BUKU LEADERSHIP AND COLLABORATIVE cek turnitin

by Wiwik Kusumawati1

Submission date: 12-Mar-2020 02:25PM (UTC+0700)
Submission ID: 1274190268
File name: BUKU_LEADERSHIP_AND_COLLABORATIVE.pdf (827.94K)
Word count: 100767
Character count: 582050

EDITED BY
DAWN FORMAN,
MARION JONES AND
JILL THISTLETHWAITE

LEADERSHIP AND COLLABORATION

Further Developments for Interprofessional Education

Leadership and Collaboration

Also by Dawn Forman

Forman, D., Jones, M., Thistlethwaite, J. (eds) (2014) *Leadership Development for Interprofessional Education and Collaborative Practice*

Gentle, P. and Forman, D. (2014) *Engaging Leaders: the Challenge of Inspiring Collective Commitment in Universities*

Forman, D., Joyce, M. and McMahon, G. (2013) *Creating a Coaching Culture for Managers in Your Organisation*

Rogers, G., Duffy, E. and Forman, D. (2013) 'The Context of Health Professional Education Today', in Loftus, S., Gerzina, T., Higgs, J., Smith, M. and Duffy, E. (eds), *Educating Health Professionals: Becoming a University Teacher*

Forman, D. (2012) 'Community-based Care and the Wider Health Care Team', in Thistlethwaite, J., *Values-based Interprofessional Collaborative Practice: Working Together in Health Care*

Forman, D. and Jones, M. (2010) 'Overcoming the Barriers to Promoting Online Interprofessional Education', in Bromage, A., Clouder, L., Thistlethwaite, J. and Gordon, F. (eds), *Interprofessional E Learning and Collaborative Work: Practices and Technologies*

Also by Marion Jones

Forman, D., Jones, M. and Thistlethwaite, J. (eds) (2014) *Leadership Development for Interprofessional Education and Collaborative Practice*

Jones, M., McCallin, A. and Shaw, S. M. (2014) 'Reflections from New Zealand: Facilitating Cultural Change', in Forman D., Jones M., Thistlethwaite J. (eds) *Leadership Development for Interprofessional Education and Collaborative Practice*

Forman, D. and Jones, M. (2010) 'Overcoming the Barriers to Promoting Online Interprofessional Education', in Bromage, A., Clouder, L., Thistlethwaite, J. and Gordon, F. (eds), *Interprofessional E Learning and Collaborative Work: Practices and Technologies*

Jones, M. (2004) 'Cultural Power in Organisations: The Dynamics of Interprofessional Teams', in Whiteford, G. and Wright-St. Clair, V. (eds), *Occupation and Practice in Context*

Jones, M. (2002) 'Interprofessional Practice', in Papps, E. (ed.), *Nursing in New Zealand – Critical Issues, Different Perspectives*

Also by Jill Thistlethwaite

Thistlethwaite, J. E. (2012) *Values-based Interprofessional Collaborative Practice*

Kitto, S., Chesters, J., Thistlethwaite, J. E. and Reeves, S. (eds) (2011) *A Sociology of Interprofessional Healthcare Practice: Critical Reflections and Concrete Solutions*

Bromage, A., Clouder, D., Gordon, F. and Thistlethwaite, J. E. (eds) (2010) *Interprofessional E Learning and Collaborative Work: Practices and Technologies*

Thistlethwaite, J. E. and Spencer, J. (2008) *Professionalism in Medicine*

Benson J. and Thistlethwaite, J. E. (2008) *Mental Health across Cultures: A Practical Guide for Health Professionals*

Thistlethwaite, J. E. and Ridgway, G. (2006) *Making It Real: A Practical Guide to Experiential Learning*

Thistlethwaite, J. E. and Morris, P. (2006) *Patient-doctor Consultations in Primary Care: Theory and Practice*

With chapters focused on how professionals from different backgrounds can work together on health and social welfare, this book places the proper emphasis on leading by doing. Educational design to prepare students for a life of interdisciplinary collaboration will follow from the role models established by practitioners.
William Burdick, Clinical Professor for Emergency Medicine and Vice President for Education. Foundation for Advancement of International Medical Education and Research (FAIMER)

Building on foundations firmly laid in their first book, the authors ground leadership in interprofessional learning and working in its theory and practice. They capture, helped by expert and experienced contributors worldwide, the energy and the creativity of teachers leading innovations in interprofessional education mirrored in teaching and learning to prepare students as leaders for tomorrow transcending professional and organisational divisions to transform health care. I find it hard to imagine a more timely contribution to resources for teachers and students alike as they rise to that challenge.
Hugh Barr, PhD, President, the Centre for the Advancement of Interprofessional Education, Emeritus Editor, the Journal of Interprofessional Care, *Emeritus Professor of Interprofessional Education, University of Westminster, UK*

This book highlights cutting-edge, evidence-based leadership concepts and frameworks in interprofessional education and practice and is a 'must read' for all involved in the complex adaptive system of health care. The use of 'stories' from nine different countries illustrates the array of international leadership developments and sharing of good practices. The authors' explicit alignment of leadership theories with achieving collaborative competence through interprofessional education addresses a significant gap in the literature and is particularly noteworthy. Without a doubt, students, educators, and practitioners reading this book will become empowered to serve as equal contributors and leaders committed to interprofessional education and practice within their own professional context.
Ruby Grymonpre, Professor, Faculty of Pharmacy and Interprofessional Education Coordinator, University of Manitoba, Canada

You must read this book before developing IPE in your institution.
Ardi Pramono, MD, anaesthesiologist, MSc, Dean, Faculty of Medicine and Health Sciences at Universitas Muhammadiyah Yogyakarta, Indonesia

Developing interprofessional education for patient-centred collaborative practice requires leaders who understand the complexities of practice education, the possibilities of interprofessional education and who possess the knowledge and skills to bring both together in order to effect fundamental changes in health and social care systems. This monograph illustrates these fundamentals in interesting and useful ways. The contributors draw on their experiences of IPE in many settings, both academic and practice, and in many global sites. They further our understanding of IPE for collaborative practice, and clearly illustrate that informed and wise leadership of interprofessional collaborative practice can provide high quality patient care. This is an important and welcome addition to the literature.
Professor John H. V. Gilbert, Co-Chair, Canadian Interprofessional Health Collaborative

I commend the editors and others who contributed to this timely and inspiring book. They present relevant and interesting information from diverse backgrounds. The crafting of the book itself is testimony to what can be accomplished when effective leadership brings multiple disciplinary perspectives to focus on a significant challenge or task. Modern science, and before it the ancient wisdom of many cultures, teaches us that bodies, thoughts, emotions, social relations and wider environments are interconnected and intrinsically related to overall health. Health and social care professions have advanced by carving off and embellishing particular parts of the wider whole. This specificity has fostered advanced knowledge and technical competence to address multiple problems. However, in concentrating on specific aspects, others are missed. This is always of concern. It is of greater and fundamental concern if we are to address the 21st-century tsunami of non-communicable diseases and growing health and other disparities. Effective health promotion, prevention, treatment, rehabilitation and management will not occur without multiple lenses illuminating our thinking and action. While long proclaimed, and more recently enshrined in WHO and national health policies, interprofessional collaborative practice has not been adopted on a widespread scale. As illustrated in this book, its promise is considerable. Building on the editors' previous book on this topic, I hope that it will play a significant part in helping translate rhetoric into overdue reality.
Professor Max Abbott, Pro Vice-Chancellor and Dean, Faculty of Health and Environmental Sciences, Co-director, National Institute for Public Health and Mental Health Research, Professor of Psychology and Public Health

Drawing from a rich spectrum of interprofessional contexts and settings from across the world, this book will enable practitioners to come to their own understanding of how they and their colleagues work. Readers will also gain inspiration, through practical examples of case practice, as to how to innovate in their own collaborative interprofessional leadership.
Dr Paul Gentle, Director of Programmes, Leadership Foundation for Higher Education

The need for collaborative leadership is as pressing now as it has ever been. Health and social care systems across the world face the combined challenge of people living longer and with more years of impaired health, though with healthcare budgets which cannot match this growth in demand. Collaborative leadership, new behaviours and recognition of the interdependence of all organisations involved in healthcare is essential.

This book draws together international thinking on building collaboration through education, practice and leadership as well as offering practical approaches and innovations already implemented. The book explores the importance of distributed leadership and its role in building collaborative working. Chapter 2 on shared leadership provides useful insights into the complex adaptive nature of healthcare systems and the implications of this in training the workforce. Through its LEAD framework Chapter 12 provides a practical tool which acknowledges that complexity and inter-dependence are important in the context within which today's health leaders must operate. It acknowledges the need for a progression towards models of distributed leadership, and away from traditional top down approaches. The book is a

valuable contribution to educators and practitioners working in today's complex world of healthcare.
Brenda Howard, Director, Howards Consultancy Ltd

Another timely and important book from these established authors, offering compelling reading for students, practitioners, educators and leaders. Once again they have brought together highly relevant contributions on both the theory and practice of interprofessional education and collaborative practice. There has never been a more important time for such a book. With health and social care seeking ever closer integration, both within and across organisations and teams to improve the quality of outcomes for citizens and make better use of our limited resources, this book offers clear evidence and practical examples. The contributions from across the globe offer opportunities to draw and best practice from different cultures and systems, and the use of storytelling underpins strong evidence-based contributions with the power of real-world examples.
Kaye Burnett, Independent Chair, Health Education East Midlands, UK, Independent Chair, Better Care Together, Transformational programme for health and social care in Leicester, Leicestershire and Rutland, UK

This is a very timely and welcome sequel to the editors' previous book on interprofessional education and practice. Both volumes articulate clearly why and how such an approach must underpin our increasingly complex health and social care services. This book emphasises the critical importance of flexibility in the workforce and of research-informed practice and innovation. It also demonstrates the impact of effective leadership on both delivery and outcomes. An inspirational theme runs through these chapters: that we can and must change how we educate professionals and how we enhance practice in our workforce, and that considerable benefits are achievable. This optimism is reinforced through the examples of best practice being shared and through the broad international reach of the contributions. Importantly, some tools for improvement and reflection that can support individuals and professional networks are provided. This thought-provoking and challenging text seeks to stimulate debate. It will certainly do that and will also facilitate the step-change we need to provide the services our patients and clients deserve.
Professor Sandra Jowett, Deputy Vice-Chancellor, University of Cumbria, UK

This collection continues the required illustration about how leadership and IPE play a major role in transforming National Health Systems to serve population needs. The scope of experience that the editors have managed to bring together, offers diverse examples of innovation and creativity to advance in the provision of care towards more humane and comprehensive health services. Stories told along the book are powerful testimonies of how competencies achieved through the dialogues of IPE lead to transformative experiences of individuals and the communities they serve. It is a delight to read through the richness of concepts that IPE can connect around the challenge of translating theory into practice for better healthcare.
Francisco Lamus, Centro de Estudios en Salud Comunitaria. Facultad de Medicina – Universidad de La Sabana. Colombia

At the heart of effective health care delivery in the 21st century is the transformation of healthcare leadership to harness the power of interprofessional education and practice. This book is a lively and engaging proof that this transformation is alive and well. Following up on their previous book on *Leadership Development for Interprofessional Education and Collaborative Practice*, Forman, Jones and Thistlethwaite have assembled here valuable insights into this transformation in such diverse cultural and socio-economic contexts as India, Indonesia, Japan, Canada, the USA, the UK, Belgium, Australia and New Zealand. This book is a must-read for anyone interested in the distinctive and demanding nature of healthcare leadership, anyone seeking a deeper understanding of leadership in the context of interprofessional practice, and more generally, anyone engaged in any form of collective effort to meet the challenges of the increasing complexity and fragmentation of healthcare.
Hassan Soubhi, PhD, Associate Professor, Founding Lead Editor of the Journal of Research in Interprofessional Practice and Education*, Québec, Canada*

This timely book provides compelling reading for everyone grappling with the issues of developing integrated workforce solutions to deliver essential health outcomes in a world of more chronic and complex disease. The editors have assembled a truly international and inclusive team, who are at the vanguard of the policy, theory, practice, and scholarship of interprofessional education and collaborative practice. This rich collection addresses several significant gaps in the literature and will provide valuable insights for all those striving to break down the wall of silo-based healthcare provision and education that is proving so detrimental to progress. Everyone, including healthcare policymakers, leaders, academics, practitioners, administrators, and students, will find something of value to enrich their own professional practice in the context of the rights of communities for better healthcare.
Chris Roberts, PhD, Associate Professor in Primary Care and Medical Education, University of Sydney. Australia

Leadership and Collaboration

Further Developments for Interprofessional Education

Edited by

Dawn Forman
Curtin University, Australia

Marion Jones
Auckland University of Technology, New Zealand

Jill Thistlethwaite
University of Technology Sydney, Australia

palgrave
macmillan

Softcover reprint of the hardcover 1st edition 2015 978-1-137-43207-0

First published 2015 by
PALGRAVE MACMILLAN

Palgrave Macmillan in the UK is an imprint of Macmillan Publishers Limited, registered in England, company number 785998, of Houndsmills, Basingstoke, Hampshire RG21 6XS.

Palgrave Macmillan in the US is a division of St Martin's Press LLC, 175 Fifth Avenue, New York, NY 10010.

Palgrave Macmillan is the global academic imprint of the above companies and has companies and representatives throughout the world.

ISBN 978-1-349-49237-4 ISBN 978-1-137-43209-4 (eBook)
DOI 10.1057/9781137432094

This book is printed on paper suitable for recycling and made from fully managed and sustained forest sources. Logging, pulping and manufacturing processes are expected to conform to the environmental regulations of the country of origin.

A catalogue record for this book is available from the British Library.

A catalog record for this book is available from the Library of Congress.

Contents

List of Figures xi

List of Tables xii

Foreword by Barbara Brandt xiii

Acknowledgements xvii

Notes on Contributors xviii

1 Introduction 1
Dawn Forman

Part I: Framing Leadership in Interprofessional Education

2 Leadership Frameworks for Interprofessional Learning 13
Alan Dow, Nital Appelbaum and Deborah DiazGranados

3 Interprofessional Education from Pilot to Formal Curriculum 29
Wiwik Kusumawati and Salmah Orbayinah

4 Foundation of the Japan Association for Interprofessional Education (JAIPE) 47
Hideaki E. Takahashi, Hideomi Watanabe and Masanobu Kinoshita

Part II: Collaborative Developments

5 Collaborative Leadership within Interprofessional Practice 71
Carole Orchard and Margot Rykhoff

6 Learner Leadership: A Change Agent for UK Interprofessional Learning 95
Kate Cuthbert, Geoff Glover and Dawn Forman

7 Training COPC and Leadership Development at Ghent University, Belgium 110
Lynn Ryssaert, Sofie Dhaese, Inge Van de Caveye, Sarah Bogaert and Jan De Maeseneer

8 Utilizing Curriculum Renewal as a Way of Leading Cultural Change in Australian Health Professional Education 121
Roger Dunston, Dawn Forman, Lynda Matthews, Pam Nicol, Rosalie Pockett, Gary Rogers, Carole Steketee and Jill Thistlethwaite

9 Assessment of Interprofessional Teamwork – An International Perspective 135
Jill Thistlethwaite

10 Collaborative Leadership for the Transformation of Health Systems 153
Rosemary Brander, Maura MacPhee, Emmanuelle Careau, Maria Tassone, Sarita Verma, Margo Paterson and Sue Berry

Part III: Innovation in Practice

11 Building Interprofessional Leadership in a Clinical Setting 169
Duncan Reid, Marion Jones and Daniel O'Brien

12 Health LEADS Australia and Interprofessional Education 182
Monica Moran, Carole Steketee and Kirsty Marles

13 Developing Pharmacy Leaders – Interprofessional Education at Work 199
Avril Lee, Dale Sheehan and Pat Alley

14 Shaping Interprofessional Education – Educators in Action 213
Payal Bansal, Rashmi Vyas, Pramila Menon, Seema Patrikar and Arun Jamkar

15 Leadership into the Future 229
Jill Thistlethwaite and Marion Jones

Appendix 237

Index 245

List of Figures

4.1	A relationship between university-led and service-led IPE aimed for service users by JAIPE	50
4.2	Community-based three soft powers to aim at healthy longevity and to maintain independent living of service users	54
5.1	Integration of vertical and collaborative leadership framework	73
5.2	Integration of vertical and collaborative leadership frameworks	84
5.3	Intersection between vertical and collaborative leadership in client-centered collaborative practice	85
6.1	IPL viewed as a Wicked Issue	103
6.2	What does the IPL ladder look like?	104
6.3	A conceptual model for students as partners in learning and teaching in higher education	104
7.1	Key leadership tasks for Complex Adaptive Systems and possible links with features of transformational leadership	114
8.1	Four-dimensional Curriculum Development Framework	127
10.1	Sustainable health systems transformation model	155
11.1	The patient pathway in the AIH clinic	176
14.1	Shaping interprofessional education – concept map	217

List of Tables

1.1	Chapters and the leadership aspect highlighted	4
1.2	Further reading on the leadership aspect	6
2.1	The axes of leadership with healthcare examples	17
5.1	Comparison of characteristics across clinical, shared, and collaborative leadership	80
5.2	Comparison of transformative leadership elements for leader and interprofessional team	83
5.3	Listing of collaborative leadership characteristics by authors	89
6.1	Practical steps	106
9.1	Examples of learning outcomes and/or competencies for interprofessional practice	139
9.2	Examples of learning outcomes and/or competencies for leadership	140
12.1	Health LEADS framework – capability descriptors	186
12.2	IPP competency domains mapped against Health LEADS capabilities	190
14.1	Summary of mean scores – modified readiness for interprofessional learning for faculty	218

Foreword

I am an accidental leader in interprofessional education and collaborative practice (IPECP). My career in higher education as a student, faculty member and administrator began over 30 years ago. This followed my experience in clinical practices in the United States as what is now called a 'frontline worker' as a medical assistant. I never had a plan – my professional career has been dotted by interesting and unique choices in clinical practice and education, often taking me into previously unexplored territories. I suspect that the vast majority of those who identify IPECP as a primary or emerging focus of their work share my story. We didn't select IPECP as a career – it found us.

Reading the stories shared in this book edited by Dawn Forman, Marion Jones and Jill Thistlethwaite provided me an opportunity to not only reflect on my own career but also to consider how far the worldwide movement of interprofessional education and collaborative practice has come. In my roles as Associate Vice President for Education at the University of Minnesota and Director of the US National Center for Interprofessional Practice and Education, I give a presentation on IPECP entitled: 'Welcome to the "New" 40-year old field'. That's because the field dates back more than 40 or 50 years and has experienced peaks and lows of commitment ever since. Today, IPECP is refuelled by new world-wide forces described in the stories in this book: aging populations requiring more care; workforce shortages and distribution challenges; transforming healthcare models to a focus on health; patient-centred care; improved health outcomes; the desire to educate health professionals in new ways, among others.

Many who are just discovering IPECP bring enthusiasm, energy and a new lens to our work. I believe we are at the cusp of exciting new horizons ahead. The first wave of IPECP leadership approached the work by trial and error and 'on the job, or OTJ' learning. I am an example. My career in interprofessional work began in the United States in what is called the 'Great Society programs'. A confluence of reports such as the Institute of Medicine (1972) *Educating for Health Teams* and a significant portfolio of federal public health legislation created programs to develop teams to broaden access to primary care in rural and underserved areas. As a result of these policy efforts, I then worked to develop continuing

education programs for all types of health professionals in their single professions and together in rural Illinois.

It was an exciting time. And I learned many practical OTJ lessons about how to be what I now call an 'interprofessional culture worker' in both practice and education. This book is full of these types of stories strengthened by linking what we have learned over the years and continue to learn about leadership and interprofessional work. For example, I am inspired by the story in Chapter 13 by Avril Lee, Dale Sheehan and Pat Alley about New Zealand pharmacists who are proactively taking a leadership role with junior physicians to teach patient safety issues in preventing medication errors. But beyond the story, the authors drew me in with explicit examples from the transformational leadership literature to ground their actions. They teach us their lessons learned so we can be informed interprofessional culture workers in our own settings.

In my career, I've also experienced the nadir of the field in the US when federal funding stimulating early interprofessional work abruptly stopped in the 1980s (Schmitt, 1994; Baldwin, 2007). Many of us had our IPECP work 'unfunded overnight' by changed federal policy (Baldwin, 2013). Since that time, I have learned – the hard way – that leadership in IPECP requires taking the long view and resilience. In this marathon, the torch is handed to us to carry to the next runner. We may not see the finish line. Together, we are changing an over 100-year-old paradigm of health professions education and healthcare delivery (Frenk et al., 2010).

My next stop in interprofessional education and collaborative practice in the 1990s was at the University of Kentucky as a pharmacy faculty member and a consultant to several national programs. I call this my 'grassroots IPECP era' when as an assistant professor in a tenure-track position I naively and passionately worked with a number of colleagues on interprofessional efforts. We had a champion who encouraged us to work in IPECP but there were few formal structures to support the effort. Our work didn't have a strategic plan, and it was an organic experience.

In the US during this time we experienced a failed attempt at healthcare reform. And, there was no major stimulus for change. Those of us who kept carrying the IPECP torch found ourselves together at various national and international meetings. We wrote grant proposals to 'fit' popular initiatives such as service learning, women's health and access to care to create interprofessional education programs and courses. While we had the passion, we also vividly lived the many obstacles replete in the literature (Hall and Weaver, 2001). These included: IPE

at the margins; grant-funded IPE; volunteering to teach in IPE courses only offered in the evening; no credit for IPE work; little support in the promotion and tenure process; among others.

Kate Cuthbert's and Geoff Glover's chapter (Chapter 6) is reminiscent of the type of leadership we were using during my grassroots era. The richness of this chapter lies in its description of the stage of development of IPE in higher education in England and the forces of change in the healthcare delivery system. They characterize interprofessional learning as a 'wicked problem' to be addressed through the deployment of learner leaders with little formal authority or power. Cuthbert and Glover adeptly use adaptive leadership principles for educators, researchers and policymakers to empower learners as leaders in healthcare transformation.

Although we didn't know it at the time, my Kentucky colleagues and I also experienced the shared and emergent leadership models described by Alan Dow, Nital Appelbaum and Deborah DiazGranados (Chapter 2). Leadership emerged based upon the specific situation, needs and opportunities that presented. Unusual at the time, we turned grant proposals and programs into interprofessional work. As I work with many IPECP champions in both education and practice today, grassroots IPECP and shared leadership is still a dominant model for implementing IPECP. Dow, Appelbaum and DiazGranados offer practical guides for educators and leaders in developing and supporting emergent leadership of students and practitioners.

As I grew as a faculty member working in IPECP, I became abundantly aware of the shortcomings of not having a senior leader who championed, supported and resourced the work. Without this commitment, sustainability and moving the work to a core focus of an organization is very difficult, if not impossible. Therefore, I resonated with Chapter 7 by Lynn Ryssaert, Sofie Dhaese, Inge Van de Caveye, Sarah Bogaert and Jan De Maeseneer, describing the community-oriented primary care leadership development at Ghent University in Belgium. These authors highlight the importance of leaders at different levels of the organizations to implement IPE. The summary of leadership tasks in complex adaptive systems and professional bureaucracy are illustrative of transformative leadership.

In 2000, I jumped at the opportunity to become a senior IPECP leader when I assumed my position as the Associate Vice President (VP) for Education in the University of Minnesota Academic Health Center (AHC). This step in my career set the stage for becoming the director of the National Center. At the time, the AHC leaders and faculty had created a strategic plan with IPECP as a core element. We've become a

high-performing team that has designed platforms and services to work across the university on interprofessional efforts: health careers advising, outreach, clinical skills assessment, curriculum and instructional design and, importantly, policy changes that are needed to support IP work. We've learned that senior leaders need to set the vision, be supportive to carry out the direction, and resource the effort in multiple ways.

I've recently heard this positional leadership referred to as 'grass-tops'. When I assumed my VP position there were few senior leadership positions or role models in the US. Today, with the resurgence of interest, the number of leadership positions charged with system and state-wide efforts linking education to transforming healthcare is growing. It is comforting to read the stories in this book about the visionaries and champions of senior, formal IPECP leadership to set the direction on a large scale: at the organizational and even national levels. We can learn much from Canada, Japan and Indonesia as they are reimagining how IPECP can address large-scale issues in their countries.

My final reflection is that indeed we are advancing the field very rapidly through technology and worldwide networks. In this book, Forman, Jones and Thistlethwaite bring us closer together with rich leadership reflections to guide us beyond OTJ learning. We are building a solid foundation together.

Barbara Brandt
University of Minnesota

References

Baldwin, D. C. (2007). Some historical notes on interdisciplinary and interprofessional education and practice in health care in the USA. *Journal of Interprofessional Care, 21*(S1), 23–37.

Baldwin, D. C. (2013). Reforming medical education: confessions of a battered humanist. In L. A. Headrick and D. K. Litzelman (eds), *Educators' stories of creating enduring change: enhancing the culture of academic health sciences centers.* Abingdon: Radcliffe Publishing: 195–221.

Frenk, J., Chen, L., Bhutta, Z. A., Cohen, J., Crisp, N., Evans, T. et al. Education of Health Professionals for the 21st Century: A Global Independent Commission. Health professionals for a new century: Transforming education to strengthen health systems in an interdependent world. *The Lancet*, 376 (9756), 1923–1958.

Hall, P. and Weaver, L. (2001). Interdisciplinary education and teamwork: a long and winding road. *Medical Education, 35*: 867–875.

Institute of Medicine (1972). Educating for the health team. Washington, DC: National Academy of Sciences.

Schmitt, M. (1994). USA: Focus on interprofessonal practice, education, and research. *Journal of Interprofessonal Care*, *8*(1): 9–18.

Acknowledgements

The editors and authors of this book would like to thank their institutions, colleagues, students and clients for their cooperation in the interprofessional 'stories' outlined in this book.

The editors would particularly like to thank Jeanne Clark for her patient editing and administrative assistance, and Kiran Bolla for all the guidance through the publishing process.

Notes on Contributors

Editors

Dawn Forman was a Dean of Faculty for Education Health and Science disciplines for 13 years and over the last 8 years she has been privileged to have worked as a consultant with universities and health services internationally. Her main areas of work include leadership development, executive coaching, research development and interprofessional education. Dawn is an Associate for the Higher Education Academy and the Leadership Foundation for Higher Education, and a Senior Associate of Ranmore Consulting. She is widely published, including five previous books and over 80 peer-reviewed articles. She has been a keynote speaker at numerous international conferences. She is a Visiting Professor at the University of Derby (UK) and the University of Chichester (UK) and Adjunct Professor at Auckland University of Technology (New Zealand) and Curtin University (Australia).

Marion Jones is Dean of University Postgraduate Studies at Auckland University of Technology and a Director of the National Centre for Interprofessional Education and Collaborative Practice in New Zealand. A significant focus of her academic career has been the development of postgraduate study. For ten years she provided her expertise as Associate Dean Postgraduate to the Faculty of Health and Environmental Sciences. Marion is author or co-author of more than 30 journal articles and of five books on these topics. Some of her national and international activities include past board member of InterEd, the New Zealand representative on the Australasian Interprofessional Practice and Education Network (AIPPEN). She is a Visiting Professor at the University of Derby in the United Kingdom and has presented at more than 70 national and international conferences.

Jill Thistlethwaite is Professor of Medical Education and a health professional education consultant. She is affiliated to the University of Technology, Sydney, and is a general practitioner in Sydney, Australia. In 2014 she spent four months at the National Center for Interprofessional Practice and Education in Minneapolis, USA, as a Fulbright senior scholar. She has written and edited several books and book chapters and

over 80 papers. She is co-editor of *The Clinical Teacher* and an associate editor of the *Journal of Interprofessional Care*.

Contributors

Pat Alley is the Director for Clinical Training at Waitemata District Health Board and Clinical Associate Professor of Surgery, University of Auckland. His teaching interests include medical undergraduate students from year 2 to year 6, postgraduate teaching responsibilities on the hospital campus and the University of Auckland School of Medicine interdisciplinary teaching program on medical ethics. He has extensive overseas experience in both medical and Voluntary Aid programs. In 2006 he was awarded the RACS medal for contributions to surgical education, surgeons' health and medico-legal work. In 2013 he won the Confederation of Postgraduate Medical Education Australasia Clinical Educator of the Year. He has a special interest in ensuring the medical workforce is able to meet the demands of modern healthcare complexities.

Nital Appelbaum is a researcher for the Office of Assessment and Evaluation Studies at Virginia Commonwealth University's School of Medicine in the USA and works primarily with the Medical Center on evaluating the effectiveness of its safety initiatives. Her past experiences include evaluating high impact training programs as a measurement specialist at the US Department of Veterans Affairs for the Employee Education System. Her educational background is in the field of industrial and organizational psychology, and her current research interests include healthcare team functioning, leadership and psychological safety as it relates to patient safety.

Payal Bansal is Professor and Head, Institute of Medical Education Technology and Teachers' Training, Maharashtra University of Health Sciences (MUHS), India. She has three FAIMER Fellowships in Medical Education and is managing editor of *Education for Health*, the official journal of The Network: Towards Unity for Health, a WHO-affiliated organization. She has created and implemented a multi-level, interprofessional model for faculty development in health professions education at MUHS and is developing a Masters in Health Professions Education through the Obama Singh 21st Century Knowledge Initiative Award. She served as a Member of the Undergraduate Working Group for curriculum reform in Medical Education – Vision 2015, of the Medical Council

of India and serves on the Academic Council and Board of Examinations at MUHS.

Sue Berry is an Associate Professor in the Division of Clinical Sciences at the Northern Ontario School of Medicine (NOSM) located at the West Campus in Thunder Bay, Ontario, Canada, and holds a part-time appointment as Assistant Professor within the School of Rehabilitation Science at McMaster University, Hamilton, Ontario, Canada. She is currently the Executive Director of Integrated Clinical Learning at the Northern Ontario School of Medicine. At an international level, she is The Network: Towards Unity for Health's Task Force chair for transforming and scaling-up health professional education and training. She held the role as NOSM's Co-Lead for the CIHLC project from 2012–2014 and was an active member of the National Steering Committee. Her scholarly work has included presentations, workshops and publications nationally and internationally on topics of integrated clinical learning, community engagement and socially accountable education.

Sarah Bogaert has a background in educational sciences. She worked as a member of the Center of Educational Development in the Faculty of Medicine and Health Sciences at Ghent University. Sarah implemented innovation projects concerning portfolio learning, mentorship and assessment of quality. In the context of the school's membership of The Training for Health Equity Network (THENet), she was part of the group evaluating the curriculum with a focus on social accountability.

Rosemary Brander is a Director of the Office of Interprofessional Education and Practice, and Assistant Professor at the School of Rehabilitation Therapy at Queen's University, Kingston, Ontario, Canada. She is also the Senior Researcher and Program Evaluator at the Centre for Studies in Ageing and Health at Providence Care, Kingston. Her research interests include collaborative practice and customer service in healthcare environments, interprofessional education and leadership, and organizational cultural change for improved health outcomes. She is a co-lead at Queen's University on the Canadian Interprofessional Health Leadership Collaborative at the Institute of Medicine's Global Forum on Innovation in Health Professions Education. Rosemary holds a doctoral degree in Rehabilitation Sciences from Queen's University (2012). She has held a variety of health leadership roles and is an experienced clinical physiotherapist working with children and adults with developmental and long-term neurologic disabilities.

Emmanuelle Careau is an assistant professor in the Rehabilitation Department, Faculty of Medicine, Université Laval, Québec, Canada and Scientific Director of the IPE office. She received her PhD in Experimental Medicine from Université Laval and did her post-doctoral training on evaluation of interprofessional education and practice. She has conducted training sessions on this topic at healthcare organizations, and has been invited as a guest speaker at many universities from the province of Quebec. She is currently the lead for Université Laval on the National Steering Committee of the Canadian Interprofessional Health Leadership collaborative (CIHLC).

Kate Cuthbert is a consultant in Academic Practice at the Higher Education Academy, UK. Throughout her career Kate has developed significant experience in facilitating change within learning organizations and has contributed to international learning developments in Zimbabwe with the British Council. Kate has produced learning opportunities in clinically led commissioning, patient safety, quality improvement skills and leadership and management. She has delivered national learning programs in patient safety as part of the NHS safer care initiative. Her work to deliver creative learning opportunities within health and social care has been recognized by several excellence awards and a national award for interprofessional learning for Innovation in Interprofessional Learning in recognition of the courtroom learning experience for social work, radiography and law students. Kate has significant teaching experience in psychology, including mental health. Her PhD explored health beliefs in eight post-Soviet states.

Jan De Maeseneer is the Head of the Department of Family Medicine and Primary Health Care at Ghent University and Vice-Dean for Strategic Planning at the Faculty of Medicine and Health Sciences. He also chairs the educational committee of the undergraduate medical curriculum. He is involved in the postgraduate training in family medicine. He is still working as a part-time family physician in the Community Health Center Botermarkt Ledeberg-Gent, a deprived area with a multicultural population (www.wgcbotermarkt.be). He was awarded the Five Star Doctor Award for Excellence in Health Care at the Wonca World Conference of Family Medicine in 2004 (Orlando, USA). In 2014 he received a Special Award for Excellence in Health Professional Education at the Prince Mahidol Conference in Thailand. He is the Secretary General of The Network: Towards Unity for Health (www.the-networktufh.org). He is an active member of the Global Forum on Innovation of Health Professional Education at the Institute of Medicine in Washington, DC.

Jan is the Director of the International Center for Primary Health Care and Family Medicine at Ghent University, a WHO Collaborating Centre on PHC. He is also active in the WHO Technical Working Group on Health Workforce Education Assessment Tools.

Sofie Dhaese is a medical student at Ghent University involved in the Student Working Group of Medical Education (SWME) at the Faculty of Medicine and Health Sciences. She has a background of active involvement in the Student Union of Medicine in Ghent. To date, she represents her class on both the educational committee and the internship committee. She undertook action, together with peer students, to create a digital and searchable variant of the learning resources of the medical curriculum at Ghent University.

Deborah DiazGranados is an industrial-organizational psychologist and assistant professor in the School of Medicine and Psychology at Virginia Commonwealth University in Richmond, Virginia, USA. As an organizational scientist she focuses on understanding the complexity of a variety of work contexts. Deborah's research has focused on understanding the influence of leadership and team collaboration on team process and performance. Her research has been published in journals such as the *Journal of Applied Psychology*, *Human Factors*, *Journal of Interprofessional Care*, *Academic Medicine*, *Current Directions in Psychological Science* and *The Joint Commission Journal on Quality and Patient Safety*.

Alan Dow is Assistant Vice President of Health Sciences for Interprofessional Education and Collaborative Care at Virginia Commonwealth University, Virginia, USA. He directs the Center for Interprofessional Education and Collaborative Care at VCU and is responsible for developing, implementing and studying initiatives in interprofessional education and collaborative practice across the Schools of Medicine, Nursing, Pharmacy, Dentistry, Allied Health, and Social Work, the VCU Health System, and the surrounding community. He has been supported in this work by funding from the Josiah H. Macy, Jr Foundation as one of the inaugural class of Macy Faculty Scholars, a highly competitive national program focused on developing the next generation of educational leaders. Alan is a practising internist and serves on the editorial board of the *Journal of Interprofessional Care* and the board of the American Interprofessional Health Collaborative.

Roger Dunston is an associate professor employed in the Centre for Research in Learning and Change, in the Faculty of Arts and Social Sciences, University of Technology Sydney (UTS). Prior to this, he worked

as a senior health services manager, educator, health policy analyst and organizational consultant. He has over 30 years' experience within the health sector. Key areas of research and development involve professional practice reform, health service redesign, interprofessional education and practice and professional learning. Roger also co-leads a health research technology partnership collaboration between UTS and the University of Dundee (Scotland). The focus of this collaboration engages with the social determinants of health. During the past six years he has led and/or participated in a number of Australian Research Council, Office for Learning and Teaching, UTS and other government-funded studies, primarily in the area of interprofessional education and learning.

Geoff Glover became an independent consultant in August 2014 specializing in innovations in learning. Prior to this he was Assistant Director and Head of Health and Social Care at the Higher Education Academy (HEA) and was responsible for the enhancement of learning and teaching within health and social care programs across the UK. Geoff has also worked at the University of Leicester and specifically with the East Midlands Health Innovation Educational Cluster developing effective education and training in support of service innovation. Geoff's previous employment has also included working at the University of Derby where he led a range of health professions groups in nursing, pharmacy and radiography and taught across a broad range of health disciplines. Geoff has advised on international professional standards for the WHO and UNESCO in Burma, Libya and Nigeria and has worked with the QAA's Major Review and across a number of institutions as an external examiner.

Arun Jamkar is Vice Chancellor, Maharashtra University of Health Sciences (MUHS), India. He is the Founding President of the Association of Vice Chancellors of Health Science Universities in India. He is a FAIMER Institute Fellow and his educational development initiatives at MUHS include quality assurance reforms, communication skills and disaster management programs, examination reforms, and over 50 new fellowship courses. He is a member of the Expert Committee of the Ministry of Health and Family Welfare, Government of India, for reframing the Indian Medical Council Act 1956 tutored to prevailing conditions.

Masanobu Kinoshita is Dean of Faculty of Health Sciences, Tokyo Metropolitan University, Japan. He has specialized in myotonic dystrophy type 1 (DM1) as a neurologist in Saitama Medical Center,

Saitama Medical School, since 1989. In 2006, he became a professor of Faculty of Health Sciences, Tokyo Metropolitan University. He is one of the lecturers in Interprofessional Education (IPE) at the above university. In addition, he has been chair of the board of directors of the Japan Association for Interprofessional Education (JAIPE) since 2011.

Wiwik Kusumawati is chair of Interprofessional Education in the Faculty of Medicine and Health Sciences at Universitas Muhammadiyah Yogyakarta, Indonesia. She has a background in medical education and pharmacology. She is also chair of the Medical Education Department in her faculty. Wiwik has over ten years' experience in designing, developing and implementing innovative learning strategies. Her current research interests include curriculum development in affective domain or professional behaviour for the medical profession.

Avril Lee is a registered pharmacist, works as a quality improvement specialist in the pharmacy services, and holds a part-time role as Interprofessional Education Developer within the Medical Education Training Unit, Waitemata District Health Board. She trained in the UK, and worked in England and Wales, the USA and Australia before moving to New Zealand. She has extensive experience in quality improvement and medication safety initiatives within primary and secondary care. She sits on the Medication Safety Expert Advisory Group and is the clinical lead for the Safe Use of Opioids National Collaborative, Health Quality and Safety Commission, New Zealand. Her research interests include developing pharmacists as interprofessional educators, and learning in the clinical workplace.

Maura MacPhee is an associate professor of nursing from the University of British Columbia (UBC), Vancouver, Canada. Her areas of expertise are healthy work environments, leadership and management. She was the Academic Lead for British Columbia Nursing Administrative Leadership Institute (2005–2010), and, with funding from the Canadian Health Services Research Foundation, she longitudinally tracked leader and staff outcomes related to leadership training and supports. She is the Deputy Officer for the Chinese University of Hong Kong (CUHK)-UBC International Centre for Nursing Leadership. She is a member of the Canadian Interprofessional Health Leadership Collaborative (CIHLC). The CIHLC is a collaborative of five Canadian universities, and Dr MacPhee co-leads the team that represents UBC.

Kirsty Marles is a service design Innovator with ACH Group. She is currently facilitating a participatory action research approach to

developing and testing the operational model for ACH Group's new teaching, research service known as ViTA (www.ach.org.au/vita). Kirsty has qualifications in health services management, health promotion and public health, and is currently expanding her research and evaluation capacity through participation in a professional doctorate with the University of Notre Dame Australia. The title of her research is 'Distributed leadership: building capacity to maximize collaborative practice in a new teaching, research aged care service'.

Lynda R. Matthews is an associate professor in the Ageing, Work and Health Research Unit at the Faculty of Health Sciences, University of Sydney. Her research focuses on the rehabilitation and workforce participation of people with posttraumatic mental health conditions and on the education of professionals who provide health and rehabilitation services. Over the past 20 years Lynda has directed a number of academic courses with different pedagogies in different disciplines and has managed significant curriculum review and development. She has co-led interprofessional learning initiatives and research in the university, work that has been closely aligned with the university's strategic plan. She was a member of the Learning and Teaching for Interprofessional Practice in Australia project team that conducted the first scoping and development study in Australia and is a project partner in the Interprofessional Curriculum Renewal Consortium, Australia.

Pramila Menon is an associate professor in the Department of Genetics, Immunology, Biochemistry and Nutrition of Maharashtra University of Health Sciences (MUHS), Pune, India. She is a pediatrician with specialization in Public Health Nutrition, member of Senate, MUHS and member of the education and advisory group of the International Postgraduate Paediatrics Certificate course jointly conducted by MUHS and University of Sydney, Australia. She is FAIMER Regional institute Mumbai Fellow, a national trainer for Facility-based Integrated Management of Neonatal and Childhood Illnesses and the National Child Survival Mission, a national flagship programme of the Government of India. Her educational work includes problem-based learning, structured oral examination and certificate courses in clinical nutrition and genetics, a masters course in Public Health Nutrition, an interprofessional education initiative using community-based learning.

Monica Moran is an academic at Central Queensland University where she is leading the development of a new occupational therapy program in this regional setting. She is a founder member of the Australasian

Interprofessional Network (AIPPEN) and Vice President of the Australian and New Zealand Association of Health Professional Educators. Monica's research interests are in the areas of interprofessional and non-traditional health education and she is a co-investigator on several large national projects. Her latest project involves using a community of practice approach to build capacity for student placements in non-government and charity organizations.

Pam Nicol is a medical educator in the Faculty of Medicine, Dentistry and Health Science at the University of Western Australia, Australia. Her professional background is in pediatrics and child health, and she has taught in both nursing and medical higher education and professional development for 18 years. She has developed, implemented and evaluated interprofessional global experiences for a wide range of health professional students, and simulation interprofessional training for clinicians. Her current research focuses on the development of interprofessional curricula and implementation in the Australian context.

Daniel O'Brien has a dual-lecturing role within the Faculty of Health and Environmental Sciences at AUT University, Auckland, New Zealand. He teaches in the School of Interprofessional Health Studies facilitating interprofessional learning in clinical education, and has a second role with the School of Rehabilitation and Occupation teaching human anatomy. He has a background in musculoskeletal physiotherapy and clinical education, which is where he fostered his passion for interprofessional learning and collaborative practice. Daniel is currently completing his PhD, which is exploring the clinical management of osteoarthritis in New Zealand. His other areas of interest include the theoretical underpinning of interprofessional clinical learning and using technology as an adjunct to facilitate learning in health studies.

Salmah Orbayinah is Head of School of Pharmacy in the Faculty of Medicine and Health Sciences at Universitas Muhammadiyah Yogyakarta, Indonesia. She is also Vice Manager of the interprofessional education program in her faculty. Salmah has over 15 years' experience in community service and Aisyiyah organization.

Carole A. Orchard is a professor in the Arthur Labatt Family School of Nursing, and Coordinator of Interprofessional Health Education and Research at Western University in London, Ontario, Canada. She has served as director of three university Schools of Nursing and is a past president of the Canadian Association of Schools of Nursing. Her honors include the 2005 Ethel Johns Award from the Canadian Association

of Schools of Nursing for her contributions to nursing education in Canada; the 2009 Interprofessional Education Mentorship Award from the National Health Sciences Students Association, and the Canadian Federation of Business and Professional Women's 2012 Leadership Award in recognition of her interprofessional collaboration in community healthcare. She is the author of *TEAMc*, an online toolkit for health practitioners to develop their interprofessional collaborative teamwork. She has developed instruments for measuring interprofessional collaborative practice and the willingness of health providers to include patients in teamwork, and was the co-lead in the development of the Canadian Interprofessional Healthcare Collaborative's Interprofessional Collaboration Competency Framework.

Margo Paterson became Professor Emerita, Occupational Therapy Program, School of Rehabilitation Therapy, Faculty of Health Sciences at Queen's University effective July 2013. She is currently Executive Director of the Association of Canadian Occupational Therapy University Programs (ACOTUP). Dr Paterson co-teaches a credit course entitled Interprofessional Collaborative Practice as part of the Interdisciplinary Studies in Global Health and Disability program at the Bader International Centre in Herstmonceux, East Sussex, UK. She has the role of academic lead for Queen's University on the Canadian Interprofessional Health Leadership Collaborative (CIHLC) at the Institute of Medicine's Global Forum on Innovation in Health Professions Education. Her academic credentials include a MSc in Community Health and Epidemiology (1994) from Queen's University and a PhD in Health Sciences from the University of Sydney, Australia (2003). Dr Paterson was the Director of the Office of Interprofessional Education and Practice in the Faculty of Health Sciences from 2009–2012. She was chair of the Occupational Therapy Program 2005–2009 and 1999–2000. She was awarded the Canadian Association of Occupational Therapy Leadership Award in 2012.

Seema Patrikar is a statistician at the Armed Forces Medical College, Ministry of Defence, India. She is also a postgraduate in Statistics, Population Sciences and an Advanced Diploma in Information Technology. She has been teaching for 15 years and is a renowned research methodology faculty member. She is involved in three Supreme Court of India research projects and various ICMR and institutional projects. She is statistical mentor to the Indian Council of Medical Research. She received two University Gold Medals for Mathematics and Statistics and Applied Statistics, Chief of Naval Staff Award for best published article,

2006, and the Best Referee award, 2013. Her current interests are leadership and project management in health research and health technology assessment (HTA).

Rosalie Pockett is an honorary senior lecturer in Social Work and Policy Studies at the University of Sydney. She is an NH&MRC Travelling Fellowship recipient and a scholar of the Mount Sinai Social Work Leadership Program, New York. She is a member of the Editorial Board of the journal *Australian Social Work* and is also a member of the Australasian Board of the international journal, *Social Work Education*. Her career background is in hospital/health social work practice and her areas of research interest include: health inequalities and social justice perspectives; interprofessional education and practice; critical reflection in education; leadership and management in social work; advanced care and end-of-life care planning; professional practice supervision; and classification systems for social work practice. Her current research involves practice-based research studies in the field of psycho-social oncology.

Duncan Reid is an Associate Professor of Physiotherapy and Associate Dean of Health in the Faculty of Health and Environmental Sciences, AUT University, Auckland, New Zealand. His areas of interest are teaching musculoskeletal physiotherapy at undergraduate and postgraduate level. In particular he has expertise in manual and manipulative therapy, especially manipulation to the cervical spine, a topic he has taught both nationally and internationally for over 25 years. Duncan's research interests are in the areas of muscle viscoelasticity, the management of osteoarthritis and sports injury prevention and screening. He has over 70 peer-reviewed journal papers and several book chapters. He is currently Vice-President of the International Federation of Orthopaedic Manipulative Physical Therapists Association (IFOMPT). He is a Fellow of the New Zealand College of Physiotherapy and a life member of the New Zealand Manipulative Physiotherapists Association and Physiotherapy New Zealand.

Gary D. Rogers is a medical practitioner, health professional educator and public health researcher. Gary is currently Professor of Medical Education and Deputy Head of School (Learning and Teaching) at Griffith University School of Medicine, Australia, in addition to a role as Program Lead in Interprofessional Learning for the Griffith Health Institute for the Development of Education and Scholarship (Health IDEAS). He hails from Adelaide, where he pioneered the development of interprofessional, community-based care for people living with HIV

in the 1990s. His PhD research at the University of Adelaide focused on Primary Health Care for people of sexual diversity utilizing a health inequity framework. He is President of the Australian and New Zealand Association of Health Professional Educators and a member of the Executive Committee of AMEE, the international association for health professional education.

Margot Rykhoff is a doctoral student in the nursing program at the University of Western Ontario, Canada, under the supervision of Dr Carole Orchard. Her research interests include interprofessional collaborative practice and leadership in healthcare teams. Margot is a professor in the University of New Brunswick/Humber Institute of Technology and Advanced Learning (ITAL), Bachelor of Nursing Program in Toronto, Ontario, with a focus in teaching acute and complex health challenges, nursing leadership and community health. Margot has been the faculty lead in interprofessional education initiatives within the School of Health Sciences, Humber ITAL for over seven years.

Lynn Ryssaert works at Ghent University (Department of Family Medicine and Primary Health Care) and at the Flemish Association of Community Health Centres. At the university she coordinates the units of Health and Society that are incorporated in the first and third year of the medical curriculum. She has a background in economics and sociology. This background enables her to put health and illness in a broader social context.

Dale Sheehan is a part-time senior lecturer in Clinical Teaching and Supervision in the School of Health Sciences at the University of Canterbury, New Zealand. She was Medical Education Coordinator at Waitemata District Health Board at the time this chapter was written and has since returned to Canterbury District Health Board in a similar role. Her research interests are clinical (workplace) learning and supervision and interprofessional education.

Carole Steketee is the Associate Dean (Teaching and Learning) in the School of Medicine at the University of Notre Dame Australia and heads the Medical Education Support Unit. She has held this position since 2007. She co-led the development of a suite of postgraduate courses in health professional education that are delivered using innovative mobile learning technologies. Carole's background is in educational theory, cognition and learning and instructional design. She has recently led the development of Prudentia©, a dynamic web-based curriculum management system that is underpinned by an outcomes-based curriculum

framework. This system is transforming how staff in the School of Medicine at Notre Dame interact with and manage curriculum. Carole has participated in large national projects on interprofessional health education and has published in the area.

Hideaki E. Takahashi is founding President and Professor Emeritus, Niigata University of Health and Welfare; Professor Emeritus and former chair of the Orthopedic Department, Niigata University School of Medicine; and founding chair of the board of the Japan Association for Interprofessional Education (JAIPE). He is interested in treating scoliosis and bone tumors as an orthopedic practice, and focusing his research interest in osteoporosis, particularly on bone remodelling and mini-modelling. He also developed the Japanese Osteoporosis Quality of Life Questionnaire (JOQOL). His honors include the achievement awards of the Japanese Orthopedic Association and the Japanese Society of Bone and Mineral Research, and Remodeling in Bone (RIB) Award of the International Hard Tissue Seminar. Internationally, he was a founding member of the International Society of Bone Morphometry; an honorary member of the Royal College of Orthopedic Surgeons of Thailand; an honorary professor of North China Coal Medical University, Tangshan, China and Krasnoyarsk Medical University, Krasnoyarsk, Russia; and a visiting professor at University Campus Suffolk, UK.

Maria Tassone is the inaugural Director of the Centre for Interprofessional Education, a strategic partnership between the University of Toronto and the University Health Network (UHN) in Toronto, Canada. She is also the Senior Director of Interprofessional Education and Care at UHN. Maria is currently the co-lead of the Canadian Interprofessional Health Leadership Collaborative, one of four international innovation collaboratives recently awarded by the Institute of Medicine in Washington, DC, USA. Maria holds a Bachelor of Science in Physical Therapy from McGill University, a Master of Science from the University of Western Ontario, and she is an assistant professor in the Department of Physical Therapy, Faculty of Medicine, University of Toronto, Canada. Her research and scholarly interests focus on leadership, professional development and knowledge translation across the health professions.

Inge Van de Caveye is a Masters student in Medicine at Ghent University. She is an active student representative. She is the chair of the SWME (Student Workgroup on Medical Education) and one of the founding members of the FSC (Faculty Student Council). Inge is also a member of various committees at Ghent University.

Dr Sarita Verma is a professor in the Department of Family and Community Medicine, Deputy Dean of the Faculty of Medicine and Associate Vice Provost Health Professions Education at the University of Toronto, Canada. She is a family physician who originally trained as a lawyer at the University of Ottawa (1981) and later completed her medical degree at McMaster University (1991). She has been a diplomat in Canada's Foreign Service and worked with UNHCR in Sudan and Ethiopia for several years. Dr Verma is the 2006 recipient of the Donald Richards Wilson Award in medical education from the Royal College of Physicians and Surgeons of Canada and the 2009 co-recipient of the May Cohen Gender Equity Award from the Association of Faculties of Medicine in Canada. Along with colleagues at McGill University, the University of British Columbia and the University of Toronto, she was one of the lead consultants for the Future of Medical Education in Canada Postgraduate project. At present she is the Co-lead for the Canadian Interprofessional Health Leadership Collaborative (CIHLC) at the Institute of Medicine's Global Forum on Innovation in Health Professions Education.

Rashmi Vyas is a professor in the Department of Physiology, Christian Medical College, Vellore, South India. She is a 2003 FAIMER Institute, Philadelphia Fellow. She completed her Masters Degree Program in Health Professions Education at the University of Illinois at Chicago, USA, in 2010 through a FAIMER Fellowship. Her main interests in health professions education are curriculum innovations, faculty development, program evaluation and qualitative research. She is course co-organizer for the Post Graduate Diploma in Family Medicine, a distance-learning program for physicians working in secondary hospitals, and convener for the Medical Council of India Regional Centre for National Faculty Development at her Institute. She is an international faculty for FAIMER Institute, Philadelphia, USA, and national faculty for the three FAIMER Regional Institutes in India. She is visiting faculty for advanced workshops in Health Professions education at Maharashtra University of Health Sciences. She has many national and international conference presentations and publications.

Hideomi Watanabe is Dean of the Gunma University Graduate School of Health Sciences, Japan. He was a Postdoctoral Fellow at Michigan Cancer Foundation, engaging in basic research in cancer metastasis in 1988. In 1990 he joined the Department of Orthopedic Surgery, Gunma University, and has purified a metastasis-related motility factor. He has also engaged in medical practice as an orthopedic surgeon. In 2005

he joined the School of Health Sciences, having implemented unique Interprofessional Education (IPE) since 1999. The Japan Interprofessional Working and Education Network (JIPWEN) was established in 2008 comprising ten (now 11) universities delivering unique IPE. He is the coordinator of JIPWEN and the International Committee Chair of the Japan Association for Interprofessional Education (JAIPE). He is Director of the Centre for Research and Training on Interprofessional Education of Gunma University, which is designated as WHO Collaborating Centre.

1
Introduction

Dawn Forman

This book builds on the 'stories' of our first volume (Forman, Jones and Thistlethwaite, 2014) to provide the latest developments and insights in international leadership in interprofessional education practice and collaboration. It is interesting to see the further leadership developments which have occurred since our first book, with more countries emphasizing the need for collaboration between health and social care professionals and the increasing recognition that we will not be able to cater for the health needs of our communities without changing the way in which we both educate and influence the practice of our healthcare workforce.

This direction was in part stimulated in 2013 by the WHO's guidelines for transforming and scaling up health professionals' education and training (WHO, 2013). Further discussion, including an interactive web site and social media, has facilitated interprofessional education being one of the six themes highlighted for early implementation in the transformation of the workforce (World Health Organization, nd) (http://whoeducationguidelines.org). An international leadership group is proactively using social media both to gather examples of good practice and to share developments.

Significant national agendas are also indicated in the time frame between our two books. For example, Health Education England (2014) urges us to develop a more flexible workforce that is able to respond to the changing patterns of service and embraces research and innovation to enable it to adapt to the changing demands of public health, healthcare and care services. In Australia the health leadership framework (Health Workforce Australia, 2013, P4) includes two significant quotes: 'Research shows the quality of health leadership directly and indirectly affects the quality of patient care and is an important factor

supporting best practice' and 'Leaders affect people, their satisfaction, trust in management, commitment, individual and team effectiveness (and) the culture and climate of organisations.' Whilst in Indonesia the director general of higher education declared that all medical and health educational institutions in Indonesia are required to introduce interprofessional education (IPE) formally in the education process to improve the quality of healthcare (see Chapter 3).

In this book we advance further the exploration of the research and literature with regard to leadership in interprofessional education and hope to stimulate the reader into reflecting and planning changes in their own practice in this area. Whilst a number of the leadership concepts such as transformational and servant leadership and shared leadership are further explored, new terms are also introduced such as distributed leadership, social accountability, power relationships, and the value of social networks.

What Denning (2005) would describe as storytelling is again a vital and important feature of this book as the authors tell their stories. It is apparent in the various chapters how leaders in interprofessional education and practice are learning from good practice nationally; as in the case of research undertaken in Australia (Interprofessional Curriculum Renewal Consortium, Australia, 2014), explored in Chapter 8. Readers wanting to learn more about this may also want to read the article by Thistlethwaite et al. (2014). Increasingly in the chapters we see the authors using evidence-based practice as they both develop interprofessional education and practice and seek to ensure interprofessional developments are sustainable for the future. The change management approaches used to gain this sustainability build on what Sinek (2010) would describe as communicating the 'why' and not just the 'how' and 'what' of interprofessional practice, as we are trying to provide collaborative ways of working which build on the values of the staff in our health and social care systems in providing a 'new era of thinking and practice' (Bevan and Fairman, 2014, p. 3).

The call within health and social care services is not only for leadership of our professions to be interprofessional but for our services to be integrated in order that we can best serve our patients, clients, and communities. We look at the difficulties this poses internationally and explore how social media can be a challenging resource in the context of interprofessional leadership.

We hope this book stimulates the debate with regard to leadership in this field and encourages more research in the area and sharing of good practice.

How to use this book

As with our previous book we hope this guide will help you dip in and out of the book and find what you are looking for within easy reach. We have separated the book into three parts. Part I, *Leadership Frameworks for Interprofessional Learning*, provides useful frameworks on the development of interprofessional leaders and the development of interprofessional practice internationally. Part II, *Collaborative Developments*, looks at some of the 'stories' of collaborative developments taking place internationally. Part III, *Innovation in Practice*, provides 'stories' of innovations both in leadership and in interprofessional practice to give the reader an insight into the variety of developments that are taking place internationally. We could have divided our chapters differently, and there are similar themes across the chapters but also differences in focus and approach. Therefore to help you navigate the book and find out what is of most interest to you there is a series of tables below: Table 1.1 indicates the country the chapter refers to, and the leadership model(s) highlighted, while Table 1.2 focuses on the leadership topic, and provides a list of further reading that may be helpful. In addition Appendix A provides a comprehensive list of definitions, which again we hope is helpful.

In whichever way you choose to read and use this book we hope you enjoy the experience and find new ways of leading the development, implementation, and sustainability of interprofessional education and practice.

Table 1.1 Chapters and the leadership aspect highlighted

Chapter	Country	Key leadership and interprofessional aspects highlighted
Section I		
2	United States	Shared leadership; distributed leadership; coordinated leadership; social networks; concept of leadership; formal/informal leadership; change; continuous learning; risk; communications; complexity adaptive systems; collaboration; coaching; power bases; multi-team systems; dynamic delegation; training for interprofessional practice (IPP)
3	Indonesia	Collaborative competency; champions and leaders; collaborative practice and context; task-force teams; problem-based learning; communications; learning strategy; pilot studies; intersection of roles and responsibilities; working and sharing together; respect of other professions; logistics and timing; module development team; feedback and reflection; roles and responsibilities of lecturers/tutors; early-stage IPE implementation; participation of clinicians; leadership; standard operation policy (SOP); change management; longitudinal and integrated placements
4	Japan	Disaster management; definite mission, vision, and passion; leadership quality of life; independent living; collaboration; cooperation; maldistribution of health professionals; lifelong learning; new competencies; collaborative network of universities; plural models; pre-qualification curricula; multicentre IPE; problem-based learning; technology; community based; regional cooperative clinical pathway; financial support; duty to stay and practise; principles of primary care professionals; locomotive syndrome and prevention strategy
Section II		
5	Canada	Collaborative care; leadership models; transformational leadership; collaborative leadership; patient outcomes; evaluation; client (patient) centred; top-down leadership; uncertainty/complexity; complementary leadership framework; transitional leadership; empowering leadership; resonant leadership; servant leadership; emotional intelligence; networking and technology; change; accountability; external demands; budgets; loss of allegiance; quality improvement; pedagogy of practice; system-driven conformity; multidisciplinary; status quo; life expectancy; who pays the bill?; temporary leaders; non-judgmental enquiry; comparison of leadership characteristics; inspire a shared vision; enable others to act; challenge processes; encourage the heart; communications; competencies
6	UK	Curriculum models; pre-registration; blended learning; patient involvement; person-centered; integrated and embedded approach; changing priorities; primary/community care services; agile team working; flexibility; demographics of population and professionals; human genome project; NHS values; transparency; workforce patterns; transferable skills; change triggers; value for money; holistic learning culture; academic versus clinical foci; medical simulation; competing demands; adaptive leadership; wicked issues; stakeholders; ladder of participation; learner partnership; learner leadership; enabling environment

7	Netherlands	Interprofessional community; leadership training strategy; change agents; integrated curriculum; IPE in the community; transformational leadership; student participation; coherence of curriculum; interdependence of clinical and administrative functions; complex adaptive system (CAS); empowering collaboration; organization identity; community-based experiences; community diagnosis; community orientation; community-orientated primary care exercise (COPC-exercise); micro and macro impacts
8	Australia	Effective professional/interprofessional practice; shared leadership; interprofessional pedagogy; national leadership; leading change; complex organization settings; curriculum renewal/IPP/IPE; multi-agency involvement; fragmented national approach; integrated care; champions; diversity of IPE concept/terminology/implementation; diversity of raw data; methodology of data collection and analysis; 4D conceptual framework; competencies and learning outcomes; diversity of teaching, learning and assessment; enablers and constraints; key areas for development and national capacity-building; national forums; community of interest and practice
9	Australia	Collaborative practice and leadership; flexible and adaptive approaches; team-working 'followership'; team dynamics; team members' 'belongingness'; constructive alignment; clinical placement education issues; duration and nature of clinical placements; transformational leadership; knowledge/skills/attitudes (KSA); competence measurement; capability; collectivist approach; competence framework; learning outcomes; assessment methodology; problem-based learning; psychometric tools; issues in measuring teamwork; summative and formative assessment; feedback; work-based assessment; pragmatic assessment
10	Canada	Transformative learning; interdependence in education; integrated core concepts-collaborative leadership/social accountability/community engagement; nurturing transformational leadership; key competencies; micro and macro collective goals; change management; long-term vision and strategy; sense-making; sectorial territoriality 'silos'; leadership styles
Section III		
11	New Zealand	Collaborative working; transformational leadership; leadership and governance; diversity of client 'patient' needs; communications streamlining; use of technology; interprofessional consultations; patient assessment and managing; patient pathways; interpretation of interprofessional collaborative practice; funding; evaluation
12	Australia	Hero leader; macro and micro change; financial viability; professional tribalism; negative stereotyping; spontaneous crisis-driven; distributed leadership; people and patient-centred; synchronized; mutually reliant; mutual goals; open communications; sustained collaboration; holistic approach; cooperative; memorable leadership framework; stakeholders
13	New Zealand	Active engagement community of practice; communications; collaboration; continuous improvement and team-based learning; cognitive decision-making; opinion leaders; transformational leadership-expertise/credibility/trust; coaching; change management; learning and working together; medical safety; changes in teaching style; champions; sharing information; feedback; patient stories; systems approach; skills stations; role modelling; attitudinal change
14	India	IP leadership vision and infrastructure; educational strategy; readiness for interprofessional learning scale (RIPLS); cohesive teamwork; faculty attitudes and perceptions; supportive leadership; funding; stakeholders

Table 1.2 Further reading on the leadership aspect

Key leadership aspect	**Further reading on this leadership topic**
Change management	Atter (2008) Bushe and Marshak (2014). Halvorson and Chinnes (2007) Rubin and Stone (2010)
Collaborative leadership and shared decision-making	Atter (2008) Endacott et al. (2008) Halvorson and Chinnes (2007) Kenny et al. (2010) Newton et al. (2012) Reeves et al. (2010) Stapleton (1998) Willumsen (2006)
Communication	Atter (2008) Endacott et al. (2008) Kenny et al. (2010) Sasnett and Clay (2008) Schippers et al. (2008) Sinek (2010) Willumsen (2006) Wylie and Gallagher (2009)
Competency	Newton et al. (2012) Thistlethwaite et al. (2014)
Cultural context	Atter (2008) Neill et al. (2007) Reeves et al. (2010) Rogers et al. (2012)
Emotional intelligence	Harrison and Fopma-Lou (2010) MacDonald et al. (2012) Sasnett and Clay (2008) Schippers et al. (2008) Stapleton (1998)
Empowering	Sasnett and Clay (2008) Willumsen (2006)
Empowering leadership/ transformational leadership	Abbott (2007) Atter (2008) Endacott et al. (2008) Metzger et al. (2005) Nielsen et al. (2009) O'Brien et al. (2008) Pollard et al. (2005) Rubin and Stone (2010) Schippers et al. (2008) Willumsen (2006) Wylie and Gallagher (2009)

(*continued*)

Table 1.2 Continued

Key leadership aspect	Further reading on this leadership topic
Integrated care	Barr (2012) Gaboury et al. (2011) Leutz (1999) Valentijn et al. (2012)
Mentoring and coaching	Forman et al. (2013) Nielsen et al. (2009) O'Brien et al. (2008)
Motivation and role models (champions)	Sasnett and Clay (2008)
Professional identity	Reeves et al. (2010) Willumsen (2006)
Reflexivity	MacDonald et al. (2012) Schippers et al. (2008)
Servant-leadership	Neill et al. (2007) Neill and Saunders (2008) Willumsen (2006)
Strategic and governance systems theory	Metzger et al. (2005) Nichol et al. (2013) Willumsen (2006)
Sustainability and resilience	Endacott et al. (2008) Hoffman et al. (2008) Harrison and Fopma-Lou (2010) Meads et al. (2009) Sasnett and Clay (2008) Stapleton (1998) Tugade and Fredrickson (2004)
Team working and team building	Atter (2008) Hoffman et al. (2008) O'Brien et al. (2008) Sasnett and Clay (2008) Willumsen (2006)
Transformational leadership	Bevan and Faiman (2014) Reeves et al. (2012)

References

Abbott, S. (2007). Leadership across boundaries: a qualitative study of the nurse consultant role in English primary care. *Journal of Nursing Management, 15*(7): 703–10.

Atter, L. (2008). Using creative transformational leadership in shaping our hospice's journey to excellence. *Practice Development in Health Care, 7*(3): 134–42.

Barr, H. (2012). Integrated and interprofessional care. *International Journal of Integrated Care, 12*: 1–4.

Bevan, H. and Fairman, S. (2014). *The new era of thinking and practice in change and transformation: a call to action for leaders of health and care*. NHS Improving Quality, at: http://media.nhsiq.nhs.uk/whitepaper/index.html [accessed 27 August 2014]

Bushe, G. R. and Marshak, R. J. (2014). The dialogic mindset in organization development. *Research in Organizational Change and Development, 22*: 55–97.

Denning, S. (2005). *The leader's guide to storytelling: mastering the art and discipline of business narrative*. San Francisco: Jossey-Bass.

Endacott, R., Boulanger, C., Chamberlain, W., Hendry, J., Ryan, H. and Chaboyer, W. (2008). Stability in shifting sands: contemporary leadership roles in critical care. *Journal of Nursing Management, 16*(7): 837–45.

Forman, D., Joyce, M. and McMahon, G. (2013). *Creating a coaching culture for managers in your organization*. Abingdon: Routledge.

Forman, D., Jones, M. and Thistlethwaite, J. (eds) (2014). *Leadership development for interprofessional education and collaborative practice*. Basingstoke: Palgrave Macmillan.

Gaboury, I., Lapierre, L. M., Boon, H. and Moher, D. (2011) Interprofessional collaboration within integrative healthcare clinics through the lens of the relationship-centered care model. *Journal of Interprofessional Care, 25*: 124–30.

Halvorson, C. K. and Chinnes, L. F. (2007). Collaborative leadership in product evaluation. *AORN Journal, 85*(2): 334–52.

Harrison, P. A. and Fopma-Lou, J. L. (2010). Reflective journal prompts: a vehicle for stimulating emotional competence in nursing. *Journal of Nursing Education, 49*(11): 644–52.

Health Education England. (2014). *Research and innovation strategy: delivering a flexible workforce receptive to research and innovation*. London: Department of Health

Health Workforce Australia. (2013). *Health LEADS Australia: the Australian health leadership framework*. Adelaide, Australia: Health Workforce Australia

Hoffman, S. J., Rosenfield, D., Gilbert, J. H. V. and Oandasan, I. F. (2008). Student leadership in interprofessional education; benefits, challenges and implications for educators, researchers and policymakers. *Medical Education, 42*(7): 654–61.

Interprofessional Curriculum Renewal Consortium, Australia. (2014). *Curriculum renewal for interprofessional education in health*. Canberra: Commonwealth of Australia. Office for Learning and Teaching.

Kenny, D. J., Richard, M. L., Ceniceros, X. and Blaize, K. (2010). Collaborating across services to advance evidence-based nursing practice. *Nursing Research, 59*(18): S11–S21.

Leutz, W. N. (1999). Five laws for integrating medical and social services: lessons from the United States and the United Kingdom. *Milbank Quarterly, 77*(1): 77–110.

MacDonald, M. B., Bally, J. M., Ferguson, L. M., Murray, L. B. and Fowler-Kerry, S. E. (2012). Knowledge of the professional role of others: a key interprofessional competency. *Nurse Education in Practice, 10*(4): 238–42.

Meads, G., Jones, I., Harrison, R., Forman, D. and Turner, W. (2009). How to sustain interprofessional learning and practice: messages for higher education and health and social care management. *Journal of Education and Work, 22*(1): 67–79.

Metzger, M., Alexander, J. A. and Weiner, B. (2005). The effects of leadership and governance processes on member participation in community health coalitions. *Health Education and Behavior, 32*(4): 455–72.

Neill, M. W., Hayward, K. S. and Peterson, T. (2007). Students' perceptions of the interprofessional team in practice through the application of servant leadership principles. *Journal of Interprofessional Care, 21*(4): 425–32.

Neill, M. W. and Saunders, N. S. (2008). Servant leadership: enhancing quality of care and staff satisfaction. *The Journal of Nursing Administration, 18*(9): 395–400.

Newton, C., Wood, V. and Nasmith, L. (2012). Building capacity for interprofessional practice. *The Clinical Teacher, 9*(2): 94–8.

Nichol, P., Nichol, P., Lu, J. and Forman, D. (2013). Looking to the future: framing the implementation of interprofessional education and practice with scenario planning. *Focus on Health Professional Education: A Multi-disciplinary Journal* (in press).

Nielsen, K., Yarker, J., Randall, R. and Munir, F. (2009). The mediating effects of team and self-efficacy on the relationship between transformational leadership, and job satisfaction and psychological well-being in healthcare professionals: a cross-sectional survey. *International Journal of Nursing Studies, 46*(9): 1236–44.

O'Brien, J. L., Martin, D., Heyworth, J. and Meyer, N. R. (2008). Negotiating transformational leadership: a key to effective collaboration. *Nursing and Health Sciences, 10*: 137–43.

Pollard, C., Ross, K. and Means, R. (2005). Nurse leadership, interprofessionalism and the modernization agenda. *British Journal of Nursing, 14*(6): 32–44.

Reeves, S., MacMillan, K. and van Soeren, M. (2010). Leadership of interprofessional health and social care teams: a sociohistorical analysis. *Journal of Nursing Management, 18*(3): 258–64.

Reeves, S., Zwarenstein, M., Goldman, J., Barr, H., Freeth, D., Hammick, M. and Koppel, I. (2011). *Interprofessional education: effects on professional practice and health care outcomes.* The Cochrane Database of Systematic Review, at: www.thecochranelibrary.com

Rogers, G., Duffy, E. and Forman, D. (2013). The context of health professional education today. In S. Loftus, T. Gerzina, J. Higgs, M. Smith and E. Duffy (eds), *Educating health professionals: becoming a university teacher.* Rotterdam: Sense

Rubin, M. S. and Stone, R. K. (2010). Adapting the 'managing by walking around' methodology as a leadership strategy to communicate a hospital-wide strategic plan. *Journal of Public Health Management and Practice, 16*(2): 162–6.

Sasnett, B. and Clay, M. (2008). Leadership styles in interdisciplinary health science education. *Journal of Interprofessional Care, 22*(6): 630–8.

Schippers, M. C., den Hartog, D. N., Koopman, P. L. and van Knippenberg, D. (2008). The role of transformational leadership in enhancing team reflexivity. *Human Relations, 61*(11): 1593–616.

Sinek, S. (2010). *Start with why: how great leaders inspire everyone to take action.* London: Penguin Books.

Stapleton, S. R. (1998). Team-building: making collaborative practice work. *Journal of Nurse-Midwifery, 43*(1): 12–18.

Thistlethwaite, J. E., Forman, D., Matthews, L. R., Rogers, G., Steketee, C. and Yassine, T. (2014). Competences and frameworks in interprofessional education: a comparative analysis. *Academic Medicine, 89*(6): 869–75.

Tugade, M. M. and Fredrickson, B. L. (2004). Resilient individuals use positive emotions to bounce back from negative emotional experiences. *Journal of Personality and Social Psychology*, *86*(2): 320–33.

Valentijn, P. P., Schepman, S. M., Opheij, W. and Bruijnzeels, M. A. (2012). Understanding integrated care: a comprehensive conceptual framework based on the integrative functions of primary care. *International Journal of Integrated Care, 13*(Jan/March): 1–12.

Willumsen, E. (2006). Leadership in interprofessional collaboration: the case of childcare in Norway. *Journal of Interprofessional Care, 20*(4): 403–13.

World Health Organization. (2013). *Transforming and scaling up health professionals' education and training world.* World Health Organization Guidelines. Geneva: World Health Organization.

World Health Organization. (n.d.). *Transformative education for health professionals,* at: http://whoeducationguidelines.org [accessed 26 August 2014].

Wylie, D. A. and Gallagher, H. (2009). Transformational leadership behaviors in allied health professions. *Journal of Allied Health, 38*(2): 65.

Part I

Framing Leadership in Interprofessional Education

2
Leadership Frameworks for Interprofessional Learning

Alan Dow, Nital Appelbaum and Deborah DiazGranados

Introduction

Shared leadership, where influence is distributed among health professionals, is considered essential for the complex challenges facing healthcare. In this chapter, the concept of shared leadership related to interprofessional practice is discussed. We describe the different types of leaders within healthcare and what team processes support developing shared leadership. In addition, we present the evidence supporting shared leadership and how shared leadership can be measured with social network analysis. We then discuss the implications of these concepts for interprofessional practice and educating health professionals. We conclude with some specific recommendations for training students in shared leadership and interprofessional practice.

Leadership and shared leadership

Functional leadership theory, the most prominent and well-described leadership model internationally (Zaccaro et al., 2001), defines leadership as satisfying the needs of team members so that they, in turn, can be successful in completing work and contribute to the team reaching overall goals (McGrath, 1962). Traditionally, leadership had been conceptualized as behaviours by the individual at the top of a hierarchy. This person was seen as responsible for providing structure, resources, and motivation to the rest of the team and crafting goals for the team in response to external demands (Bass and Bass, 2008).

However, as society has moved from the industrial age to the information age, the nature of work has changed and the concept of leadership has evolved from a description of the traits of a leader to a description

of how a team functions. In the newer model, leadership is a characteristic of a team with contributions from both hierarchically ordained leaders and other team members who may not have a formal leadership role (Day et al., 2004). This reconceptualization of leadership has been called shared leadership (Gibb, 1954). Shared leadership is focused on the multiple sources of influence found within a team. Teams with high levels of shared leadership distribute the source of influence across team members rather than influence being focused on a single individual. When teams engage in shared leadership, members lead and follow dynamically so team members are both providing leadership and responding to leadership from other sources on the team.

In comparison to vertical leadership paradigms, research on shared leadership models has shown that teams adopting this model are more effective, especially in complex environments (Wang et al., 2014). The ambiguity that is found in complex tasks often makes it prohibitive for a single leader to fulfil all leadership functions. In the complex, rapidly evolving world of healthcare, shared leadership may be especially important for improving the health of patients and communities.

Shared leadership and healthcare

Healthcare can be viewed as a complex adaptive system (Institute of Medicine, 2001). Inputs to the system are constantly changing; for example, patients get sicker or improve, resources become more abundant or less available, and the providers available in a certain situation change depending on location and time of day. Similarly, the desired output from the patient-care team (for example the patient-defined goals of care) often fluctuates. For a specific patient, the goal of care may evolve from preventative care to chronic disease management to urgent care to palliative care. Across a population, these shifts demand a health system that can adapt to changing conditions. At the centre of these shifts are teams of healthcare providers, patients, and families making individual and team decisions with potentially broad impacts on a community. Only recently has the USA healthcare system begun to recognize this organizational aspect of care, sought to develop approaches to study how care is delivered in this environment, and aspired to create a continuously learning system capable of improving care delivery (Institute of Medicine, 2012).

To create high-performing, continuous-learning systems, we need teams that are also continuously learning. Effective learning teams engage in learning processes which include collaborative problem-solving, reflection,

and work-practice improvement (Argote et al., 2001). Continuously learning teams perform better (Edmondson, 1999). Central to the successful learning teams is psychological safety: the idea that team members can take interpersonal risks without repercussions. When individuals on a team perceive a level of respect and acceptance, they experience higher levels of psychological safety (Edmondson, 1999) which, in turn, allows them to speak freely, facilitating the learning process. Members are not concerned about reactions to bringing up errors or discussing concerns.

Across industries, individuals in high authority positions perceive their opinions to be valued and have a higher level of psychological safety (Nembhard and Edmondson, 2006). Team leaders in high authority positions can influence the teams they are assigned to lead. For example, when nurse managers were more inclusive – defined as supportive and welcoming of questions and challenges – frontline nurses perceived it was safer to speak up and voice concerns (Edmondson, 1996). This is a good illustration of how leaders can create the teamwork foundations that improve the process of and enhance the outcomes from work.

In the complex adaptive system of healthcare, hierarchical leaders, who have been often viewed as the only persons to influence a team, are only a part of the potential leadership within a team (Uhl-Bien et al., 2007). Because of the changing needs of the system, individuals and teams must adapt, and different team members – often not the hierarchical leader who may have legitimate positional power – assume leadership based on their expertise and the needs of the situation. The individuals who assume leadership based on contextual demands are considered emergent leaders and their influence is primarily based on their expertise.

For example, a nurse making patient rounds might discover a patient in cardiac arrest. The nurse activates the code button to call the acute resuscitation team but, before they arrive, the nurse begins chest compressions. As other healthcare providers from the floor respond to the alarm and rush into the room, the nurse announces the cardiac arrest, directs the providers to assist in the compressions, and calls for a defibrillator. Soon, the acute resuscitation team arrives but, in the interim, the nurse has served as a leader, responding to the needs of the situation and the patient by providing their expertise as well as structure and direction to the ad hoc team gathering. This type of leadership is called emergent leadership.

Emergent leaders can also appear in non-urgent settings. Consider a patient who visits a pharmacy in a community setting where the pharmacist recognizes that the patient needs medication counselling. The

pharmacist, rather than continuing work on medication refills, shifts focus to the patient and reviews with him or her the proper use of a medication. The pharmacist has become the leader of the dispersed set of providers involved in the care of the patient and, in doing so, has prevented a potential harmful medication error. If necessary, the pharmacist can contact the patient's primary care physician to access different expertise and create a larger ad hoc team with greater shared leadership.

Leaders in education and practice should consider reframing how leadership is viewed in the complex adaptive system of healthcare. The focus should not just be on developing individuals who will be in positions of power. Under the new model of emergent shared leadership in complex adaptive systems, leadership becomes a quality of the team that can be developed and supported (Day et al., 2004). The distributed expertise of the team should be complemented with competency across a number of leadership processes, such as setting a vision, crafting organizational structures, allocating external resources, and being able to relinquish power. This approach, framed as shared leadership, focuses on how well the team collaborates to adapt to change in the environment, with different members becoming leaders and followers over time based on resources and expertise.

The leader's position on the team

Although shared leadership is dynamic, an individual's typical position relative to the team has important implications for the leadership capacity of that individual. The leadership position relative to a team can be thought of as aligning with two axes (Morgeson et al., 2010). The first axis ranges from formal to informal. A formal leader is one whose leadership status derives from a relatively high position in the existing hierarchy. In contrast, an informal leader is an individual whose leadership is not granted by the traditional hierarchy. Formal leaders have greater access to external resources through the chain of command, while informal leaders often need to engage formal leaders to access external resources. While emergent leaders can be formal or informal leaders, they frequently are informal.

The second axis for team leadership extends between internal and external (Morgeson et al., 2010). An internal leader is one who is well-integrated into a team (that is, someone who would be considered a team member). An external leader is someone who is not engaged in the regular function of the team. Internal leaders have a better understanding of the task at hand and the individuals on the team. In contrast, external

Table 2.1 The axes of leadership with healthcare examples (Morgeson et al., 2010)

	Internal	**External**
Formal	Physician (often)	Unit manager Executives
Informal	Nurse, social worker (often)	Quality improvement champion

leaders have a better perspective for evaluating the team's performance, providing feedback, and coaching.

Leaders in healthcare can be found at each point on the axes (Table 2.1). The previously mentioned nurse who discovers the patient in cardiac arrest is an informal, internal leader. When the leader of the resuscitation team arrives, that individual (a formal, external leader) assumes direction of the team. Importantly, each of these individuals has different abilities. While the nurse has more knowledge about the patient, the unit and the other unit personnel, the resuscitation leader has access to more resources and more expertise. Although physicians tend to be formal team leaders and other health professionals tend to be informal leaders, this relationship certainly varies across settings. Likewise, formal leaders higher in the organizational hierarchy are frequently less engaged and thus less internal to clinical care teams.

Importantly, each box within the table has different sources of power. Power has been described as having six sources (French and Raven, 1959):

- Legitimate power – power stemming from a formal position;
- Reward power – power stemming from having things another person wants;
- Coercive power – power stemming from fear and intimidation;
- Expert power – power stemming from expertise and credentials;
- Information power – power stemming from the ability to control the flow of information;
- Referent power – power stemming from charisma, attraction, and/or respect.

These six sources have been classified into two main groups: positional power and personal power (Yukl and van Fleet, 1992). Positional power is conceptually similar to the idea of formal leadership and encompasses legitimate power and reward power. Because resources and job status are often linked to formal leadership, coercive power usually aligns with formal leadership. Within the traditional leadership model in

healthcare, these three sources of power were buoyed by expert power – usually an aspect of personal power – that gave physicians a greater hierarchical power than formal leaders would have in most non-healthcare organizations. However, as other health professionals have become more expert and more essential to care, these other team members have seen increases in both expert power and information power. In a sense this transformation in healthcare mirrors the broader changes in work elsewhere in society as we have moved from the industrial into the information age. Most employees have unique expertise that they bring to a work team and, because of their expertise, they can harness information power to shape the work of the team (that is, voice). As a result, effective teams are identified by mutual respect or social support – referent power given by team members to each other. As positional power and formal leadership have become less dominant, personal power – expert power, information power, and referent power – has become increasingly important in healthcare.

Healthcare practitioners should recognize their position along these axes and how the different sources of power should shape their team interactions (Dow et al., 2013). Physicians and other formal leaders should recognize the dangers of using positional power to achieve individually identified team goals; this approach is short-sighted and outdated. Instead, these individuals need to demonstrate leader inclusiveness (Nembhard and Edmondson, 2006) by recognizing and encouraging the expert, information, and referent power of lower-status team members. Individuals, who potentially are informal leaders, need to ensure their proficiency to maintain expert power and understand how to communicate effectively to exercise information power. While internal team members are more directly engaged in the ongoing power interactions on a team, external leaders can be critically important in encouraging the appropriate use of power by interacting with the team as a group rather than through a subset of formal leaders, by appropriately aligning incentives (reward power), and by using coaching to encourage expert, information, and referent power.

The elements of shared leadership

Shared leadership that improves team performance has several key features (Carson et al., 2007). Specifically, certain internal and external factors are needed to support shared leadership. First, teams must have a shared purpose. Members must agree upon the goal for the team and the steps to be taken toward reaching that goal. This agreement then increases

the motivation and empowerment of team members. In healthcare, the related term 'shared mental models' is often used (Cannon-Bowers et al., 1993). Having the same understanding of a patient's plan of care is essential. For example, contrast the patient who is being discharged from a hospital to a nursing home to one who is being discharged from a hospital to their own home. The entire team – physicians, nurses, pharmacists, social workers, therapists – needs to plan differently depending on the patient's destination and the wishes of the patient and, where appropriate, of their family or carer. Without a shared purpose, team members, including the patient, may work futilely towards the wrong goal, undermining motivation, trust, and professional relationships.

The second key element for shared leadership is social support, a concept interrelated with psychological safety (Edmondson, 1999). Teams build strength by recognizing each other's contributions and accomplishments. In turn, this strength creates a resilient team where members are not afraid to make decisions as emergent leaders or to navigate conflict if team members disagree. In our earlier example where a nurse activated the emergency resuscitation team as an emergent leader, the formal leader of the resuscitation team demonstrated social support by relying on the nurse to supply critical patient information and praising the nurse's efforts to initiate the resuscitation. In contrast, not acknowledging the nurse's critical role in this situation does not engage her or him as a vital part of the resuscitation effort and hampers patient care.

The third element of shared leadership is voice, or simply the input of team members in decisions. Whereas social support may be considered a retrospective or concurrent interaction, voice is a forward-looking concept that helps define the shared goals of the team. In addition, voice provides a foundation for team members from lower levels of the hierarchy to suggest ideas and challenge the current plans of the team without fear of negative consequences; that is, there is psychological safety (Edmondson, 1999). This empowerment is essential for emergent, shared leadership and for learning teams.

These three characteristics of teams with shared leadership are interconnected and potentially mutually reinforcing. For example, voice is important for developing shared purpose and shared purpose leads to mutual support and increased voice. While these three characteristics are internal to the team, the final characteristic that is associated with effective shared leadership is external to the team – supportive coaching.

Supportive coaching seeks to develop shared leadership in several ways. First, supportive coaching signifies the larger organization's or system's support for the work of the team. This support fosters the

culture of inclusiveness important for developing psychological safety and the voice of team members (Nembhard and Edmondson, 2006). Supportive coaching also can foster specific team processes such as developing shared goals, creating mutual support through role-modelling and providing encouragement, and supplying other strategies to optimize team effectiveness. In the healthcare system, multidisciplinary team members often report to supervisors from each team member's own profession. As a consequence, multidisciplinary teams rarely have an external coach who focuses on the performance of the team as a whole. External coaches who focus on interprofessional team process could be an avenue for improving interprofessional team practice.

The evidence for shared leadership

While shared leadership can be contrasted with traditional leadership, each form of leadership might have merit in different situations. Interprofessional practice can be seen as a continuum from non-urgent care to emergency care (Retchin, 2008). As urgency increases, authority becomes more structured with the physician commonly at the top of the hierarchy. This sort of hierarchy supports a more traditional approach to leadership which needs to be questioned within the interprofessional team.

Consider a continuation of the cardiac arrest situation introduced above. The physician arrives and assumes the role of formal leader. Working from well-known treatment algorithms (American Heart Association, 2010), the physician assigns roles such as chest compressions, electric treatment, and medication administration. He or she also arranges airway management. Yet the physician also seeks information from the nurse and other staff about the patient. Trying to understand why the patient has arrested and identify possible steps to help the patient, the physician engages the information and expert power of other team members such as the nurse. The traditional leadership relationship begins to evolve into a shared leadership model as the team begins to coalesce around the needs of the patient.

Similarly, an operative team conducting a complex surgical procedure might have a traditional leadership structure. The technical expertise of the surgeon grants that individual power in this situation. In the background though, the rest of the operative team – nurse, scrub technicians (operating-department practitioners), the anesthesiologist – are anticipating the needs of the surgeon and waiting to step into an emergent, shared model of leadership if needed. If a crisis occurs, the rest of the

team members adapt their work to support the surgeon and, if need be, rescue the patient from harm.

In addition, shared leadership can sometimes actually be divided leadership. The degree to which leadership processes are shared is important. For example, shared leadership has been divided into distributed-fragmented and distributed-coordinated types (Mehra et al., 2006). Teams with distributed-fragmented leadership have more than one leader; however, not all members of the team are engaged in leadership. Rather, a subset of the team members are leaders. An example in healthcare would be a team with two leaders who may or may not work with each other in a coordinated fashion. In contrast, distributed-coordinated leadership better approaches the ideal of shared leadership, with all members of the team having the opportunity to participate in leadership. In this instance, each team member can become an emergent leader if needed.

These distinctions are important. Distributed-coordinated teams have been found to perform better than distributed-fragmented or individually led teams (Mehra et al., 2006). Additionally, single-leader teams have been found to perform better than distributed-fragmented or leaderless teams (McIntyre and Foti, 2013). As systems move towards embracing shared leadership, embracing truly shared (that is to say distributed-coordinated) leadership is essential for realizing the benefits of this leadership approach.

In healthcare, shared leadership has been found to improve performance during specific circumstances. In interprofessional simulations of anesthesia crises (Kunzle et al., 2010), teams performed better with shared leadership which depended on nurses demonstrating leadership behaviours to reshape the work of the team. However, the physicians' role in encouraging leadership behaviours from nurses in the simulations was unclear.

Shared leadership also does not always predict a higher rate of success. In simulations for pilots and cabin crews of a mid-air fire, three findings were noted (Bienefeld and Grote, 2013). First, shared leadership by cabin crews improved team performance. Second, leadership behaviours by pursers who spanned boundaries (that is to say gathered and transferred critical problem-solving information) between the cockpit and cabin crew also predicted success. Third, and most interestingly, shared leadership in the cockpit did not predict better outcomes. These findings highlight the complexity of leadership models. While shared leadership was not inferior, it clearly was more important in certain situations (for example, the cabin) than others (for example the cockpit). This type of scenario where different teams are responsible for different

tasks as part of a larger system is called a multi-team system (Marks et al., 2005). Multi-team systems are common in healthcare though they have not been well-studied. Understanding how the work of the individual teams fits together in the larger system has important implications. For example, in this study, the cabin situation where the crew was directly dealing with smoke and with affected passengers may have been more complex while the cockpit activities for making an emergency landing were urgent but more straightforward. If true, this insight should shape the work of the purser but less so other team members. As shared leadership continues to evolve into one of the dominant models for conceptualizing team function in the modern workplace, interaction between teams should also be examined.

Measuring shared leadership

One of the recent advances in studying leadership is the application of social network analysis techniques. Social network analysis measures the relationships between interacting units (Wassernman and Faust, 1994). Network theory provides a useful perspective for measuring leadership relationships within a team and their influence. Applied to teams, social network analysis can describe how team members interact, including who is viewed as a leader, both formally and informally, and which members are more or less central to team function. Using social network analysis, researchers have shown that certain leadership structures (for example, shared versus traditional) perform better in certain environments (Mehra et al., 2006). In addition, social network analysis has been shown to be a more descriptive and predictive tool for assessing team structures than aggregated data (for example, median Likert-scale ratings of leadership by team members) (D'Innocenzo et al., 2014). By integrating social network analysis concepts into assessment, educators, in addition to researchers, can better understand the function of teams.

Translation to healthcare

While healthcare is a system rich in teams, most of the studies of teams and leadership have been done in a non-healthcare context. Applying the findings from these studies to healthcare should be done cautiously. Yet the alternative is to rely on no evidence base for understanding teams and training individuals in interprofessional competencies. The non-healthcare world of work has a much more sophisticated approach to teamwork (Bharwani et al., 2012), and starting from this basis seems

sensible as educators and researchers unravel the team aspects specific to healthcare (for example, the unusual power wielded by physicians historically).

Healthcare also has some unusual features related to how teams are constructed. For example, many healthcare practitioners move through many teams during a day, resulting in fluid team membership. Consider the nurse on an inpatient floor. He or she may have four patients cared for by four different medical teams and function as a team member on all these teams. In addition, he or she may identify their nursing unit colleagues as a discrete team. This nurse is functioning as part of a multi-team system (Marks et al., 2005), or collaborative practice, which requires specific skills for integrating within teams and being able to cross boundaries between teams. The interrelated multi-team system of healthcare adds another dimension of complexity to interprofessional teamwork and also potentially increases the adaptability and resilience of the system as a whole (DiazGranados et al., 2014).

Healthcare also approaches training and the development of expertise differently from a non-healthcare context. Particularly in academic centres training is woven into the approach to team function. Through a process described as dynamic delegation (Klein et al., 2006), more expert physicians (for example, attending physicians/consultants) delegate responsibility to less experienced physicians (for example, interns). As a condition of this delegation, the experts expect the novices to escalate up the hierarchy if a situation, such as a critically ill patient, requires it. Through this process, interns gain experience and learn, while attending physicians engage in coaching behaviours and can focus their attention on the most complex patients.

However, two important caveats should be considered in relation to this model. First, other healthcare practitioners around the physician hierarchy interact with the process of care. Delegation and escalation might occur within the nursing hierarchy, for example, or across professions (Dow et al., 2013). In a sense, this active transition of responsibility is essential to developing shared leadership if it is also supported by shared purpose, social support, and voice. Second, in practice, attending physicians often do not hear about critically ill patients because resident (registrar/junior) physicians do not recognize the need to access attending expertise (Elbardissi et al., 2009). As a result, other health professionals are placed in the position of working within or around the hierarchy to access expertise. As we move towards shared leadership and interprofessional practice, how the traditional hierarchy is reshaped will be a critical issue to confront.

Finally, healthcare faces some historic professional divides that negatively affect team performance. While physicians often feel collaboration between team members is excellent, nurses disagree (Lingard et al., 2012). Nurses value interprofessional practice from the perspective of equality, but physicians view interprofessional practice as a pragmatic issue (Haddara and Lingard, 2013). None of these contrasting views inhibits interprofessional practice, yet educators and researchers need to be aware of these potential issues and prepare to engage learners and practitioners through tailored means across some deep-seated cultural issues.

Implications for training

Based on the review of the literature above, we suggest the following recommendations for training for interprofessional practice:

1. **Students and practitioners should perceive and be able to describe healthcare as a complex adaptive system.** A foundational understanding of the dynamic nature of healthcare is critical because it underpins the type of team performance the system demands. Healthcare practitioners need to appreciate that resources, processes and goals change, and individuals and teams need to be responsive to these changes.
2. **Students and practitioners should know how shared leadership enhances teamwork in the healthcare environment.** They should recognize the beneficial contributions of allowing others to lead, embrace their own opportunities to show leadership and expertise, and be willing to allow others to lead as the situation dictates.
3. **Students and practitioners should demonstrate the capacity to develop a shared purpose or team mental model.** They should learn to engage in behaviours so that a mental model can be created when there is no mental model to start from. Included in this capacity should be the ability to compromise and resolve conflict when engaging in the process of developing a mental model.
4. **Students and practitioners should demonstrate social support and encourage the voice of more reticent team members.** All team members should recognize and support contributions from all team members. In particular, formal leaders should ensure that less vocal team members have opportunities to contribute and develop the capacity to lead if necessary.

5. **Students and practitioners should understand their professions' sources of power, how those sources of power interact with the concepts of formal and informal leadership, and how to leverage their power to improve patient care.** All healthcare practitioners should recognize their expertise and information-sharing as key elements of power and the effectiveness of care delivery. In addition, formal leaders should recognize their responsibility to support informal leaders to become emergent leaders when needed.
6. **Students and practitioners should be able to assess the function of the teams on which they serve and recognize and address deficiencies in shared leadership.** These activities should be on-going and viewed as preparation for when the team faces challenging clinical situations.
7. **Educators and leaders should provide external coaching to teams to support the goals described above.** Educators and leaders should strive to create self-managing teams. With multi-team systems in healthcare, leaders may need to restructure processes of care to develop more discrete, stable teams.
8. **Educators and leaders should use tools such as social network analysis to provide feedback to teams and guide team improvement efforts.** Reflection is a critical learning process for developing self-managing teams. Data from social network analysis can be a powerful catalyst for change within teams as members seek to improve performance.

Conclusions

Shared leadership is an emerging concept of team function that describes leadership as a property that adapts to the changing environment. This approach fits the challenges of modern healthcare. Shared leadership is supported by several concepts: shared purpose, social support, voice, and external coaching. Although shared leadership has demonstrated benefits in many work settings and has great potential in healthcare, translating these specific concepts to healthcare requires providers to interact with existing traditional leadership structures and teams that are more fluid than those in most other work settings. As such, practitioners should be trained in specific aspects of shared leadership so that they can build and lead more resilient and effective teams.

Reflective questions

1. How have you seen emergent leaders in action in healthcare? How did they work within a more formal hierarchy?
2. In what ways does the current healthcare system in which you work foster shared leadership by supporting shared purpose, social support, and voice? Can you think of examples of external coaching that have improved team performance?
3. In your local environment, how are the different sources of power leveraged to advance patient care and population health? Is power leveraged to impede the goal of advancing health?
4. How have you shared leadership behaviours in teams with which you have worked in the past? How did shared leadership affect the team's performance, and how did the concepts in this chapter manifest themselves on the team?
5. Is Wenger's (1998) concept of 'boundary crossings' useful when developing interprofessional education (IPE) in the workplace?
6. Undergraduate IPE programs are now well established, but how effective are they at preparing the student for entering the workforce?
7. How do busy teaching hospitals maintain an IPE focus?
8. Is the possession of strong technical expertise within individual professions a key prerequisite to IPE leadership?
9. Can this transformational leadership model be applied to other professional groups?

References

American Heart Association. (2010). *2010 handbook of emergency cardiovascular care*. Dallas: American Heart Association.

Argote, L., Gruenfeld, D. and Naquin, C. (2001). Group learning in organizations. In M. Turner (ed.), *Groups at work: Advances in theory and research*. New York: Erlbaum: 369–411.

Bass, B. and Bass, R. (2008). *The Bass handbook of leadership: theory, research, and managerial implications*. New York: Free Press.

Bharwani, A., Harris, G. and Southwick, F. (2012). A business school view of medical interprofessional rounds: transforming rounding groups into rounding teams. *Academic Medicine, 87*(12): 1768–71.

Bienefeld, N. and Grote, G. (2013). Shared leadership in multiteam systems: How cockpit and cabin crews lead each other to safety. *Human Factors, 56*(2): 270–86.

Cannon-Bowers, J., Salas, E. and Converse, S. (1993). Shared mental models in expert team decision making. In N. Castellan (ed.), *Individual and group decision making: current issues*. Hillsdale: Lawrence Erlbaum Associates: 221–41.

Carson, J., Tesluk, P. and Marrone, J. (2007). Shared leadership in teams: An investigation of antecedent conditions and performance. *Academy of Management Journal, 50*(5): 1217–34.

Day, D., Gronn, P. and Salas, E. (2004). Leadership capacity in teams. *Leadership Quarterly, 15*: 857–80.

DiazGranados, D., Dow, A., Perry, S. and Palesis, J. (2014). Understanding patient care as a multi-team system. In R. Rico, M. Shuffler and E. Salas (eds), *Pushing the boundaries: Multiteam systems in research and practice* (in press). London: Emerald.

D'Innocenzo, L., Mathieu, J. and Kukenberger, M. (2014). A meta-analysis of different forms of shared leadership–team performance relations. *Journal of Management*, ePub.

Dow, A., DiazGranados, D., Mazmanian, P. and Retchin, S. (2013). Applying organizational science to healthcare: a framework for collaborative practice. *Academic Medicine, 88*(7): 952–7.

Edmondson, A. (1996). Learning from mistakes is easier said than done: Group and organizational influences on the detection and correction of human error. *Journal of Applied Behavioral Science, 32*(1): 5–32.

Edmondson, A. (1999). Psychological safety and learning behavior on work teams. *Administrative Science Quarterly, 44*(2): 350–83.

Elbardissi, A., Regenbogen, S., Greenberg, C., Berry, W., Arriaga, A., Moorman, D. et al. (2009). Communication practices on 4 Harvard surgical services: A surgical safety collaborative. *Annals of Surgery, 250*(6): 861–5.

French, J. and Raven, B. (1959). The bases of social power. In D. Cartwright and A. Zander (eds), *Group dynamics*. New York: Harper & Row.

Gibb, C. (1954). Leadership. In G. Lindzey (ed.), *Handbook of social psychology* (Vol. 2). Reading, MA: Addison-Wesley: 877–917.

Haddara, W. and Lingard, L. (2013). Are we all on the same page? A discourse analysis of interprofessional collaboration. *Academic Medicine, 88*(10): 1509–15.

Institute of Medicine. (2001). *Crossing the qualty chasm: A new health system for the 21st century*. Washington, DC: National Academy Press.

Institute of Medicine. (2012). *Best care at lower cost: The path to continuously learning health care in America*. Washington, DC: The National Academies Press.

Klein, K., Ziegert, J., Knight, P. and Xiao, Y. (2006). Dynamic delegation: shared, hierarchical, and deindividualized leadership in extreme action teams. *Administrative Science Quarterly, 51*(4), 590–621.

Kunzle, B., Zala-Mezo, E., Wacker, J., Kolbe, M., Spahn, D. and Grote, G. (2010). Leadership in anesthesia teams: the most effective leadership is shared. *Quality and Safety in Health Care, 19*(6), e46.

Lingard, L., Vanstone, M., Durrant, M., Fleming-Carroll, B., Lowe, M., Rashotte, J. et al. (2012). Conflicting messages: examining the dynamics of leadership on interprofessional teams. *Academic Medicine, 87*(12): 1762–7.

Marks, M., DeChurch, L., Mathieu, J., Panzer, F. and Alonso, A. (2005). Teamwork in multi-team systems. *Journal of Applied Pyschology, 90*(5): 964–71.

McGrath, J. (1962). *Leadership behaviour: Some requirements for leadership training*. Washington, DC: US Civil Service Commission, Office of Career Development.

McIntyre, H. and Foti, R. (2013). The impact of shared leadership on teamwork mental models and performance in self-directed teams. *Group Processes & Intergroup Relations, 16*(1): 46–57.

Mehra, A., Smith, B., Dixon, A. and Robertson, B. (2006). Distributed leadership in teams: The network of leadership perceptions and team performance. *The Leadership Quarterly, 17*(3): 232–45.

Morgeson, F., DeRue, D. and Karam, E. (2010). Leadership in teams: A functional approach to understanding leadership structures and processes. *Journal of Management, 36*(1): 5–39.

Nembhard, I. and Edmondson, A. (2006). Making it safe: The effect of leader inclusiveness and professional status on psychological status and improvement efforts in health care teams. *Journal of Organizational Behavior, 27*(7): 941–66.

Retchin, S. (2008). A conceptual framework for interprofessional and co-managed care. *Academic Medicine, 83*(10): 929–33.

Uhl-Bien, M., Marion, R. and McKelvery, B. (2007). Complexity leadership theory: shifting leadership from the industrial age to the knowledge era. *The Leadership Quarterly, 18*(4): 298–318.

Wang, D., Waldman, D. and Zhang, Z. (2014). A meta-analysis of shared leadership and team effectiveness. *Journal of Applied Psychology, 99*(2): 181–98.

Wassernman, S. and Faust, K. (1994). *Social network analysis: methods and applications*. Cambridge: Cambridge University Press.

Wenger, E. (1998). *Learning in communities of practice*. Cambridge: Cambridge University Press.

Yukl, G. and van Fleet, D. (1992). Theory and research on leadership in organizations. In M. Dunnette and L. Hough (eds), *Handbook of industrial and organizational psychology*. Palo Alto: Consulting Psychologists Press: 147–97.

Zaccaro, S., Rittman, A. and Marks, M. (2001). Team leadership. *Leadership Quarterly, 12*(4): 451–83.

3

Interprofessional Education from Pilot to Formal Curriculum

Wiwik Kusumawati and Salmah Orbayinah (Indonesia)

Introduction

The aim of this chapter is to describe and reflect on the experiences of the Faculty of Medicine and Health Sciences Universitas Muhammadiyah Yogyakarta (FKIK UMY), Indonesia in developing interprofessional education (IPE).

The implementation of IPE in FKIK UMY is designed to meet the policy of the Directorate General of Higher Education, Ministry of National Education Indonesia, which was described at the health professional education quality (HPEQ) conference in December 2011. At this conference, the Director General of Higher Education declared that all medical and health educational institutions in Indonesia are required to introduce IPE formally in the education process to improve the quality of healthcare. Moreover, the implementation of IPE must achieve the competency standards or guidelines for healthcare professionals (as established by the Indonesian Medical Council, the Association Institution of Nursing Education and the Indonesian Association of Pharmacists), which stated the importance of working together as a team and of the collaborative competency of healthcare professionals in managing patients. Not all medical and health institutions were able to apply the policy to develop and implement IPE straight away because the interprofessional curriculum is considered innovative and technically very complex in its implementation.

FKIK UMY has four major programs: medicine (since 1993), nursing (since 2000), dentistry (since 2004) and pharmacy (since 2010). The existence of these four programs provides opportunities and also challenges for FKIK UMY to implement IPE. The former dean of FKIK UMY proposed that IPE should be implemented straight away because of the

new national policy and his vision for FKIK UMY due to its four study programs. There was thought to be a greater chance of success through the dean's leadership and championing of IPE. The dean asked me (Wiwik Kusumawati) to be a leader of the IPE team, which has responsibility for developing and implementing the IPE program for the four health professions. This implementation of IPE has not been an easy task due to the complexity of managing the schedule and other logistical challenges. However, the dean has inspired us through his leadership such that we consider that the benefits will be so important for our community that we cannot leave things as they are. The four professional programs have already introduced problem-based learning (PBL) as a student-centred learning strategy since 2010. By implementing IPE we want all graduates of FKIK UMY to be competent in collaborative practice in the patient-centred care era.

The IPE pilot – preclinical

FKIK UMY started implementing IPE pilots at the preclinical stage for about one month, from 24 January until 18 February 2012. Since August 2011 and before the pilots, FKIK UMY had prepared for IPE through a 10-person task force team consisting of four medicine lecturers, two dentistry lecturers, two nursing lecturers and two pharmacy lecturers. This task force team, which was set up by the dean's decree, held some coordination meetings to discuss the preparation, implementation and evaluation of IPE pilots. The preparation consisted of determining which cases or scenarios should be chosen as the main topic, developing modules and tutor guidelines, composing a skill lab manual and a field experience guide, scheduling activities, and so on.

Based on the endorsement of the task force team at the preparation stage, diabetes mellitus (DM) was chosen as the topic for learning in the form of scenarios. The case selected was a complex example of DM so that the scenario, which was used as a trigger, could include the viewpoints and input of the four health professions (medicine, dentistry, nursing, and pharmacy). To ensure that the case or scenario under development could accommodate the triggers and roles of all health professions, lecturers from the four different health professions worked collaboratively. Together they discussed the learning strategy, technical guidelines, and the schedule of activities. In our faculty this is the first experience in which lecturers from the four health professions have discussed together the content knowledge or the disease as a learning trigger. The discussion was led by the chair of IPE and involved

four lecturers from medicine, nursing, dentistry and pharmacy as the module developers. The success in developing the IPE module was due to all the professions contributing; if any one profession were absent, it would have been difficult to finish the content of the module. A series of workshops was held after the lesson planning and guidelines had been completed, to gain input from competent stakeholders, and also to introduce IPE to all FKIK UMY lecturers.

IPE as a learning activity, with two credits' value, involved a number of students recruited voluntarily from the four major programs. Students who expressed an interest in registering for the IPE pilot were told about the technical implementation of this learning activity via a flyer; recruitment criteria included students who had finished their endocrine module, and who were willing to participate actively for the whole process and give informed consent. Subsequently 23 of 30 students took part in the pilot after going through a selection process. Those 23 students were: six third-year medical students; four third-year dental students; seven fourth-year nursing students; and two second-year pharmacy students. They were divided into two groups for tutorials, skills laboratory and field experience. Having the endocrine block or module completed was the main requirement for the students who applied for the IPE pilot so that they had prior knowledge about DM. However because the pharmacy students were still in their second year and had not yet studied this module, they were briefed about DM prior to the pilot. The IPE pilot at the undergraduate stage was implemented and used the DM scenario as a trigger. Learning activities consisted of small group discussion or tutorials, lectures, practical work, field experience, and plenary discussion.

A patient with DM and leg ulcer complications was the subject of three tutorials; the duration of each tutorial was two hours. The first and the second tutorials focused on the case of diabetes mellitus, whereas the third meeting focused on health profession ethics. The lecturers from the four health professions gave lectures on communication, ethics, and the role of each health profession. The purpose of the lectures was to provide students with the key points about the intersection of the roles and responsibilities of healthcare professionals, which they would be able to apply in other practical activities. The same case (DM with ulcer complication), involving a simulated patient and a mannequin, was used to develop clinical skills among students. Besides improving clinical skills, those activities were also designed to help students learn to work together, to share their skills according to their competencies, and to respect one another.

Field experience activities, overseen by lecturers from the four health professions, were designed to give the students opportunities to interact with other health professions and to work collaboratively with physicians, nurses, pharmacists, and dentists in relation to patient observation, interaction and management. Plenary discussions, along with evaluation, were held at the end of that series of IPE pilots.

The general impressions of the IPE pilot were that students seemed to be more confident within their own professions, and that they respected others during the IPE learning process. It also improved their sense of curiosity about the knowledge possessed by other professions, and those impressions were noticeable during lectures or tutorials.

The evaluation also included some less positive feedback about the implementation of IPE. The students were not keen on the recruitment method. This might have been due to the requirements stipulated by the committee and, perhaps because of this, it took a long time (more than a month) to reach the minimum number of participants. Moreover, due to timetabling issues, medical students were not able to participate in the third tutorial, while the dentistry students could not participate in the activities of the skills laboratory. These circumstances caused imbalances and incompleteness in the discussions and learning processes. In the field experience activity, the lecturer from nursing could not attend the second group so that activity, which was aimed at showing how each health profession interacts with patients, became less than perfect. Likewise, in the plenary discussion, one of the mentors from a health profession could not attend, so the feedback to the plenary discussion was not from each of the four health professions as expected. All these circumstances were caused by problems in the regular and concurrent schedule of activities in the last two weeks of implementation of IPE, that is lectures, tutorials, and faculty development.

The IPE pilot – clinical

FKIK UMY started implementing the IPE pilot in the clinical phase from December 2012 to July 2013. The preparation for the pilot, running from July 2011 to December 2012, was undertaken by the task force team which was formed by the dean of the Faculty of Medicine and Health Sciences UMY. The organizational structure of the task force team for the clinical practice phase was different from the preclinical phase. Because of the complexity of the learning activities at the clinical practice phase, it was decided that the task force team should consist of a consultant (acting as chairperson or leader), deputy (treasurer), the technical team

from the four health professions, and administrative staff. The leader of the IPE team was chosen by the dean and other team members were subsequently chosen by the leader. To perform its duty, the task force team was assisted by a module development team, which consisted of various expert lecturers and also lecturers from the medical education unit. The team then had meetings and coordination events to develop and design modules and learning triggers, the learning method, the involvement of real and simulated patients as the trigger, the learning activities schedule, assessment, infrastructure, facilities, and so on.

Besides considering the complexity of each disease, the selection of diseases to be developed as modules was also based on their impact on society, that is, diseases with high morbidity and mortality rates in Indonesia. Based on its discussions and findings, the task force team decided on which diseases or conditions should be learning triggers on a modular basis, such as DM, HIV/AIDS, endemic goiter, drug abuse, trauma, stroke, osteoarthritis, infectious disease (pulmonary tuberculosis, malaria, leptospirosis), and abortion. The team agreed to develop the first six modules in such a way as to involve dentistry. A team appointed by the chairperson and approved by the task force team developed the modules. Since the students involved in the IPE pilot were used to interacting with and managing patients as part of their clinical education in the hospital, the task force team agreed to work with real patients as well as simulated patients, with a higher priority given to real patients. Scenarios were also used for certain cases such as trauma.

The development of the modules, which consisted of module overview, learning objectives, the role of each health profession (clinical pathway), scenario (if any), assessment, facilities, and schedule of activities, required some intensive coordination among health professions to enable the learning trigger to stimulate interprofessional discussion among the health professions involved. Frequent and regular meetings for coordination were necessary and important. Once the module development was completed a workshop was held, attended by lecturers from several related sections, resulting in enhancements before implementation.

The IPE pilot in the clinical practice phase lasted a week and was worth one credit. It was conducted within the clinical practice rotation in general medicine, in conjunction with the family medicine stage for nursing. The dentistry students involved in the pilot were in their clinical practice phase at Asri Medical Center and PKU Muhammadiyah Hospital. Because the senior students of pharmacy were still in the third year, the IPE trial in the clinical practice phase involved pharmacy

students but they were still in their preclinical (theoretical) stage. As it was thought that pharmacy students should not miss too much of their regular training, they were only required to attend specific IPE activities such as bedside teaching and tutorials. The period of learning activity for the IPE pilot was one week, and most of the activities started at 1pm to allow for the schedule of clinical rotation of the students. Interprofessional teaching and learning activities were conducted in the same period during the family medicine rotation, that is, while students were working at the primary health service (Puskesmas). They had their clinical rotation in the morning and their IPE at Asri Medical Center (AMC) in the afternoon.

The total number of FKIK UMY students who attended the pilot from December 2012 to July 2013 was 379: 121 general medical students, 105 dentistry students, 114 nursing students and 39 pharmacy students. Because of the small number of pharmacy students, every pharmacy student spent, beside teaching and tutorials, three periods on different modules during this time in order that there was a balanced number of each profession for every activity.

The pilot interprofessional learning activities started with didactic lectures on the first day. The topics were: introduction to IPE, the role of each health profession in managing patients, communication between health professionals, the technical explanation of IPE, and also explanation of the assessment of IPE. The objective of the introduction to IPE lecture was to help the students understand the concepts and principles of IPE, as well as their role in the practice of teamwork. The lecture on the role of each health profession aimed to help the students understand the role of their profession and other professions in a collaborative context when interacting with patients, so it was linked with the appropriate competencies that must be mastered in order to improve the ability to cooperate. The objective of the health interprofessional communication lectures was to develop the interprofessional communication competency of students so that they could develop effective communication among the health professions, have the ability to negotiate problems faced by the patient according to the perspective of their profession, and be able to manage an effective meeting and/or interaction between professions.

On the second or third day, students participated in bedside teaching (BST) with real patients and were mentored by clinical lecturers from the four professions. In every BST session, students from each profession were accompanied by one lecturer. The aim of the BST session was that the students should learn the role of each health profession (clinical

pathway) or, in other words, share roles between the health professions. Informed consent was obtained from the patients in advance by general medical students before the interaction with each health profession. General medicine was the first profession to carry out the BST, in order to provide a clinical trigger for other professions who watched through an observation room. Nursing students became the second profession to carry out the BST, learning to perform the appropriate role for the patient, that is, providing nursing care for the patient's disease or condition. If the case that was used as a learning trigger involved the profession of dentistry, then dentistry students carried out the task of identifying the patient's teeth and mouth problems and also identifying the solution (therapy). Lastly, the profession of pharmacist carried out the BST to carry out pharmacy care and to provide information to the patient about drugs, including side-effects and drug-related problems (DRP). When students from one profession conducted BST, students from the other professions observed the interactions from another room (either with a one-way mirror or through CCTV).

On the fourth day, a *small group discussion* or tutorial was conducted to discuss the problems faced by the patients who had been involved in BST. The aim of the tutorial was to enable the students to *share knowledge* and to develop effective communication amongst the health professions, with BST patient cases being the *trigger*. In this tutorial, students identified and analysed the problems of the patients, determined the appropriate solutions or treatment alternatives from the perspective of each profession, and then negotiated with the other professions. The tutorial used the *seven jumps* modification of the PBL approach (Gijselaers, 1995) and was facilitated by one tutor. Tutors on duty already were required to follow training for tutors (TOT) which was organized by the *task force* team of IPE.

On the fifth day, a case study was presented which aimed to set out the case in the traditional way; this was attended by expert lecturers. In the case study presentation, the students first presented a summary of the case and its analysis which had been obtained from BST and tutorials, along with relevant citations and references to scientific or evidence-based medicine (EBM). In addition, the case study presentation required a focus on the collaborative context related to the patient's problem. At the end of the case study presentation, the lecturers provided feedback to the students on the content and technique of the presentation. The case study presentation was organized by the IPE task force team.

On the sixth day of the IPE pilot, a reflection session was conducted. The aim of this session was for the students to reflect on the learning

experience of IPE for one week. The reflection could also be linked to the case which was used as the learning trigger. Besides providing beneficial feedback to the students about IPE and their future orientation as health professionals, this activity was also expected to give input to the institution to improve the technical implementation of IPE as well as the IPE learning content.

Feedback and reflection

The result of reflection demonstrated the importance of IPE, that is, the benefits of cooperation and communication between health professionals in handling patients, and sharing roles and knowledge, so that it could improve the knowledge of IPE participants. [We have permission to reproduce the quotes below.]

Here are some expressions of the feelings and thoughts of the medical students:

> *As a student I felt attracted to interprofessional education, because based on my experience during the following clinics, there was a lack of good communications among healthcare practitioners in hospitals and a tendency to work individually. So a program like interprofessional education is needed. I was able to learn the respective roles of the professions in pursuing the same goal, i.e. patient safety in healthcare.*
>
> *The feeling…during and after I attended the program of IPE is pleasant enough, as these activities provide many positive values and benefits. By following IPE [I] can interact, discuss, and collaborate with colleagues from different health department personnel (in the fields of nursing, dentistry, and pharmacy), not only with a peer group. Interpersonal communication can be learned properly on this activity to avoid misunderstanding in handling and giving medical therapy to patients. In addition, in this activity we can share useful information and knowledge about the handling of patients, and apply the experience that has been acquired during…IPE as independent practitioners in hospitals and in other medical services places.*
>
> *My feeling about the IPE experience is that it is very interesting and makes me understand how to provide the best health services for patients, so that we can apply the system of cooperation with other professions with similar purposes in which one gives the best healthcare for every patient…a follow-up will be done; this should keep IPE activities as their benefit is huge for the respective professions. However, these activities are carried out*

outside the clinical practice profession, so that each phase can focus on this activity.

The following are some expressions of feelings and thoughts from dentistry students:

Activities that are performed during IPE are very interesting, providing experience and demonstrating to us the importance of cooperation among the health professions for good general medicine, dentistry, nursing and pharmacy. The expectation is none other than increasing the degree of a patient's health.

Attending the activities of…IPE for the first time became an experience as well as a challenge for me as a student because the dentistry profession must be able to team up with students of other health professions in the field of healthcare, so that patients get maximal service, supervised by the respective competent health personnel in the field, namely, general practitioners, nurses, pharmacists/pharmacy, and dentists. Thus, the healthcare and treatment of patients gets better and more secure.

IPE held this time around is very helpful in intercultural professional communication. Because of this we can communicate…IPE in accordance with their respective competencies so as to obtain comprehensive decisions for patients. Patient-specific drug abuse this time was related to HIV/AIDS, so that cases are very complex and each profession can contribute to dealing with such cases to the maximum. IPE aims to increase the quality of health services, patient satisfaction, and economic efficiency.

The following are expressions of the feelings and thoughts of nursing students:

IPE is very important, and must be applied between the health professions, so things that may threaten patient safety do not happen. Communication and collaboration between physicians, nurses, pharmacists, dentists, and other health professions must be entwined for the good of patients.

IPE learning experience is especially suitable for professional students in practical application in the clinic. By learning to collaborate early between professions, we can increase…good cooperation with fewer staff, which is ultimately expected to deliver higher quality health services to the community.

The process of learning IPE for one week had plenty of benefits for me. From the experience of…BST I came to know the divisions between doctors, nurses, dentists, and pharmacists. Each has its own role and its own responsibility

> *in the physical examination of the patient. Doctors focus on general studies and physical examination from head to toe, nurses focus on the study of basic human needs, dentists focus on assessment and examination of the teeth and mouth, while the focus of pharmacy is treatment… Every profession has its own role, from examination to diagnosis. In the process tutorial we can explore and discuss existing cases in patients, and what their care plans are. From these discussions we can know the importance of collaboration among health professions; communication is very important in the healing process for patients, so that things which are undesirable and detrimental to the health of the patient do not happen.*

These student statements about IPE are one of the factors contributing to the decision to implement IPE as part of the formal curriculum at FKIK UMY. The university leadership took note of the following student and patient feedback about the importance of and necessity for IPE.

From medical students:

> *…there should be a special time used for the IPE (not only inserted as another stage), so conditioning [sic] the division of roles to take care of patients can be applied better.*
>
> *IPE activities must be carried out by all students… IPE should be expected to be applied in the clinic/hospital directly and beneficially to all instead of just being discussed as a science course.*
>
> *IPE needs to be given to all students of medicine and health sciences as early as possible… It is important to plan to provide education and sustainable IPE periodically on campus [at] FKIK UMY, not only in the education profession, so that early communication between disciplines is already conditioned [sic]…*

From a dental student:

> *IPE must be implanted… early [in the] semester so that students have had an overview of collaboration with other professions to prepare them for when they are working in hospitals.*

From students of nursing:

> *Implementation of IPE needs to be delivered at the right time because it clashed with the other activities.*
>
> *IPE should be developed in each place to improve the quality of health services… To make the IPE a habit, it should be introduced early on, not only at the clinical stage but it can be taught in college before entering the profession.*

Some patients with DM who had been involved with or participated in the bedside teaching interprofessional activities also expressed their feelings about the experience: Mrs M., 47 years old with dental problems and DM, and Mrs. S. K., 58 years old, who shared her experience about drug therapy.

> *I am very happy, because I was examined by four professions and was asked to complete a detailed program. For example, dental problems, I asked regarding dental issues in great detail … When examined by one person or one profession alone in my opinion it is incomplete, because then the question is not detailed. [It is] different to ask two or more professions. (Mrs M.)*
>
> *I think the implementation of IPE has been good. The services and facilities have been very satisfactory. The method has also been good. In addition, after I became a patient of IPE, my blood sugar levels began to improve but it must take medication adjustments again. But that does not matter because the medicine I got from the IPE is perfect for me. (Mrs M.)*
>
> *I am very happy, because I see there is a sense of mutual cooperation … among doctors, nurses, and [the] pharmaceutical section. (Mrs S. K.)*
>
> *… very different. I prefer to be examined by four professions than one profession. For example, in the health centre, doctor's check only. Sometimes when I ask the efficacy of a given drug, the doctor did not answer, I was told to take medicine but was not told usefulness. But if there are four professions, as practised in IPE, I am so happy that I could better know in detail what exactly my disease [is], and I came to know the function of each drug … administered. (Mrs S. K.)*

Mrs D. (37 years), a HIV patient, who was diagnosed with HIV in 2002, said that the implementation of IPE in FKIK UMY was very good. Mrs D. said that when she was examined by a team of four healthcare professions at once, it made for a very effective inspection and was more practical; she didn't need to repeat her story several times. If there were problems, suggestions for treatment could be directly given by four different healthcare professions at once. This circumstance made Mrs. D. feel cared for and she was delighted. She also became more aware of her health and eager to maintain it, so as not to have HIV complications:

> *Being checked directly by four different healthcare professions (general medical doctor, dentists, nurses, pharmacists), I feel very happy, it saves time, is more efficient, and more practical, I can freely ask the medical doctors,*

> *the pharmacists, dentists, and nurses about my disease, and I do not need to repeat the same story to different healthcare professions (Mrs D.)*

Mrs D. even said that this event was extraordinary. Imagine medical doctors and other healthcare professions spending a lot of time in this activity and waiting patiently for their turn to meet the patient. She did not think it could be easily done in another hospital.

Similar comments came from Mr A. (48 years), a teacher, suffering from tuberculosis (TB) for five years, and Mr R. (33 years), a driver, who has been suffering from DM for six years. They said that when they were invited by IPE FKIK UMY to participate in bedside teaching they also felt happy. Mr A. said that the interaction with four different healthcare professions at one time meant he did not need to return as frequently for further checks and being consulted by different healthcare professions in the same examination avoided the need to repeat answers to the same questions:

> *I am very happy with the IPE program at FKIK UMY. For education, this program has been very good. I find it more efficient to me to come here. Being examined by four healthcare professions, there seemed to be a connection with each other, and I do not need to come over and over again to see different healthcare professions, because it could all be here in one visit. (Mr A.)*

Although most patients felt comfortable interacting with the four healthcare professions working collaboratively, some patients expressed shortcomings about this process. While Mr S., a patient with HIV aged 26 years, said that being examined by four healthcare professions at a time was more practical, he also felt that certain things reduced his comfort. There were still some questions which were asked several times by different healthcare professions. According to Mr S., internal coordination is needed to overcome this. Also, Mrs D., quoted above, said that the shortcomings of the implementation of IPE in FKIK UMY were that she was always met and handled by a different medical doctor for every visit. This circumstance led to the questions which had been asked in previous visits being asked again so she had to repeat the same story over and over again. This made her less comfortable, because being handled by different medical doctors meant there was less continuity between visits. Mr D. (48 years), a patient with TB involved in bedside teaching, said that it needs good communication between healthcare professions

before they meet the patient so they do not ask the same things and work together well.

Overall, the patients believed that healthcare which is carried out collaboratively by several professions is better than healthcare which is done separately:

> *There are some things that could be explored more deeply. (Mr S., HIV, 26 years)*
>
> *More effective, more efficient, and continuous. (Mr D., TB, 48 years)*
>
> *If you go to see a doctor, sometimes the doctor hands over to other health-care professions…But in IPE, it is more practical; you'll be given advice when there are health complaints. (Mrs D., HIV, 37 years)*

There were some suggestions from the patients who had been invited to the learning process in IPE FKIK UMY. According to Mr S. (HIV, 26 years), IPE goals have not been fully achieved. Mr S. said that informed consent is very important, and should be obtained at the beginning of the process. He suggested that it is necessary to build *an attachment* to the patient in order to obtain hidden information about the case. Mr S. and Mr D. also stressed the importance of communication skills, so that more students could ask questions without duplication. They would thus be able to dig deeper in eliciting information from the patients. Mrs D. (HIV, 37 years) suggested that it needs internal coordination so that the medical doctor who examines the patient is always the same for every visit, thus providing continuity of care. Furthermore, the four patients interviewed all said that they would be willing to come back for IPE FKIK UMY bedside teaching activity. They would be happy to contribute directly to IPE. According to them, this program is beneficial not only for the patient but also for the students of IPE.

Difficulties in implementation

In the implementation of the IPE pilot at the clinical stage, there were some constraints such as technical problems in scheduling the IPE activities as these sometimes *overlapped* with the ongoing regular clinical education schedule in spite of the IPE activities schedule having been set up with due regard to the clinical education schedule. The students from the different healthcare professions couldn't always be scheduled to be together at the same time, so that the learning process was sometimes carried out with the involvement of only three healthcare professionals,

or even sometimes only two. The role of the lecturer or tutor in *bedside teaching* and tutorials among the healthcare professions was not understood by all those involved. The presence of lecturers from four healthcare professions, which was scheduled for the BST and the case study presentation, couldn't always be guaranteed. These types of logistical and development problems are found frequently when IPE is implemented for the first time in an institution.

To solve these problems, the institution should implement appropriate faculty development to improve the role of tutor and clinical teacher in BST and other interprofessional learning activities. This can be done through discussion, workshops, or seminars. Involving more tutors and clinical teachers in the teaching and learning process leads to an improvement in managing the schedule.

Discussion and reflection

Thanks to the commitment of all staff, the IPE pilot at the academic stage (preclinical) and the clinical stage (professional) was implemented, and it provided a lot of valuable experience and input for the next formal implementation of IPE. However, various obstacles, mainly technical, were encountered during this pilot. Some students, especially those at the preclinical stage, couldn't attend the third tutorial activities and plenary because they still had regular unavoidable commitments. At the clinical education stage, especially for medical doctors and nurses, there were sometimes complaints from the health centre and lecturers if their students left their activities to attend IPE sessions. But this problem can be overcome by communication and coordination with the dean and also with the division of family medicine and community about the IPE activities schedule so as to minimize the possibility of *overlapping* activities. Students' interaction among health professions in teaching and learning activities such as small group discussion, laboratory skill activity, and field experience gave them a vital opportunity to share knowledge, skills, and professional roles, thus engendering mutual respect.

Implementing interprofessional education as early as possible, even from the first year at the preclinical stage, followed by an integrated curriculum throughout the academic educational process and also at the clinical stages, can cultivate positive attitudes and respect, remove barriers to communication, and improve collaboration.

Leadership in implementing IPE

Based on the experiences in implementing the IPE pilot, I (Wiwik Kusumawati) as the *chairperson of IPE* since the beginning, wish to convey to the dean that, considering the complexity of the implementation of IPE involving four healthcare professions using a variety of learning *settings*, I need *persons in charge* on every aspect of the task with a high commitment to the IPE program so that the IPE learning process can be realized. This commitment needs to be maintained, or even improved, if we intend to apply IPE in formal learning. Problems will not be resolved without optimizing the participation of clinical lecturers from the four healthcare professions in their roles as BST supervisors, and also the participation of the case study presentation supervisors, as students need to share professional knowledge and understanding of the roles of the healthcare professions. Technical coordination of the schedule of activities, and the role of each department of each profession in each learning activity and the assessment system, still needs to be improved and developed for better IPE implementation. In addition, a big effort is still required to engage clinical lecturers as important care providers in the health services, in order to contribute or to serve as good *role models* in *collaborative practice* among healthcare professionals.

Based on the four *leadership frames* of Bolman and Deal (2003), the implementation of IPE in FKIK UMY utilizes a combination approach between the *structural* and *human resource* frames. An approach using a combination of *multiple frames* makes it easier for the leaders to do their job because it is more flexible. The *structural frame* in the implementation of IPE requires policies at the institutional level, and the high commitment of each healthcare profession department, so that the students of each department can learn and work together. Therefore, when they graduate, healthcare professionals will have been able to establish avenues of communication and maintain effective cooperation in dealing with patients. In addition, *standard operating procedures* (SOP) are needed for each learning activity so that students and faculty have the same perception of the learning activities. The SOPs and clear guidance in the learning processes can help overcome the confusion of students and some lecturers in undergoing interprofessional learning and working. The *human resources frame* focuses on *people,* and assumes that the organization must meet the basic needs of workers as human beings. There should be a balance struck between their needs and the expectations of the organization.

Learning goals and objectives need to be tailored to the capabilities and needs of their human resources. The interest and enthusiasm of the lecturers to teach cooperation among healthcare professions need to be encouraged from the outset, so that building commitment and fostering participation in learning becomes easier. Not all lecturers are interested in implementing IPE due to a natural resistance factor or because some lecturers do not understand the background, purpose and importance of IPE. Providing such understanding is the first thing that needs to be developed through *workshops,* seminars or *informal meetings* with all lecturers from all healthcare profession departments, both in preclinical and clinical stages. They will thus be better able to play their role as healthcare educators to prepare graduates who are ready to work together effectively and improve health outcomes in the patient-centred care era.

The FKIK UMY IPE program involved four professions: doctors, nurses, dentists and pharmacists. All of these professions collaborated with each other to achieve better patient care. Developing leadership skills in certain professions, especially those related to the health field, is not an easy task. Every profession requires personal skills in leadership to lead both practitioners and the organization to develop collaboration competencies in order to produce the best service for patients. Leadership skills are crucial for health professions in their goals to build a good, solid, collaborative team and thereby to assist patients in improving their quality of life.

FKIK UMY has Asri Medical Centre (AMC) as a health centre that can support the implementation of the IPE pilot during part of the students' community medicine rotation. The students practise basic health services to enhance their professional capabilities in primary care at AMC. However, one week is perhaps too short – not enough for students to fully become aware of their professional duties in primary care and develop adequate teamwork skills. According to Thistlethwaite et al. (2013), in a review of longitudinal clinical rotations, students moving from location to location over a few weeks are unlikely to be able to build trust with supervisors, other health professionals, or the communities in which they are placed. Longer (longitudinal and integrated) placements enable students to become members of a community of practice, and develop legitimate peripheral participation and increasing responsibility as their capabilities, especiallly in relation to teamwork, are enhanced. Therefore, in our implementation of IPE the scheduling will be evaluated on an ongoing basis.

For the application of leadership and team-building skills, IPE FKIK UMY conducted teamwork activities such as bedside teaching, tutorials and case presentations. In the IPE pilot the principles and the importance of leadership and teamwork were taught and applied through group collaboration. Experience in generic leadership skills in individual professions will be broadly similar to that required for interprofessional collaborative practice but there are also some differences to take into account. Interprofessional experiences provide opportunities for students to collaborate with professionals from other disciplines, respecting the values and expertise of other professions, and to learn about and share in decision-making activities. Learning at the bedside, tutorials, and case presentations in the IPE pilot provided excellent experience of the application of leadership and team-working skills. Communication between health professions, as well as team-working, can be developed well during such processes. This was evidenced through the comments of students and also patients involved in the IPE pilot. The students from the four professions worked well together and this helped improve patient satisfaction. According to Lamb and Clutton (2014) citing Reason (2004), improving patient safety requires a whole-system approach, including an understanding of the nature of risk and the complexity of the interaction between the health and social care environments, health and social care professionals and the patient/client, and the potential impact on developing safe care.

Conclusion

1. In the implementation of IPE into a formal curriculum, testing or piloting at the preclinical stage and also at the clinical stage are important activities which provide benefits both in terms of technical implementation and the impact of the learning content for both students and patients.
2. Strong leadership was needed to prepare the learning content effectively so as to make it capable of being a trigger for every healthcare professional involved; to manage the IPE learning process which is quite complex; and also to provide human resources in order to achieve the learning objectives.
3. Leadership facilitates the process of all stakeholders involved in understanding the background, purpose, and benefits of IPE; thus it can make a more optimal contribution to the process of education in the health services.

Reflective questions

1. Does your institution conduct IPE pilots before it is applied in the formal curriculum? What are the advantages and disadvantages of this approach?
2. How could the leadership in your institution support the implementation of IPE?
3. What are some of the obstacles that you encountered in the implementation of IPE? What is the most dominant constraint or the most difficult to overcome?
4. Did coordination among the healthcare professions and other components involved work well in overcoming these obstacles?

Acknowledgments

The authors would like to thank the 'real' patients who have contributed to the IPE teaching and learning process (bedside teaching and reflection). Our thanks also go to the students from medicine, nursing, dentistry, and pharmacy of the faculty of medicine and health sciences UMY who participated in these pilots.

References

Bolman, L. G. and Deal, T. E. (2003). *Reframing organizations: artistry, choice and leadership*. San Francisco: Jossey-Bass.

Gijselaers, W. (1995). Perspectives on problem-based learning. In W. Gijselaers, D. Tempelaar, P. Keizer, J. Blommaert, E. Bernard and H. Kapser (eds), *Educational innovation in economics and business administration: The case of problem-based learning*. Dordrecht: Kluwer: 39–52.

Lamb, B. and Clutton, N. (2014). Leadership development for interprofessional teams to drive improvement and patient safety. In D. Forman, M. Jones and J. Thistlethwaite (eds), *Leadership development for interprofessional education and collaborative practice*. Basingstoke: Palgrave Macmillan.

Thistlethwaite, J. E., Bartle, E., Chong, A. L. et al. (2013). A review of longitudinal community and hospital placements in medical education: BEME Guide No. 26. *Medical Teacher, 35*(8): e1340–64.

4

Foundation of the Japan Association for Interprofessional Education (JAIPE)

Hideaki E. Takahashi, Hideomi Watanabe and Masanobu Kinoshita (Japan)

Introduction

In Japan, over the past 60 years, the constant increase in life expectancy has resulted in one of the world's highest longevities. As the number of elderly increases, it is difficult for any single professional to meet their diverse health and social care needs. During the past two decades, however, there has been a change in the view of health among Japanese – a 'paradigm shift' with particular attention being paid to improvement in the 'quality of life' (QoL). Healthcare professionals are required not only to increase the 'mean life expectancy', but also to help people, as QoL supporters, to extend their 'healthy life expectancy' and encourage independent living.

Background to the foundation of JAIPE (Japan Association for Interprofessional Education)

Interprofessional medical and social care is becoming increasingly important. This is care in which a variety of healthcare professionals, with common basic knowledge of disease prevention, treatment and welfare, collaborate with other care specialists while further developing their own specialized skills.

With this in mind, 46 founders of medical, healthcare and welfare fields from universities, other academic institutions, hospitals and welfare facilities proposed and agreed to the establishment of the Japan Association for Interprofessional Education (Takahashi, 2009a; Takahashi and Sato, 2009) – see Box 4.1 for the proposal (translated by the authors from the Japanese).

Box 4.1: A proposal for the establishment of the Japan Association for Interprofessional Education by the proposers, June 2008

In the 21st century, Japan became a country with a super-ageing society. It is strongly hoped to enhance the quality of life (QoL) of the elderly and to maintain it along with prolongation of healthy life expectancy. Health, medical, and welfare services should be carried out in close collaboration and delivery needs to be seamless between the services. We aim for a cohesive society where one can keep living independently as long as possible and people of different ages and different cultures, with and without handicap, can live together and help one another. To achieve this goal, interprofessional work, that is teamwork by professionals, is mandatory and the management of healthcare and welfare has to be considered simultaneously within a community. Therefore, interprofessional work should be implemented at health-related facilities such as hospitals.

In higher education, at universities and other educational institutions which train such professionals, both a liberal arts and a professional curriculum have been provided. In the last ten years, the importance of interprofessional education has been gradually recognized.

A new academic society will be established. It is a society that can share the knowledge of interprofessional education at the undergraduate level and of interprofessional work at health-related facilities. Through the efforts of such a society, people can live long, healthy and independent lives.

Many new professions have come to be needed because of the advancement of medical science. In our country a new profession related to welfare has also been added in response to an increase in the number of senior citizens. A shortage of medical doctors and their geographical maldistribution has become a problem for public health improvement in the last 30 years. There are more doctors per 100,000 population in the western part of Japan than the eastern part. In addition to the shortage of doctors there is an uneven distribution of specialists for the needs of the elderly. It became difficult to rely solely on doctors to meet this demand. Professionals in the medical and welfare services have to undertake interprofessional collaborative practice for various needs through their own professional competencies and try to add value through collaboration. Mutual understanding and full collaboration is essential.

Although interprofessional education has been initiated at some Japanese universities, it is still not widespread. Both in the hospital service and in social care practice, collaboration among different professions has become very important. In fact, interprofessional collaboration has been practised in hospitals, between hospitals and clinics, and between hospitals and facilities for senior citizens and the disabled. It may be time to construct a comprehensive network of health, medical care, and welfare in the community, including sports clubs in which people may enjoy sports and learn about prevention of lifestyle diseases.

In Japan, interprofessional education and interprofessional work among multi-occupational categories are insufficient. Moreover, research activity in this field is not yet done adequately. It is important to develop educational content, research methodology, and evaluation methods. Higher educational

organizations such as universities and health-related facilities such as hospitals should be able to operate the plan (P), do (Do), check (C), and (Act) cycle through the effort mentioned above. The time has come for Japan to engage in international information exchange and joint research in the field of interprofessional education and interprofessional work. The new scientific society for interprofessional education will surely enhance the level of education of health and welfare related personnel and bring about improvement in the quality of life (QoL) of people in this country. We await the participation of everybody who agrees to the purpose of this academic society.

In the past 50 years collaborative practice among professionals has been implemented on-site in regional hospitals, but interprofessional education (IPE) has only been implemented in universities since a little more than ten years ago. During that period IPE developed in the United Kingdom had a large impact on Japan. In 1996 and between 1998 and 1999, information about IPE was widely published in the literature. Since the first IPE workshop was held by Saitama Prefectural University in November 2005, many lecturers have been invited to Japan from the Centre for Interprofessional Education (CAIPE) and universities in the United Kingdom and, at the same time, people from universities in Japan have visited the United Kingdom and Canada, while exchange agreements with universities in both countries have been concluded.

The content of IPE in universities must be improved and enhanced by constantly reflecting the results produced by implementation of interprofessional collaborative practice on the ground in those schools (Takahashi, 2007). As a result, seamless services and care can be provided in health and social care. Furthermore, the continuing life-long education of professionals, and IPE for professionals, are both essential for enhancing and maintaining these services and care (Figure 4.1).

Annual meetings

The first annual meeting of JAIPE was held on 29–30 November 2008 at the Saitama Prefectural University and was chaired by Professor Susumu Sato. At this meeting, the organizers hoped to confirm the spread of education practices and academic research based on the definition of IPE, and to make the meeting the starting point for the creative development of IPE as professional education that enables multiprofessional cooperation and collaboration for the benefit of service users and patients in Japan. Therefore, *Cooperation for whom, and for what*? was chosen as the main theme of the meeting. The participants aimed to share the fact that the starting point for interprofessional practice was

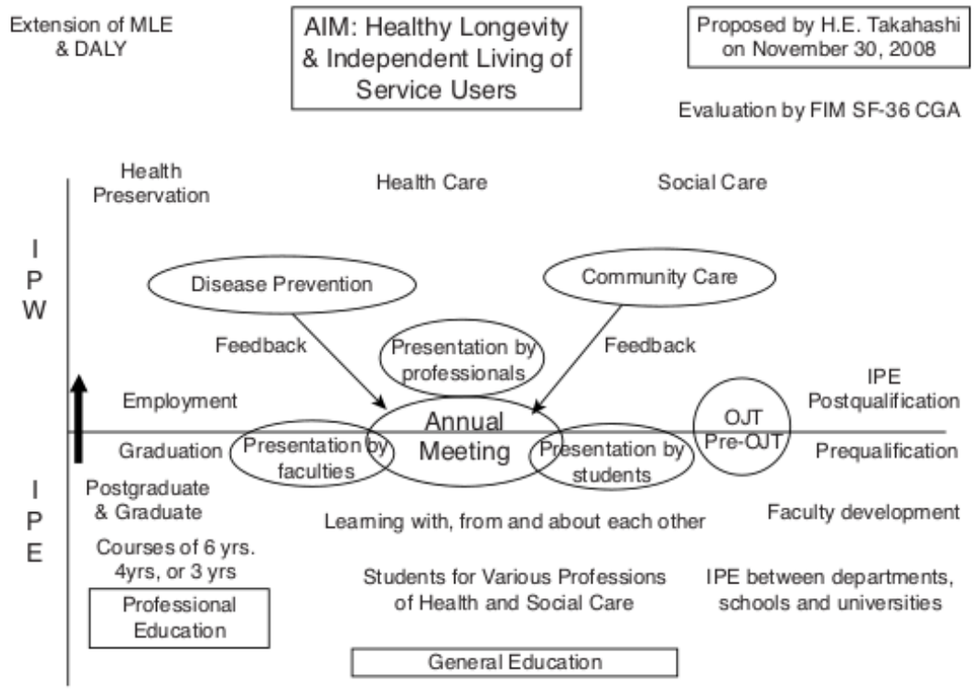

Figure 4.1 A relationship between university-led and service-led IPE aimed at service users by JAIPE

MLE: mean life expectancy; DALY: disorder-adjusted life year; FIM: functional independence measure; SF-36: short form-36; CGA: comprehensive geriatric assessment; OJT: on-the-job training.

ensuring that practices based on cooperation and collaboration among multiple professions were for the benefit of service users and patients. The mission was to realize healthy long life, independent living, and a society of harmonious coexistence from the perspective of higher education, and through education, to provide 'new competencies' as added value to the students.

The second annual meeting was held on 11 October 2009 at Chiba University and chaired by Professor Ikuko Sakai. The main theme of the meeting was *Development of professionalism and IPE*. The third was held on 11–12 August 2010 and chaired by President Kohzoh Imai of Sapporo Medical University. A main theme was '*aiming toward a close relationship between interprofessional education and interprofessional working*'. The fourth was held on 5 November 2011 and chaired by President Mikiko Yamazaki of the Kanagawa University of Human Services. A main theme was *Pursuing an ideal service-user-centred interprofessional education of health and social care professionals*.

The fifth meeting (JAIPE 5) was chaired by Professor Hiroshi Furukawa of Kobe Gakuin University and held on 7–8 October 2012,

together with the All Together Better Health VI conference (ATBH VI, the 6th International Conference for Interprofessional Education and Collaborative Practice) on 5–8 October, with Yuichi Ishikawa and Hideomi Watanabe as co-chairs. The main theme of ATBH VI was *Exploring new horizons: diversity and quality in interprofessional education and collaborative practice*, and that of JAIPE 5 was *A prospect of collaborative practice on health and social care in Japan*. An ATBH VI & JAIPE 5 joint symposium was held on *Challenges of health and social care in rural and urban communities, with interprofessional collaborative practice in Japan*. A satellite symposium of ATBH VI was held at Uonuma on 11 October.

The sixth meeting was held in Sendai on 26–27 October 2013, and chaired by Professor Noriyoshi Nishimoto of Tohoku Bunka Gakuen University. A main theme was *Proof of interprofessional collaborative practice in a process of restoration after the Great Eastern Japan Earthquake*.

Networks of universities for IPE

A university has several departments in which health and social care professionals are educated, but every university does not educate all types of professions. Although it is not easy for separate schools or departments of the healthcare and social care professions to collaborate, collaborative networks of universities for IPE have been formed both regionally and nationally.

Two national networks of universities for IPE are:

1. *The Japan Interprofessional Working and Education Network (JIPWEN)*

JIPWEN was established in 2008 by ten universities (and included 11 by 2013) (JIPWEN, n.d.). The initiatives of these institutions have been approved as 'good practices' by the Japanese government. Among JIPWEN universities the programs vary in content, as do their individual backgrounds, goals, methods, modules, student compositions, facilitation systems, and timing of their respective university curricula (Watanabe and Koizumi, 2009). JIPWEN aims to present plural models so that institutions that are interested in the IPE programs can adapt the models to their own academic and social settings. JIPWEN is independent of JAIPE, which consists of individual members from a wide range of institutions including universities, colleges, hospitals, clinics, nursing homes, welfare facilities, and so on, and organizes an open-discussion meeting annually; but both are cooperating closely. All JIPWEN

universities send staff to act as JAIPE board members, who then actively participate in the management of JAIPE activities.

A JIPWEN mission first visited the World Health Organization (WHO) headquarters in December 2008 and recognized the health workforce crisis at the global level and the WHO global strategy on human resources for health (HRH). In accordance with this recognition, the WHO/JIPWEN action plan was developed. JIPWEN obtained *Global Health Workforce Alliance* (GHWA) membership in 2009 (Global Health Workforce Alliance, n.d.). Since then JIPWEN has started to collaborate with WHO in terms of IPE in the WHO global strategy on HRH. Coordinating activities of JIPWEN with WHO include active participation in global forums on HRH convened by WHO, GHWA, the Japan International Cooperation Agency (JICA), the World Bank, Prince Mahidol Award Conference (PMAC) and others, a convention of international symposia such as the organized symposium in All Together Better Health VI (ATBH VI), Transformative scale-up of health professional education in Asia: IPE in the Western Pacific Region, and promotion of scientific research resulting in English journal publications (Ogawara et al., 2009). Through these collaborative activities, JIPWEN has recognized the importance of comprehensive pre-qualification IPE curricula in the WHO global strategy on HRH.

Collaboration with the WHO is one of the central issues of JIPWEN activities. In 2013 Gunma University, as coordinator university of JIPWEN, was designated as a WHO collaborating centre for research and training on interprofessional education. On the basis of this formal collaboration, JIPWEN will: 1) contribute to better understanding of IPE in the context of overall transformative scaling-up of health professional education; 2) collect and disseminate evidence for transformative scale-up of health professional education by promoting research and training in evaluating the efficacy of IPE programs; and 3) expand linkages with health professional education institutions and provide IPE training courses in the Western Pacific Region (WHO, n.d.).

2. The Consortium for Interprofessional Education Strategy–21 (CIPES–21)

Co-development and practice of module-centered interprofessional education to improve quality of life was a project of CIPES–21, a consortium of five universities and other related universities from 2009 to 2011 funded by the Ministry of Education, Culture, Sports, Science & Technology (MEXT) (Endoh et al., 2012).

CIPES-21 jointly developed various modules of IPE for development of core curricula in order to standardize IPE for professional education in the

medical, health, and social care fields, using information and communication technology. The five universities were: Niigata University of Health and Welfare (NUHW, representative), Saitama Prefectural University, Sapporo Medical University, Tokyo Metropolitan University, and Japan College of Social Work.

Each university had developed its own IPE prior to 2009. CIPES-21 made collaboration possible between health and social care departments since the five universities included almost all professional departments. In order for the CIPES-21 universities to achieve a consensus on IPE, a multidisciplinary team from the five universities visited several leading universities in the United Kingdom and Canada, and lecturers were invited to IPE workshops held in universities in Japan.

Committees were formed in the five member universities for standard modules development, facilitator training, learning effectiveness evaluation, and IPE operating systems. The standard modules development committee had re-examined the modules of NUHW and collected cases from the other four member universities and other related universities which participated by submission of modules only. Thirty modules were available until the end of the project in March 2012. A module comprises of the following items: case description, a scenario, scenario study materials with basic literature, a facilitator guide, and a tutor's guide including a learning matrix.

Modules were in the following four topic areas: 1) prevention and early detection model (for example, secondary prevention and treatment of a patient with an osteoporotic fracture of hip and spine); 2) medical model (for example, rehabilitation and support for living in a community for a patient with quadriplegia resulting from cerebral infarction); 3) life and long-term care model (for example, care of aged patient with dementia at home); and 4) health promotion and sports models (for example, improvement of the metabolic syndrome of the middle-aged).

The modules for use in IPE included problem-based learning materials, which are considered to have the following advantages: 1) the quality of the problems can be guaranteed with standardization; 2) the consent of the patient is not needed; 3) the students could choose a case from various themes; 4) self-learning may be done before the session and; 5) a student could participate in the session online and asynchronously.

It is definitely clear that e-learning has been most helpful for enabling collaboration between the member universities and for sharing the expertise of each university. The third-party evaluation emphasized the importance of maintaining the inclusion of social work students in IPE for combining health and social care services to respond effectively

to the needs of the rapidly growing numbers of the frail elderly (Barr, 2012). Through this project an excellent relationship formed between the Japan Association for Interprofessional Education (JAIPE) and the Centre for the Advancement of Interprofessional Education (CAIPE). Modules have been made open for general use; the number of accesses was more than 400 in 2012, and nearly 400 in 2013.

Interprofessional collaborative practice

Japan has become a super-ageing society so, in order to control an increase of medical expenditure, the priority location for elderly care has changed from hospitals to welfare facilities, then to homes in each region in which long-term care is provided.

It is certainly important not only to prepare resources such as hospital buildings and medical equipment, but also to develop three types of soft power, namely medical and health care, social care networks in local communities, and education of various levels in the region (Figure 4.2).

Therefore, wherever an advocate for improvement of health and social care works in a community, his/her leadership could create a team with cooperative members, enabling sharing of the objectives of the team,

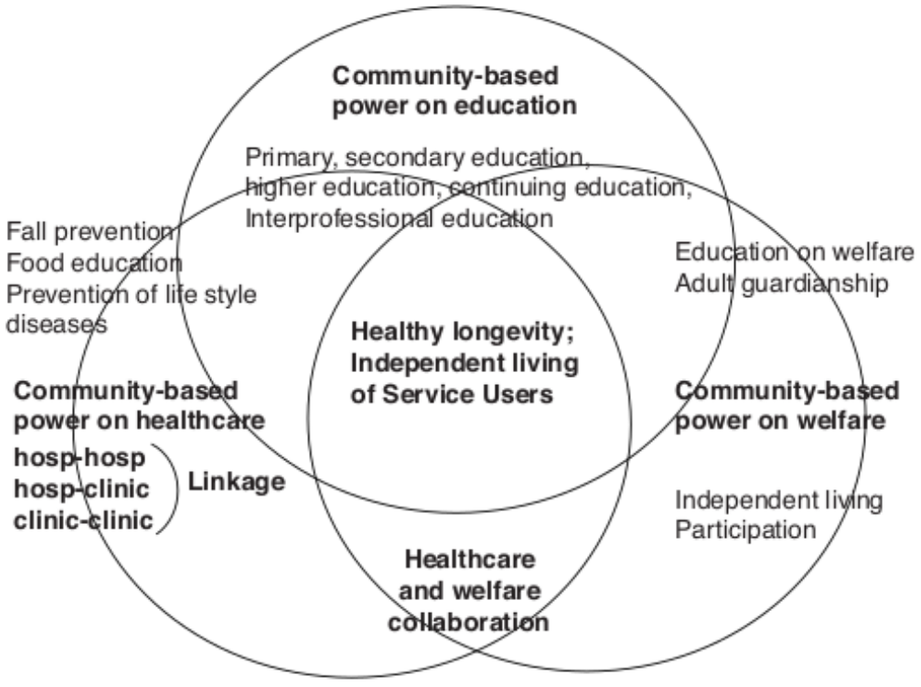

Figure 4.2 Community-based three soft powers to aim at healthy longevity and to maintain independent living of service users. (Takahashi, 2007, modified)

and resulting in good outcomes. A common mission of the team is to extend healthy life expectancy, and duration of independent living, and to improve the quality of life (QoL) of service users. Depending on where those advocates work – hospitals, universities, medical associations, welfare facilities, or communities – distinctive medical, health, and social care networks have been built in the respective regions and communities. Moreover, collaboration among multiple professions is being developed in response to various demands, diseases, or disasters. Collaborative practices among multiple professions on various issues in Japan are described below along with a few examples, although there are many more excellent accomplishments we have no room to mention.

Hospital-centred regional collaboration

Medical and health care through interprofessional collaboration has been implemented in regions throughout the country. One example is Saku Central Hospital in Nagano Prefecture, which after the Second World War and before anyone else in Japan, implemented an initiative which not only considers health problems from the perspective of the treatment of illness, but also offers a comprehensive health system including prevention, health promotion, and rehabilitation understood at the life level. In 1946 Toshikazu Wakatsuki became the director of the hospital and from 1959 he became the first person in Japan to begin to offer medical check-ups for an entire rural community, and he worked hard on disease prevention and health promotion for the residents. He established departments to support the medical care and welfare of the community, centred on home-visit treatment and home-visit nursing called community care (Cho et al., 2012). Implementation of collaboration on the ground by doctors, public health nurses, nurses, medical technologists, and certified social workers has been carried out based on the concept of primary healthcare for over 60 years since the war, and has produced excellent outcomes. Moreover, the central philosophy of the hospital is the medico-polis concept (Saku Central Hospital, n.d.), which revitalizes regional industries (agriculture, forestry, tourism, and others), employs young people and the disabled, and gives the elderly a reason for living.

In spite of the fact that the ratio of doctors to population in Nagano Prefecture is 35th out of 47 prefectures in Japan, Nagano is the prefecture with the longest mean life expectancy (Ranking, 2013) and is first for both men (80.88 years) and women (87.18 years). The dissemination of the medical care and welfare network has had a huge impact on this result. In addition to Nagano Prefecture, cooperation in community

medical care and welfare is being carried out in regions throughout the country, centred on hospitals or hospital groups.

Universities-centred regional collaboration

Kumamoto University

In Kumamoto Prefecture collaboration related to patients is being carried out based on information-sharing and the regional cooperative clinical pathway (for example, femoral neck fracture, and cerebral infarction), which is a tool for sharing objectives such as the final goals of care. The formation of this network was made possible by the high level of specialized abilities of each profession, information disclosure, and clarification of areas of responsibility in acute-phase hospitals, recovery-phase hospitals, recuperation-type medical institutions, long-term care facilities, and other facilities, and the consent of and trust among these hospitals and facilities. This creation of organizations in this region is thought to originate from the Kumamoto Rehabilitation Research Society, established in 1967 under the leadership of the late Professor Tatsuji Tamai, of the Kumamoto University Orthopedic Department. The members participating in this society were all professionals involved in rehabilitation medicine and, at the time, it was a pioneering organization unlike any other in the country. Its members considered collaboration in the region as a matter of course, and this led to the development of the regional collaborative critical pathway for femoral neck fractures, the first of its kind implemented in Japan. Currently, the Kumamoto Seamless Care Network for Hip Fracture comprises 43 groups (SCAN–HF, 2013) including a prefectural medical association, district and municipal medical associations, dental associations, pharmacist associations, psychiatric hospital associations, nurses' associations, therapists' associations, and welfare-related organizations. Having received the commission for the pathway it has built a regional rehabilitation promotion structure.

Jichi Medical University

Jichi Medical University, founded in 1972, is an institution with the objective of training medical doctors working in remote areas. Each prefecture has sent two selected high school students and supported the university financially (Jichi Medical University, n.d.). The Division of Community and Family Medicine, established in 1981, proposed the development of an organization aimed at achieving team medicine in the form of 'community-oriented primary care' (Ishibashi and Maezawa,

1987). In 2004 it was reorganized as the Division of General Practice Centre. The members of the team are government officers, public health nurses, nurses, home helps, doctors in private practice, nutritionists, physiotherapists, and social workers. This meant that workshops were held with the participation of these professions in order to provide student education. Every year two graduates from each prefecture, educated at this university, return to their home prefecture. They have a duty to stay and practise within the prefecture of their origin for nine years. Many of them became excellent leaders involved in community medical care, effectively implementing team-based medicine; furthermore, some of them, as hospital directors, are certainly active in interprofessional collaborative practice, involving residents as a human resource of health and social care in the community.

Medical association-centred regional collaboration

Onomichi City Medical Association, Hiroshima Prefecture

One of the most well-known regional health and social care delivery models in Japan is the 'Onomichi type'. The Onomichi City Medical Association in Hiroshima Prefecture has built a multidisciplinary care system for comprehensive community medical care under the leadership of its chair, Hisashi Katayama. At the Care Conference held at his office, for example, a patient who needs rehabilitation for stroke is assessed with a comprehensive geriatrics assessment (CGA), and a decision is made on his/her management. The professionals of both health and social care, about ten attendants including the patient if possible, and his/her family, are responsible for medical care, long-term care, and social welfare; they attend the conference, sharing all information with respect to care management and to understanding their respective roles in implementation (Katayama, 2005). It only takes about 15 minutes per case, twice a week, and such case assessment is the initial task for these various professionals one afternoon a week (as observed by one of the authors [*Hideaki E. Takahashi*] who visited Katayama's office several years ago).

The medical association has developed an environment in which the three principles of working as a primary care physician – 1) multiple activities: implementation of home care with multidisciplinary collaboration; 2) flexibility: delivery of patient-centred services; and 3) accountability, that is, explanations of evaluations, prognosis, and options to the patient and family – can be applied to the greatest extent possible (Onomichi City Medical Association, n.d.). Moreover, with the goal of

implementing home medical care, home palliative care is being implemented through patient-centred team-based medicine, in collaboration with community hospitals, clinics, specialists in various disciplines, dentists, and social care providers.

Uonuma City Medical Association, Niigata Prefecture

The activities of the city medical association in Uonuma City area in Niigata Prefecture are described as the 'Uonuma type' of collaborative practice. This area has the lowest ratio of medical doctors and the largest ratio of elderly in Niigata Prefecture, where the number of doctors is ranked 42nd out of 47 prefectures in Japan. Under the leadership of Masaaki Niwayama, the former director of the city medical association in this region, a social network for health and social care has been formed. Members of the association have accepted young doctors for training in rural medicine. An initiative to reorganize three prefectural hospitals has been implemented through close cooperation between the city medical association and the prefectural government. General practitioners, who are members of the association, provide various healthcare services, from the prevention of lifestyle-related diseases, such as diabetes mellitus and hypertension, to operating fully equipped regional sports clubs for age groups from youth to elderly. Clinics in this region engage in activities 'aiming to be a total care clinic offering everything from prevention of long-term care without using long-term care insurance to bedside care' (Kamimura, 2006). With the collaboration of the city government, and through close communication with parents, vaccination for cervical cancer was implemented for all girls under 15 years of age in the city; this was the first implementation in the country. Niwayama has also participated in the planning of the foundation of Koidego Cultural Hall, the centre of regional cultural activities, providing young artists and singers with the opportunity for public performances.

This city medical association independently launched a disaster headquarters for care at the time of the 2006 Chuetsu Earthquake to protect the health of the community's residents.

The Uonuma Community School for Health and Social Care, consisting of practitioners of multiple professions from the hospital, including doctors and various support staff, and the medical association founded in 2011, both consider local residents as human resources for healthcare, and provide them with the knowledge and skills to manage their own health.

Social care corporation-centred regional collaboration

The Total Care Centre for the Aged, 'Kobushien' in Nagaoka City, Niigata Prefecture, operates many welfare facilities that implement cooperation among multiple professions, forming a welfare facility network in the region, with Tsuyoshi Koyama, a social worker, now the director of the facility, as a leader (Kobushien, n.d.). The centre has proposed and is implementing the idea of breaking up and moving the welfare facilities with a scale-capacity of 100 elderly residents that were previously located away from urban areas, and turning them back into small-scale facilities located in urban areas near families, where the facility residents are able to have a close relationship with family and community residents. The centre has launched many small-scale multifunctional business establishments and, moreover, has realized a fixed-price, 24-hours-a-day, 365-days-a-year home services project. This demonstrates not only cooperation among multiple professions, but also close collaboration with the city government and community residents.

Disease prevention and control-centred collaboration among multiple professions

Diabetes mellitus

Diabetes, in particular type II diabetes, is very common in Japan and finding measures to alleviate this condition is a major issue to be faced. The Certification Board for Diabetes Educators in Japan (CDEJ) is part of a system founded in 2000 (CDEJ, n.d.). Diabetes Educators possess wide-ranging specialized knowledge about diabetes and recuperation education, understand the lives of patients, and assist patients so that they can carry out appropriate self-supervision. As of June 2013 approximately 17,600 of them are active. Approximately half of these educators are nurses, one quarter are registered dieticians, and the other quarter are pharmacists, medical technologists, physical therapists, or other professionals.

Metabolic syndrome

Metabolic syndrome is the name for a group of risk factors, diagnosed by a co-occurrence of three out of five of the following medical conditions: abdominal (central) obesity, elevated blood pressure, elevated fasting plasma glucose, high serum triglycerides, and low high-density cholesterol (HDL) levels (Metabolic syndrome, n.d.). This syndrome poses a threat to extension of healthy life expectancy in Japan. Since interprofessional collaboration is really needed among doctors, public

health nurses and registered dieticians, the educators mentioned above have a very important role in the prevention and treatment of metabolic syndrome.

Osteoporosis and osteoporotic hip fracture

Osteoporosis and fragility fracture are heavy burdens in Japan with many elderly people affected. Osteoporosis and vertebral fractures are related to ageing and the incidence of osteoporotic hip fracture is increasing. It has been emphasized that interprofessional collaborative practice is very important for the prevention of falls and the treatment of osteoporosis. Therefore various academic societies have been putting into place systems for many professionals, such as nurses, public health nurses, therapists, pharmacists, certified dietitians, and others, to learn about osteoporosis.

In 2004 the Society of Fall Prevention Medicine was established. In 2014 the society changed its name to the Japanese Society for Fall Prevention (Fall Prevention, 2014). In 2012 the Japan Osteoporosis Society launched a system of certification for osteoporosis specialists called 'osteoporosis managers', for nurses, physiotherapists, pharmacists, certified dietitians, and others, aiming to establish fracture liaison specialists in hospitals and communities. The Japan Fragility Fracture Network was established in 2012, when its first annual meeting was held in Kyoto. In order to prevent secondary fracture after osteoporotic hip fracture, the Network emphasized that the establishment of a fracture prevention (liaison) service would be particularly useful in an acute hospital, run by a fracture prevention (liaison) coordinator (most frequently a nurse) with the skill mix derived from interprofessional collaborative practice (Takahashi, 2014). A reference library with a learning matrix is also useful in interprofessional learning for secondary fracture prevention at both pre-and post-qualification levels (Takahashi, 2009b).

Locomotive syndrome

Nakamura (2009) has developed the concept of 'locomotive syndrome'; this has a symbolic meaning relating to a locomotive engine, and brings to mind an active image. The locomotive organs consist of three main elements: bones, joints, and intervertebral discs; muscles; and the nervous system. When these elements deteriorate, diagnoses often arise of osteoporosis-related fragility fractures – osteoarthritis, spondylosis, sarcopenia, nerve disorders, and so on. Prevention of these disorders is most important for elderly people and is best accomplished through a multidisciplinary approach.

The Japan Locomotive Syndrome Research Society, established in 2008, is working on the prevention and appropriate treatment of locomotive syndromes (Locomotive syndrome, n.d.) among the elderly, such as osteoarthritis, rheumatoid arthritis, problems due to spinal canal stenosis, and fragility fractures due to osteoporosis, and is educating the public about both prevention and treatment. In 2014, the Japan Stop the Locomo Council initiated a system to educate professionals as 'Locomo Coordinators' who will train volunteers as 'locomo helpers' over the next three years.

Dementia

The number of patients in Japan in 2013 with dementia was estimated to be about four million. The Ministry of Health, Labour and Welfare has begun a policy of management of dementia; this 'Orange Plan, 2013–2017' (n.d.) comprises: 1) development and dissemination of a critical pathway for dementia care: surveys and research were carried out in 2012–13; the development of a pathway for dementia care was completed in 2013–14, and the pathway will be included in long-term care insurance in the community from 2015; 2) early diagnosis and early treatment has been emphasized: annual workshops have been held for general practitioners to improve the quality of care of dementia and for specialists to train in the support and care of patients with dementia; 3) establishment of community healthcare services to support patients with dementia; 4) establishment of social care services to support patients with dementia in the community; 5) empowerment in the daily life of the patients and encouraging support for their family; 6) development of a policy for juvenile dementia; 7) training of health and social care professionals in dementia care: lectures for specialists and general practitioners and workshops for allied professionals have been held to train leaders for dementia care. A 'life support model for dementia patients' is now being developed for interprofessional collaborative learning.

Collaboration among multiple professions to deal with disasters

Disaster Medical Assistance Teams (DMATs, n.d.) are 'mobile medical teams' that can be deployed during the acute phase of a disaster, and comprise two doctors, two nurses, and one administrative coordinator (from multiple professions including administrative staff, medical technician, pharmacist, radiology technician, and others) who have received specialized training. In the aftermath of the Hanshin and Awaji Great Earthquake that occurred on 17 January 1995, the Ministry of Health, Labour and Welfare launched the disaster medical assistance team, Japan

DMAT, in April 2005. Disaster base hospitals and critical care centres have also been established. They engage in 'medical activities in disasters that are in the hyper-acute phase'. There were 1002 disaster medical assistance teams registered by the end of 2012.

Japan Medical Association Teams (JMATs, n.d.) are the disaster medical teams of the Japan Medical Association. They were established in March 2010. JMAT teams engage in 'activities in the acute phase and subacute phase'. They have been established in each prefecture and each city medical association; 1384 teams were registered by July 2011.

The Wide-area Social Care Support Network for Disaster (Thunderbird), is an organization created by medical, health and social care professionals and residents that supports welfare at times of disaster (Wide-area Social Care Support Network, n.d.). It was proposed and represented by Takeshi Koyama, a social worker. It established a 'support centre' as a base for providing long-term care, as well as trying to prevent the need for long-term care, and health promotion for the elderly who were victims of the 2004 Chuetsu Earthquake in Niigata Prefecture. It offers psychological care from clinical psychotherapists and a full range of consultations by social workers. With this as the catalyst, it subsequently became a nationwide incorporated non-profit organization (NPO). It was active in relief efforts for the 2011 Great Eastern Japan Earthquake and tsunami.

The Primary Care for All Team (PCAT, n.d.) was established by the Japan Primary Care Association to respond to the Great Eastern Japan Earthquake, which occurred on 11 March 2011. Since 13 March 2011 it has been involved in activities aimed at supporting the disaster victims in the sub-acute and chronic phases of the disaster, with the participation of not only doctors but also many other professionals involved in primary care, including dental practitioners, pharmacists, nurses, public health nurses, midwives, nutritionists, physical therapists, occupational therapists, clinical psychotherapists, and others.

Discussion and conclusion

In this chapter we have discussed the background to the development of on-site collaboration that has been implemented by health and social care professionals during the last 60 years in Japan. We then described the background to the development of IPE projects that have been implemented by universities and other professional training schools over the last 15 years. Whether the working site is in the health care or social care field, the key to creating an efficient health and social care network, and for developing good collaboration among multiprofessionals, is

'people'. This means that a person with a definite vision and passion could show his/her outstanding leadership skills to form teams, and further progress by sharing their philosophy with fellow team members. Furthermore, this approach is centred on the users of services and care, such as patients, the disabled, the elderly or the users' family, who also become team members and share common objectives. There are many issues that are better resolved by team-based care than by professionals from a single discipline working alone. Examples were shown in hospital-centred, medical association-centred, or social care corporation-centred regional collaboration. In each case we could find a leader with a mission. We recommend creating the team and dealing with issues using the human and social resources that may be available at that time and in that place. It may be advisable to form a team of different professions according to the issue.

In Japan, the super-aged society, an aim of both faculties in higher education and professionals in active on-site practice in the health and social care fields is to extend healthy life expectancy, that is, to prolong the period of independent living and to enhance QoL through interprofessional collaborative practice. A professional in any field could be a leader of a multidisciplinary team dedicated to solving an issue in his/her own field. Most importantly, in order to respond effectively to the wide-ranging needs of elderly people, it is most important to ensure the involvement of social work students in IPE (Takahashi, 2006; Barr, 2012).

We are now in an era when IPE can be implemented across academic disciplines within the university and between different universities by using information and communication technology (ICT), which may be helpful in building cooperation between universities with dedicated healthcare departments and social care departments. Therefore IPE, which enables participants to master teamworking competencies, is needed not only pre-qualification, but also post-qualification – and this is still in an early stage of development. Integration between IPE and interprofessional collaborative practice is imperative. There may be a very important role for JAIPE to advocate collaboration between educators in universities and active practitioners in many aspects of health and social care learning (Figures 4.1 & 4.2).

It is extremely important to take the first step, to build a team and to work together, so that the team can make things better for the service user. 'Two heads are better than one.' A team may start with two, then add more.

IPE in Japan is still a developing field in higher education. It is neither a compulsory subject, nor is it systematically included in professional education curricula in universities. Even if IPE is included, most programs are still limited to healthcare students. It is rare to see a common curriculum shared between healthcare and social care students in universities in Japan, although this is definitely needed.

It would be more practical and indispensable to include self-directed learning (Knowles, 1980; Watanabe, 2007) for both healthcare and social care professionals in post-qualification professional education. The role of a 'champion' in interprofessional collaborative practice as well as education (Freeth et al., 2005) is still not well understood by medical doctors in Japan; nevertheless the facilitation of leadership is most important in teamwork. In order to attain continuous quality improvement, that is, to extend healthy longevity and independent living in a super-ageing society, we strongly advocate well balanced development of community-based powers in education, healthcare and welfare (Figure 4.2). Relating outcomes to foci, we have to understand outcomes at six levels, as well as the interlocking relationships of the three foci of interprofessional education (Barr et al., 2005). When we can consider our interprofessional collaborative practice as a dynamic model we will really have found the key to knowing how to learn and teach.

Reflective questions

1. Consider the case of Japan, or any other country, where IPE is developing in higher education, being neither a compulsory subject nor necessarily included in the curricula of professional education: how would you advocate the inclusion of IPE in a curriculum? How would you facilitate collaboration in curriculum development, particularly between healthcare and social care faculties for pre-qualification programs?
2. In Japan there still exists a hierarchy of professions in a hospital. How might educators and clinical teachers begin to break down this hierarchy to facilitate IPL in clinical settings?
3. How might you enhance the use of self-directed learning (Knowles, 1975; Watanabe, 2007) rather than teacher-directed learning for both healthcare and social care professionals in continuing life-long education?
4. A champion (Freeth et al., 2005) has played an important role in fostering interprofessional education and collaborative practice. How do champions influence curriculum and practice if they do not have leadership roles within an organization?

Acknowledgements

For the establishment of the Japan Association for Interprofessional Education, the authors are most grateful to Professor Hugh Barr, president of the UK Centre for the Advancement of Interprofessional Education (CAIPE) for his warm encouragement and continuous support.

References

ATBH VI. (2012). All Together Better Health VI conference, the 6th International Conference for Interprofessional Education and Collaborative Practice). Retrieved from: www.k-con.co.jp/atbh6_link.html.

Barr, H., Koppel, Reeves, S., Hammick, M. and Freeth, D. (2005). *Effective interprofessional education – argument, assumption and evidence*. Oxford: Blackwell. Japanese Version (2011). Translation supervised by H.E. Takahashi. Niigata: Publishing Support Daikisha.

Barr, H. (2012). CIPES-21: A third party evaluation. In K. Endoh, A. Magara and Y. Nagai (eds), *QOL supported by a team. Expanding interprofessional education for health and social care professionals*. A final report of a supporting program of strategic collaboration between universities to promote university education: Common development and implementation of module-centered curriculum for interprofessional education to improve QoL of the service-users: 283–5 (in Japanese).

CAIPE. (n.d.). Center for the Advancement of Interprofessional Education. Retrieved from www.caipe.org.uk

CDEJ, Certification Board for Diabetes Educators in Japan. (n.d.). Retrieved from www.cdej.gr.jp

Cho, J., Fujii, H. and Izawa, S. (2012). *History of interprofessional work in Saku Central Hospital*. All Together Better Health VI (ATBH VI): Kobe, 8 October 2012. Program & Abstract Book, 117–18.

Dementia care. (n.d.). Measures for dementia care. Ministry of Health, Labour and Welfare. Retrieved from www.mhlw.go.jp/file/05-Shingikai-12601000-Seisakutoukatsukan-Sanjikanshitsu_Shakaihoshoutantou/0000047999.pdf

DMAT. (n.d.). Disaster Medical Assistance Team. Retrieved from http://dmat.jp

Endoh, K., Magara, A. and Nagai, Y. (eds) (2012). *Development and practice of interprofessional education in Japan – modules, sharing and spreading*. CIPES-21; Niigata University of Health and Welfare (Representative), Saitama Prefectural University, Sapporo Medical University, Tokyo Metropolitan University and Japan College of Social Work.

Fall Prevention. (n.d.). Japanese Society for Fall Prevention. Retrieved from www.tentouyobou.jp/1.html

Freeth, D., Hammick, M., Reeves, S., Koppel, I. and Barr, H. (2005). *Effective interprofessional education – development, delivery and evaluation*. Oxford: Blackwell. Japanese Version (2011), translation supervised by H. E. Takahashi. Niigata: Publishing Support Daikisha.

Gedik, F. G. and Watanabe, H. (Mod.) (2012). Organized Symposium *Transformative scale up of health professional education in Asia: IPE in Western Pacific Region.*

All Together Better Health VI (ATBH VI): Kobe, 8 October 2012. Program & Abstracts: 129–32.

GHWA, Global Health Workforce Alliance. (n.d.). Retrieved from www.who.int/workforcealliance/members_partners/member_list/ jipwen/en

Ishibashi, Y. and Maezawa, M. (1987). Primary health care in undergraduate medical education. Experiments led by Jichi Medical School. *Medical Education (Japan), 18*(1): 39–41.

Jichi Medical University. (n.d.). Retrieved from www.jichi.ac.jp/english/history.html

JIPWEN. (n.d.). Retrieved from http://jipwen.dept.showa.gunma-u.ac.jp

JMAT. (n.d.). Japan Medical Assistance Team. Retrieved from http://med.or.jp/etc/eq201103/jmat.html

Kamimura, N. (2006). *Care prevention without long-term insurance: Care prevention by an activity of Comprehensive Community Sports Club*: 26th Annual Meeting of Japan Primary Care Association, PC06-8.

Katayama, H. (2005). *Community medical collaboration and home health care as a patient-centered system*. Chiryo, 87:1693-1700.

Knowles, M.S. (1975). *Self-directed learning: A guide for learners and teachers*. Japanese version. (2005) (on demand version 2011). Translation supervised by Y. Watanabe. Tokyo: Akashi Publisher.

Knowles, M.S. (1980). *The modern practice of adult education, from pedagogy to andragogy – revised and updates*. New Jersey: Pearson Education. Japanese version. (2001) (3rd edition, 2012). Translation supervised by Shigeo Hori & Kenji Miwa. Tokyo: Otori Shobo Publisher.

Kobushien. The Total Care Center for the aged. (n.d.). Retrieved from http://kobushien.com/

Locomotive syndrome. (n.d.). Retrieved from https://locomo-joa.jp

Metabolic syndrome. (n.d.). Retrieved from www.nhlbi.nih.gov/health/health-topics/topics/ms

Nakamura, K. (2009). Locomotive syndrome: disability-free life expectancy and locomotive organ health in a 'super-aged' society. *Journal of Orthopedic Science. 14*(1): 1–2. DOI: 10.1007/s00776-008-1302-y

Ogawara, H., Hayashi, T., Asakawa, Y., Iwasaki, K., Matsuda, T., Abe, Y., Tozato, F., Makino, T., Koizumi, M., Yasukawa, T. and Watanabe, H. (2009). Systematic inclusion of mandatory interprofessional education in health professions curricula at Gunma University: a report of student self-assessment in a nine-year implementation. *Human Resources for Health, 7*: 60.

Onomichi City Medical Association. (n.d.). Retrieved from www.onomichi-med.or.jp/support/support.html

PCAT. (n.d.). Primary Care for All Team. Retrieved from www.pcat.or.jp

Ranking. (2013). *Mean life expectancy by prefectures*. Retrieved from www.japan-now.com/article/335027369.html

Saku Central Hospital. (n.d.). Retrieved from www.sakuhp.or.jp/ja/index.html

SCAN–HF. (2013). Kumamoto seamless care network for hip fracture. Retrieved from http://scan-hf.umin.jp/index.html

SLOC. (n.d.). Japan Stop the Locomo Council. Retrieved from www.stop-locomo.com

Takahashi, H. E. (2006). The practice of interprofessional education at Niigata University of Health and Welfare. *Niigata Journal of Health and Welfare*. *6*(1): 112–16.

Takahashi, H. E. (2007). Interprofessional education needs to correspond with the necessity of interprofessional work in health-care and welfare in Japan. *Niigata Journal of Health and Welfare, 7*(1): 1–8.Retrieved from http://hdl.handle.net/10623/27361

Takahashi, H. E. (2009a). Establishment of the Japan Association for Interprofessional Education. *Journal of Interprofessional Collaboration in Health and Social Care, 1*(1): 48–51 (in Japanese).

Takahashi, H. E. (2009b). A proposal for virtual cases in interprofessional education held in a reference library with a learning matrix. *Niigata Journal of Health and Welfare*. *9*(1): 1–2. Retrieved from http://hdl.handle.net/10623/27378

Takahashi, H. E. (2012a): The development of interprofessional collaborative practice and education in Japan: Past and present status. In K. Endoh, A. Magara and Y. Nagai (eds), *Development and practice of interprofessional education in japan – modules, sharing and spreading*. Niigata: Niigata University of Health and Welfare (Representative): 19–33.

Takahashi, H. E. (2012b): Future prospects of IPE in Japan. In K. Endoh, A. Magara and Y. Nagai (eds), *Development and practice of interprofessional education in japan – modules, sharing and spreading*. Niigata: Niigata University of Health and Welfare (Representative): 187–96.

Takahashi, H. E. (2014). Secondary fracture prevention, treatment and support of living for hip fracture with interprofessional collaborative practice: An experience in the United Kingdom and a current status in Japan and its future prospects. *Osteoporosis Japan. 22*(2): 213–47 (in Japanese).

Takahashi, H. E. and Sato, S. (2009). Establishment of the Japan Association for Interprofessional Education and perspectives. *Journal of Interprofessional Care, 23*(6): 554–5.

Uonuma Satellite Symposium on Health and Social Care of ATBH VI. (2012). Retrieved from www.k-con.co.jp/ATBH/uonuma.pdf

Watanabe, H. and Koizumi, M. (eds) (2009). *Advanced initiatives in interprofessional education in Japan*. Tokyo: Springer Tokyo.

Watanabe, Y. (2007). The fundamental principles of adult education and their suggestions: some implications for the professional education. *Medical Education. 38*(3): 151–60.

WHO. (n.d.). World Health Organization. Retrieved from http://apps.who.int/whocc/Detail.aspx?cc_ref=JPN-89&cc_ref=jpn-89&

Wide-area Social Care Support Network for Disaster, Thunderbird (n.d.). Retrieved from www.thunderbird-net.jp

Part II
Collaborative Developments

5

Collaborative Leadership within Interprofessional Practice

Carole Orchard and Margot Rykhoff (Canada)

Introduction

Leadership and interprofessional client-centred collaborative practice are situated so both can resonate within both health and social care students moving into practice, educators who are interested in teaching from an interprofessional perspective, and practitioners who are grappling with the desire to provide enhanced collaborative care to their clients. This chapter begins with a discussion of a selected number of leadership models and their interrelationship to interprofessional collaborative teamwork. This is followed by an exploration of the impacts of current multidisciplinary practice within the health system; traditional hierarchical and top-down decision models will be discussed. Transformations needed to create the conditions for the capacity of teams to emulate interprofessional client-centred collaborative teamwork will then be explored. A case study is provided to assist in showing how a manager can create the conditions for collaborative teamwork to develop in an institutional setting. Finally, issues in current practice environments are discussed regarding how these subjects can be presented and enacted to support collaborative leadership. Thus, leadership reflective of more participatory and shared approaches to enhancing patient outcomes will be explored. The chapter ends with a brief discussion on selected means to evaluate the effectiveness of interprofessional collaborative team leadership.

This chapter sets the structure for the exploration of the impact of leadership in health organizations on the capacity of health professionals to enact interprofessional client-centred collaborative practice.

Leadership: organizational hierarchies

The issue of leadership in healthcare has been discussed by numerous authors. Transformative leadership has been defined as 'an influential model of leadership style… that includes…: 1) influence through a vision; 2) motivating through inspiration; 3) stimulating the intellect of subordinates; and 4) individualized consideration' (Burns et al. 2012: p. 477). These have been advocated as the models for leadership within health services in a number of studies, with a limited uptake into health systems (Wong and Cummings, 2009). Others suggest that leadership is not well defined and that the theories currently being advocated need to be abandoned and new models introduced (Pearce, 2004). What relevance does all this rhetoric have to establishing effective leadership in health systems? Edmonstone (2009) challenges the predominance of 'command and control' approaches with top-down directive leadership in health services, and suggests that a balance between hierarchical and *clinical leadership,* which he defines as 'leadership by clinicians of clinicians' (p. 291) is needed in our current health environment. He argues that current healthcare approaches require health professionals' rapid responses to the *uncertainty* and *complexity* that many of today's patients bring into healthcare encounters. At the same time those in the 'command and control' hierarchy of health organizations feel that the continuance of their approach is needed to control the costs of healthcare, and to more effectively distribute their health personnel to efficiently deliver services. Concomitantly health professionals are seeking the means to provide effective care that results in more positive health outcomes. The question then arises of whether these two dichotomies become *complementary* versus *confrontational*.

A complementary leadership framework

Pearce (2004) offers a potential framework that can create this complementarity. He discusses the need for both vertical and shared leadership, which is defined as situations 'when all members of a team are fully engaged in the leadership of the team and are not hesitant to influence and guide their fellow team members in an effort to maximize the potential of the team as a whole' (p. 48), thus both forms of leadership 'living together' within organizations. However, when Pearce and Sims (2002) studied four varying leadership theories and their complementarity with clinical leadership, which he terms shared leadership, they found that leaders who use the 'command and control' dimensions of

directive and autocratic styles were in conflict with clinical leadership. When these same leaders chose to use *transformative*, *transactional,* and *empowering* leadership approaches they found complementarity between vertical and shared leadership (Pearce and Sims, 2002). Transactional leaders are described as those who focus their leadership on 'making rewards contingent on performance, correcting problems actively when performance goes wrong, refraining from interruptions of performance if it meets standards, and a laissez-faire approach to organizational change' (Burns et al., 2012, p. 477). Empowering leaders are described as those who 'emphasize building self-influence skills that orchestrate performance while preserving [individuals'] autonomy' (Pearce, 2004). The integration of the above theories results in a framework proposed by Orchard and Rykhoff in this chapter titled the Complementary Leadership Framework (Figure 5.1) and encompasses Pearce and Sims's concepts of vertical and shared leadership.

Within this framework it is theorized that there is a reciprocal building of relationships between the formal vertical leader and the team members who are within the formal leader's responsibility area, and at the same time there is a shared relational practice at the informal practitioner level. Together these relationships result in both team effectiveness in

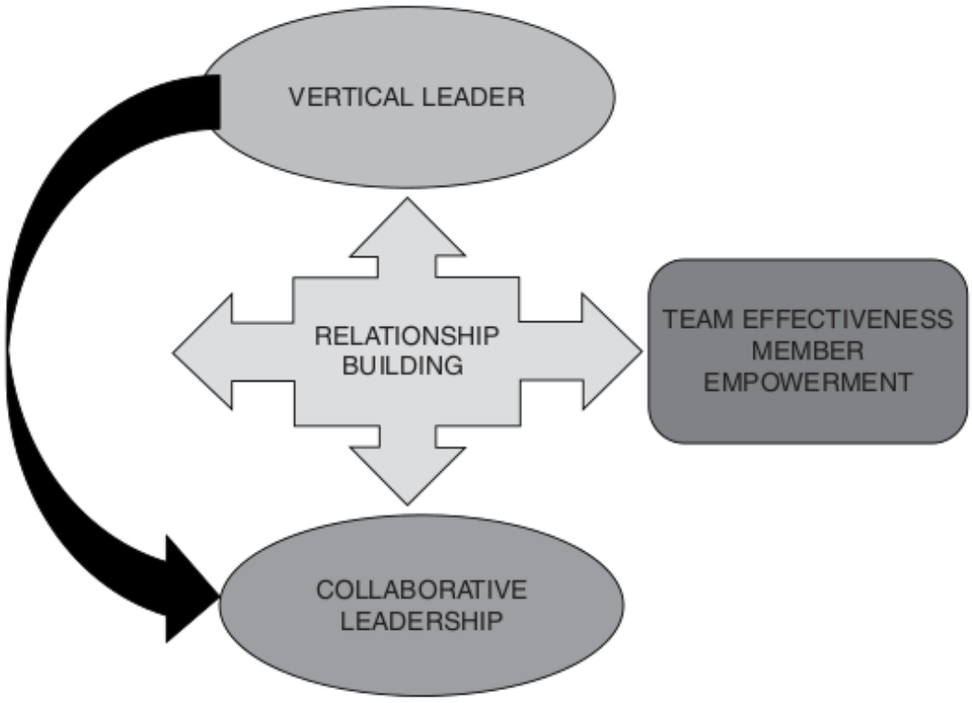

Figure 5.1 Integration of vertical and collaborative leadership framework
Source: Orchard and Rykhoff.

delivery of interprofessional client-centred collaborative care and individual empowerment of all parties. This framework can be viewed as an evolution through a series of leadership theoretical formulations across the period from the 1940s to the present time.

Leadership theories and models

Leadership and its various theories have generically arisen from the business sector as needs for managerial processes have evolved. Early work focused on what was termed the 'great man theory' which asserted that leaders were born with certain characteristics that endowed them to lead others. As the industrial age took root, assembly-line production was introduced and the great man theory of leadership evolved, incorporating styles of leadership that leaders used to guide work output and productivity. Sociologists such as Skinner and Pavlov studied workers and their environments and began to note the impact work settings had on workers. This caused leadership theories to begin to attend to the situation or context in which leadership was enacted (Banaszak-Holl et al., 2012). These behavioral theories fitted well into the industrial age and its focus on assembly lines. However, as scholars began to consider the impact that leadership had on workers, newer ideas about leadership emerged which moved theories into leader–member exchange (LMEX) models.

Leadership scholars began focusing directly on relational factors that further created reciprocity between leaders and followers through such theories as *transformational/transactional leadership* (Bass,1988), *authentic leadership* by Avolio and Gardner (Wong and Cummings, 2009), *resonant leadership* by Boyatzis and McKee (McKee and Massimilian, 2006) and *servant leadership* by Greenleaf (Stone et al., 2004). In each of these theories of leadership the determining characteristics are the emphasis on the leader, the followers, or the organization. In *transformational/transactional leadership* the leader's role is seen to assist followers to achieve organizational goals; in *authentic leadership* the focus is on the transparency of the leader in relationships with others; while in *resonant leadership* the focus is on the leader's own renewal of self. These theories examine the characteristics of leaders whose primary relation is with their followers.

Leadership scholars in healthcare have also focused on the vertical leader's capacity to emulate transformative leadership. Goleman's concept of emotional intelligence (EI) (Goleman, 2006) has been discussed as a core characteristic of effective leadership (Foltin and Keller, 2012; Freshman and Rubino, 2002; Vitello-Cicciu, 2002, 2013). EI stresses the need for leaders to exhibit self-awareness, self-management, social awareness, and relational management. It is suggested that the higher the level of

these EI competencies, the more attuned leaders are to their followers. Thus there must be a link between the vertical leadership capacity of the formal leader with that of the team of followers. However, to date the emphasis in all leadership theories has been on the individualized ability of the vertical leader to support followers – or get them to follow. There has been a paucity of discussion around the inter-relationship between the formal leadership transmitted through the vertical leader and the informal collaborative leadership occurring at the care interface of health professionals, patients, and family members.

The information age and leadership

The information age of the 21st century has brought forward attention to interactions between parties through networking capabilities. The World Wide Web, which is now taken for granted as the 'internet', has become a norm of connectivity to gain knowledge and has led to rapid technological advances. While seen both as a 'blessing and a curse' the internet has also created challenges for all in keeping current with learning as an outcome of the speed of change and new knowledge generation. This rapid connectivity has resulted in more attention during the late 20th and into the beginning of the 21st century on efficiencies of practice with concomitant cost savings achieved through partnerships, and through mergers and alliances. Little attention, until more recently, was focused on those affected by these changes, the followers, and to the impact on their workplace culture.

This interconnectivity achieved through transmission of information around the world has also concomitantly created the need to respond rapidly to changes. To address these rapid changes in organizations Anderson (1999) proposed a complexity theory which suggests that complex causes for change are responsive to participants at the provider group level who are faced with making rapid decisions to facilitate appropriate and effective care (in healthcare the complex health needs of patients is an example). In response to population needs for health services and government-mandated accountability frameworks, health institutional administrators frequently adjust their vertical structures to bring order out of the 'chaos'. However, the effectiveness of the change outcomes is actually dependent on the rapid decision-making that is occurring at the care interface level within health service organizations and less often at the upper administrative levels. This frequent adjusting of administrative structures, in response to external demands, has created workplace environments that are perceived by health providers as constantly changing. In complexity theory this phenomenon is

described as 'living on the edge of chaos'. In the face of pressures by governments to live within assigned budgets to control public expenditure, health administrators often use business responses which focus on the highest costs in the budget that if cut will result in the least negative political response. A recurring choice in Canada is to reduce the nursing workforce to balance the budget. Frequent staff layoffs have led many health providers to lose allegiance to their employing organizations due to their job insecurity, which is compounded by the impact of increased workloads for the remaining staff. These frequent changes are often carried out without any input from the direct care providers who are most affected by the changes. The outcome is an emerging view of vertical leaders as administrators' 'henchmen' whose actions are detrimental to their responsible health providers.

In an attempt to improve the connection between vertical leadership and those at the care interface, hospital executives and boards introduced quality improvement initiatives as a means to focus on efficiencies and care outcomes. Quality Improvement (QI) was influenced by Donabedian's work (2002) which advocates the need to attend to the structures, and processes, that lead to the outcomes of care. Thus QI was initially brought forward as a cost saving means. A further impact on healthcare delivery resulted from the release of the Institute of Medicine report *Crossing the Quality Chasm* (2001) that shocked the healthcare industry about the incidence of untoward patient deaths as a result of errors in care. Quality improvement through attention to patient safety became a new high priority for health systems in a number of countries such as Canada, the US, and the UK. The impact on funding and on patient safety caused health administrators to perceive the need to wrest control over healthcare delivery away from the health professions. This latter movement, sometimes referred to as the 'new managerialism' (Hunter, 1996) created conflicts and feelings of disenfranchisement between organizational administrators (the vertical leaders) and the health professionals who were providing the care (the collaborative leaders). Hence, these administrative actions were in conflict with what was going on in the private sector where knowledge workers became valued by their employers. In contrast, health professionals were seen as the problem by health system administrators.

In 2005 Shulman presented his work on signature pedagogies outlining why it is difficult to change professions' pedagogies of practice. All of the above movements created the perception among health system administrators of the need for systematized care around clinical pathways and standard care plans which has become the 'best practice' movement. In the UK there was also a belief that what was needed to break professions'

control over care delivery was to introduce the generic professional who could perform all roles and improve patient care outcomes without the need for a variety of health providers (Cameron, 2011). Hence, interprofessional health teams trying to address the growing complex needs of their patients are being pressured to conform to system-generated approaches to care when in reality their patients' co-morbidities are demanding more individualized approaches to improve the outcomes of their care. This disconnect needs to be addressed to create synergies between the vertical leadership in health organizations and the growing movement for interprofessional patient-centred collaborative practice.

What is currently advocated by the World Health Organization (2010) is a large number of health providers who have the capacity to bring together the necessary information to provide effective care to patients with complex health and social problems. However, this intended transformation to interprofessional client-centred collaborative practice has not resulted in wide-scale adoption of new models of care to meet the above challenges in health systems. Thus the multidisciplinary model of care has persisted, as has the traditional top-down administration of health providers.

Interprofessional collaborative practice is a form of practice in which a partnership exists between a team of health providers and a client in a participatory, collaborative and coordinated approach to share decision-making around health and social issues (Orchard et al., 2005). Multidisciplinary care occurs when each health provider assesses the patient on his/her own and all the health providers may or may not discuss their individual plans for the patient. A great deal of rhetoric around patient-centred care is espoused by administrators with the emphasis at the practice level, without the concomitant emphasis on improvements in workplace environments for the health providers delivering this care. As a result health providers tend to stick with the *status quo*, multidisciplinary care, at a time when patients have increased health issues necessitating care from a team of health providers. This complexity of care needed by patients necessitates a re-examination of the importance of knowledge workers being able to make quick and effective shared decisions at the patient/health provider level, and of health system administrators supporting local responses without the impediments of bureaucratic administrative structures.

The patient of today and care imperatives

Why have all these people with complex health and social problems suddenly presented themselves for care? It has been theorized that health research treatment findings and their resultant influence on technological

advancements have led to individuals with chronic health conditions living longer. With this extended life expectancy come failures in body systems, and patients now require ongoing health monitoring of their health/illness status. It has been suggested that the multidisciplinary model of care delivery, with each professional attending to a patient in an individualized interactive manner, developing care plans in isolation from other health professionals' viewpoints, limits the creation of the shared plans of care that are a feature of collaborative team relationships.

As these patients are taxpayers, and in countries delivering socialized healthcare they expect to receive all the services needed to address their problems. In non-socialized healthcare individuals seek the best care their insurance providers will allow. The long-term focus on curative medicine has resulted in individuals who seem to demonstrate varying commitments to the management of their own health. Concomitantly, governments or payers (insurers) exert close control over the budgets of health institutions and are increasingly requiring these institutions to live within these budgets while at the same time requiring them to meet all-comers' needs for quality services – the accountability movement. However, what has often occurred is a focus by administrators on efficiency of operations with a weakening emphasis on the effectiveness of service provisions.

Evolving new models of team leadership

The outcome in many healthcare institutions is for administrative and leadership structures and processes providing vertical leadership not to keep pace with the requirements of the information age and collaborative team leadership approaches. Vertical leaders feel under the microscope, and tend to focus on 'quick-fix tasks' to meet targets for program and staff performance. Targets are often dictated by governments or other funders and may be seen as disconnected by health professionals trying to increase the quality of their care and better patient outcomes. Thus the aims of vertical leaders and teams of interprofessional health providers diverge and disconnect.

In clinical leadership the health professionals 'retain some clinical role, but at the same time [take] on a significant part in matters of strategic direction, operational resource management and collaborative working with colleagues in their own and other clinical professions, with health care managers…' (Edmonstone, 2009, p. 291). Thus there is a form of shared leadership within the frontline staff. Pearce (2004) expands on this idea with his depiction of a combination of vertical and shared leadership in healthcare. Vertical formal leadership arises

through top-down hierarchy, and informal clinical leadership occurs via the health professional team and patient interface leading to complementarity and integration of knowledge, as depicted in this chapter's Complementary Leadership Framework (Figure 5.1).

Pearce and Sims (2002) studied leadership approaches used by vertical leaders to determine theories most effective in supporting shared leadership in teams. These authors envision teams using clinical or shared leadership in which all members 'focus…on the ability to connect with others in achieving team or group objectives…[and] represents a conceptualization of leadership characterized by the serial emergence of temporary leaders, depending on the task(s) facing the team and the knowledge, skills and abilities of the team members' (Bligh et al., 2006, p. 306). Bligh and colleagues found in their study of groups in workplace environments that those vertical leaders who adopted transformative, transactional, and empowering approaches to facilitate their work with staff were able to support shared leadership in followers. This cross-sharing of leadership responsibility reflects the concept of collaborative leadership defined by Raelin (2006) as occurring when 'there is a stance of nonjudgmental inquiry, [that] is receptive to the critical scrutiny of others, and assumes the view that something new or unique might arise from a dialogue that could reconstruct the participants' view of reality' (p. 157). He further suggests that in teams 'members used their conversation to invent new ways to attack a problem and collectively made sense together from what once was a state of "not knowing"' (p. 156). Thus three views of team leadership have been presented – clinical, shared, and collaborative. Are these the same concept with just different terms, or are there similarities but with some differences? To assist in this deliberation, Table 5.1, which compares the characteristics of these concepts, is provided below.

In clinical, shared and collaborative leadership a common thread of relationships created within teams who focus on a shared goal is identified. Hence, all three forms focus on relationships of those within their 'team' around an ethos for addressing processes to arrive at outcomes. Team members also seem to adopt a group responsibility for work, but reach this shared approach using somewhat different forms of group decision-making processes. Since all forms are dependent on relationship-building and working together, there is consistency with the integrated vertical and collaborative leadership framework presented earlier. Each of the terms have similarities but there are also subtle differences; for the purposes of this discussion 'collaborative leadership' will be the term used.

The idea of integrating vertical formal leadership with shared leadership further emphasizes the importance of relational-based integration

Table 5.1 Comparison of characteristics across clinical, shared, and collaborative leadership

CHARACTERISTIC	CLINICAL LEADERSHIP (Edmonstone, 2009)	SHARED LEADERSHIP (Boyle and Kochinda, 2004)	COLLABORATIVE LEADERSHIP (Linden, 2003)
POWER	Influence through personal power	Share power	Use persistence, energy and resolve
FOCUS ON OUTCOMES	Achieve change through debate, persuasion, negotiation	Rely on credibility, integrity, and ability to focus on process	Passionate about achieving desired outcomes
RELATIONSHIPS	Collegial relationships	Build broad-based involvement	Comfortable working interdependently
VALUING OTHERS	Enjoy respect and trust of colleagues	Value each person's input	Pull others rather than push
RESPONSIBILITY	Shared responsibility	All responsible to each other	
ACCOUNTABILITIES	Collegial decision-making	Accountable to each other	See interdependencies

Source: Orchard and Rykhoff

of leadership achieved through reciprocal sharing between the vertical leader and those who implement care at the clinical level. A case study is provided below to illustrate how the vertical formal leadership role might be emulated.

Case Study: Medway Hospital

Sally Robinson was recently appointed as the manager of the Medway Hospital's Neurosciences Unit. She comes to this position following her recent completion of her Master's degree in Health Services Administration. She has a social work background and is excited to have the opportunity to trial her transformative leadership approach that she had conducted a study about amongst health providers working in an emergency department at another hospital for her thesis.

Sally learned during her informal discussions with Neurosciences Unit staff that there is a great deal of discontent because the staff do not feel their work is valued by the hospital administration. They feel they work very hard with 'complex' and challenging patients to assist them to a level where they can move on to rehabilitation, and a transition back to their homes or other arranged locations. The staff talked about their 'team' and how they work together well to make sure their patients receive the best care possible.

During her Master's program Sally had an opportunity to learn about inter-professional client-centred collaborative practice from a guest presenter in one

of her courses. This session challenged her understanding of how care should be provided. Her previous experience had been working in multidisciplinary teams which she always found somewhat frustrating because she often was not fully apprised of what was going on with patients until the staff needed her help to place them somewhere. She wondered if this new approach to care would really result in better teamwork that was more effective. She felt that as a team they might be able to demonstrate this form of practice.

Sally decided that she was going to be open with the staff about her planned leadership approach and hear how they would like her to support them in their needs as well. She planned to use the next staff meeting for an open discussion. She sent an email message through the intranet inviting all the staff working on the unit, and also those who consulted in the unit, to attend the meeting. The agenda was prepared for open discussion. Sally wondered how many staff would attend. She was surprised when 25 of the 40 staff came. She opened the meeting by asking them what their expectations of her were. They were at first quite quiet as they assessed the safety of the environment she was providing. She reiterated how important it was to her to hear from them. The first member asked Sally to talk about who she was, what her background was, what were her hobbies, and what were her likes and dislikes. Sally noted that this was a way for them to assess her as a manager and to determine what her intentions and competence in performing her role for them might be. She openly shared about her life and her professional career, and then talked about her hobbies, likes and dislikes – including mentioning her dislike of brocolli. This got the group laughing and sharing with her their own background. She listened carefully to them and watched to see who spoke and the group's body language to indicate to her their perception of her as their manager. Finally one of the staff started to talk about what was important to her about the manager of the unit. Others then added to this discussion and soon most of the group was involved in the discussion. Sally carefully listened and took notes. Once they seemed to not have anything more to add Sally summarized what they had said was important to them about their manager. Sally then identified how she would try to meet these expectations and begin working with the staff to create a shared view for the unit's goals, purpose, and vision for patient's/families within the unit. She talked about the challenges that they would all have to work through, but that she was committed to them and to working with them to achieve the goals they would all set together to achieve. In this way she was setting the path towards a vertical and collaborative leadership model based on their relationships with each other.

The time set for the meeting came to an end and Sally wanted to keep to the schedule set out of respect for the staff. However, a few stayed behind and one came up to her and said it was the first time she felt someone from management really cared about her. Sally was very touched but also alarmed by this. The others also talked to Sally about how much they valued her just listening to them. They said that for too long they have had to listen to their previous managers telling them what they were to do. Rarely were their viewpoints or ideas sought.

Sally reflected on what had been stated, and realized that she had just engaged in the start to being the vertical leader she had envisioned she wanted to be. She had begun her journey in creating relational coordination between herself and the staff. There was still much work to do but the beginning showed promise.

For the vertical leader the key skill set needed relates to: design of teams, management of team boundaries (Carson et al., 2007), member task specifications, securing of resources needed by the team, and delineation of expectations for interactions and performance (Pearce and Sims, 2002). These skills need to be integrated into transformative leadership (Bass, 1985) and the leadership practices identified by Kouzes and Posner (2012) including: 'model the way' (clarifying your own values and validating and connecting actions to the group's shared values); 'inspire a shared vision' (helping the group to see a desired future); 'challenge the process' (seeking opportunities to innovate and take risks); 'enable others to act' (building relationships and trust); and 'encourage the heart' (recognizing the contributions of others). These leadership elements are envisioned to occur through relational building processes guided by transactional leadership theory. In our case study Sally emulated these practices – but at the start of the team development process.

While *transformational leadership* provides a means for focusing on relational perspectives associated with formal leadership, incorporating the valuing of the contributions of followers is missing. Hence the leadership practices fail to connect basic managerial skills and performance management with reward systems. In the concept of *transactional leadership*, however, it is theorized that vertical leaders are able to empower their followers (Avolio et al., 1999). The limit to this argument lies in its failure to address the concomitant development and enactment of shared leadership at the follower level. In this chapter we now adapt Kouzes' and Posner's leadership practices (2006) into a model of collaborative teams reflecting a shared responsibility for performance (see Table 5.2).

Model the way is demonstrated when team members know their own personal values and how these may enhance or interfere in working with others; and in helping the team to stay focused on client care and their own well-being. *Inspire a shared vision* can be seen when members focus on client-specified goals, and when the team considers how to get there; and further when team members help each other to bring their ideas together in an agreed-upon plan with the patient. *Enable others to act* is viewed when members help to guide the team in promoting respect for all members and in arriving at shared goals with patients and team members; and further when team members encourage other members to take on the leadership role and support patients in their decision-making with the team. *Challenge the process* is enacted through carrying out on-going reflection on how the team is working together and with the patient, and based on feedback making needed changes; and members thinking about their provider roles within an interprofessional patient-centered context. *Encourage the heart* is shown when the

Table 5.2 Comparison of transformative leadership elements for leader and interprofessional team

LEADERSHIP ELEMENT (Kouzes and Posner, 2006)	TRANSFORMATIVE LEADER	INTERPROFESSIONAL CLIENT-CENTRED COLLABORATIVE TEAM
Model the way	Clarifying your own values and validating and connecting actions to the group's shared values	Team members know their own personal values and how these may enhance or interfere in working with others; helping the team to stay focused on client care and their own well-being
Inspire a shared vision	Helping the group to see a desired future	Members focus on client-specified goals and when the team considers how to get there; help each other to bring their ideas together in an agreed-upon plan with the patient
Enable others to act	Seeking opportunities to innovate and take risks	Members help to guide the team in promoting respect for all members and in arriving at shared goals with patients and team members; encourage other members to take on the leadership role and support patients in their decision-making with the team
Challenge the process	Seeking opportunities to innovate and take risks	Carrying out on-going reflection on how the team works together with the patient and, based on feedback, make necessary changes; thinking about their provider roles within an interprofessional patient-centred context
Encourage the heart	Recognizing contributions of others	Collaborative leader in the team recognizes the positive work of all team members, including the patient, towards meeting patient-set goals for care; help team members with the patient; celebrate achievement of steps towards patient-set goals of care and well-being

Source: Orchard and Rykhoff.

collaborative leader in the team recognizes the positive work of all team members, including the patient, towards meeting patient-set goals for care and helping team members, with the patient, celebrate achievement of steps towards patient-set goals of care and well-being.

Comparing the leader-driven and the team-driven leadership practices together, a more comprehensive picture emerges of how vertical and shared leadership can intersect and interact. Thus, the practices may provide a greater means for coordinating both formal and informal approaches, leading to relational valuing. The application of these leadership elements enriches our framework, enabling a recognition of the impact of these elements on relational practice (See Figure 5.2).

Relational Leadership

Gittell et al. (2013) term the intersection between members within a team as 'relational coordination', that is, '...a network of communication and relationship ties among work groups engaged in a common work process' (p. 210). Thus relationships are built through communications that are frequent, timely, accurate, and focused on problem-solving (Gittell et al., 2013) and are based more on influence than on power differentials between members. In this chapter we extend the concept of relational coordination beyond just the team to also include the intersection between the vertical leader and team members. This intersection is key to effective patient outcomes (see Figure 5.3).

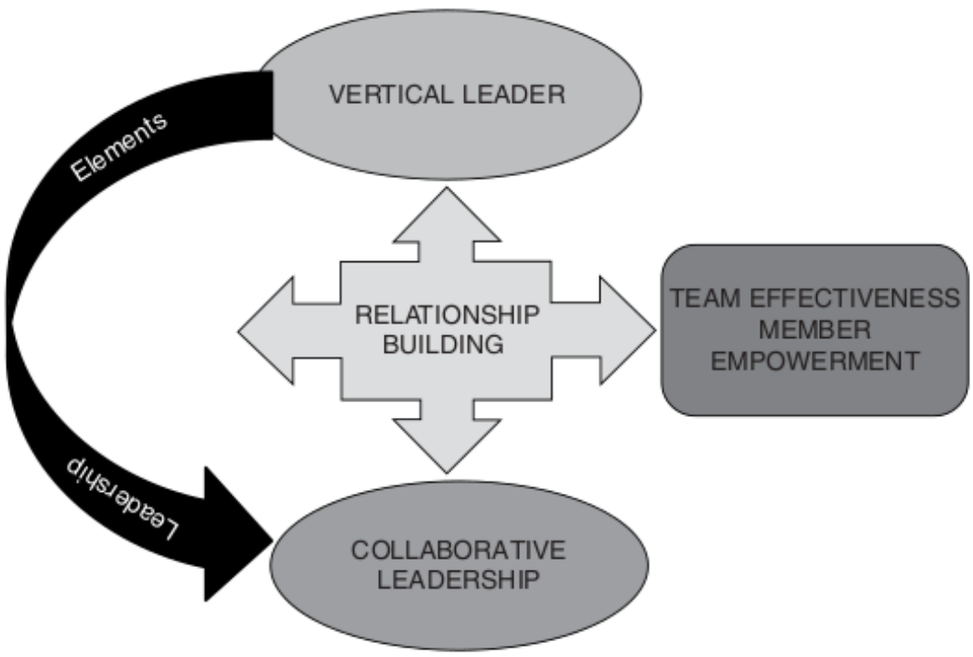

Figure 5.2 Integration of vertical and collaborative leadership frameworks
Source: Orchard and Rykhoff.

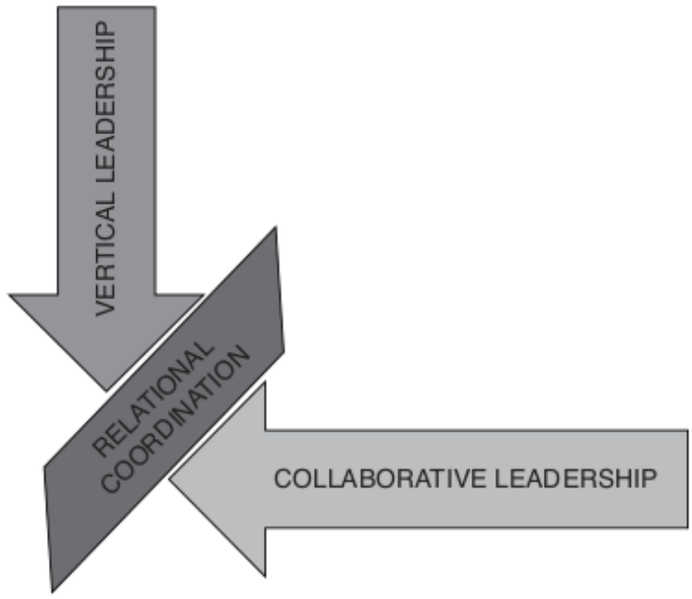

Figure 5.3 Intersection between vertical and collaborative leadership in client-centred collaborative practice

Source: Orchard and Rykhoff.

How team members interact with each other seems to be associated with perceptions of competence among members. When there is a strong belief in the competence of a member then that individual has the capacity to enter into discussions and be influential to other members. Hence, *influence* (the capacity of another to have an impact on others) and *competence* ('the habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values, and reflection in daily practice for the benefit of the individual and the community being served' [Epstein and Hundert, 2002, p. 226]) together are likely key characteristics for the development of trust ('reliance on the integrity, strength, ability, etc ... of' another [dictionary.com]) within a team. Similarly, perception of the vertical leader's competence is likely to directly relate to the trust team members place in this person. Caldwell and Hayes (2006) refer to this as the 'zone of trust', defined as 'the boundaries within which followers are willing to follow leaders and the degree to which individuals feel personal ownership regarding organizational goals and rules' (p. 263). These authors conclude that trust is a social model that exists between the leader and the followers. But, as has been stated earlier, health professionals pay more allegiance to their professions than to organizations. The degree of trust followers hold in their vertical leader will likely be more dependent on the personal and

professional relationships that evolve between leader and followers and may not be dependent on allegiance to the organization.

Thus influence and perceptions of competence between leader and followers and among followers seem to evolve through interactions between these parties. The quality of these interactions is believed to arise from attention to five principles: 1) intention – openness to sharing and listening to your own and others' thinking to gain a comprehensive understanding of the topic; 2) listening – receptivity to hear without attaching meaning or motives to what is stated by others; 3) advocacy – sharing your own thinking related to discussions; 4) inquiry – asking probing questions to gain more in-depth understanding; 5) silence – reflecting on the above and allowing new insights to be formed (Wesorick et al., 1997, p. 16, cited by Walker, 2001, p. 30). The quality of these interactions, according to Boyle and Kochinda (2004), evolves through stages. Initially team members must be open to discussing their views, followed by members seeking clarity of the shared information between them for its relevance to the discussion topic, then developing collaborative approaches to deal with ideas identified, and working out how these might fit into a shared agreed-upon plan. Finally all team members use the shared plan together to distribute work dedicated to achieving the plan's outcome. The vertical leader's role is to assist in the design of the team, managing the team's boundaries, seeking out necessary resources, identifying and finding solutions to training needs of team members, mentoring teamwork when needed, and providing reward systems for team efforts (Pearce, 2004). Thus the vertical leader has a sensitive role in guiding without authoritatively directing the team. This role should help the team create a workplace environment for building trust through honesty between the vertical leader and the collaborative team members in which all parties feel they are being valued, respected, listened to, and supported.

The vertical leader's role is flexible in 'remov[ing] administrative and organizational barriers to collaboration … and permeat[ing] organizational boundaries … to become a partner [with team members] … [and] offer[ing] training in key collaboration skills … [while] recogniz[ing] and support[ing] collaborative leaders … [and] providing the means for … [followers to] tell their own stories' (Linden, 2003). Thus the vertical leader becomes a facilitator for the team as well as their mentor – helping, encouraging, and supporting their efforts to work collaboratively while ensuring the work performed fits within overall organizational mandates and strategic directions. If we return to our case study, to be successful in her quest to create an interprofessional patient-centred

collaborative team, Sally will have to develop her vertical leadership role to include the above role characteristics.

Challenges to enacting collaborative leadership in teams

How can shared leadership within teams evolve within environments where the vertical leadership role presented above theoretically does not exist? Can groups of health professionals come together and still function to achieve shared or collaborative leadership within a directive or autocratic vertical leadership structure in their organization? Healthcare practice is controlled through the regulation and standards of practice of health professions. These standards of practice are set out within the structure and processes of institutions or agencies. However, health professionals do exercise a high degree of independent clinical judgment which is rarely scrutinized by the administration unless a complaint or untoward event occurs. Hence, clinical decision-making rests with health professionals and is controlled by professiional regulations. As one coordinator of a hospital-based outreach program of interprofessional care aimed at home-based clients stated: 'to achieve our work I work around the policies and procedures of the parent institutions' (EW: personal communication, April 2014). He further commented on the need to provide high-quality care to the home-based clients who received his teams' care while having to work within directives that were applicable only to inpatient care and hospital-based practitioners. The constraints he faced were largely related to human resource management policies and material resources, but in each case his approach was always beneficial to the organization, as the actual practices he pursued and encouraged improved the care productivity of the staff. Although he often felt on the defensive against his manager's challenges to his policies and practices, without exercising his collaborative approach, care could not be delivered within the time available. Thus, as long as the health professionals' vertical leader pursues a degree of latitude in how team members work together to enhance their teamwork and embrace interprofessional client-centred collaborative practice, it can be accomplished within traditional hierarchical institutions. At the same time such an approach does place the vertical manager at professional risk within the organization.

A further issue amongst the team members is related to their capacity to effect change. Although health professionals have the educational preparation to be change agents within their work environments, long-standing top-down decision-making models have often forced them to abandon actions to reform practices that do not make sense

to them, and to follow the *status quo* instead. Arguing that it cannot be changed, health providers often use 'managers' as their scapegoats. In a recent research study that included 16 focus group interviews with interprofessional staff in a cluster of small community hospitals within Ontario, Canada, informants readily identified the problems that interfered with their teamwork, but not the role health providers could take to enact a change (Gaffney et al., 2013). Staff tended to immediately target the manager as the individual impeding change. However, in two cases when practice-based problems were more deeply probed within these focus groups, the informants realized their capacity to take action (Gaffney et al., 2013). These findings suggest that when health professionals communicate with each other around a desire to change, and the group provides motivation to act within their workplace, they discover an increased capacity to find solutions to longstanding practice process issues. The informants further discussed their reluctance to take risks by speaking out about changes due to fear of retribution from administrators. Whether this is true or a myth, it is a belief that was widely expressed (Gaffney et al., 2013). Hence, if these health professionals are representative of others, then a focus on change through teams (to develop perceptions of 'safety') is needed to transform healthcare from multidisciplinary to interprofessional collaborative practice.

Assessing effectiveness of interprofessional collaborative leadership

If interprofessional collaborative leadership within teams is enacted, the question arises of how one can know if it is effective. If we consider the characteristics of collaborative leadership suggested by a variety of authors (see Table 5.3) these may be used as concepts to assist in performance-rating.

Some authors focus on emotions based on interactions, others on outcomes, on skills of team members and their personal values, and still others on team processes. The use of a wide variety of measurement instruments has been reported (Canadian Interprofessional Health Collaborative, 2010), but these measure individuals and their independent attributes rather than the team as a whole. Hence a clear direction cannot be provided at this time as to what should be assessed for measuring the effectiveness of collaborative leadership.

Although the Canadian Interprofessional Healthcare Collaborative's (CIHC) National IP Competency Framework does identify collaborative

Table 5.3 Listing of collaborative leadership characteristics by authors

Knowledge seeking	Walker, 2001
Risk-taking	Walker, 2001
Respectful interaction	Walker, 2001
Cooperation	Walker, 2001
Shared accountability	Walker, 2001
Shared norms	Boyle and Kochinda, 2004
Shared values	Boyle and Kochinda, 2004
Shared beliefs	Boyle and Kochinda, 2004
Shared expectations	Boyle and Kochinda, 2004
Shared purpose	Carson et al., 2007
Social support	Carson et al., 2007
Voice	Carson et al., 2007
Non-judgmental inquiry	Raelin, 2006
Receptivity to critical scrutiny of others	Raelin, 2006
Openness to what might emerge from discussions	Raelin, 2006
Competence in professional knowledge, skills, and expertise	Linden, 2003
Professional growth	Anonson et al., 2009
Empowerment of self and others	Anonson et al., 2009

leadership as a competency for interprofessional team practice, it does provide a number of descriptors as another option for consideration including:

- Working with others to enable effective patient/client outcomes
- Advancement of interdependent working relationships among all participants
- Facilitation of effective team processes
- Facilitation of effective decision-making
- Establishment of a climate of collaborative practice among all participants
- Co-creation of a climate of shared leadership and collaborative practice
- Application of collaborative decision-making principles, and
- Integration of the principles of continuous quality improvement to work processes and outcomes.

(Canadian Interprofessional Health Collaborative, 2010, p. 15)

Returning to our case study, Sally could use the competency descriptors to guide her in assessing the implementation of the team's collaborative leadership processes.

In the judgment of collaborative leadership competency we argue that leadership has two components – task orientation and a relationship

orientation. If collaborative leadership is expected to be a shared responsibility within an interprofessional team, and the goal is collaboration, could team effectiveness be related to total collaboration as a 'proxy' for collaborative leadership? If so, then Orchard et al.'s Assessment of Interprofessional Team Collaboration Scale (AITCS) (2012) assesses the constructs of partnership, cooperation, and coordination within interprofessional teams, and might provide an interim tool until a more robust measure is available. AITCS contains 37 items measured using a five-point rating scale (5 = always and 1 = none of the time). The Cronbach reliability estimate for the total scale is 0.98 while the item total correlations range from 0.80 to 0.97. Construct validity was established through both exploratory factor analysis (EFA) and confirmatory factor analysis (CFA), revealing a three-factor solution labelled 'coordination, partnership (shared decision-making) and cooperation', accounting for a total variance of 61.02 per cent.

A further means that can be employed by teams is to have members identify what their group wishes to assess as the means for determining what is important to them in measuring their collaborative leadership effectiveness. Respondents are then asked to rate each item using a five-point rating scale. Two ratings could be provided: 1) rate their own collaborative leadership within the team; 2) rate the overall perceived collaborative leadership within the team. Further enhancement of this assessment could occur by requesting an outsider to the team to observe their teamwork in practice against the same indicators and rate these and compare the observation ratings with the perceptual ratings, and compare both sets of ratings for consistency. Another option is to request patients who have been involved with the team for their care to also rate the team using the same criteria.

Hence, a variety of means can be employed to determine collaborative leadership effectiveness in teams. No matter which criteria or means are adopted, on-going assessment is essential to ensure that teamwork achieves the goal of interprofessional client-centred collaborative practice in which

> a partnership between a team of health professionals and a patient [is demonstrated] where the patient retains control over his/her care and is provided access to the knowledge and skills of team members to arrive at a realistic team-shared plan of care and access to the resources to achieve the plan. (Orchard, 2008)

Furthermore, good teamwork is achieved when all team members experience the leadership practices of: modelling the way, inspiring a shared vision, challenging team processes, enabling others to act, and encouraging the heart, so that all members, with their patients, seek out opportunities to lead and to follow in order to reach high-quality patient-care outcomes.

Chapter summary

This chapter set out to explore a variety of leadership models and consider the impact of each on leadership within interprofessional collaborative teams. A historical overview was provided, from 'great man' theories through to a series of theories related to shared and collaborative leadership. A conceptual framework developed by the authors to integrate both vertical leadership and collaborative leadership within interprofessional teams was then provided. The impacts of traditional hierarchical and top-down decision-making models in health systems on the capacity of teams to emulate this form of practice were also explored. A case study was provided to exemplify an approach that a vertical leader could take to support collaborative leadership development within an interprofessional team. Comparisons between institutional leadership models and collaborative leadership in teams that might have effects on team-based models of patient-centred care were discussed. Throughout the chapter the Complementary Leadership Framework (Figure 5.1) was referred to in addressing how integration might be realized between vertical formal leader and shared leadership within teams, and how both can intersect through relational coordination. At the same time, the reality of traditional hierarchical models of healthcare administration persists, making it difficult to point to widespread changes in practice-delivery models. Some strategies to implement interprofessional collaborative leadership in teams were discussed as well as how some of these have been operationalized in traditional hierarchical settings. This led to a discussion of current practice environments and how workplaces can support collaborative leadership within teams of health professionals in order to create quality care for their patients. And, finally, a discussion on assessing the effectiveness of collaborative leadership was presented.

It is hoped that over time the impediments currently experienced by health professionals within their organizations and professions, and by patients seeking more say in their care, will be transformed to emulate the leadership model we have presented in this chapter and become the norm of practice. Subsequently all parties – administrators, health

providers, patients and their families – will be able to celebrate the true success of collaborative patient-centred practice through a visible improvement in health outcomes.

Reflective questions

1. How well does the Complementary Leadership Framework (Figure 5.1) fit within existing practice settings you are familiar with?
2. How is leadership within your interprofessional teams managed? From within the teams or through a formalized leader? Is a fixed or a variable member assuming the formalized role?
3. How well are patients integrated into the team and the planning of their care?
4. How well do all the team members within teams you are familiar with interact with each other? Are some perceived to be less competent than others? Or do some have more influence on the team members than others and why?

References

Anderson, P. (1999). Complexity theory and organization science. *Organization Science, 10*(3): 216–32.

Anonson, J. M. S., Ferguson, L., MacDonald, M. B., Murray, B. L., Fowler-Kerry, S. and Bally, J. M. G. (2009). The anatomy of interprofessional leadership: An investigation of leadership behaviors in team-based health care. *Journal of Leadership Studies, 3*(3): 17–25. DOI: 10.1002/jls.20120.

Avolio, B. J., Bass, B. and Jung, D. I. (1999). Re-examining the components of transformational and transactional leadership using the multifactor leadership questionnaire. *Journal of Occupational and Organizational Psychology, 72*(4): 441–62.

Banaszak-Holl, J., Nembhard, I., Taylor, L. and Bradley, E. H. (2012). Leadership and management: a framework for action. In L. R. Burns, E. J. Bradley and B. J. Weiner (eds), *Shortell and Kaluzny's health care management: Organization design and behavior* (6th Ed.). Clifton Park: Delmar, Cengage Learning: 33–62.

Bass, B. M. (1985). *Leadership and Performance*. New York: Free Press.

Bass, B. M. (1998). *Transformational leadership: Industrial, military, and educational impact*. Mahwah: Lawrence Erlbaum.

Bligh, M. C., Pearce, C. L. and Kohles, J. C. (2006). The importance of self- and shared leadership in team-based knowledge work: A meso-level model of leadership dynamics. *Journal of Managerial Psychology*, *21*(4): 296–318. DOI: 10.1108/02683940610663105.

Boyle, D. K. and Kochinda, C. (2004). Enhancing collaborative communication of nurse and physician leadership in two intensive care units. *Journal of Nursing Administration, 34*(2): 60–70.

Burns, L. R., Bradley, E. H. and Weiner, B. J. (2012). *Shortell & Kaluzny's health care management: Organization design and behavior* (6th Ed.). Clifton Park: Delmar Cengage Learning.

Caldwell, C. and Hayes, L.A. (2007). Leadership, trustworthiness, and the mediating lens. *Journal of Management Development, 26*(3): 261–81. DOI: 10.1108/02621710732155.

Cameron, A. (2011). Impermeable boundaries? Developments in professional and interprofessional practice. *Journal of Interprofessional Care, 25*(1): 53–8. DOI: 10.3109/13561820.2010.488766.

Canadian Interprofessional Health Collaborative. (2010). *A national interprofessional competency framework*. Retrieved from www.cihc.ca/files/CIHC_IPCompetencies_Feb1210.pdf

Carson, J. B., Tesluk, P. E. and Marrone, J. A. (2007). Shared leadership in teams: An investigation of antecedent conditions and performance. *Academy of Management Journal, 50*(5): 1217–34.

Donabedian, A. (2002*). An introduction to quality assurance in health care*. New York: Oxford Press.

Edmonstone, J. (2009). Clinical leadership: the elephant in the room. *International Journal of Health Planning and Management, 24*(4): 290–305. DOI: 10.1002/hpm.959.

Epstein, R. M. and Hundert, E. M. (2002). Defining and assessing professional competence. *Journal of the American Medical Association, 287*(2): 226–35. DOI: 10.1001/jama

Foltin, A. and Keller, R. (2012). Leading change with emotional intelligence. *Nursing Management. 43*(11): 21–5.

Freshman, B. and Rubino, L. (2002). Emotional intelligence: A core competency for health care administrators. *Health Care Manager, 20*(4): 1–9.

Gaffney, D., Orchard, C. A. and Miller, K. (2013). *Engagement of patients and families on hospital unit action councils*. Final Report for Canadian Health Services Research Council, November.

Gittell, J. H., Godfrey, M. and Thistlethwaite, J. (2013). Interprofessional collaborative practice and relational coordination: Improving healthcare through relationships. *Journal of Interprofessional Care, 27*(3): 210–13. DOI: 10.3109/13561820.2012.73056

Goleman, D. (2006). *Emotional intelligence* (10th ed.). New York: Bantam Dell.

Hunter, D. J. (1996). The changing roles of health care personnel in health and health care management. *Social Science & Medicine, 43*(5): 799–808.

Kouzes, J. and Posner, B. (2006). *Student leadership practices inventory* (2nd ed.). San Francisco: Jossey Bass.

Institute of Medicine. (IOM). (2001). *Crossing the quality chasm: A new health system for the 21st century*. Washington, DC: National Academy Press.

Linden, R. (2003). The discipline of collaboration. *Leader to Leader, summer*: 41–7.

McKee, A. and Massimilian, D. (2006). Resonant leadership: A new kind of leadership for the digital age. *Journal of Business Strategy, 27*(5): 45–9. DOI: 10.1108/02756660610692707.

Orchard, C. A. (2008). *Patient-centered collaborative care*. Canadian Health Services Research Foundation. Retrieved from http://youtube/h7jHp500Nec.

Orchard, C. A., Curran, V. and Kabene, S. (2005) Creating a culture for interdisciplinary collaborative professional practice. *Medical Education Online*, 10-11. Retrieved from http://med-ed-online.net/index.php/meo/article/viewFile/4387/4569 [accessed 9 August 2014].

Orchard, C. A., King, G. A., Khalili, H. l. and Bezzina, M. B. (2012). Assessment of interprofessional team collaboration scale (AITCS): Development and testing of the instrument. *Journal of Continuing Education in the Health Professions, 32*(1): 58–67. DOI: 10.1002/chp.21123.

Pearce, C. L. (2004). The future of leadership: Combining vertical and shared leadership to transform knowledge work. *Academy of Management Executive, 18* (1): 47–57.

Pearce, C. L. and Sims Jr., H. P. (2002). Vertical versus shared leadership as predictors of the effectiveness of change management teams: An examination of aversive, directive, transactional, transformational, and empowering leader behaviors. *Group Dynamics: Theory, Research & Practice, 6*(2): 172–97. DOI: 10.1037//1089-2699.6.2.172.

Raelin, J. A. (2006). Does action learning promote collaborative leadership? *Academy of Management Learning and Education, 5*(2): 152–68.

Shulman, L. S. (2005). Signature pedagogies in the professions. *Daedalus, 134*(3): 52–9.

Stone, A. G., Russell, R. F. and Patterson, K. (2004). Transformational versus servant leadership: A difference in leader focus. *Leadership and Organizational Development Journal, 25*(4): 349–61. DOI: 10: 1108/01437730410538671.

Vitello-Cicciu, J. M. (2002). Exploring emotional intelligence: Implications for nursing leaders. *Journal of Nursing Administration, 32*(4): 203–10.

Walker, J. (2001). Developing a shared leadership model at the unit level. *Journal of Perinatal and Neonatology Nursing, 15*(1): 26–39.

Wesorick, B., Shiparski, L., Troseth, M. et al. (1997) *Partnership Council field book: Strategies and tools for co-creating a healthy work place*. Grand Rapids: Practice Field Publishing.

Wong, C. and Cummings, G. (2009). Authentic leadership: A new theory of nursing or back to basics. *Journal of Health Organization and Management, 23*(5). DOI 10.1108/14777260910984014.

World Health Organization (WHO). (2010). *Framework for action on interprofessional education and collaborative practice*. (WHO/HRH/HPN/10.3). Geneva: WHO.

6

Learner Leadership: A Change Agent for UK Interprofessional Learning

Kate Cuthbert, Geoff Glover and Dawn Forman (UK)

Introduction

So what kind of leadership model is appropriate for taking forward interprofessional learning (IPL) in the UK? This chapter will paint the UK IPL landscape with commentary on IPL initiatives and their response to the steady progression towards differing patterns of care in the National Health Service (NHS). With a long-charted history in IPL and a significant volume of knowledge capital evaluating the impact of IPL models, the UK is on the cusp of an interesting threshold. How are we to realize the next wave of transformation on the UK IPL landscape, and does the current model of leadership help or hinder?

Triggers for change

In January 2014 the Centre for the Advancement of Interprofessional Education released their second review of UK IPL, charting the developments from 1997 (Barr, et al., 2014). Since the first review completed in 2002 there has been a significant increase in the adoption of IPL within the pre-registration programs. The universality of IPL experiences for pre-registration healthcare learners is, today, somewhat of a given. However, 12 years ago the CAIPE review reported that fewer than 30 per cent of the IPL studies reviewed included pre-registration learners. The 2014 report also points to the growth of blended learning approaches and the ways in which technology-enhanced learning has loosened the geographical boundaries which had previously acted as a barrier to IPL. As with all learning agendas, the priority question evolves and is replaced with new discourses. Challenging the need for IPL; the variety of delivery methods suitable for IPL;and the importance of patient involvement are

all questions that have been directed at the UK IPL movement. It is fair to say these questions are on the wane. The presence of IPL for pre-registration students has become a norm, with the review describing shifting pedagogic patterns, and highlighting the moves from discrete and isolated IPL modules to professional programs offering a more integrated and embedded IPL experience. Yet the landscape of health education is provoking a step-change, a change that cannot be realized through low-level development such as content and format. Instead the triggers of change outlined below demand a challenge to the current IPL leadership base. Here is what we in the UK are responding to.

Revolution in healthcare delivery

With its arguably hasty entrance into healthcare policy and the structural re-engineering of the NHS, the White Paper *Equity and Excellence – Liberating the NHS* (2010) continues to fuel an atmosphere of flux in the NHS. At the heart of the paper was the aspiration to strengthen commissioning processes via the development of best-practice tariffs and the centrality of clinicians to the commissioning of health services. The paper also advocated a greater emphasis on public value and representing local health community needs through the development of clinical commissioning groups (CCGs) and local education and training bodies (LETBs). Speaking at the time, David Nicholson, the Chief Executive of the NHS, commented that 'nothing in the system is left untouched'.

Fast forward to 2014 (acknowledging a protracted and volatile reworking of the White Paper and the eventual ratification of the Health and Social Care Act 2012) Health Education England (HEE) is the body responsible for delivering the health workforce via education, training and personal development. HEE strategic plan (HEE, 2014) points to the educational challenges needed to meet workforce needs in response to shifting health priorities in the context of budgetary constraints, technological advances and population and cultural diversity. Do the following health service predictions necessitate a transformational interprofessional response?

Healthcare Prediction 1: Out-of-hospital care will be a major component of our future care delivery

> *'Hospitals are expensive, impersonal and risky places in which to deliver care that does not require a high tech and specialized environment.'* The Health Foundation (2011, p. 4).

Indeed care is being jeopardized by the systemic nature of hospital care (Royal College of Physicians, 2012). The knowledge that the hospital is not the best location and structure to deliver care to a large portion of the population has been a slow burn in the health policy and practice of the UK. However this is picking up pace with the emergence of Clinical Commissioning Groups, the growing power of primary/ community care services and patient surveys indicating satisfaction with the divergence away from acute services. Acute services will therefore reshape too, with radical change in the interface between acute and primary care (Future Hospital Commission, 2013). More importantly, there is the repeated call for person-centred care, implying that professionals and care will be organized around the patient. This web of professionals, not necessarily tied to a static location, will demand agile and flexible teamworking.

Healthcare Prediction 2: The health team will have different compositions

The number of people aged 80 and over in the UK is projected to more than double to 6 million by mid-2037 (Office for National Statistics, 2013). It is increasingly the case that the patient is viewed as a member of the healthcare team. This fact is also in parallel with a steady increase in the number of women in the workforce. According to UCAS, in 2011 55 per cent of people accepted on to medical degree courses in the UK were women. In addition to this the NHS workforce is ageing, with the average age of workforce in 2023 at 47 years (HEE, 2014). These stratifications will no doubt add another layer to the cultural dynamics in the health service.

The skills mix of the caring teams is also being questioned. Interprofessional partnerships are being examined in response to new healthcare problems and the recognition and the ability of knowledge transfer across the discipline boundaries. For example, there has been a marked increase in hip and knee replacements due in turn to the increase in chronic illnesses (National Joint Registry, 2012). The effective management and scientific development of this surgical response will require a differing knowledge capital and thus a differing matrix of professionals such as product designers, materials experts and fashion designers. If this stretches the imagination, consider then the impact of the Human Genome project where our understanding of disease susceptibility and individual variations is highlighting the ways in which we might treat and potentially prevent certain disease groups. The shape of this workforce will be radically different from our current patterns.

A King's Fund report discussed the role of technology across the UK health service (Liddell et al., 2008). Technology here was seen as a convener, a process and system aid but ultimately as another member of the healthcare team. The report pens a series of future scenarios in which technology plays an active role across the professional domains of triaging, diagnosis, administration of care, therapeutic treatments and therapeutic relationships, including the advancement of telemedicine. How is a health learner prepared for this context, particularly given what we understand about how the opportunity for error widens with the increased complexity of the system (Reason, 1990)? The call for training and early-career professionals to be articulate in ergonomics and focus a human-factors lens on the care they offer is increasing. This leads us to health prediction number three.

Healthcare Prediction 3: Transferable skills will define the new health professional

The significant health policy developments in response to the significant health needs of the population will draw into question the requisite skills required by a health professional. We have witnessed a pull on curricula space from non-technical skills and attitude development for the health graduate. The series of high-profile cases illustrating poor standards of care in the NHS, including the report of the Mid-Staffordshire NHS Foundation Trust Public Inquiry (Francis, 2013), has resulted in the learner journey having checkpoints for compassionate care and upholding NHS values.

The more recent report from Berwick and colleagues (National Advisory Group on the Safety of Patients in England, 2013) corroborates the notion that the workforce requires a new wave of health professional, one who can work in a learning and transparent culture, where patient-safety science is consistently applied:

> Patient safety should be the ever-present concern of every person working in or affecting NHS-funded care. The quality of patient care should come before all other considerations in leadership and conduct of the NHS, and patient safety is the keystone dimension of quality. (National Advisory Group on the Safety of Patients in England, 2013, p. 2)

There appears to be an urgency to plan for workforce patterns and skills that are not currently evident in the staffing pool. The value of

transferable skills across a professional matrix is crucial – a skills mix, therefore, that is harmonized and agile rather than one which emphasizes an individual or linear progression. Add here to the mix the demand for new health professionals to demonstrate enterprise; public value; media savvy; community-focused liaison and private/voluntary and independent sector specialisms.

To summarize the challenge of the fit between workforce need and educational direction, according to HEE (2014), the 'workforce' will:

- Continue to help people prevent ill-health and manage their own care
- Have the skills, values and behaviours required to provide personalized care
- Have adaptable skills, responsive to innovation to enable 'whole person' care
- Have the skills, values and behaviours to provide high quality care
- Deliver the NHS Constitution: 'able to bring the highest levels of knowledge and skill at times of basic human need when care and compassion are what matters most'.

This is a highly ambitious yet much-needed stretch target for the educational leaders in Healthcare Environment Inspectorates (HEIs) and practice domains in the UK. It is also set against a tough NHS climate. It is suggested that whilst the NHS system has survived the reforms, cracks are beginning to surface, with care providers reporting financial woes and a decrease in public satisfaction with the service (Gregory et al., 2012). So where might the enablers for this required change exist? Let's now review the triggers for change from the educational context.

Learner expectations

With the advent of post-secondary educational fees in the UK and the exchange of provider information, via the Key Information Set (KIS), being increasingly accessible to the public, purchaser power in education is experiencing an all-time high. There is a renewed drive to enhance the quality of students' learning experiences, with a sharper emphasis on providing value-for-money education that fosters employability, enhances institutional accountability and transparency, and improves the quality of teaching (Healey et al., 2014). The warning signs couldn't be clearer – where students seek to 'have a degree' rather than 'be learners' (Molesworth et al., 2009, p. 277)

Molesworth et al. (2009) suggest that in responding to this mindset a market-led university will focus attention on what the consumer wants. In the context of healthcare this may mean amplifying the connections to the workplace, and so co-curricula growth is not a surprising feature of the university offer. The offer of adding value via enhancement themes such as citizenship programs and employability schemes is a positive move to tap into learner motivations. This highlights a means of disrupting the overwhelming consumer model of learning in order to promote a more holistic learning culture even in the context of financial transactions (Millican, 2014). How can we better understand learner motivations and establish a sense of public value in the context of interprofessional experiences? First let us take a temperature check on IPL to better understand the triggers for change.

IPL home truths

The marked growth of interprofessional learning in the UK, as recognized in the more recent CAIPE report, has been supported by several levers including Department of Health funding and professional bodies insisting on interprofessional practice within curricula. The other significant lever, largely in the absence of pump-priming funding, has been the creativity and tenacity of faculty staff and practice tutors in the development of a wide range of interprofessional opportunities.

The UK IPL profile is rich with accounts of interprofessional interactions between the whole range of professional groups, spiralling in and out of their university and practice phases of programs. In general the hosting and management of IPL experiences appears to reside predominantly within the university rather than during clinical placements. That is not to suggest that interprofessional activities are absent from practice learning but rather that IPL leadership is found at the academic faculty base. This is perhaps due in part to the professional body requirement to act as a deal breaker for academically validated programs, and the pedagogic direction of the programs is cultivated and sustained in the universities. However, it could also be due to the perception that university-based learning is somewhat boundaried, that is, not complicated by the public or by medical emergencies, affords time and space to think and reflect, not constrained by the organizational protocol or culture that exists in a care delivery organization and has a time-tabled and controlled audience. But is working within this boundaried environment producing limitations with current IPL provision?

Whilst IPL can be said to be led by academic institutions there are a number of examples, including those we created in Derby but more

specifically the Leicester community projects and St George's training ward which have IPL working well in practice and importantly have created openings for student leadership.

Similar examples could also be considered within the area of medical simulation where high-fidelity scenarios are often applied within IPL activity within universities and areas of work-based practice. Such activities, initially established within medical education, are now being developed and refined for nursing and allied health professions, and the interprofessional nature of the scenarios is becoming increasingly valued within the area of patient safety and improvement science.

The Robert Gordon University highlights the role of the student leader within curriculum redesign and how such leaders play an active role in the co-production of learning resources within their program of study. Such leadership capitalizes on the experiential learning of the student body and highlights the benefits of learning in the workplace.

Reflections on factors affecting the UK's capacity for transformational IPL

- Structured IPL learning (timetabled in modules) is more likely to be a victim of organizational systems such as enrolment
- Feelings of inertia (of both faculty and student)
- Competing demands on faculty staffing such as income-generation targets means that creative attention is diverted away from IPL developments
- The tensions of creating effective IPL staffing teams where lines of authority or guidance to the learner (actual and those perceived by the learner) creates ambiguity; the continued yet not evidence-based need for representation of staffing across the professions leads to IPL delivery teams that are not equipped to teach an interprofessional cohort (Lindqvist and Reeves, 2007).

Where does the leadership for IPL reside? It has traditionally been held among academic faculty and service leaders. However, could a shift in leadership towards that of learner leadership result in better IPL outcomes?

Adaptive Leadership: a model for IPL

Heifetz (1994, p. 15) describes adaptive leadership as 'mobilizing people to tackle tough problems'. In this instance the leader holds an influencer role and communicates a vision without necessarily operating in the

upper levels of any traditional hierarchy. A move away from trait theories of leadership to one which emphasizes activities permits a wider view of the ways in which leadership can be displayed. The ethos described here suggests that leaders emerge as their capabilities, qualities, knowledge and approach meet the needs of the situation, perhaps a situation in which traditional autocratic leaders have failed to have impact. In fact situations are considered ambiguous either because of their complex values tensions or their multifaceted nature so that clear solutions fail to be realized; these are often termed Wicked Issues. These problems continually resurface; problems that many people are working on at once and that elude pinning down and are therefore difficult to define because of the myriad stakeholders involved. The distinction between Wicked Issues and Tame Issues stems from the availability of a tried and tested solution (Ritter and Webber, 1973). Grint (2005) makes a further clarification that if situations are novel with ambiguous origins and limited options for reaching resolution and the problems are interconnected or tangled up with competing value systems then we are dealing with a Wicked Issue. Whilst not on the scale of certain Wicked Issues, such as sustaining peace in troubled war zones, interprofessional learning that impacts on patient care throughout a professional career bleeds into the realm of Wicked Issues (see Figure 6.1). The blend of stakeholders, from patients, students, academic organizations and service providers, all contribute to the philosophical and practical noise of IPL. The outcomes of IPL and therefore the means of measuring its impact create ambiguity and thus certainly are not a Tame Issue. Knowing what to teach has been a consistent challenge; is IPL a topic, method, process or outcome and where do these interface?

An adaptive leadership approach for IPL would involve an increased transparency on behalf of the academic team to the learner group and, rather than cleansing the IPL experience, be open about the complexities of IPL engagement, and as Heifetz and Linsky (2002) advocate, regulate the distress. This is not about handing over power to the learner but rather helping the learner assume responsibility for their learning. This would entail letting go of the organizational reins somewhat, for instance, allowing learners to find their way to the Wicked Issue of the venue/location of IPL experiences. Importantly there is a sense that the solutions to many of the problems associated with traditional forms of IPL exist within the learner community, rather than totally with the academic faculty team. The key role of an academic organizing team would therefore be that of an 'enabler'. The introduction of adaptive leadership into an IPL faculty and IPL systems of an organization may appear daunting and, of course, being an adaptive approach, would flex according to the

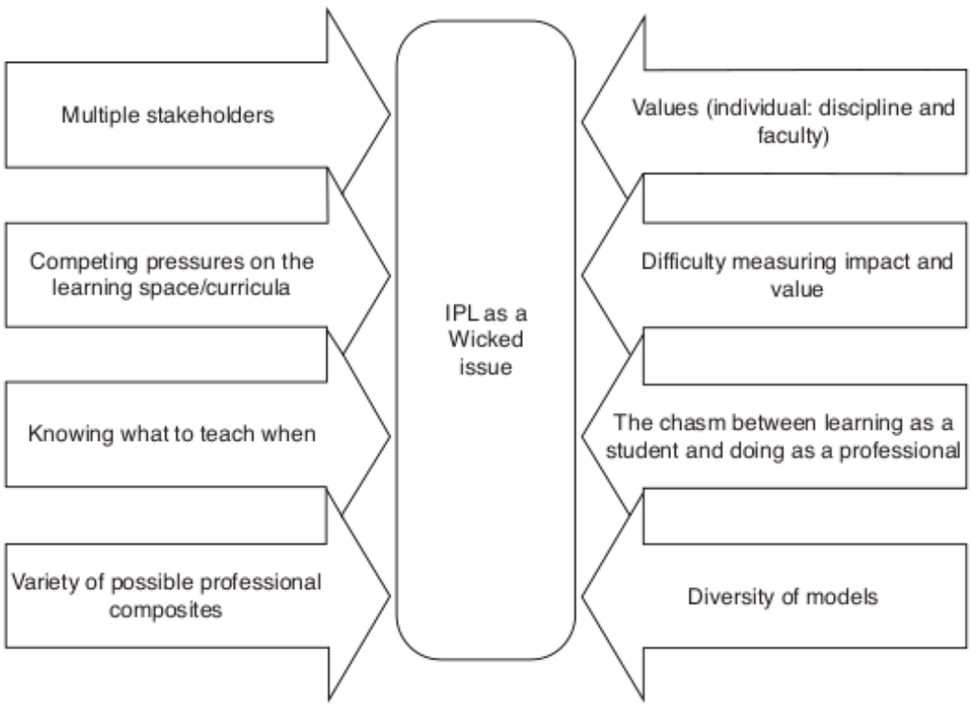

Figure 6.1 IPL viewed as a Wicked Issue

learner's preparedness to work within this leadership style. Indeed there is much preparatory work to ensure the correct fit between leadership style and learner receptiveness. The entry point into this leadership style for IPL would be an increased partnership role for learners.

Foundation steps – students as partners

> Partnership is understood as fundamentally about a relationship in which all involved – students, academics, professional services staff, senior managers, students' unions, and so on – are actively engaged in and stand to gain from the process of learning and working together. (Healey et al., 2014, p. 12).

The recent framework from the Higher Education Academy (HEA) by Healey et al. (2014) calls for an augmented approach in which existing learner engagement via consultation activities is in addition to active engagement through partnership, whereby the process of partnership is paramount. Where are the partnership opportunities that are currently active in the IPL landscape? A useful diagnostic tool is the well-recognized ladder of participation from Arnstein (1969).

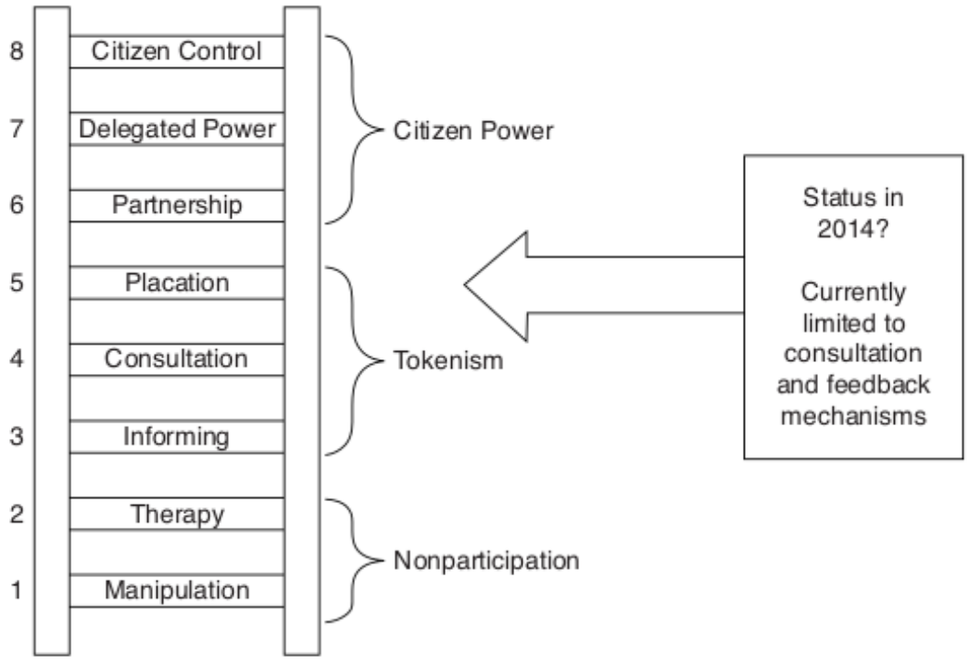

Figure 6.2 What does the IPL ladder look like?

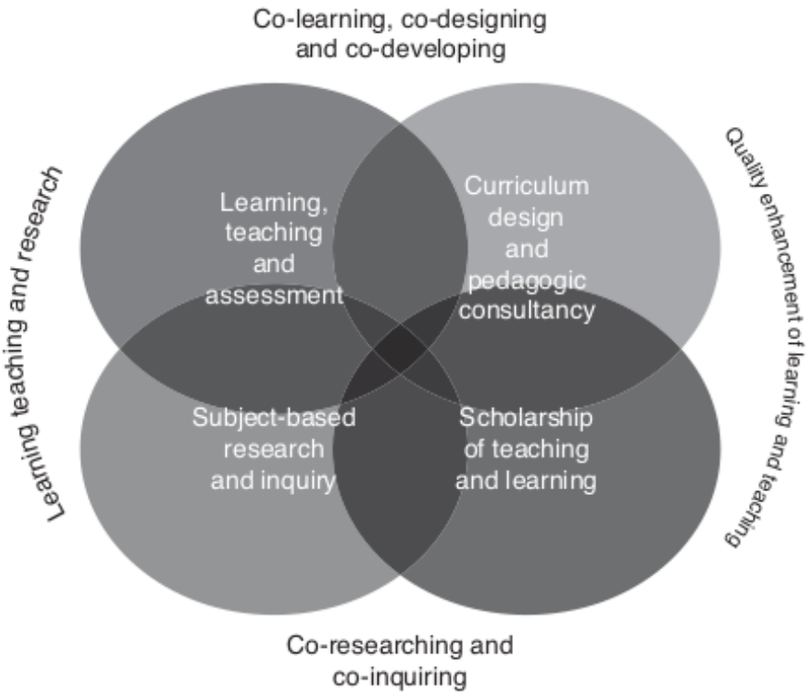

Figure 6.3 A conceptual model for students as partners in learning and teaching in higher education

Source: Healey et al. (2014).

The holistic conceptual framework offered by Healy et al. (2014) (Figure 6.3) illustrates the many ways in which learner partnership can be encouraged. Many of these individual components are present in the IPL formats active in the UK. However the greatest leap forward will be when a partnership model such as the one in Figure 6.3 is used in totality to shape the interprofessional experiences of an undergraduate in health education and beyond into their professional career development. This bravery may even open up the channels for a new leadership model in IPL, that of Learner Leadership.

Hoffman et al. (2008), working with the material resources and experience of the National Health Science Students' Association in Canada, offer insight into the possibilities and practicalities for learner leadership in IPL. The authors point to the existence of an enabling environment, one that nurtures, seeks out and embraces learner leadership. Clearly, too, there is recognition that student leadership must be supported across all levers of the learning experience; educators, researchers and policymakers. According to Hoffman et al. (2008, p. 659):

> An enabling environment – validate students' efforts, provide access to knowledge and guidance based on past experiences, and provide the institutional backing and resources necessary for the success of student-initiated IPE projects.

Table 6.1 resonates with the philosophy of adaptive leadership, embraces partnership working and, importantly, articulates the diverse range of actions that form the steps towards an engaged learner community in IPL.

Student-initiated IPL: case studies

Robert Gordon University, Aberdeen

Learners at Robert Gordon organized an Interprofessional Education Conference designed to forge greater understanding between future health professionals, patients and clients. The academic team provided support and acted as sponsors for the event.

See www.rgu.ac.uk/news/students-take-the-reins-at-first-student-led-interprofessional-education-conference-in-aberdeen

Institute of healthcare improvement chapters

These learning initiatives (originating in the USA) are beginning to find roots in UK universities. A chapter is a group of healthcare students, healthcare faculty and healthcare staff that share an interest in learning about patient safety and quality improvement. Importantly, there is distributed leadership across academic tutors and student representatives. The learning materials,

including an e-repository, are universally accessible and form part of a larger active learning agenda.

Examples of chapters include Sheffield (www.sheffieldihichapter.co.uk); and the 1000 Lives Improvement Student and Educator Community, Wales (www.1000livesplus.wales.nhs.uk/student-educator-community)

Table 6.1 Practical steps

Priority areas	Action for educators and researchers	Action for policymakers
Integrate students into larger curricular reform, research and policy initiatives	Student representation on curriculum planning committees, IPE steering committees and relevant education and research working groups Research assistant opportunities Mentorship opportunities Consultations with students on curriculum design	Student representation on government-led health professional education advisory committees Support for graduate-level training in interprofessional education Requirement for meaningful involvement by students in all government-funded IPE projects
Support the development of student-led IPE organizations	Encouragement and support for gatherings of students interested in IPE Dedicated faculty time for mentorship of student initiatives Dedicated funding for student-initiated projects Support for community of student researchers in IPE	Financial support for creation of local student-led IPE organizations Financial support for creation of a national network linking local student-led IPE organizations Publicity opportunities Policies encouraging others to support creation of student IPE organizations
Partner with student organizations	Support for complementary socialization extracurricular activities Leveraging of student support for institutional action Invitations for student organizations to participate in new initiatives	Support and encouragement for existing student organizations to engage in IPE activities Opportunities for student organizations to participate in decision-making
Recognize when students make valuable contributions	Rewards for student champions Public recognition for student contributions Dissemination opportunities for students Renew commitment to student-initiated IPE projects	Dissemination opportunities for students Opportunities for student champions to participate in policymaking process Incentives for others to recognize when students make valuable contributions Re-investment in student-initiated IPE

Summary

This chapter has endeavoured to provide a case for a new model of leadership in IPL, a model which embraces adaptive leadership in order to enhance learner participation and ultimately learner leadership. It is argued that maintaining the current pattern of leadership will only hinder the progression towards high-impact IPL. The current health climate in the UK provides the catalyst; the emerging learner leadership work in HEIs provides the right conditions.

Working towards the aspiration of learner leadership in IPL will be an iterative process. Developing the sense of public value held by learners about their IPL experiences and needs would be a useful foundation – not via surveys and feedback questions but rather two-way conversations so we tap into their value systems and motivations for engagement in IPL.

My recommendations to IPL students

The following recommendations were absent from the pioneering work by Hoffman et al. (2008) as the recommendations that close this chapter are tailored to UK IPL learners.

Students appear to show a genuine interest in collaborating in the future; however, educators need to give them the tools to do so in a way that will excite them about, not turn them off from, collaborative practice. (Rosenfield et al., 2011, p. 476)

Actions for IPL learners to take

- Learn how to work more effectively with your IPL academic faculties. Understand the programs and learners which form your faculty. There is no science to this, just ask and listen! Know that you and your program of study is part of a greater picture.
- See the co-curricula opportunities; value the outcomes of your learning beyond the assessed pieces.
- Peer networking is a collective effort. Don't wait to be introduced to your fellow learners – take a lead.
- Remind your tutors and fellow learners that you value IPL. Write about what it means to you as a learner; offer reflections that can be used to help other learners; put yourself forward as a change agent for IPL, learning ways to both rock the boat and stay in it (Bevan and Fairman, 2014).

References

Arnstein, S. (1969). A ladder of citizen participation. *Journal of the American Planning Association*, *35*(4): 216–24.

Bevan, H. and Fairman, S. *The new era of thinking and practice in change and transformation: A call to action for leaders of health and care*. Available online at: http://media.nhsiq.nhs.uk/whitepaper/index.html [accessed 30 July 2014].

Barr, H., Helme, M. and D'Avray, L. (2014). *Review of interprofessional education in the United Kingdom 1997–2013*. Fareham: CAIPE.

Future Hospital Commission. (2013). *Future hospital: Caring for medical patients*. A report from the Future Hospital Commission to the Royal College of Physicians.

Gregory, S., Dixon, A. and Ham, C. (2012). *Health policy under the coalition government: A mid-term assessment*. London: The King's Fund.

Grint, K. (2005). *Leadership: limits and possibilities (Management, work and organizations)*. London: Palgrave Macmillan.

Healey, M., Flint, A. and Harrington, K. (2014). *Framework for partnership in learning and teaching in higher education*. York: The Higher Education Academy.

HEE (Health Education England). (2014). *Framework 15: Health Education England Strategic Framework 2014–29*. Available online at: http://hee.nhs.uk/2014/06/03/framework-15-health-education-england-strategic-framework-2014-29

Heifetz, R. A. (1994). *Leadership without easy answers*. Cambridge, MA: The Belknap Press of Harvard University Press.

Heifetz, R. A. and Linsky, M. (2002). *Leadership on the line: Staying alive through the dangers of leading*. Cambridge, MA: Harvard Business School Press.

Hoffman, S. Rosenfield, D. Gilbert, J. and Oandasan, I. (2008). Student leadership in interprofessional education: benefits, challenges and implications for educators, researchers and policymakers. *Medical Education 42*: 654–61.

Liddell, A., Adshead, S. and Burgess, E. (2008). *Technology in the NHS: Transforming the patient's experience of care*. London: King's Fund.

Lindqvist, S. M. and Reeves, S. (2007). Facilitators' perceptions of delivering interprofessional education: A qualitative study. *Medical Teacher, 29*(4): 403–5.

Millican, J. (2014). Engagement and employability: Student expectations of higher education. *AISHE-J, 6*(1).

Molesworth, M., Nixon, E. and Scullion, R. (2009). Having, being and higher education: the marketization of the university and the transformation of the student into consumer. *Teaching in Higher Education, 14*(3): 277–87.

National Advisory Group on the Safety of Patients in England. (2013). *A promise to learn – a commitment to act: Improving the safety of patients in England*. London: National Advisory Group on the Safety of Patients in England.

National Joint Registry. (2012). *National Joint Registry for England and Wales, 9th Annual Report*. See more online at: www.arthritisresearchuk.org/arthritis-information/data-and-statistics/osteoarthritis/data-on-replacements.aspx#sthash.ErBfG7DQ.dpuf

Office for National Statistics. (2013). *National Population Projections, 2012–based projections*. Available online at: www.ons.gov.uk/ons/rel/npp/national-population-projections/2012-based-projections/index.html [accessed 6 August 2014].

Parliament. (2010). *Equity and excellence: Liberating the NHS*. Cm 7881. London: The Stationery Office.

Reason, J. (1990). *Human Error.* Cambridge: Cambridge University Press.

Report of the Mid-Staffordshire NHS Foundation Trust Public Inquiry (2013). London: The Stationery Office.

Rittel, H. W. A. and Webber, M. M. (1973). Dilemmas in a general theory of planning. *Policy Sciences*, *4*: 155–69.

Rosenfield, D., Oandasan, I. and Reeves, S. (2011). Perceptions versus reality: a qualitative study of students' expectations and experiences of interprofessional education. *Medical Education 45*: 471–7.

Royal College of Physicians. (2012). *Hospitals on the edge? The time for action*. London: RCP. Available online at: www.rcplondon.ac.uk/sites/default/files/documents/hospitals-on-the-edge-report.pdf

The Health Foundation. (2011). *Getting out of hospital? The evidence for shifting acute inpatient and day-case services from hospitals into the community.*

UCAS data: Available online at: www.ucas.com/data-analysis/data-resources/data-tables/data-summary# [accessed 26 July 2014]

7

Training COPC and Leadership Development at Ghent University, Belgium

Lynn Ryssaert, Sofie Dhaese, Inge Van de Caveye, Sarah Bogaert and Jan De Maeseneer (Belgium)

Introduction

In this chapter a dual approach has been undertaken: on the one hand student participation as a strategy for training leadership and becoming change agents is documented, on the other hand, 12 years of experience is described with the development of an interprofessional community diagnosis exercise in the undergraduate medical curriculum at Ghent University. This, the Community Oriented Primary Care exercise is an attempt to integrate in the third year of the undergraduate training program knowledge, skills and attitudes that are needed for the training of a 'Five-Star Doctor' (Boelen, 1997). This exercise is part of the integrated curriculum at Ghent University, based on patient-centredness, student-centredness, community orientation and problem orientation, and evidence-based practice. Therefore, at several points the curriculum offers experiences with interprofessional work in the community, especially in primary care.

Since the curriculum reform in 1999, students have played an active role in its innovation. The idea grew to explore to what extent student participation in the change process and innovation of the curriculum could contribute to the learning of transformational leadership (De Maeseneer and Forman, 2013). Burns (1978) first introduced the concept of transformational leadership in his descriptive research on political leaders, but this term is now used in organizational psychology as well. According to Burns, transformational leadership is a process in which 'leaders and followers make each other advance to a higher level of morale and motivation'. De Maeseneer and Forman (2013), building on work by Gumusluoglu and Ilsev (2009), and Bass and Avolio (1994), proposed the following definition for transformational leadership:

> Transformational leadership occurs when leaders articulate the purpose and the mission interactively with the group and are intellectually stimulating the group, championing innovation, inspiring group members to become change agents. Transformational leadership is characterized by connecting the member's sense of identity and self to the project and the collective identity of the organization: being a role model for the group-members that inspires them and keeps them interested. Transformational leadership challenges group members to take greater ownership and strategic understanding of the context, the strengths and the weaknesses that have to be addressed in the change process. Transformational leadership creates a climate of trust, a process of empowerment and guarantees safety so that group members can look beyond their own self-interest in order to make change happen.

Learning transformational leadership

In the undergraduate medical training at Ghent University, student participation in the development of the medical training program contributes to acquiring skills that are useful for transformational leadership. The Student Workgroup on Medical Education (SWME) has for more than 15 years been responsible for the participation of students in the different committees that build the 'units' and 'lines' in the curriculum. They participate in the Educational Commission (with voting power), as well as in the faculty council and other governance structures of the university. The SWME organizes monthly meetings, an annual student research symposium and a yearly one-week seminar that produces a report with a fundamental analysis of the curriculum and proposals for improvement. They contributed actively to the fundamental reform of the undergraduate medical curriculum in 1999 from a traditional discipline-based curriculum, towards an integrated contextual medical curriculum with a focus on problem-solving and community orientation. The student participation is very effective as students continuously develop tools to assess the quality and improve the coherence of the curriculum (for example, the 'Hercules' project, a searchable database with all the documents used in six years of undergraduate teaching).

In a first exploratory attempt to assess what the impact could be of student participation, a questionnaire was sent to over 50 students who were active in the SWME. A Likert-scale (1–5) was used. The items focused on the function of a physician (four items) and 20 items

assessed the extent to which students felt their participation contributed to the development of some transformational leadership competencies. The results illustrated that students find that it is a physician's responsibility to reflect on how to continually improve quality of care (96.2 per cent [totally] agreed) and to take initiatives to improve quality of care (94.2 per cent [totally] agreed). As far as the skills and competencies that the students learn through student participation activities were concerned, the students agreed the most with the following statements:

- Dealing with decision making in an ethical way (85 per cent [totally] agreed)
- Defending the viewpoints of the group I represent (89.5 per cent [totally] agreed)
- Tackling problems in an effective way (95 per cent [totally] agreed)
- Developing a vision for the future (85 per cent [totally] agreed)
- Formulating proposals for improvement (87.5 per cent [totally] agreed)
- Communicating the results of negotiations to the group I represent (82.5 per cent [totally] agreed)
- Supporting the development of processes of change (86.1 per cent [totally] agreed)
- Working effectively as an interprofessional team (67.5 per cent [totally] agreed)

In free-text comments, students illustrate concrete examples of what these skills and competences meant and how they had been developed. Especially, the importance of their monthly meeting, the annual seminar and their participation in commissions and working parties and their involvement in curriculum reform was illustrated frequently. This exploratory study concludes that student participation in the development and quality assurance of the medical curriculum, through a formal student organization, together with an open attitude of the staff towards student participation, may contribute to learning 'transformational leadership' as defined in the introduction. The data illustrate that the students are able to stimulate and motivate the group for change processes starting from a climate of trust and goes beyond self-interest, because the change processes will not benefit themselves but the students that will learn in the forthcoming years.

Evolving organizational environments in healthcare require transformational leadership

As resources for healthcare become scarce and demands on the health system intensify, the interdependencies among administrative issues and clinical issues within healthcare organizations become more and more visible. This heightened interdependency may lead to conflicts when what administrators see as rational is not seen as rational by clinical professionals and vice versa. Traditionally, healthcare organizations have been viewed as professional bureaucracies where the key transformation tasks are embedded in clinicians' work and where there is a need for an extensive administrative staff to manage infrastructure demands.

Increasingly during the last 15 years, healthcare organizations have been seen as Complex Adaptive Systems (CAS) (McDaniel and Driebe, 2001). Plesk and Greenhalgh (2001, pp. 625–8) defined a CAS as 'a collection of individual agents with freedom to act in ways that are not always totally predictable, and whose actions are interconnected so that one agent's actions change the context for other agents'. In CAS the focus is on empowering collaboration. CASs are self-managed with distributed control and adapt to welcome change. They work with flat organizations where people manage themselves to meet a vision in course of the organization. This way of working together and reacting in unforeseen circumstances in an effective and efficient way asks for adjusted leadership tasks and characteristics. In their article, 'Managing health care organizations: where professionalism meets complexity sciences', Anderson and McDaniel describe key leadership tasks for Complex Adaptive Systems (see Figure 7.1) (Anderson and McDaniel, 2000).

The shift illustrated in Figure 7.1, from professional bureaucracy to CAS, illustrates the relevance of different features of transformational leadership. In CAS more focus is put on relationship-building than on role-definition which characterizes a professional bureaucracy. This recognizes that an organization must resonate in the heads and hearts of its members, which requires a climate of trust and inspiring group members to become change agents. In the absence of an externalized bureaucratic structure, it becomes more important to have an understanding of what the organization stands for and where it intends to go – in short, a clear sense of the organization's identity (Albert et al., 2000). Transformational leadership will guide healthcare organizations through this important transition, taking into account professional values.

Key leadership tasks		Features of transformational leadership
Professional complex adaptive system	**Professional bureaucracy**	
• Relationship-building • Loose coupling • Complicating • Diversifying • Sense-making • Learning • Improvising • Thinking about the future	• Role-defining • Tight structuring • Simplifying • Socializing • Decision-making • Knowing • Controlling • Planning based on forecasting	• Connecting the members' sense of identity • Strategic understanding of the context • Create a process of empowerment and being a role model • Look beyond their own self-interest in order to make change happen

Figure 7.1 Key leadership tasks for Complex Adaptive Systems and possible links with features of transformational leadership

Source: Adapted from Anderson and McDaniel (2000).

From theory to practice: objectives of the Community Oriented Primary Care exercise

The COPC exercise takes one week, halfway through the second semester of the third year in the Health and Society II unit, which covers topics such as public health, occupational health, global health and human rights. At that moment in the program, medical students have acquired basic medical sciences, have developed communication skills and have already had some clinical exposure in primary care and in a nursing home. The other groups of students (nursing students, health promotion students, social work students, social pedagogic students, sociology students and so on) have had a little experience through a small, community-based project. All students, irrespective of their educational background, receive an introductory lecture on social determinants of health and the principles of Community Oriented Primary Care.

The specific learning objectives of the COPC exercise are:

- to gain insight into the meaning of health and illness and their practical consequences in the primary care context;

  - to gain insight into determinants of health and social inequity in health
  - to gain insight into the limitations of the care provider
  - to reflect on the opportunities to make a difference as a care provider: signalling and referral function, interprofessional collaboration
- to gain insight into their personal frame of reference concerning, for example, underprivileged groups;
- to assess the impact that the community has on individual health;
- to develop understanding of the range of professionals and services involved in health in social care; and
- to learn how to develop a community diagnosis by collecting and integrating individual stories as well as epidemiological data.

As far as skills are concerned, the COPC exercise focuses on the following skills:

- to work together with students from other disciplines;
- to conduct semi-structured patient and caretaker interviews, starting with a set of themes the students want to explore, but without a rigid interview style, thus allowing for elaboration of certain topics;
- to work autonomously and within a tight time schedule;
- to formulate possibilities for improvement at the community level;
- to make a poster in relation to the proposed actions in the community;
- to present the results to a public audience of healthcare workers and local agents, including policymakers;
- to write an 'advocacy letter' to an involved healthcare professional or agency in order to improve the situation of the family they have been visiting.

Community diagnosis experience in the undergraduate medical curriculum

One of the most difficult challenges in undergraduate medical training is to expose students to community-based experiences that stimulate them to translate the individual approach towards patients into a broader population-oriented strategy. At the Department of Family Medicine and Primary Health Care of Ghent University, several staff members have applied for decades the Community Oriented Primary Care (COPC) model. This approach was first developed by Sidney and Emily Kark at

the Pholela Health Center in South Africa in the late forties (Kark and Cassel, 1952). They described a COPC cycle as a process, starting with the definition and characterization of a community, then an identification of the health problems of the community, leading to a 'community diagnosis', with involvement of the local community, the development of an intervention with the local community and the monitoring of the impact of that intervention. In order to identify the community's health problems, healthcare providers start from their daily experiences with patients, and complete this information with data from all kinds of sources and surveys, for example, criminality figures from the police, morbidity statistics and socio-economic data. The approach described by Kark and Cassel has the advantage that students recognize the different phases, as they are quite similar to the usual 'clinical process'. The students are prepared for this exercise by concepts that they acquired in the first bachelor year during the course Health and Society I where they studied social determinants of health using the model developed by Dahlgren and Whitehead (Dahlgren and Whitehead, 2007).

The educational design of the COPC experience distributes the students in small groups (+/– 25 students) over different neighbourhoods with a high degree of social deprivation. On the Monday morning, students are introduced to the historical background and context of the neighbourhood. This introduction illustrates the need for care providers to learn about the neighbourhood they are working in, in order to better understand the actual problems the population is facing. After the introduction the students split up into interprofessional groups of four to five students, who will visit a family living in poverty and confronted with chronic diseases. The patient and the family give informed consent beforehand, so that the students can prepare for the visit by studying the summary of the electronic patient record. Students prepare the interview with a topic list. The students must not focus only on the medical condition of the patient, but must also explore the social context of the interviewee; for example, is the patient happy to live in the community; what are his/her experiences with the care providers? The interview takes no more than an hour and patients very often describe the challenges they are facing. For medical students (often with a higher social class background), this confrontation with poverty and people living in difficult conditions can be quite shocking. So they spend time after the interview to reflect in their small group about this confrontation. On Monday afternoon and Tuesday morning they visit three care providers who are involved in the care for this patient and the family. These providers are from different disciplines: family physician, nurse, social worker, dietician, pharmacist,

volunteers and so on. The interviews with the care providers (on average 30 minutes), enable the students to confront the different perspectives of the patient and providers and make the picture more complete. In between the interviews, the students explore the neighbourhood in order to better understand the context in terms of housing, infrastructure, presence or absence of 'green spaces' and so on.

On Tuesday afternoon, the students who worked in the community meet together with a tutor – preferably a care provider who is familiar with the community – to exchange information, report about the visits and the encounters with patients and providers, and try to integrate the information, in order to look for a 'community diagnosis'. Students recognize the diversity of the situations of the different families, and understand the relevance of context and the roles of the different health-care providers, including the need for interprofessional cooperation.

During the debates following the presentations on the different encounters the diverse backgrounds of the students (medical students, nursing students, sociology students, social pedagogic students) lead very often to a 'clash of cultures'. Medical students try to formulate 'solutions' immediately after the presentation of the case reports, whereas sociology students and social-pedagogic students are more likely to emphasize the need for a broader and more in-depth exploration of the 'problem-behind-the-facts'. Learning from each other's frames of reference is an enriching experience. The tutor helps students to structure and focus the debate, and provides supplementary information when needed. The group looks for similarities in the different patient and provider experiences, and on Tuesday evening the groups come up with a preliminary 'community diagnosis'. It is remarkable to see that most of the time the 'community diagnosis' is not disease-related, but focuses on issues like intercultural relationships, unemployment and its consequences, absence of services for certain groups in the community (for example, for young people), need for health promotion, improvement of infrastructure, traffic safety and so on.

In order to avoid sticking to the 'anecdotal evidence', the students explore databases in relation to the community they are working with on Tuesday evening and Wednesday. They look for information about demographic and epidemiological background, information about housing quality, ethno-cultural diversity, and services available. By doing so they put the experiences from the visits into a broader context.

The students also visit community agencies that are involved in the development of that specific community in order to check the relevance of the 'community diagnosis' they have formulated. Most of the time,

the community diagnosis formulated by the students is seen as very relevant by the professionals. However, at the same time, the students learn that different actions have already been undertaken to tackle the problem, but that the problem is still not solved. This information helps the students to develop an intervention that is relevant and feasible and takes into account what has already been attempted or done. The students then prepare a PowerPoint presentation that will be presented to their fellow students and stakeholders from the community (care agencies, social public welfare services, police, local teachers) on the Friday afternoon. At this presentation the stakeholders from the community critically question the analysis and proposals of the students.

The students also make a poster in relation to the topic of their proposed intervention that can be used by the community in case they want to develop action in that specific field. Finally, each group of students who visited a family write a letter to a healthcare provider or agency, in order to ask for interventions that may improve the situation of that family. By doing so, they take up an 'advocacy' role for that family.

Student assessment

The students are assessed at the level of their participation in the visits and the group discussions that contribute to the formulation of the 'community diagnosis'. They are also assessed by staff members of the departments of family medicine and primary healthcare for the public presentation at the end of the week, and there is also an assessment of the letter they wrote to the healthcare provider or agency.

Moreover, they reflect on their experiences in the COPC exercise during the regular 'mentor sessions', where students meet with an experienced staff member from the first year of the curriculum, in the framework of their continuous professional development.

Evaluation

In the week following the COPC exercise a survey using a Likert-scale questionnaire assesses the learning experience. In March 2014 233 students participated, most of them medical students, but also students from Master of Social Work in Social Pedagogy, Master of Health Promotion, and Master of Management and Health Policy. They visited 64 patients and interviewed 192 caregivers. The results from the survey indicated that only 19 per cent of the students (totally) disagreed with the statement *To work with students from other disciplines was an enriching*

experience, that 55 per cent (totally) agreed with the statement *As a care provider your duty is to continuously improve the care system*, that 94 per cent (totally) agreed with *Not to be open to other cultures is not an option for a care provider*. Remarkably, although students were confronted with people living in very difficult situations, only 13 per cent agreed with the statement *I do not see solutions to all the problems of the people living in this neighbourhood*. Moreover, 78 per cent agreed with the statement *In order to eradicate social inequities in health, we should tackle the upstream causes at the level of education, income, work*. Finally, 88 per cent of the students (totally) disagreed with the statement *It is better for a family physician to only focus on curing diseases*, 88 per cent (totally) agreed with *Interprofessional cooperation is essential for any physician* and 45 per cent (totally) agreed with the statement *Health care is politics*. From this assessment, we can conclude that the objectives of this COPC exercise are to a large extent met for most of the students.

Conclusion

Leadership development for interprofessional education and collaborative practice requires actions at different levels. First of all at the micro level the need for interprofessional education is illustrated, using the example of the Community Oriented Primary Care exercise at Ghent University (Art et al., 2008). The example illustrates how interprofessional education, community orientation and equity can be linked in a concise educational program. Secondly, in order to prepare students to become change agents, training in transformational leadership is required. Finally, at the macro level there is a need for a shift from professional bureaucracy towards a professional Complex Adaptive Systems approach. This may also lead to a new type of leadership, 'Complex Adaptive Leadership, embracing paradox and uncertainty' (Obolensky, 2013). This illustrates that changing practice also requires a change of health service organization.

Reflective questions

1. Are there opportunities in your institution to integrate the learning of social inequities in the framework of IPE? List the enabling and limiting factors
2. Is there a way of learning transformational leadership in your curriculum? Can student participation create opportunities?
3. What are the positive and negative aspects of implementing a Complex Adaptive Systems approach in your institution?

References

Albert, S., Ashforth, B. E. and Dutton, J. E. (2000). Organizational identity and identification: Charting new authors and building new bridges. *Academy of Management Review*, *25*(1): 13–17.

Anderson, R. R. and McDaniel, R. R. (2000). Managing health care organizations: where professionalism meets complexity sciences. *Health Care Management Review*, *25*(1): 83–92.

Art, B., De Roo, L., Willems, S. and De Maeseneer, J. (2008). An interdisciplinary community diagnosis experience in an undergraduate medical curriculum: Development at Ghent University. *Academic Medicine*, 83(7): 675–783.

Bass, B. M. and Avolio, B. J. (1994). *Improving organizational effectiveness through transformational leadership*. Thousand Oaks: Sage Publications.

Boelen, C. (1997). *The five-star doctor: An asset to health care reform?* Available online at: www.who.int/hrh/en/HRDJ_1_1_02.pdf

Burns, J. M. (1978). *Leadership*. London: Harper and Row.

Daft, R. I. (1989) *Organization theory and design* (3rd ed.). St Paul: West Publishing Company.

Dahlgren, G. and Whitehead, M. (2007). *European strategies for tackling social inequities in health: Leveling up, Part 2*. Copenhagen: WHO Regional Office for Europe.

De Maeseneer, J. and Forman D. (2013). Transformational leadership. In J. De Maeseneer, S. Dhaese, I. Van de Caveye et al. (eds), *Student participation as a strategy for training leadership and becoming change agents.* Workshop: Assessing health professional education, 9–10 October, 2013. Washington, DC: Institute of Medicine.

Gumusluoglu, L. and Ilsev, A. (2009). Transformational leadership, creativity and organizational innovation. *Journal of Business Research*, *62*: 461–73.

Kark, S. and Cassel, J. (1952). The Pholela Health Centre: A progress report. *South African Medical Journal*, *26*: 101–4, 131–6.

McDaniel, R. R. and Driebe, D. J. (2001). Complexity science and health care management. In J. D. Blair, M. D. Fottler and G. T. Savage (eds), *Advances in health care management, 2*. Stanford: JAI Press: 11–36

Obolensky N. (2013). *Complex adaptive leadership: Embracing paradox and uncertainty*. Farnham: Gower Publishing.

Plsek, P. E. and Greenhalgh, T. (2001). The challenge of complexity in health care. *British Medical Journal*, *323*: 625–8.

Rhyne, R., Bogue, R., Kukulka, G. and Fulmer, H. *Community-oriented primary care: Health care for the 21st century*. Washington, DC: American Association for Public Health.

8

Utilizing Curriculum Renewal as a Way of Leading Cultural Change in Australian Health Professional Education

Roger Dunston, Dawn Forman, Lynda Matthews, Pam Nicol, Rosalie Pockett, Gary Rogers, Carole Steketee and Jill Thistlethwaite (Australia)

Preface

Health systems globally are engaged with major reforms focused on the need to deliver more responsive, effective and sustainable health services. Interprofessional practice (IPP), and the development of interprofessional educational (IPE) targeted at enabling IPP, sit at the heart of many of these reforms. IPP enabled by IPE could be argued as the practice foundation for achieving new and more effective forms of health service provision and health professional practice (World Health Organization, 2010; Gittell et al., 2013).

This increasing policy and practice focus on IPP and IPE is underpinned by a growing understanding that effective professional practice in health is a social and situated negotiation and achievement occurring between several different health professionals, and, critically, between this group of health professionals and the patient, carer/s, and other professionals and support services involved. In this sense effective practice is a larger concept requiring individual practitioners to be able to work effectively together (Matthews et al., 2011). This broader concept of practice contrasts with a more particular and limited view of effective practice as defined primarily in terms of disciplinary or uni-professional knowledge and expertise delivered by individual professionals operating primarily from within their own sphere of knowledge and expertise. In fact, in Australia the National Health Workforce Innovation and Reform Strategic Framework for Action 2011–2015 (Health Workforce

Australia, 2011) suggests that if the Australian healthcare system is to meet future workforce needs, it must adopt a 'shared leadership' model that is typical of IPP. Shared leadership is characterized by a distribution of tasks and activities across a range of individuals that might otherwise have been the responsibility of a 'sole leader'. In stretching the leadership boundary, a range of diverse talents and skills become more available to contribute to and shape outcomes, thus resulting in a service and/or intervention which is greater than the sum of individual actions (Lamb and Clutton, 2014). Similarly, the importance of and need for particular forms of interprofessional pedagogy and education to enable this development is also a constant of health service redesign, workforce development and health professional education within the higher education sector.

Introduction

The aim of this chapter is to provide an overview of an ambitious initiative that has sought to demonstrate leadership in building new knowledge, increased capacity and shared direction within the area of IPE curriculum development in Australia. In doing this we describe and discuss three studies, generically referred to as a program of curriculum renewal studies (CRS), which were designed and implemented as an integrated approach to achieving national curriculum renewal and change. Whilst providing a brief outline of the three studies we foreground one particular study, the National Audit Study (NAS), as a way of illustrating our approach to national leadership and leading change. This approach and leadership methodology draws on theorizations that emphasize practice and change as social, material and cultural formations that are negotiated, achieved, stabilized and evolved in the complex organizational settings of professional practice and education (Fenwick, 2012; Fenwick and Nerland, 2014; Kemmis et al., 2012; Schatzki, 2002). At the level of practical implementation and project management we made use of a wide range of participatory methods to enable change.

The CRS (curriculum renewal studies) program

The three projects that make up the CRS program are:

1. Curriculum Renewal for Interprofessional Education in Health. The overarching study. Funded by the Office for Learning and Teaching (Interprofessional Curriculum Renewal Consortium, Australia, 2014).

2. Interprofessional Education: a National Audit Report to Health Workforce Australia. Funded by Health Workforce Australia. (Interprofessional Curriculum Renewal Consortium, Australia, 2013).
3. Interprofessional Education for Health Professionals in Western Australia: Perspectives and Activity. Funded by Western Australian Health (Nicol, 2013).

We were ambitious. In addition to achieving particular study outcomes for each study, including a substantial report and various resources, the team was committed to using the opportunity of the three studies as a mechanism for leading and enabling system-wide change for interprofessional education. Our starting point engaged with a series of design questions: what would the program of studies need to look like, what would we seek to achieve, what methods would we use, how would activities be sequenced, how would we engage with stakeholders, how would the findings be disseminated, and how would we achieve the maximum impact?

The team

We were a diverse group drawn from different professional and organizational backgrounds – medicine, nursing and allied health, and represented a number of very different university environments (nine in all). A not-for-profit organization, the Australasian Interprofessional Practice and Education Network (AIPPEN), was also involved. The expertise we drew on ranged across health professional education, educational research and curriculum studies, clinical practice, management in health, health policy development and social policy. The team role modelled our commitment to interdisciplinary and interprofessional practice. We also worked closely with our three funding bodies, government agencies involved in: higher education development, OLT; health service provision and policy at a state level, WA Health; and the lead national health workforce agency, HWA. The CRS leadership team drew extensively on the support and guidance of an international advisory group.

Learning and teaching for interprofessional practice in Australia (L-TIPP)

The starting point for generating answers to the above design questions was to return to an earlier national scoping and development study conducted in 2007–2009 by some members of the CRS team, the L-TIPP study (Dunston

et al., 2009). L-TIPP had focused on understanding Australian IPE from a national perspective. It was the first Australian study that had sought to grapple with and represent this emerging area of curriculum development from the perspective of all relevant universities and educators. However, given the complexity of Australian IPE and the limited funds available, L-TIPP had been a skim across the surface of Australian educational practice. We had used a short survey and had consulted with a number of key colleagues in the areas of curriculum development, IPE delivery, health service provision and health workforce development.

We did, however, learn much from the L-TIPP study. Two particular things stood out. Firstly, the identification of what we referred to as characteristics of IPE in Australian higher education. Each of these characteristics provided us with guidance as to what we might target as part of our capacity-building work. Participants identified Australian IPE as existing on the margins of the curriculum, as locally designed and implemented, as minimally connected across different universities and, for the most part, reliant on the input of local champions rather than being embedded in curriculum structures.

What was also evident from L-TIPP was the lack of any system-wide (national) description of IPE as it was occurring in and across different universities. It seemed to us that any attempt to develop a coherent national approach would be highly problematic without a national understanding of the phenomena in question – IPE pedagogy and educational practice. Put simply, outside the individual organizations in which IPE educators worked, there was little understanding of what others were doing.

Addressing this deficit would be essential to inform and resource any attempt at national change. It would also establish a baseline of shared understandings and shared data. We also believed that an approach that sought to build and share understandings about IPE practice in different universities would model an interprofessional approach and lay the foundations for a more connected national community.

The NAS (National Audit Study)

Building a national profile of IPE across the Australian higher education sector became possible through the strong support and funding of Australia's lead health workforce development body, HWA. This support was an immense opportunity and meant we could significantly expand our initial ideas about what was possible in the area of resourcing curriculum renewal. Although not addressed in this chapter, we were also able to undertake an in-depth qualitative study of IPE development in four

Western Australian universities (Nicol, 2013). The WA study complemented the more structured and comprehensive national survey.

However, questions about how to build a national profile engaged us through many meetings; in particular, we discussed what kinds of data we should collect and what kinds of analyses we should develop. It was clear that there was immense diversity in how Australian IPE was being conceptualized and developed. Historically and in terms of capacity, number of professions involved and exposure to IPE, different universities were in very different positions.

Such diversity had significant implications for how we needed to think about 'data' and about what was possible to collect and, importantly, what would be useful. Clearly our ability to collect and compare data would need to be developed at a high level of generality. Whilst this would be useful by allowing some cross-organizational comparison, it would lack detail. To represent data diversity and richness we would need other methods. We agreed on five forms of data collection. Firstly, we would conduct a national survey. This involved 26 Australian universities. In total we received 83 discrete IPE curriculum program/units to review. Secondly, we would conduct at least two rounds of consultations through interviews with key stakeholders in higher education, in health practice, in health policy and workforce development, with the professions, with regulatory bodies and with government. One consultation was conducted as part of the NAS and one follow-up consultation occurred as part of the overarching CRS that aimed to verify our interpretations and draw conclusions in and through discussion. We wanted this consultation process to provide individuals and organizations with an opportunity to present their experience. Additionally this interactive process would build connections. In total we conducted 32 formal consultations. These were audio recorded and, in some cases, transcribed. Thirdly, we also thought it crucial to represent what people were doing at the development level. These data became the 'exemplars' and 'case study' focus of the NAS and its final report. We invited education and service organizations to provide details of IPE developments they had initiated and/or been involved with. This invitation was distributed through the study newsletter and through relevant networks. Fourthly, a broad-based documentary analysis of national and international policy, curriculum and IPE development policies, guidelines and research was undertaken. Finally, some team members had been engaged with a method known as future scenario planning (Sayers, 2010). Two future scenario-planning events were held, one in Perth and one in Sydney.

We hoped that these different forms of data and our inclusive and invitational approach to sampling would do justice to what was occurring in practice and would additionally provide a useful baseline understanding for designing the future of Australian IPE.

The four-dimensional framework (4DF)

One final and critical element of the design of the CRS program involved the development of a conceptual framework that would provide a structured way of locating, analysing and communicating data from the studies. Given the national focus of these projects and previous findings about diversity, gaps and inconsistencies in IPE understanding across the country and professions, it was imperative that our dispersed conversations be guided by a common conceptual understanding about the dimensions underpinning IPE curriculum development.

A four-dimensional curriculum framework, the 4DF, was developed to connect the design of curricula to the bigger picture around health professional education, practice and policy. The four dimensions are interdependent and together provide a comprehensive picture of the dynamic interplay between curricula elements, which are often considered in isolation to one another when developing interprofessional courses. Dimension One asks curriculum developers to consider the purpose and fundamental importance of a course. In doing so, the interplay between the curriculum and its social, political, economic, professional and educational influences is acknowledged and encoded into the course's design. Dimension Two encompasses the specific knowledge, skills and capabilities that define competency in a particular area. Often, this is the *only* dimension that is considered during curriculum development. As Lee et al. (2013, p. 65) write:

> ...the term 'curriculum' tends to be used in its limited sense, often referring to the development of written syllabi for courses where learning objectives, activities and assessment are identified for localized needs. In this regard, little systematic attention is paid to the curriculum development process and to the impact of the curriculum decisions on the health of citizens or the future development and sustainability of the health professions.

Dimension Three explores how curriculum is to be delivered in terms of the teaching, learning and assessment practices. Elements of the previous two dimensions are considered in determining these practices

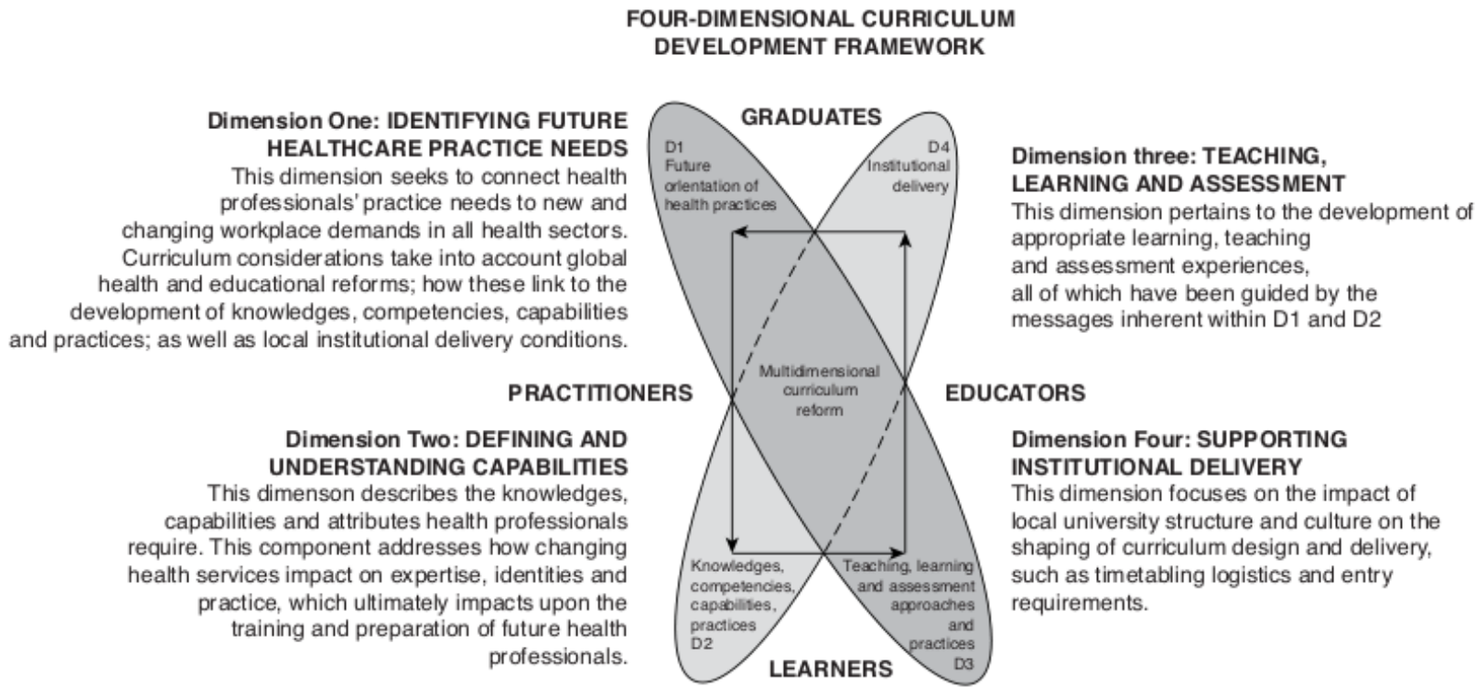

Figure 8.1 Four-dimensional Curriculum Development Framework

and how they drive the practicalities associated with the selection and sequencing of learning activities. Finally, Dimension Four addresses the often overlooked aspects of local implementation and the cultural norms, protocols and procedures that shape curriculum development at the local level.

The national picture

As a way of presenting something of the diversity and richness of Australian IPE we provide a brief overview of some of the data, findings and analysis drawn from the different methods used. If we were to identify an overarching characteristic of what we learned it would be diversity: conceptual diversity, diversity in the framing of curriculum, diversity in when and how IPE operates in the curriculum, diversity in teaching methods, and diversity in assessment. In terms of the survey data we identified twenty findings. A few examples follow.

Competencies and learning outcomes – dimension 2 of the 4DF

Despite an international focus on specifying the knowledge and practice characteristics of IPP competencies, the majority of cases, 61.4 per cent, did not specify such competencies (Interprofessional Curriculum Renewal Consortium, Australia, 2013, p. 29). At the level of learning outcomes (or aims and objectives) this picture altered significantly with 77.1 per cent of cases including learning outcomes (Interprofessional Curriculum Renewal Consortium, Australia, 2013. p. 30). What also became clear from the way these initial questions were answered was that different educators held different understandings and used different terms to comment on competencies, capabilities, learning outcomes, learning objectives and so on. What also became clear was that the significantly different views and understandings held by educators as to the meaning of IPE and pedagogy have major implications for the development of IPE.

Not surprisingly, an analysis of the competency and learning outcome responses reflected the knowledge and practice areas well identified in the literature. These included teamwork, understanding and respecting the role of others, the ability to clarify role expectations, understanding of IPE, and reflection or reflective practice (Thistlethwaite and Moran, 2010). In a separate 'linguistic analysis' conducted by one member of the team what stood out was an underpinning focus on 'relational' activity, that is, a focus on knowing and practising in relationship with others (Interprofessional Curriculum Renewal Consortium, Australia, 2013. p. 34).

Teaching, learning and assessment – dimension 3 of the 4DF

Moving to the domain of 'teaching, learning and assessment' (the third dimension of the 4DF) we found similar levels of diversity. The critical questions of 'when' and 'how' to introduce, locate and develop IPE within the curriculum were viewed very differently by different institutions and educators. The key stakeholder consultations identified that an array of factors were at work in shaping the particular curriculum approach of IPE: '…curriculum design decisions that should be understood with reference to not only pedagogical rationales utilized but also the organizational context – the politics, culture, funding, staff capabilities – existing at a particular point in time' (Interprofessional Curriculum Renewal Consortium, Australia, 2013, p. 37).

A range of IPE interactional methods were being used across the nation, including case-based (46 per cent), problem-based (28 per cent), experiential learning (27 per cent) and simulation (23 per cent), and while a majority (59 per cent) were offered to students from a range of years, one-third were delivered exclusively to final-year students (Interprofessional Curriculum Renewal Consortium, Australia, 2013, p. 43).

One of the defining characteristics underpinning the educational process is assessment. Across all survey responses the process of assessment was identified as occurring in only just over half (58.6 per cent) of reported cases. What was also notable was the diversity of methods utilized to inform the assessment process, with individual participation and written assignment constituting the two most frequently used methods (Interprofessional Curriculum Renewal Consortium, Australia, 2013, p. 55).

Enablers and constraints – the lived experience of IPE

Whereas the survey required participants to respond to particular questions with specified kinds of answers, the consultations were more fluid and flexible. We were interested to understand the 'on the ground' experience: what is it like to design and implement IPE, often in organizational settings where there is minimal support and understanding, where the legitimacy of IPE is often questioned, and where IPE often exists as an optional curriculum element?

In seeking to represent the experience of the key stakeholders we used the distinction between 'enablers' and 'constraints' as an overarching way of organizing what we were being told. From there the interviews often developed their own shape. Many of the issues discussed will be familiar to colleagues nationally and internationally and are also well

identified in the literature. Broadly, comments were able to be grouped in terms of 'curriculum and course design'; 'leadership'; 'stakeholder and industry links'; 'funding and support'; 'collaboration and communication'; and the implications of 'the university structure'. Respondents commented on the disjunction between the prominence of IPP/IPE in the policy and health reform literatures and the variable ways in which IPE existed as part of universities' curricula. They pointed to the lack of clarity in how IPE was conceptualized, understood and communicated and, critically for ongoing development and sustainability, the over-reliance on local champions with minimal capacity who tended to commit because of their enthusiasm for IPE. Such a situation created significant vulnerability and, not infrequently, burnout amongst those involved.

The 'overcrowded curriculum' was a constant theme in consultations. Educators often discussed the competing demands for space within the curriculum. This was also an issue when discussion turned to the kind of pedagogy required to generate learning from relational activity – a pedagogy that required smaller numbers of students engaged in educational activities, that is, group work and more time. The legitimacy, knowledge and evidence base of IPE, or rather the difficulties in these areas, were frequently discussed as making claims for greater centrality and more curriculum space difficult to argue. Finally, the theme of career-long learning in the area of interprofessional and collaborative practice was an area of concern. Many educators discussed the need for continuous learning in the area of IPP and their concern that what was learned in pre-registration education was often undermined by the strong silo-type experiences that are reported as still defining many areas of healthcare practice.

Recommendations

What the above data also allowed us to do was to identify seven 'key development areas' and the need for a 'national approach'. In all the work we have undertaken as a team, we have always concluded with an attempt to articulate what has been learned and what this means for future action and development. Our learnings from the NAS were articulated as follows:

Key areas for development and national capacity building

1. Establishment of a structure and process to provide national leadership and national coordination across higher education, health, the professions and government

2. Agreement on a common language for the development of IPE curricula in Australia
3. Agreement on an Australian statement of core competencies and learning outcomes for IPP
4. Adoption of IPP/IPE requirements in the accreditation standards of all Australian health professions
5. Adoption of IPP/IPE in the continuing professional development (CPD) requirements for ongoing registration
6. Development of a national approach to building curriculum and faculty capacity, knowledge and research in IPE
7. Development of a national approach to IPE/IPP knowledge management and information sharing and learning. (Interprofessional Curriculum Renewal Consortium, Australia, 2013, pp. 111–16)

The National Forum

As a further part of our leadership strategy, we sought and received a small amount of additional funding to bring key stakeholders, both individuals and organizations, together at the end of the CRS to reflect on the question of where to from here? We used the idea of national work plan as an organizing framework. This event, what we called a 'National Forum', was highly successful. It allowed for reflection and a consideration of how we might maintain our commitment and energy and, above all, be able to act interprofessionally. We are currently processing the data from the National Forum and plan to use this as a basis for scoping a next step in the national development process.

Discussion

We believe there have been a number of significant benefits derived from the design, conduct and findings of the NAS. Importantly and critically for the possibility of further national development in the area of IPE, the findings of the survey have for the first time provided a system-wide and national picture of IPE as it existed in 2011 and 2012 in Australian higher education. Developing a national data set for the first time within the Australian context has made it possible to think about policy and education futures informed by a diverse range of data sources both quantitative and qualitative. Together with a number of other reports and consultations we have developed, and the important work conducted by many colleagues, for example, the 'Learning and Teaching Academic Standards' study (O'Keefe et al., 2011) and the Harmonization (O'Keefe

et al., 2014) we have observed the way that the national focus and data foundations lend a certain legitimacy and status to what they comment on. We have been surprised by how many people have engaged with and could comment on the overall findings of the NAS. These developments have, we think, contributed to a shift in IPE discourse from a predominantly local conversation to a national conversation.

In parallel with this development, what we have also observed and heard comment about is the further development of a more connected and informed community of interest and practice. As with the shift from the local to national stage identified above, we have observed a shift in the focus of IPE networks from (and including) local to national. A further area of significant development that we believe the CRS process has contributed to is that of learning or rather, shared learning. The L-TIPP study identified the lack of connection and learning for many IPE educators. IPE worlds were local. Taking a national approach to data development, sharing, consultation, and processes of data verification and dissemination have all led to more expansive connections, to an exchange of data and narratives and to discussions focused on shared learning. What has also been affirming and exciting about the work, as it has developed, is the strong interest from many other universities to become involved in the development of a national collaborative.

Conclusion

We present the work of CRS as a design-led and collective leadership approach to IPE development and capacity building in Australia. Underpinning the design of each of the three studies in the CRS program is the theoretical position that professional practice and practice change are far more than simple technical or procedural accomplishments. On the contrary, we view practice and change as complex social and cultural formations that are negotiated over time in specific sites of education and practice. These negotiations engage with issues of power, status and control – with the existing order of things. Given this framing it is our view that a participatory, inclusive and interactive approach to leading change will always be required. Significant change cannot, in our view, be prescribed without the participation of those involved and affected.

The NAS is presented as a way of illustrating this thinking and related methodology. We believe a similar approach may be of benefit in building connection, capacity and shared direction in other settings.

In summary, the CRS program was an important step in building a connected community; in representing IPE as a national object rather

than just as a local phenomenon; in generating a 'currency' (data) that has political status; in making visible the creative and innovative work of many IPE educators; in facilitating shared learning amongst the IPE and workforce development community; and in focusing a small number of national development directions.

Reflective questions

The following four questions ask readers to reflect on the usefulness of key strategies developed as part of the CRS program for their own education and national context.

1. Might consideration of the major strategies used across Australia (collaborations, outreach, inclusivity, networking and so on) be useful in the development of IPE with the reader's educational and state context?
2. Might the development of a reflective and research-for-learning approach to building IPE capacity be useful for the development of IPE with the reader's educational and state context?
3. Is there a well-developed approach to curriculum development that links the practice context to curriculum design and implementation in the reader's educational and state context? If not, might the 4DF approach be useful?
4. Are there opportunities for small projects, led by an interprofessional team, to be used as a mechanism for building increased levels of connection, communication and capacity development across all health professions?

References

Dunston, R., Lee, A., Lee, A., Matthews, L., Nisbet, G., Pockett, R., Thistlethwaite, J. and White, J. (2009). *Interprofessional health education in Australia: The way forward.* Sydney: University of Technology Sydney and the University of Sydney.

Fenwick, T. (2012). Co-production in professional practice: a sociomaterial perspective. *Professions & Professionalism, 2*(2): 1–16.

Fenwick, T. and Nerland, M. (eds) (2014). *Reconceptualising professional learning: Sociomaterial knowledges, practices and responsibilities.* London and New York: Routledge.

Gittell, J., Godfrey, M. and Thistlethwaite, J. (2013). Interprofessional collaborative practice and relational coordination: Improving healthcare through relationships. *Journal of Interprofessional Care, 27*: 210–13. Guest Editorial.

Health Workforce Australia. (2011). *National Health Workforce Innovation and Reform Strategic Framework for Action 2011–2015*, Australia.

Interprofessional Curriculum Renewal Consortium, Australia. (2013). *Interprofessional education: A national audit report to health workforce Australia.* Sydney: Centre for Research in Learning and Change: University of Technology Sydney.

Interprofessional Curriculum Renewal Consortium, Australia. (2014). *Curriculum renewal for interprofessional education in health.* Canberra: Commonwealth of Australia, Office for Learning and Teaching.

Kemmis, S., Edwards-Groves, C., Wilkinson, J. and Hardy, I. (2012). Ecologies of practices. In P. Hager, A. Lee and A. Reich (eds), *Practice learning and change: Practice theory perspectives on professional learning.* London and New York: Springer: 33–50

Lamb, B. and Clutton, N. (2014). Leadership development for interprofessional teams to drive improvement and patient safety. In D. Forman, M. Jones and J. Thistlethwaite (eds), *Leadership development for interprofessional education and collaborative practice*. Basingstoke: Palgrave Macmillan.

Lee, A., Steketee, C., Rogers, G. and Moran, M. (2013). Towards a theoretical framework for curriculum development in health professional education. *Focus on Health Professional Education, 14(*3): 70–83

Matthews, L., Pockett, R., Nisbet, G., Thistlethwaite, J., Dunston, R., Lee, A. and White, J. (2011). Building capacity in Australian interprofessional health education: Perspectives from key health and higher education stakeholders. *Australian Health Review, 35*(2): 136–40.

Nicol, P. (2013). *Interprofessional education for health professionals in Western Australia: Perspectives and activity*. Sydney: Centre for Research in Learning and Change, University of Technology Sydney.

O'Keefe, M., Henderson, A. and Pitt, R. (2011). *Learning and teaching academic standards statement for health, medicine and veterinary science*. Sydney: Office for Learning and Teaching.

O'Keefe, M., Henderson, A., Jolly, B., McAllister, L., Remedios, L. and Chick, R. (2014). *Harmonizing higher education and professional quality assurance processes for the assessment of learning outcomes in health*. Final Report. Sydney: Office for Learning and Teaching.

Sayers, N. (2010). *A guide to scenario planning in higher education*. London: Leadership Foundation for Higher Education. Vol. 4.

Schatzki, T. R. (2002). *The site of the social: A philosophical account of the constitution of social life and change*. University Park: Penn State University Press.

Thistlethwaite, J. E. and Moran, M. (2010) Learning outcomes for interprofessional education (IPE): Literature review and synthesis. *Journal of Interprofessional Care, 24*: 503–13.

World Health Organization. (2010). Framework for action on interprofessional education and collaborative practice. Geneva: WHO.

9

Assessment of Interprofessional Teamwork – An International Perspective

Jill Thistlethwaite (Australia)

Introduction

This chapter is written on the understanding that there is a need for health professions students and qualified health professionals to be able to practise collaboratively and to deliver team-based health care in the 21st century. In a 2013 set of guidelines for the transformation of health professions education the World Health Organization suggests that 'building on an approach of global collaborative leadership, efforts that are adaptive and flexible in various cultural and socio-economic settings will be key to the successful implementation of these evidence-informed guideline recommendations' (WHO, 2013, p. 11). Moreover, leadership and good governance are crucial for education reform (WHO, 2013). While interprofessional education (IPE) may facilitate the process of becoming interprofessional, educators are continually challenged by the need to observe and assess teamwork, and learners to provide evidence that they are capable of working in teams. Teamwork is listed as a graduate attribute by many higher education institutions (HEIs), while the accreditation bodies of increasing numbers of the health professions globally are including teamwork and collaborative practice as core standards. Moreover, 'leadership' is also frequently included in the list of attributes required of health professionals, while some educators have suggested that 'followership' is also an important skill. However, there is a lack of valid and feasible assessment methods for use at the prequalification level.

Health professions education at the prequalification (preregistration/precertification) level is ideally founded on the principle of constructive

alignment: the defined learning outcomes can be achieved by the learning activities provided, while students are assessed only in relation to those learning outcomes. This alignment is based on constructivist learning theory and instructional design, and ensures learning is student-centred with meaning derived from the learning experience (Biggs and Tang, 2007). Curriculum developers and those educators employed by HEIs should be familiar with this concept of alignment. However clinically based education is delivered by a wide variety of clinical educators, supervisors and clinicians who may not be fully informed about their students' curriculum and how their teaching fits within this. Senior faculty members need to ensure educators are kept up-to-date with curricular changes and assessment methods.

Transformational leadership (Burns, 1978) is required at all levels of the education and training development and delivery enterprise in partnership with health services and policymakers. Innovations in learning activities and assessment methods will help transform the preparedness of graduates for practice. Such innovations require robust evaluation methods, preferably through a realist approach, which explores not only outcomes (effectiveness) but also what works for whom and in what contexts (Pawson and Tilley, 1997).

Learning outcomes and the language of competence

Before focusing on assessment I will consider the learning outcomes for interprofessional education and the language in common usage in terms of what educators expect students to achieve. The terminology includes learning objectives, outcomes, attributes and capabilities, which may also be broken down into 'knowledge, skills and attitudes' (KSA) as defined in Bloom's taxonomy of learning domains (Bloom, 1956). These domains are conceptualized as cognitive (mental/knowledge), psychomotor (manual or physical skills) and affective (feelings or emotional areas). In health professions education we are currently in a landscape of competency-based education (CBE), another attempt to recognize the complexity of professional practice and integrate KSA as tasks. The question now being asked of graduates is: 'Are you competent to practise?' rather than 'Are you able to demonstrate your knowledge and skills acquisition during training or under examination conditions?' The question asked of and by leading educators is: 'What does competence look like and how may it be measured?' And, specifically in relation to IPE: 'How may a competent team member be recognized and how is leadership demonstrated and assessed?' For example, the highly influential

document published by the Interprofessional Education Collaborative (IPEC) in the United States in 2011 has adopted the CBE approach with its list of *Core competencies for interprofessional collaborative practice*. A year earlier the Canadian Interprofessional Health Collaborative (CIHC) published its *National Interprofessional Competency Framework* (CIHC, 2010). This succinctly defines a collaborative practice-ready health worker as someone who has learned how to work in an interprofessional team and is competent to do so.

Learning objectives are aspirational, whereas competence is seen as objective and observable (Carraccio et al., 2002). Some commentators see competence as the mastering of a set of competencies, though the competencies may then be framed in similar words to learning outcomes. Discussion continues as to whether there are degrees of competence or whether a person may only be competent, not competent or, indeed, incompetent. Competence is the minimal standard for qualification and certification, whereas postgraduate training and on-the-job experience is required for 'expertise'. IPE competency statements are said to 'identify specific knowledge, skills, attitudes, values and judgments that are dynamic, developmental and evolutionary' (Bainbridge et al., 2010, p. 8). To make matters more confusing, some educators prefer the term 'capability' because it has overtones of evolution and highlights the need for learners and professionals to respond and adapt to changes in health care and health services (Walsh et al., 2005).

Lurie has raised the question, in a review of competency-based assessment, as to 'why has it been so difficult to crystallize a general consensus about "doing" into a set of specific, well-accepted and measurable competencies?' (Lurie, 2012, p. 50). He critiques examples of the very broad competencies defined in the past few years by medical boards and accreditation bodies, noting that many are abstract and socially constructed concepts, which are difficult to translate into observable and therefore assessable behaviours (notable examples being professionalism and collaborative practice, while leadership may also be added to this list).

Lingard, who writes widely on teamwork and discourse, has contrasted the individual and the collectivist approaches to competence. Within medical education (though there is no reason to presume this differs greatly than for the health professions in general), she suggests there are three key premises underpinning the collectivist discourse of competence:

1. Competence is achieved through participation in authentic situations
2. Competence is distributed across a network of persons and artefacts

3. Competence is a constantly evolving set of multiple, interconnected behaviours enacted in time and space (Lingard, 2012).

It is crucial, whatever terminology is adopted, that learners are informed of the purpose and aim of their education. In particular in my experience I have frequently found that students undertaking interprofessional learning are not fully aware of the goals of the activities. In Australia I was part of the Interprofessional Curriculum Renewal Consortium funded by Health Workforce Australia (HWA) and the Office of Learning and Teaching (OLT). The consortium carried out a national audit of IPE in Australia during 2012 and found a marked variation in learning outcomes for IPE activities, with 15.7 per cent of those activities having no learning outcomes defined at all (The Interprofessional Curriculum Renewal Consortium Australia, 2013). This finding was similar to a previous review of the literature that formed part of the World Health Organization's study group on IPE and which analysed and synthesized key learning outcomes for IPE as defined in published descriptions of interprofessional learning activities (Thistlethwaite and Moran, 2010). While a minority of activities did not specify any outcomes, the majority fell under six main headings, that correlate well with published competency frameworks: teamwork; roles and responsibilities; communication; learning/reflection; the patient (client); ethics and attitudes (Thistlethwaite and Moran, 2010). Examples of learning outcomes/competencies defined as required for interprofessional and collaborative practice from three sources are listed in Table 9.1, while leadership outcomes and competency examples are listed in Table 9.2. The examples chosen are from North America but the wording is similar to that used in the literature when discussing interprofessional activities. The three documents used are widely available and the rationale for the outcomes/competencies is well described.

Leadership as an outcome and competence

The inclusion of leadership as a required competency for healthcare professionals, particularly as related to teamwork processes, is controversial. For example, IPEC states that 'learning to be interprofessional means learning to be a good team player' (IPEC, 2013, p. 24). Not all members of a team can be leaders but in well-established teams the leadership may be rotated depending on the task. Therefore perhaps another core competence should be 'followership' for those team members not actively leading at a given point in time. To be an effective team member

Table 9.1 Examples of learning outcomes and/or competencies for interprofessional practice

Organization and reference	Domains	Examples	Comments
Interprofessional Education Collaborative (2011): USA	1. Values/ethics 2. Roles and responsibilities 3. Interprofessional communication 4. Teamwork	1. Work in cooperation with those who receive care, those who provide care, and others who contribute to or support the delivery of prevention and health services 2. Communicate one's roles and responsibilities clearly to patients, families, and other professionals 3. Listen actively, and encourage ideas and opinions of other team members 4. Perform effectively on teams and in different team roles in a variety of settings	The competencies are very broad in all domains and not amenable to simple assessment methods but would require observation over time. The document states that the competencies should be both formatively and summatively assessed but does not suggest methods of assessment: 'The need for assessment instruments to evaluate interprofessional competencies represents a 'next step' in the development of competency-based interprofessional education for all stages of interprofessional learning. This work is in early stages of development' (IPEC, 2011, p. 35).
Canadian Interprofessional Health Collaborative (2010).	1. Interprofessional communication 2. Patient/client/family/ community-centred care 3. Role clarification 4. Team functioning 5. Collaborative leadership 6. Interprofessional conflict resolution	1. Communicate to ensure common understanding of care decisions 2. Support the participation of patients/ clients, their families, and/or community representatives as integral partners alongside healthcare personnel	Within the document, there is a discussion of the concepts of competence and competency: 'Competencies do not measure the level of competence. They provide the foundation upon which assessment of ability can be built, but they do not describe the levels at which individuals are expected to perform' (CIHC, 2010, p. 31). No specific assessment methods suggested.
CanMeds – the Royal College of Physicians and Surgeons of Canada – 2015 Framework draft online (Frank and Snell, 2014)	Six roles of which collaborator is one Working within the healthcare team and interprofessional health-care are core concepts	Actively participate, as an individual and as a member of a team, in the continuous improvement of healthcare quality and patient safety (medical expert role). Work effectively with other physicians and other healthcare professionals	While these competencies are specifically for the medical profession, the collaborator role is being used to guide interprofessional outcomes by other organizations. There is a companion to the 2005 framework: An introductory guide to assessment methods (Bandiera et al., 2006).

Table 9.2 Examples of learning outcomes and/or competencies for leadership

Organization and reference	Domains	Examples	Comments
IPEC: Inter-professional Education Collaborative (2013): USA	Within the teamwork domain	Apply leadership practices that support collaborative practice and team effectiveness	
CIHC: Canadian Interprofessional Health Collaborative (2010).	Collaborative leadership in one of the six domains	Facilitation of effective team processes Facilitation of effective decision-making Establishment of a climate for collaborative practice among all participants Co-creation of a climate for shared leadership and collaborative practice	Here collaborative leadership is equated to shared leadership and the domain also supports shared decision-making. 'In a shared leadership model, patients/clients may choose to serve as the leader or leadership may move among learners/practitioners to provide opportunities to be mentored in the leadership role. In some cases, there may be two leaders – one for learners/practitioners to keep the work flowing and the other who connects with patients/clients/families in a helping relationship, serving as the link between the team and the patient/family' (CIHC, 2010, p. 15).
CanMeds – the Royal College of Physicians and Surgeons of Canada – 2015 Framework draft online (Frank and Snell, 2014)	The 2015 draft has changed the role of 'manager' to 'leader'. Collaborative leadership and 'followership' are key concepts.	Develop their leadership skills Facilitate change in healthcare to enhance services or outcomes	The wording, as would be expected, relates to physicians and therefore the use of CanMeds for interprofessional learning outcomes is debatable. 'Society has explicitly identified management and leadership abilities as core requirements for the practice of medicine. Physicians and others exercise collaborative leadership within the complex health care systems that form their specific work environments' (Frank and Snell, 2014, p. 17).

requires understanding of how teams function and become dysfunctional, and the nature of conflict and how it may be resolved. Such understanding is only gained on a background of awareness of styles of leadership and personal reflection on one's own leadership potential or satisfaction with being led.

Conflicts frequently arise over leadership. The health professions are unequal in status and power in most societies but such inequities should not be allowed to hinder teamwork at the patient care level. In particular they should not hinder authority based on professional expertise. Expert leaders in interprofessional and collaborative practice are patient/client and community-centred, respect the roles and contribution of each team member and are able to facilitate each member's contribution to the team's goals.

Practice-based learning

For assessment to be equitable, acceptable and aligned, students need to be given suitable opportunities to learn about teamwork, to observe teamwork in action and to take part in team-based tasks. In their early education activities may be classroom-based, such as group or problem-based learning, or through community-based team projects. Subsequently, clinical placements are examples of broader work-integrated learning (WIL), which facilitates the integration of theory and practice (Orrell, 2006). To maximize learning about teamwork in clinical environments, students require a theoretical platform on which to build their practical learning prior to clinical exposure, and orientation to the clinical environment and the people working within it. The extent to which, and the ways in which, such pre-clinical placement preparation is conducted across professional curricula and institutions is highly variable. Pre-clinical education is still largely uni-professional and conducted in the 'silos' frequently described in the interprofessional literature. Subsequently, the nature of clinical practice placements is such that there will always be variation in students' exposure to and immersion in teamwork experiences. Such experiences in the workplace may be uni-professional, multi-professional or interprofessional. While observation of healthcare teams in action is helpful it is not sufficient: students need to become members of teams and be exposed to the complex tasks and boundary challenges of decision-making and service delivery in order for profound learning to take place (Orrell, 2006). Situated and experiential learning is enhanced through continuity of location and supervision (Thistlethwaite et al., 2013).

The length of placements differs inter- and intra-professionally and between institutions, some being no more than two weeks but others extending to eight weeks or more. While shorter placements may enable students to meet the required learning outcomes for many elements of their programs, frequent moves to new attachments limit how students perform as team members and their experience of 'belongingness'. There is no consensus as to how long a specific clinical attachment should be to enable a learner to feel part of the local community of practice (Thistlethwaite, 2013). Levett-Jones et al. (2008), for example, report that student nurses feel a greater sense of belongingness the longer their placements, and this enhances their self-efficacy, confidence, capacity and motivation. At the beginning of each rotation learners need to start again to demonstrate their abilities. As learners move from one community of practice (Lave and Wenger, 1991) to another, both they and their new colleagues/supervisors need time to build trust, and such trust has been shown to be one of the features of longer rotations or longitudinal clinical placements, particularly in community settings (see, for example, Couper et al., 2001). Unequal rotation lengths for different health professions groups are also one of the barriers to interprofessional placements, as students do not stay in the same place for the same time.

While clinical attachments are still predominantly based in hospital and secondary care settings, healthcare globally is delivered predominantly in communities and through primary healthcare. As the WHO states, drawing on a number of sources, this 'excessive focus on hospital-based education and education that is segregated into professional silos does not prepare health professionals for team work, and for leadership skills required in 21st century health services' (WHO, 2013, p. 21).

Challenges of assessment

Once a course or program has agreed learning outcomes or competencies there is still the major challenge of devising and administering valid, reliable, acceptable and feasible assessments of those outcomes and/or competencies. The predominant outcomes relating to teamwork and collaborative practice are particularly difficult to assess in the prequalification space for various reasons. Students rarely work in defined teams for any length of time, thus observation of their teamwork competencies is rarely practical. Establishing a team specifically for the purpose of assessment, such as for a simulation or OSCE (objective structured clinical observation), is not authentic as teams take time to form and gel and

thus to perform optimally. The team-OSCE (or T-OSCE) is an example of one innovation to overcome some of these issues but still raises questions about the validity of assessing teamwork undertaken by a newly formed team (Symonds et al., 2013). A 'team' of students formed specifically to be assessed for their collaborative skills is unlikely to function well (Oakley et al., 2004). Moreover decisions about 'passing' summative university examinations are almost always based on individual student scores and grades, though in some institutions coursework may have elements of group and peer assessment. For registration by the relevant professional accreditation bodies a student needs to meet individual defined standards and, to complicate matters further, the registration bodies in many jurisdictions mandate that qualified staff from the same profession assess students. Academic, professional and interprofessional considerations and requirements often conflict, while diverse underlying philosophical assumptions and educational cultures hamper the development of acceptable and feasible assessments for interprofessional learning outcomes and competencies (Dunworth, 2007).

The Australian Curriculum Renewal Project previously mentioned found that, of the documented IPE activities happening in Australia, just over 50 per cent were assessed and 'written assessment, participation/attendance and presentation were the predominant methodologies employed' (The Interprofessional Curriculum Renewal Consortium Australia, 2013, p. 58). There were a small number of assessments involving reflective journals and online activities, but observation of teamwork was rare.

Existing teamwork instruments

There are numerous examples of instruments for the assessment of team performance, not limited to but including healthcare teams as some examples. In 2013 two major reviews of teamwork instruments used in healthcare settings were published. The first, by the Canadian Interprofessional Health Collaboration (CIHC, 2012) provides an overview of instruments (quantitative tools) that may be used to evaluate the effectiveness of IPE by measuring outcomes of IPE in relation to learning and collaborative practice. There is limited exploration of the tools' psychometric properties. The review includes 128 tools from 136 articles. They are classified following the 4-level Kirkpatrick outcomes evaluation framework (Kirkpatrick and Kirkpatrick, 2006) as modified for IPE by the Joint Evaluation Team (JET) (Barr et al., 2000): attitudes (64 tools); knowledge, skills and abilities (20); behaviour (34); organizational level

(6); patient satisfaction (8); and provider satisfaction (14). Excluding the tools focusing on attitudinal change, many of the others may be used to assess how a team is performing and changing over time, but such teams consist of qualified health professionals rather than students. Examples are: the OR (operating room) 360-degree teamwork assessment scale (ORTAS), which is for peer and self-assessment of observable behaviours associated with effective teamwork (such as team orientation and communication) with 13 items on a 6-point Likert scale (Paige et al., 2009); the observational teamwork assessment for surgery (OTAS) which has 15 items (including communication, coordination, cooperating, leadership and monitoring), and 7-point Likert scales (Sevdalis et al., 2009); and the team observation scale (TOS), which has nine subscales of interdisciplinary team functioning with 67 items (including sharing of leadership functions, negotiation of roles, patient-centered goals and discipline-specific information shared) and binary (yes/no) scales (Cole et al., 2003).

The second review was published by the Harvard Business School (Valentine et al., 2012) and is aimed more specifically at finding and evaluating instruments used to assess dimensions of teamwork. It focuses on the psychometric properties of the teamwork instruments as well as providing a review of the components of teamwork. Interestingly, the two reviews have limited overlap in the instruments described. The Harvard review found 35 surveys that measured teamwork, with the most common dimensions included being communication, coordination and respect. Two examples are: the team diagnostic survey with 16 items and 5-point Likert scales, with which teams score more highly if they are stable and have interdependent work (Wageman et al., 2005); and the teamwork scale focusing on safety climate with 22 items and 5-point Likert scales (Hutchinson et al., 2006).

Some instruments assess very specific tasks within teamwork such as ward rounds and handover; others focus on attitudes and, when used longitudinally, how these change over time (Heinemann et al., 1999). Methods used in other industries such as aviation have been applied in healthcare (Thomas et al., 2004), though this has created some controversy (Hunt et al., 2007). Observation for assessment of established teams is primarily used to diagnose and improve team performance, for example if teams are dysfunctional and performing sub-optimally. While the individuals within a team are also observed, judgment is not of an individual's competencies but how the team performs as a whole. As well as observing an established team in the workplace, teamwork assessment is often carried out via simulation (Woodward et al., 2010).

This is a very suitable method for formative assessment with its high educational impact, but has the same problems of knowing whether 'shows how' translates into the 'does' of performance over time.

TeamSTEPPS is a widely used package that was developed for the assessment and training of established healthcare teams in order to enhance patient safety (http://teamstepps.ahrq.gov). Subsequent modifications have facilitated its use as an educational intervention during simulation activities for health professional students. In one study learners were then assessed by a written knowledge test and for recognition of team skills using video vignettes (Robertson et al., 2010). A spin-off questionnaire, the T-TAQ (TeamSTEPPS teamwork attitudes questionnaire) has been used to measure attitudes to teamwork in qualified healthcare providers (Baker et al., 2010).

Many of the published methods are described following development but without longer-term evaluation and demonstration of predictive validity. It is also unclear how often a particular instrument is used, where and why, as publications tend to focus on the innovation rather than subsequent utility.

Assessment *of* learning and assessment *for* learning

Commonly assessment is referred to as either summative or formative. Summative assessment is the endpoint of a particular course, program or university degree and compares a learner's achievement through marks or grades with a previously set standard or benchmark. Summative assessment aims to answer the questions: Has the learner shown evidence of adequate learning? Has the learner achieved the pass mark? Formative assessment is a process that provides information to both learners and educators about the progress of the learner and identifies areas of strength and/or weakness. Thus formative assessment is about feedback and dialogue between learner and teacher. Ideally all summative assessment should have a formative component but this is often missing from high-stakes examination for which students often only receive a mark or pass/fail result. Thus summative assessment assesses learning (assessment of learning) while formative assessment supports and enhances learning (assessment for learning). Formative assessment of skills-based activities and complex tasks such as teamwork involves observation with constructive and timely feedback. When done well, therefore, it is time and resource-intensive.

Feedback is undergoing a process of reconceptualization through the work of leaders in the field of higher and professional education. To

be useful feedback should no longer be viewed as a passive activity on the part of the learner. 'The information provided to students is used to influence their subsequent task performance' (Molloy and Boud, 2013, p. 19). In other words students need to reflect on and assimilate the feedback in order to make any changes in their subsequent activities. Students are encouraged to be active and indeed seek out feedback rather than wait for it to happen.

In the workplace students may be reluctant to solicit feedback and may not be sure whom to ask in a busy environment. If a request for feedback is denied, this demotivates learners and they are less likely to ask in future. Informal feedback processes in relation to teamwork and collaborative work may be rare due to workforce pressures. More formal systems of work-based assessment (WBA) are therefore being put into place to give students and clinicians a more structured feedback process, but this is still largely contingent on goodwill and the need for protected time.

Work-based assessment in healthcare

There is growing interest in work-based assessment (WBA) not only for its feedback potential but also because of growing interest in the assessment of performance or how students and qualified health professionals work in authentic clinical settings. Research has shown that what is demonstrated in controlled assessment environments (such as the OSCE mentioned above) is not representative of actual daily work-based performance (Rethans et al., 1991). WBA instruments have therefore been developed to improve validity and the authenticity of judgments of competence. The quest for reliability, and its attendant objectivity, in particular has resulted in the attempt to break down complex and context-specific clinical tasks into discrete elements, the mini-CEX (Norcini et al., 2003) being one example. This, as one commentator has suggested, 'is at least in part, responsible for what might be described variously as "reductionist", "deconstructive", "tick-box", "mechanistic" or "instrumentalist" approaches to assessment' and 'the lack of appreciation of assessment as the learning tool for the student' (Amin, 2012, p. 5) – so very much assessment for rather than of learning. Even with the most detailed grade descriptors, there is an element of personal opinion (Kogan et al., 2009), which is acknowledged by the common addition of a 'global rating' independent of the accrued grades on a checklist – a potentially reliable method of assessment if delivered by an expert in a controlled environment such as an OSCE (Regehr et al., 1998).

WBA of teamwork is an area for development for pre-qualification health professionals. There are a number of instruments for the assessment of teamwork, and in healthcare there is on-going work looking at such assessment post-qualification, mainly through the use of simulation and multisource feedback (also known as 360-degree feedback and colleague feedback). It is imperative that any combination of instruments/methods used has construct validity, with evidence of the reasonableness of their proposed interpretation (Downing, 2003). Multisource feedback (MSF) tends to have a formative rather than summative function, with subsequent learning and change being dependent on the quality and timing of the feedback and its individualization to the appraisee (Atwater et al., 2002). There are many variations of these instruments, which may include items relating to interactions with patients, interpersonal and communication skills, and professionalism, as well as team skills. They are completed by a variety of assessors, who may include self, peer, own-profession clinicians, other health professionals and, sometimes, patients, service users and carers. Thus they are not necessarily specific to team working nor to the judgment of team members. Best practice appears to be that they are kept simple with few items, but there is a lack of consensus as to how many assessors are needed (Word et al., 2006). One example is the TAB (team assessment behaviour), as used in the foundation program for junior doctors in the UK, with the intention of identifying those whose professional behaviour does not meet the required standards. Team-working is only one of four domains (the others being relationship with patients, verbal communication and accessibility) as the team in the title refers more to the process of being assessed by 'the team'. The attitudes/behaviour relating to teamwork are: 'Respects others' roles, and works constructively in the team. Hands over effectively, and communicates well. Is unprejudiced, supportive and fair'. Between 10 and 15 assessors from multiple professions assess the doctor's performance in the workplace and state whether they have any concerns. There is no training for assessors, enhancing the feasibility of the tool, and the trainee chooses assessors (Pant et al., 2009). The number of assessors required limits the feasibility of the TAB at prequalification level.

The Interprofessional Capability Tool (ICAT), has been developed and used at Curtin University in Western Australia for three years to assess health professions students (http://healthsciences.curtin.edu.au/local/docs/Interprofessional_Capability_Assessment_Tool.pdf). This is not MSF as assessment is by one facilitator and the student. There are grade descriptors for four domains: communication, professionalism,

collaborative practice (which includes 'provides leadership when appropriate') and client-centred service/care.

Self and peer assessment are being increasingly used as a means of assessing group and teamwork in university settings, because of the difficulties in finding clinicians and educators to observe students. One innovative tool for this is SPARK, which is web-based (Freeman and McKenzie, 2002). Students working in teams assess their own and each other's performance against outcomes defined for the activity. Self-assessment can be compared to the peer assessment and all judgments are de-identified.

Assessment of leadership

Assessing leadership competencies at the pre-qualification level is difficult. Students working in teams with qualified health professionals are unlikely to take leadership roles. They may have teamwork activities requiring leadership and this leadership may be assumed or shared. Some higher-education institutions run specific student leadership programs as electives or for high-achieving individuals. However, it is unlikely that all students within a given cohort will have the opportunity to demonstrate leading, though all should have the opportunity to demonstrate being team members. Leadership potential and assessment of behaviour are more validly undertaken after qualification.

However there are tools available that may be used formatively to provide details about students' leadership attributes. For example the *Student Leadership Practices Inventory* (www.studentleadershipchallenge.com/Assessments.aspx) developed by and based on the work of Kouzes and Posner (2011), is an online suite of instruments for student self-assessment and 360-degree observation and feedback. For a fee (which does limit its feasibility), students who complete the package receive an in-depth report related to Kouzes' and Posner's (2011) *five practices of exemplary leadership®*. The five practices, with an example of behaviour for each, are: model the way (sets personal example); inspire and shared vision (looks ahead and communicates future); challenge the process (makes certain that goals, plans and milestones are set); enable others to act (treat others with respect); and encourage the heart (provides support and appreciation). All WBA tools of this kind are limited by the availability and willingness of clinical tutors and supervisors to observe behaviour over time and complete detailed inventories.

Programmatic assessment

Along with the tendency to reduce complex tasks to individual components, educators have tended to evaluate discrete assessments rather than considering the performance of the full suite of assessments administered to each student. Schuwirth and van der Vleuten, leaders in the field of medical education and assessment, suggest that the careful combination of methods, which may include less than perfect instruments, into a program of assessment is more important than the quality of the components administered individually (Schuwirth and van der Vleuten, 2012). Thus the ability to work in a team should not be judged by a one-off observation whatever the context such as simulation, OSCE or work-based activity. Neither would a leader's performance be evaluated on the basis of a short task but rather over a longer time frame and from both a process and outcomes perspective.

Conclusion

Assessment is a fundamental component of education at all levels of experience within the health professions. It may be undertaken by oneself, one's peers or by institutions for the purpose of accreditation. Methods of assessment have changed radically in the last decade and the over-reliance on written and unstructured assessments is no longer best practice. The assessment of teamwork and leadership needs further consideration, with a need for assessment for learning to complement the curriculum. Observation and feedback processes are important for educational achievement and growth yet, at a time of increasing student numbers and dwindling resources, such processes are difficult to do well. Leadership in education aligned with health services and policymakers is vital for improving the standards of practice in the coming decades.

Reflective questions

1. What methods have you used to self-assess or assess others in relation to teamwork?
2. Has the performance of your team ever been evaluated? What methods were used and how useful were the findings?
3. Consider the leaders you have worked with during your career. How would you rate them using a multisource feedback tool? What items should be included in such a tool and why?

References

Amin, Z. (2012). Purposeful assessment. *Medical Education, 46*: 4–6.

Atwater, L. E., Waldman, D. A. and Brett, J. F. (2002). Understanding and optimizing multisource feedback. *Human Resource Management, 41*: 193–208.

Bainbridge, L., Nasmith, L., Orchard, C. and Wood, V. (2010). Competencies for interprofessional collaboration. *Journal of Physical Therapy Education, 21*(1): 6–11.

Baker, D. P., Amodeo, A. M., Krokos, K. J., Slonim, A. and Herrera. H. (2010). Assessing teamwork attitudes in healthcare: Development of the TeamSTEPPS teamwork attitudes questionnaire. *Quality and Safety in Health Care, 19*: 1–4.

Bandiera, G., Sherbino, J. and Frank, J. (eds). (2006). *The CanMEDS Assessment Tool Handbook*. Ottawa: The Royal College of Physicians and Surgeons of Canada.

Barr, H., Freeth, D., Hammick, M., Koppel, I. and Reeves, S. (2000). *Evaluations for interprofessional education. A United Kingdom review for health and social care.* London: CAIPE/BERA.

Biggs, J. B. and Tang, C. (2007). *Teaching for quality learning at university: What the student does* (3rd ed.) Maidenhead: McGraw-Hill/Society for Research in Higher Education and Open University Press.

Bloom, B. S. (1956). *Taxonomy of educational objectives, Handbook I: The cognitive domain*. New York: David McKay.

Burns, J. M. (1978). *Leadership*. New York: Harper and Row.

Carraccio, C., Wolfsthal. S. D., Englander, R., Ferentz, K. and Martin, C. (2002). Shifting paradigms: From Flexner to competencies. *Academic Medicine, 77*: 361–7.

CIHC (2010). Canadian Interprofessional Health Collaborative (2010). Available online at: www.cihc.ca/files/CIHC_IPCompetencies_Feb1210r.pdf

CIHC (2012). *An inventory of quantitative tools to measure interprofessional education and collaborative practice.* Available online at: http://rcrc.brandeis.edu/pdfs/Canadian%20Interprofessional%20Health%20Collaborative%20report.pdf

Cole, K. D., Waite, M. S. and Nichols, L. O. (2003). Organizational structure, team process and future directions of interprofessional health care teams. *Gerontology and Geriatrics Education, 24*(2): 35–9.

Couper, I., Worley, P. S. and Strasser, R. (2001). Rural longitudinal integrated clerkships: Lessons from two programs on different continents. *Rural Remote Health, 11*(2): 16–65.

Downing, S. M. (2003). Validity: on meaningful interpretation of assessment data. *Medical Education, 37*: 830–7.

Dunworth, M. (2007). Joint assessment in inter-professional education: A consideration of some difficulties. *Social Work Education, 26*: 414–22.

Frank, J. R. and Snell, L. (eds) (2014). *Draft CanMEDS 2015. Physician competency framework – Series I.* Ottawa: The Royal College of Physicians and Surgeons of Canada.

Freeman, M. and McKenzie, J. (2002). SPARK, a confidential web-based template for self and peer assessment of student teamwork: Benefits of evaluating across different subjects. *British Journal of Educational Technology, 33*: 551–69.

Heinemann, G., Schmitt, M. H. and Farrell, M. P. (1999). Development of attitudes towards health care teams scale. *Evaluation in the Health Professions, 22*: 123–42.

Hunt, E., Shilkofski, N. A., Stavroudis, T. A. and Nelson K. L. (2007). Simulation: Translation to improved team performance. *Anesthesiology Clinics, 25*: 301–19.

Hutchinson, A. K. l., Cooper, J. E., Dean, A., McIntosh, M., Patterson, C. B., Stride, B. E. et al. (2006). Use of a safety climate questionnaire in UK health care: Factor structure, reliability and usability. *Quality and Safety in Health Care, 15*(5): 347–53.

IPEC – Interprofessional Education Collaborative Expert Panel. (2011). *Core competencies for interprofessional collaborative practice: Report of an expert panel*. Washington, DC: Interprofessional Education Collaborative. Available online at: www.aacn.nche.edu/educationresources/ipecreport.pdf.

Kirkpatrick, D. and Kirkpatrick, J. (2006). *Evaluating training programs: The four level model*. San Francisco: Berrett-Koehler.

Kogan, J. R, Holmboe, E. S. and Hauer, K. E. (2009). Tools for direct observation and assessment of clinical skills of medical trainees: A systematic review. *JAMA, 302*: 1316–26.

Kouzes, J. M. and Posner, B. Z. (2011). *The five practices of exemplary leadership* (2nd ed.). Hoboken: Wiley

Lave, J. and Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge: Cambridge University Press

Levett-Jones, T., Lathlean, J., Higgins, I. and McMillan, M. (2008). The duration of clinical placements: A key influence on nursing students' experience of belongingness. *Australian Journal of Advanced Nursing, 26*(2): 8–16.

Lingard, L. (2012). Rethinking competence in the context of teamwork. In B. D. Hodges and L. Lingard (eds), *The Question of Competence*. Ithaca: ILR Press.

Lurie, S. J. (2012). History and practice of competency-based assessment. *Medical Education, 46*: 49–57.

Molloy, E. and Boud, D. (2013). Changing conceptions of feedback. In D. Boud and E. Molloy (eds), *Feedback in higher and professional education*. London: Routledge: 11–33.

Norcini, J. J., Blank, L. L., Duffy, F. D. and Fortna, G. (2003). The mini-CEX: a method for assessing clinical skills. *Annals of Internal Medicine, 138*: 476–81.

Oakley, B., Felder, R. M., Brent, R. and Elhajj, I. (2004). Turning student groups into effective teams. *Journal of Student Centered Learning, 2*: 9–34.

Orrell, J. (2006). *Good practice report: Work-integrated learning*. Surry Hills: Australian Learning and Teaching Council.

Paige, J. T., Kozmenko, V., Yang, T., Gururaja, R. P., Hilton, C. W., Cohn, C. and Chauvin, S. W. (2009). High-fidelity, simulation-based, interdisciplinary operating room team training at the point of care. *Surgery, 145*(2): 138–46.

Pant, M. T., Nesargikar, P. N. and Cocker, D. M. (2009). Team Assessment Behavior (TAB) as an assessment tool: A critical evaluation. *British Journal of Medical Practitioners,* 2: 35–7.

Pawson, R. and Tilley, N. (1997). *Realistic Evaluation*. London: Sage.

Regehr, G., Macrae, H., Reznick, R. K. and Szalay, D. (1998). Comparing the psychometric properties of checklists and global rating scales for assessing performance on an OSCE-format examination. *Academic Medicine, 73*: 993–7.

Rethans, J., Sturmans, F., Drop, R., van der Vleuten, C. and Hobus, P. (1991). Does competence of general practitioners predict their performance? Comparison between examination setting and actual practice. *British Medical Journal, 303*: 1377–80.

Robertson, B., Kaplan, B., Atallah, H., Higgins, M., Lewitt, M. J. and Ander, D. S. (2010). The use of simulation and a modified TeamSTEPPS curriculum for medical and nursing student team training. *Simulation in Healthcare, 5*: 332–7.

Schuwirth, L. W. T. and van der Vleuten, C. P. M. (2012). Programmatic assessment and Kane's validity perspective. *Medical Education, 46*: 38–48.

Sevdalis, N., Lyon, M., Healey, A. N., Undre, S., Darzi, A. and Vincent, C. A. (2009). Observational teamwork assessment of surgery: Construct validation with expert versus novice raters. *Annals of Surgery, 249*(6): 1047–51.

Symonds, I., Cullen, L. and Fraser, D. (2003). Evaluation of a formative interprofessional team objective structured clinical examination (ITOSCE): A method of shared learning in maternity education. *Medical Teacher, 25*: 38–41.

The Interprofessional Curriculum Renewal Consortium Australia (2013). *Interprofessional education: A national audit.* Report prepared for Health Workforce Australia. Available online at: www.ipehealth.edu.au/library/content/gateway/IPE_National_Audit_Report_Australia_2013.pdf

Thistlethwaite, J. (2013). Practice-based learning across and between the health professions: A conceptual exploration of definitions and diversity and their impact on interprofessional education. *International Journal of Practice-based Learning, 1,* 15–28. DOI: 10.11120/pblh.2013.00003

Thistlethwaite, J. E., Bartle, E., Chong, A. L. et al. (2013). A review of longitudinal community and hospital placements in medical education: BEME Guide No. 26. *Medical Teacher, 35*(8): e1340–64.

Thistlethwaite, J. E. and Moran, M. (2010). Learning outcomes for interprofessional education (IPE): Literature review and synthesis. *Journal of Interprofessional Care, 24*: 503–13.

Thomas, E. J., Sexton, J. B. and Helmreich, R. L. (2004). Translating teamwork behaviors from aviation to healthcare: Development of behavioral markers for neonatal resuscitation. *Quality and Safety in Health Care, 13* (supplement 1): 157–64.

Valentine, M. A., Nembhard, I. M. and Edmonson, A. C. (2012). *Measuring teamwork in health care settings: a review of survey instruments: Working paper.* New Haven: Harvard Business School.

Walsh, C. L., Gordon, F., Marshall, M., Wilson, F. and Hunt, T. (2005). Interprofessional capability a developing framework for interprofessional education. *Nurse Education in Practice, 4*: 230–7.

Wageman, R. J., Hackman, R. and Lehman, E. (2005). Team diagnostic survey: Development of an instrument. *Journal of Applied Behavioral Science, 41*(4): 373–98.

WHO (2013). *Transforming and scaling up health professionals' education and training. World Health Organization Guidelines 2013.* Geneva: World Health Organization.

Woodward, H. I., Mytton, O. T., Lemar, C., Yardley. I. E., Ellis, B. M., Rutter, P. D. et al. (2010). What have we learned about interventions to reduce medical errors? *Annual Review of Public Health, 31*: 479–97.

Word, L., Hassell, A., Whitehouse, A., Bullock, A. and Wall, D. (2006). A literature review of multi-source feedback systems within and without health services, leading to ten tips for their successful design. *Medical Teacher, 28*: 185–91.

10

Collaborative Leadership for the Transformation of Health Systems

Rosemary Brander, Maura MacPhee, Emmanuelle Careau, Maria Tassone, Sarita Verma, Margo Paterson and Sue Berry (Canada)

Introduction

Globally, collaborative leadership has gained much attention in academic fora as a concept to achieve socially accountable education and health systems change for improved regional and local health outcomes. The authors of the Lancet Commission 2010 report, *Health professionals for a new century: Transforming education to strengthen health systems in an interdependent world*, put forward their vision of global health equity for high-quality comprehensive health services (Frenk et al., 2010). To achieve this vision, they advised that the reform needed in health professional education must be led by changes in two proposed directions: 1) transformative learning, and 2) interdependence in education. Transformative learning is best understood in the context of three successive and interconnected forms of learning: informative, formative and transformative. Informative learning is the process of acquiring knowledge and skills. Formative learning includes processes of socializing students about professional values. Transformative learning 'is about developing leadership attributes; its purpose is to produce enlightened change agents' (Frenk et al., 2010: 1924). The Commission posited that transformative learning would position health leaders to work collaboratively across professional, system, regulatory and local boundaries to lead change toward 'locally responsive and globally connected teams' (Frenk et al., 2010: 1924). Their second desired direction for educational reform, interdependence in education, 'involves three fundamental shifts: from isolated to harmonized education and health systems; from stand-alone institutions to networks, alliances, and consortia; and from inward-looking institutional preoccupations to harnessing global flows of educational content, teaching resources, and innovations'

(Frenk et al., 2010: 1924). Reform in these two proposed directions for health professions education are necessary to prepare health professionals to meet the population health needs of the 21st century.

In 2012, the Canadian Interprofessional Health Leadership Collaborative (CIHLC) was selected by the United States (US) Institute of Medicine (IOM) Global Forum as one of four collaboratives to focus on novel ideas and research regarding the transformation of health professional education as called for in the Lancet Commission 2010 report (Frenk et al., 2010). The CIHLC, a pan-Canadian collaborative led by the University of Toronto, includes the University of British Columbia, the Northern Ontario School of Medicine, Queen's University and Université Laval. This interprofessional partnership represents health professions from faculties and schools of health science, medicine, nursing, public health, rehabilitation and programs in IP education. The CIHLC's vision is *collaborative leadership for health systems change* to globally transform education and health.

To achieve this vision, the CIHLC research focused on the distinct and integrated core concepts of collaborative leadership, community engagement and social accountability. Community engagement and social accountability were conceptualized as enablers to address complex social and health disparities, particularly in diverse and culturally sensitive groups such as Aboriginal, Francophone and inner-city populations. Phase I of the CIHLC research included an environmental scan that aimed at establishing the definition and collecting the evidence related to collaborative leadership for health systems change. This consisted of a scoping literature review (Creede, 2012) to determine concepts and frameworks, a systematic review of peer-reviewed literature (Careau et al., 2014) to investigate competencies, best practices, educational methodologies, program outcomes, and a grey literature survey of current Canadian leadership courses and programs for academic and professional organizations (Gertler et al., 2013). To further understand collaborative leadership and to validate the findings from the environmental scan, key informant interviews with health leaders, practitioners and students were conducted (Tassone et al., 2012).

The Phase I research findings revealed that there were no existing leadership development programs for emerging health leaders based on the CIHLC's core concepts of collaborative leadership, social accountability and community engagement. The second phase of the CIHLC's work included: a) the creation of a theoretical collaborative leadership model; and b) a proof-of-concept pilot with interprofessional teams of high potential and/or senior health leaders across Canada in partnership with an existing Ontario program, the University Health Network's (UHN's) Collaborative Change Leadership program, which is currently

under way. The third will include a formal developmental evaluation of the pilot.

This chapter focuses on Phase II, the theoretical underpinnings that have contributed to the development of the proposed integrated CIHLC and UHN collaborative leadership program. The goals of this chapter are three-fold: 1) to present a theoretical collaborative leadership model for education of health leaders based on current evidence that collaborative leadership is needed to build collaborative partnerships and collaborative teams for health systems transformation; 2) to provide examples that illustrate health systems' transformation guided by collaborative leadership in interprofessional teams and partnerships; and 3) to briefly describe the final phase of the research that will focus on the proof-of-concept 'capstone' projects and developmental evaluation for defining outcomes related to the collaborative leadership pilot curriculum.

A collaborative leadership model for health systems transformation

In response to the Lancet Commission 2010 report and the 2012 IOM Global Forum, the CIHLC developed an evidence-based model (Figure 10.1).

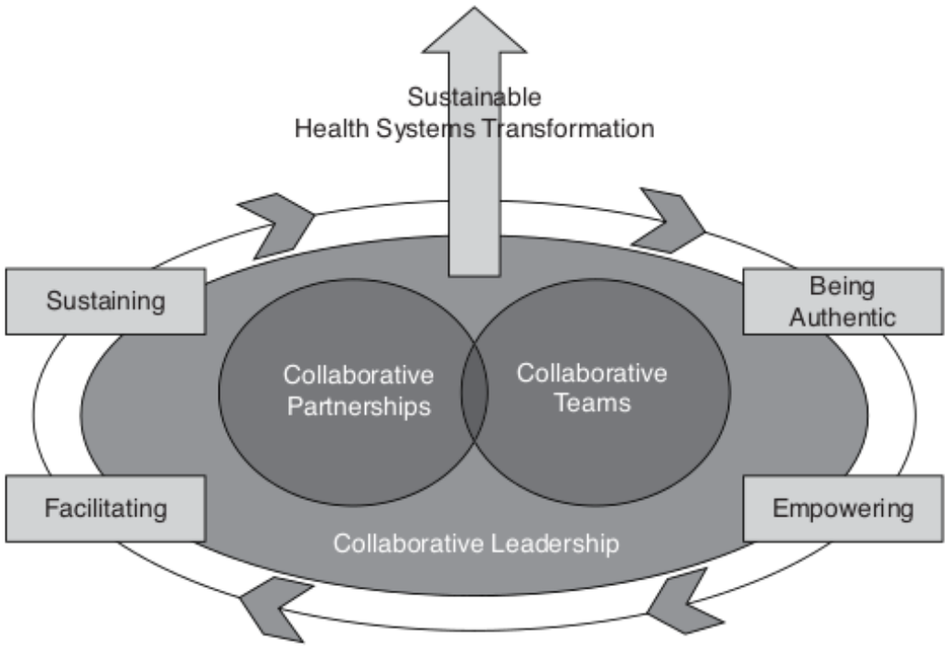

Figure 10.1 Sustainable health systems transformation model

Source: From authors' (Rosemary Brander, Maura MacPhee, Emmanuelle Careau, Maria Tassone, Sarita Verma, Margo Paterson, Sue Berry) own work.

Central to the model is the collaboration within interprofessional teams and partnerships across interprofessional teams, organizations and communities. These are 'structures' in which transformative leadership learning occurs and is nurtured. Effective health systems transformation relies on collaborative leadership within teams (micro-level) and across partnerships (macro-level) where team members and partners work together to achieve collective goals; otherwise, teams and partners exist as separate system elements with separate missions (Canadian Interprofessional Health Collaborative (CIHC), 2010; Baker et al., 2008).

At the macro-level, the formality of collaborative partnerships is necessary to unite the community and other stakeholders (for example, healthcare providers) to collectively identify and address complex social and health disparities. The World Health Organization and numerous foundations support the importance of community coalition-building and collaborative partnerships for shared communal benefit (Ansari et al., 2010). Health and social care collaboration requires an appreciation of different cultures, attitudes, values and language. Collaborative partnerships often require contractual or formal co-ordination among partners at macro-systems levels with a long-term vision and strategy of significance to all the partners (Axelsson and Axelsson, 2009). The most effective macro-level partnerships evolve through the development of local or micro-level teamwork where shared goals, intensive contacts and communications slowly erode interprofessional, inter-organizational and intersectoral differences (Chreim, et al., 2013; Weinberg et al., 2011).

The collaborative leadership model also depicts four key competencies associated with collaborative leadership at team (micro) and partnership (macro) levels: *Being Authentic, Empowering, Facilitating* and *Sustaining*. Leadership competencies refer to the knowledge, skills, attitudes and professional judgments associated with effective leadership (Yukl, 2006). Through a self-awareness process, the collaborative leader develops his/her authentic self through becoming and being more self-aware; aware of his/her own strengths and limitations, and their impact or influence on others, for example, team members and partners. By becoming and *being authentic*, leaders are able to draw upon their core values and ethical principles to promote a positive environment for others (Walumba et al., 2008). Characterized by openness to others, humility and consistency between their values and actions, authentic leaders demonstrate deep consideration of others, even if others' opinions challenge their own beliefs (Gardner et al., 2011). Heightened self-awareness, an internal moral compass, a balanced approach to the evidence, and relational transparency are all attributes of being authentic and are critical for

fostering leadership in others, and therefore are necessary foundations for the development of the collaborative leader (Walumba et al., 2008; Wong and Cummings, 2009).

By being authentic, by drawing on core values and ethical principles, leaders take on an *empowering* role. As empowered leaders, they trust their own work, have confidence in their ability to succeed, recognize their control or choice in initiating and regulating their work and in influencing the work of others, and in believe they can make a difference (Maynard et al., 2012). Empowered leaders empower others through a variety of facilitation strategies that include enhancing communications, ensuring adequate resources and supports, expressing appreciation for others' contributions, and promoting shared problem-solving and decision-making (Chen et al., 2007).

Collaborative leaders who are authentic and empowered *facilitate* the engagement of others around common values and a sense of belonging (Jones and Wells, 2007). Facilitating and empowering others to become collaborative leaders ensures sustainability of ideas, projects and work. In essence, collaborative leaders act as a catalyst for innovative ideas that have positive and sustainable impacts on transforming health systems. The ongoing development of collaborative leaders who enact these key competencies supports health systems transformation by *sustaining* collective actions even within complex adaptive systems (Lanham et al., 2013). The four collaborative leadership competencies are necessary for fostering professional development and expansion of high-functioning interprofessional teams (Buljac-Samardzic et al., 2010) at the micro-level and in building effective collaborative partnerships at the macro-level (Ansari, 2012).

Collaborative leadership and health systems transformation: translating theory to action

The following examples illustrate the application of collaborative leadership competencies at both the individual team and partnership levels. These examples provide evidence of the interdependencies required in leading transformative change, guided by collaborative leadership within interprofessional teams and across team, organizational and sector partnerships. The examples represent many different countries and healthcare environments but share many commonalities in their discussions about collaborative leadership.

Swensen et al. (2013) discussed the collaborative interprofessional teams that participated in the Institute for Healthcare Improvement

Triple Aim initiative (that is, improve care, improve health of populations, reduce costs). Collaborative leadership within teams concentrated on 'mental boundarylessness' that required genuine openness to others' ideas, particularly when working with community and social service organizations. Health leaders used 'mental boundarylessness' when displaying behaviours which engaged the development of collective goals and empowered others, such as asking open-ended questions, encouraging others' ideas and creativity, and promoting diversity, innovation and creativity.

In complex health systems, individuals often organize into groups or teams based on common purposes and goals. A complexity science term, 'sensemaking', describes how teams make sense of their environments. Sensemaking is a social activity where productive work (for example, response to change, introduction of innovation) depends on team interdependencies (Lanham et al., 2013). In one US study (Ghaferi et al., 2009), health service researchers hypothesized that patient complication rates would directly correspond to hospital mortality levels. Instead, complication rates were similar for hospitals with either low or high mortality levels. What differed was how quickly interprofessional teams recognized complications and responded to them. In this example, collaborative leaders facilitated team 'sensemaking'. These leaders shared critical information (being authentic) and empowered and respected team members' abilities to problem-solve together and utilize one another's expertise to accomplish team goals. Ghaferi et al., (2009) speculated that 'failure to rescue' patients (which led to mortality) may have been due to ineffective sensemaking and lack of collaborative leadership that supported team interdependencies (that is, collaborative teamwork).

Extensive transformation of the Swedish welfare system over a ten-year period involved collaborative leadership, teamwork and partnerships (Axelsson and Axelsson, 2009). Researchers found that leaders, in particular, had to become more altruistic and give up traditional professional, organizational and sectoral territoriality (that is, defending one's own turf and ways of doing things). In most instances, there were formal management positions to coordinate partnerships and teams, but shared or collaborative leadership was constantly being re-negotiated, constructed, practised and evaluated among partners and teams, depending on the contextual circumstances and the work to be done. Collaborative leaders were able to: acknowledge one another's competencies, take risks, resolve conflicts, build trust, and create a new culture,

that is, a new way of working together with evidence of authentic and empowered leadership competencies (Axelsson and Axelsson, 2009).

In an example from the English National Health Service (NHS), analyses of successful structural and cultural change within the NHS showed that 'Leadership for Change' was spread throughout the trusts (health regions) by local team leaders who championed shared problem-solving and decision-making (Ginsburg and Tregunno, 2005; Kislov et al., 2011). Similar to the Swedish welfare system transformation, in the transformed NHS the essence of collaborative leadership was the capacity to build genuine, open connections (being authentic) and to empower others to act together towards realization of a shared vision and goals. Hannah and Lester (2009, p. 35) describe these types of leaders as 'social architects and orchestrators of emergent processes' where collaborative learning takes place.

A demonstration of collaborative leadership was apparent in one Ontario, Canada, research study that investigated healthcare employee perspectives regarding collaborating with patients and their designated family members in their day-to-day work (Brander et al., 2013). Based at one of the hospital sites of a multi-site academic health science centre, this research sought to understand healthcare providers' perceptions of facilitators and impediments to collaborative interprofessional teamwork and patient/family partnerships. Collaborative leadership in a participative action research approach resulted in shared planning, design, communication and implementation at micro- and macro-levels (that is, within and across teams of health workers). In this example, the four competencies of the CIHLC theoretical model were evident. Openness and trust were built amongst the healthcare worker participants, which resulted from being authentic. Trust, in particular, is critical to facilitate and sustain collaborations (Friedrich et al., 2009). The formal project leader empowered the members of the participative action research (PAR) team by modelling and facilitating principles for collaborative problem-solving and decision-making. The PAR team, for instance, jointly negotiated leadership roles as determined by mutual goals, which had been established early in the project. By creating partnerships with mid- and senior-level managers, the project leader worked to sustain and apply the suggestions from the healthcare worker participants to create improved collaborations with patients/clients and families in the organization.

Jones and Jones (2011) studied interprofessional perceptions for good teamwork. The aspects of good teamwork were reported as 'difficult to describe: it's like a fish trying to describe water ... it's symbiotic' (p. 177).

The continual evolution and emergent nature of the team mirrored the complexity of healthcare situations and the flexibility needed within the team to address the complex and unique needs of the patient/client and their family. The authors suggested that interprofessional teams use collaborative leadership to facilitate better appreciation for one another's scopes of practice and unique disciplinary contributions to collaborative teamwork.

Another Canadian research project further illustrated the contributions of collaborative teamwork. This project examined ideal leadership styles and qualities used by seven successful interprofessional palliative-care teams working in rural communities in Ontario (Hall et al., 2008). In their teams they indicated that there was no one specific leader; rather, leaders emerged according to the needs and demands of the task at hand. Individuals who were aware of their own skills and strengths (who were being authentic) felt empowered to emerge as a collaborative leader when needed. Participants determined that a key feature of success in meeting their clinical and educational demands was related to the fact that 'leadership was shared' (Hall et al., 2008, p. 75).

In a multiple case study of four interprofessional mental health teams from three different provinces in Canada, Chreim et al. (2013) revealed that collaborative leadership is needed to sustain 'boundary work' within and across teams (micro-level) and with external partners (macro-level). Boundary work was described as that of 'managing the delicate tension between reinforcing and eliminating boundaries', such as those between an individual's own leadership and clinical roles, team members' different professional roles, formal leaders and other team leaders, personal and professional experiences, and/or those between the team and its environment (Chreim et al., 2013, p. 224). Chreim and colleagues (2013) concluded that boundary work, such as 'opening boundaries' (or silos) is essential for collaboration at any level. Their findings about boundary work align with the collaborative leadership competencies of the CIHLC model: facilitating a climate of openness (being authentic) and facilitating egalitarian approaches to knowledge-sharing (facilitating and empowering). They recognized how additional competencies are needed to sustain collaborations, and that sustainability is particularly hard to achieve in complex, shifting health systems. Chreim et al. (2013) suggested that education about potential boundary issues, and about leadership competencies associated with collaboration, should be part of educational foundations for health leadership development.

Enhancing collaborative leadership capability in health systems

The CIHLC theoretical model illustrates that health systems transformation requires collaborative leadership at both the team and partnership levels to transcend the silos and hierarchies that traditionally exist between professions, organizations and sectors. The four proposed evidence-based competencies are foundational to collaborative leadership and health systems transformation. Although a variety of terms and labels are used in the leadership literature (for example, engagement, openness, trust, shared problem-solving, sensemaking), the parallels identified for collaborative leadership competencies include: *Being authentic, Empowering, Facilitating* and *Sustaining*. There is growing acknowledgment that living and practising in a world of complex systems, a shift from the traditional model of top-down leadership towards collaborative leadership is a needed attribute (Creede, 2012) of health professionals for a new century. The systematic review (Careau et al., 2014) revealed that there are very few educational programs that focus on the evidence-based competencies that are most associated with collaborative leadership development. Of note, many interprofessional educational initiatives target team-based collaboration without including leadership development in their learning objectives (Reeves et al., 2013; CIHC, 2008, 2009). To meet the mandates of the Lancet Commission and IOM Global Forum, the concept of collaborative leadership is fundamental to 21st-century interprofessional education. The CIHLC collaborative leadership model depicts a bold new approach for interprofessional education transformative learning as described by Frenk et al. (2010). The CIHLC research will be drawn upon in the next phase of the CIHLC's work through a proof-of-concept pilot in partnership with an existing program at the UHN in Toronto that embeds community engagement and social accountability in its education program, through interprofessional teams participating in the program, and through community-engaged capstone initiatives focused on health systems transformation.

The above examples illustrate that for collaborative leadership skills and interprofessional transformational learning to gain momentum, education must move outside of the traditional, hierarchical structures still evident in academic and healthcare settings. 'No matter how democratic or egalitarian a particular healthcare team is, it still operates within larger organizational structures that challenge non-hierarchical interprofessional relations' (Lingard et al., 2012: 1765). Situated learning

such as workplace learning is not new – it began with Lave and Wenger's communities of practice (1991). What is new is the appreciation of the complexities of collaboration across team and partnership boundaries where territoriality (versus altruism) is typical. Collaborative leadership becomes the means to bridge structural, social and cultural boundaries (Lawn et al., 2014).

Summary and conclusions

The development and adoption of collaborative leadership as a concept is an essential ingredient for transformative, socially accountable change with communities at micro- and macro-levels of health and education systems. It has been our collective experience as healthcare clinicians and researchers that effective collaborative leadership is evolving and growing in healthcare practice. Phase I of the CIHLC research provides evidence about others' experiences in using various elements of collaborative leadership within teams and amongst partners. Phase II of the CIHLC work involves the development and implementation of a proof-of-concept pilot in partnership with the UHN's Collaborative Change Leadership program, focused on collaborative leadership education, and the development, implementation and evaluation of collaborative initiatives with partners across communities, working together for positive transformative health systems change. Senior and high potential health leaders will work in interprofessional project teams over ten months (April 2014 to January 2015). Following the Phase III evaluation component of the integrated CIHLC/UHN proof-of-concept pilot, it is anticipated that the outcomes and resultant knowledge mobilization will expand our understanding of what is essential to further develop collaborative leadership in practice. The findings from the developmental evaluation will determine if health systems transformation can indeed be attributed to the engagement in a collaborative leadership program while learning in situ (that is with teams and partnerships). As indicated by Frenk et al. (2010) the ability to achieve and sustain health systems change for greater global equity and high-quality comprehensive care will be led by transformative learning and interdependence in education.

Reflective questions

1. In reflecting on this chapter, how would collaborative leadership be best taught and how could current and future healthcare practitioners

'learn' collaborative leadership skills to facilitate transformative change?
2. In what ways do you think current pedagogy needs to shift if the focus is on developing the individual leader, while enabling collaborative leadership?
3. Think about the enablers that will build the capacity of collaborative leaders within your local and regional communities and globally.
4. Reflect on how the two educational outcomes, transformative learning and interdependence in education, will contribute to health systems transformation.

Acknowledgements

The CIHLC project is a consortium of the five partner Canadian universities (University of British Columbia, University of Toronto, the Northern School of Medicine, Queen's University and Université Laval). The CIHLC project was funded by the Ministry of Health and Long Term Care (MOHLTC) and by individual contributions of the partner universities. For full membership of the CIHLC National Steering Committee, please see our website at: http://cihlc.ca/about-us/national-steering-committee/.

The authors would like also to take this opportunity to thank a number of people for making this research possible. Firstly, we would like to thank our research associate Janice P. van Dijk who has supported many aspects of this CIHLC project, and Paola Durando, Librarian, Bracken Library, Queen's University, who supported us on the different aspects of systematic literature research. Secondly, thanks also to Gijn Biba, Mathew Gertler, Jelena Kundacina, Jane Seltzer, Benita Tam and Deanna Wu for supporting this project in various ways during their work in the CIHLC Secretariat. Thirdly, we would like to thank the other members of the National Steering Committee Group for their support during this research, both in terms of their invaluable expertise and moral support, namely: Lesley Bainbridge, Marion Briggs, Serge Dumont and David Marsh. For more information on the CIHLC project, please visit our website: http://cihlc.ca.

References

Ansari, W. (2012). Leadership in community partnerships: South African study and experience. *Central European Journal of Public Health, 20*(3): 174–84.

Ansari, W., Oskrochi, R. and Phillips, C. (2010). One size fits all partnerships? What explains community partnership leadership skills? *Health Promotion Practice, 11*(4): 501–14.

Axelsson, S. and Axelsson, R. (2009). From territoriality to altruism in interprofessional collaboration and leadership. *Journal of Interprofessional Care, 23*(4): 320–30.

Baker, G. R., MacIntosh-Murray, A., Procellato, C., Dionne, L., Stelmacovich, K. and Born, K. (2008). *High performing healthcare systems: Delivering quality by design*. Toronto: Longwoods Publishing Corporation.

Buljac-Samardzic, M., Dekker-van Doorn, C., van Wijngaarden, J. and van Wijk, K. (2010). Interventions to improve team effectiveness: A systematic review. *Health Policy, 94*: 183–95.

Brander, R. A., Paterson, M. and Chan, Y. E. (2013). Using a common vision of partners in care to enhance hospital collaborative relationships. *Journal of Research in Interprofessional Practice & Education, 3*(2): 1–25.

Canadian Interprofessional Health Collaborative (CIHC) (2008). *Curricula approaches from 20 Health Canada funded IECPCP projects,* 1–55. Available online at: www.cihc.ca/files/curricula/CIHC_CurriculaApproaches_Sept08.pdf [Accessed 3 March 2014].

Canadian Interprofessional Health Collaborative (CIHC). (2010). *A national interprofessional competency framework*. *College of health disciplines*. University of British Columbia, Vancouver, 1–36. Available online at: www.cihc.ca/files/CIHC_IPCompetencies_Feb1210.pdf [Accessed 17 April 2014].

Careau, E., Biba, G., Brander, R., Van Dijk, J., Verma, S., Paterson, M. et al. (2014, in press). Health leadership education programs, best practices and impact on learners' knowledge, skills, attitudes and behaviors and system change: A literature review. *Journal of Healthcare Leadership*.

Chen, G., Kirkman, B., Kanfer, R., Allen, D. and Rosen, B. (2007). A multilevel study of leadership, empowerment and performance in teams. *Journal of Applied Psychology, 92*: 331–46.

Chreim, S., Langley, A., Comeau-Vallee, M., Huq, J. and Teay, T. (2013). Leadership as boundary work in healthcare teams. *Leadership, 9*(2): 201–28.

Creede, C. (2012). *What informs the topic of collaborative leadership for healthcare system change?* Unpublished manuscript.

Frenk, J., Bhutta, Z. A., Chen, L., Cohen, J., Crisp, N., Evans, T. et al. (2010). Health professionals for a new century: Transforming education to strengthen health systems in an interdependent world. *The Lancet, 376*(9756): 1923–58.

Friedrich, T., Vessey, W., Schuelke, M., Ruark, G. and Mumford, M. (2009). A framework for understanding collective leadership: The selective utilization of leader and team expertise within networks. *The Leadership Quarterly, 20*: 933–58.

Gardner, W., Cogliser, C., Davis, K. and Dickens, M. (2011). Authentic leadership: A review of the literature and research agenda. *The Leadership Quarterly, 22*: 1120–45.

Gertler, M., Careau, E., Verma, S., Seltzer, J. and Tassone, M. (2013). *Navigating the leadership landscape: The methodology used in searching and creating an inventory where no one had gone before*. Unpublished manuscript.

Ghaferi, A. A., Birkmeyer, J. D. and Dimick, J. B. (2009). Variation in hospital mortality associated with inpatient surgery. *The New England Journal of Medicine, 361*: 1368–75.

Ginsburg, L. and Tregunno, D. (2005). New approaches to interprofessional education and collaborative practice: Lessons from the organizational change literature. *Journal of Interprofessional Care, Supplement 1*: 177–87.

Hall, P., Weaver, L., Handfield-Jones, R. and Bouvette, M. (2008). Developing leadership in rural interprofessional palliative care teams. *Journal of Interprofessional Care, 22*(s1): 73–9.

Hannah, S. and Lester, P. (2009). A multilevel approach to building and leading learning organizations. *Leadership Quarterly, 20*: 34–48.

Jones, A. and Jones, D. (2011). Improving teamwork, trust and safety: An ethnographic study of an interprofessional initiative. *Journal of Interprofessional Care, 25*(3): 175–81.

Jones, L. and Wells, K. (2007). Strategies for academic and clinician engagement in community-participatory partnered research. *Journal of the American Medical Association, 297*(4): 407–10.

Kislov, R., Harvey, G. and Walshe, K. (2011). Collaborations for leadership in applied health research and care: Lessons from the theory of communities of practice. *Implementation Science, 6*(64): 1–10.

Lanham, H., Leykum, L., Taylor, B., McCannon, C. J., Lindberg, C. and Lester, R. (2013). How complexity science can inform scale-up and spread in health care: Understanding the role of self-organization in variation across local contexts. *Social Science & Medicine, 93*: 194–202.

Lave, J. and Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge: Cambridge University Press.

Lawn, S., Lloyd, A., King, A., Sweet, L. and Gum, L. (2014). Integration of primary health services: Being put together does not mean they will work together. *BMC Research Notes. 7*(66): 1–10.

Lingard, L., Vanstone, M., Durrant, M., Fleming-Carroll, B., Lowe, M., Rashotte, J. et al. (2012). Conflicting messages: Examining the dynamics of leadership on interprofessional teams. *Academic Medicine, 87*(12): 1762–7.

Maynard, M. T., Gilson, L. and Mathieu, J. (2012). Empowerment-fad or fab? A multilevel review of the past two decades of research. *Journal of Management, 38*(4): 1231–81.

Reeves, S., Zwarenstein, M., Goldman, J., Barr, H., Freeth, D., Hammick, M. and Koppel, I. (2013). Interprofessional education: Effects on professional practice and health care outcomes (update) (review). *Cochrane Database Systematic Reviews*. *23*(3), CD002213. DOI: 10.1002/14651858.CD002213.pub3.

Swensen, S., Pugh, M., McMullan, C. and Kabcenell, A. (2013). *High impact leadership: Improve care, improve the health of populations, and reduce costs*. Cambridge, MA: Institute for Healthcare Improvement.

Tassone, M., Verma, S., Arweiler, D., Creede, C., Sholdice, M., van Dijk, J. and Careau, E. (2012). *What does our interview data tell us: A qualitative approach to defining collaborative leadership?* In preparation.

Walumba, F., Avolio, B., Gardner, W., Wesning, T. and Peterson, S. (2008). Authentic leadership: Development and validation of a theory-based measure. *Journal of Management, 34*: 89–126.

Weinberg, D., Cooney-Miner, D., Perloff, J., Babington, L. and Avgar, A. (2011). Building collaborative capacity: Promoting interdisciplinary teamwork in the absence of formal teams. *Medical Care, 49*(8): 716–23.

Wong, C. and Cummings, G. (2009). The influence of authentic leadership behaviors on trust and work outcomes of health care staff. *Journal of Leadership Studies, 3*(2): 6–23.

Yukl, G. (2006). *Leadership in organizations, 6th edition*. Upper Saddle River: Pearson Education.

Part III
Innovation in Practice

11

Building Interprofessional Leadership in a Clinical Setting

Duncan Reid, Professor Marion Jones and Daniel O'Brien (New Zealand)

Introduction

Interprofessional education (IPE) and collaborative practice (CP) have been promoted by the World Health Organization (WHO) as one way that healthcare providers are able to deliver key health outcomes with ever increasing populations living longer with more chronic and complex disease. As stated in the WHO document, 'the health workforce [needs to be] more flexible, and better prepared to maximize limited resources' (World Health Organization, 2010, p. 13). It is clear that most countries will struggle to educate and train enough health professionals to meet these needs, therefore working together more collaboratively and interprofessionally is one of the key ways forward. This concept seems quite easy to talk about and align with, but putting it into practice is more challenging. IPE and CP need to meet certain conditions and most importantly these should include leadership which promotes a team approach (Gilbert, 2005). This chapter will outline how an IPE and CP model of care was implemented in a clinical-service setting where undergraduate and postgraduate health students are educated and trained. The philosophical framework, the leadership model and decision-making processes are discussed as well as the implementation and evaluation of the clinical service.

Framework

Following the publication of the WHO Framework (2010) for action on interprofessional education and collaborative practice, Auckland University of Technology (AUT) Faculty of Health and Environmental Sciences launched the National Centre for Interprofessional Education

and Collaborative Practice (NCIECP). Whilst housed in the faculty the Centre is a national entity and meetings involve face-to-face interaction, video/tele conferences, newsletters and email correspondence. The founding members were made up of key academic staff from within the faculty and strategic external partners from other tertiary education providers, universities and district health boards or non-governmental health providers who had an interest in IPE and CP. The key aim of the NCIECP is to provide a vehicle for developing education, practice, research and Hauora Māori (Māori health) by bringing collaboration to the forefront of health professional education and practice. The Centre is committed to advancing interprofessional education and collaborative practice to improve the quality of healthcare. The vision is to support educators and practitioners from a wide range of disciplines and provide opportunities for new and emerging models of practice to develop. A series of key goals were established by the initial founding members. These goals were to increase education and awareness of IPE and CP models of care to staff, students and healthcare providers who were either undertaking or delivering health professional education and training at AUT (Box 11.1) or who were practising in the community. It also provided leadership to deliver such a model in a clinical setting and to use the learning from this to support other projects outside the university. It was agreed by the faculty leaders that an interprofessional model could be implemented in the AUT clinic and this was undertaken.

The leadership model chosen by the Centre was transformational, in that there was dedication of the leaders and staff members involved, along with the motivation, common vision and understanding of the challenges ahead to promote the positive changes required. Bass (1985) believed there are four parts of transformational leadership: intellectual stimulation, individual consideration, inspirational motivation and idealized influence. Furthermore, Northouse (2001) states that the leaders must be empowering, role models, effective listeners, visionary and change agents, and help others contribute to the development. The initial leaders of the NCIECP were all motivated academics and clinicians who had undertaken interprofessional practice research, had experienced international interprofessional dialogue through conferences and networks, and were champions of moving this change forward. In order to achieve these goals the following steps were undertaken (Box 11.1).

Box 11.1 AUT's Faculty of Health and Environmental Sciences

AUT's Faculty of Health and Environmental Sciences offers an extensive range of programs and a diverse, rich research profile spanning health, sport and science. There are currently 6000 equivalent full-time students studying at the faculty of whom 2200 are enrolled in health professional degrees.

> *Our mission is to prepare our graduates for enriching and viable careers and to advance knowledge through research. We actively foster and maintain collaborative links with other universities, clinical providers and industry partners both in New Zealand and internationally. We offer an innovative and engaging learning environment for our students. Our programs and research degrees are designed to challenge students and prepare them with the knowledge and skills to thrive in their future careers.*

The Faculty of Health and Environmental Sciences hosts various research institutes and centres, and has six schools:

- Applied Sciences (chemistry, microbiology, food science, medical laboratory science, environmental science)
- Health Care Practice (nursing, para-medicine, midwifery, physiotherapy, occupational science and therapy, podiatry)
- Interprofessional Health Studies
- Public Health and Psychosocial Studies (oral health, psychotherapy, psychology, health promotion)
- Rehabilitation and Occupation Studies
- Sport and Recreation (sports science, outdoor education)

See www.aut.ac.nz/study-at-aut/faculty-of-health-and-environmental-sciences

Development of a leadership and governance team

Following on from the transformational leadership model, Orchard et al. (2005) offered a conceptual model for collaborative practice and a framework to 'transform barriers into enablers' (p. 3). These enablers include role clarification, role valuing, development of trusting relationships and power sharing within an organizational structure that already had evidence of power imbalances, role diffusion and strong hierarchical challenges. Therefore, in considering these factors, two leadership and governance teams were developed: one to lead the clinic-based model on a day-to-day basis and another to provide leadership and oversight for the whole project. The first group was the clinic leadership group. This group comprised the clinic manager, the reception staff, and the clinical educators for each of the disciplines

educated in the clinic. These disciplines were physiotherapy, podiatry, oral health, occupational therapy, nursing and counselling psychology. This group met weekly or as required to manage the interprofessional approach to patients coming to the clinic. The second group was the Akoranga Integrated Health (AIH) management group. This group met once a month and was led by members of the NCIECP who had responsibility for the project. The makeup of this group included representatives from the NCIECP, the clinical educators working in AIH, the clinic manager and administration staff, and the head of the disciplines with the faculty that had student clinical placements in AIH.

The model of leadership in the two sites was based on the transformational leadership model (Burns, 1978; Bass, 1985) and the patient-centred interdisciplinary collaborative practice (IDCP) proposed by Orchard et al. (2005). Both models required a fundamental shift in health professionals' attitudes towards such an IPE and CP approach. A change to IDCP required alterations in existing health professionals' values, socialization patterns, and workplace organizational structures. This model is also consistent with the IPE and CP competencies that AUT University has adopted to facilitate student and staff learning from the Canadian Interprofessional Health Collaborative (CIHC) competency framework. This highlights the required skills, knowledge, attitudes and behaviours which aim to provide a practical guide for interprofessional education and collaborative practice (CIHC, 2010). The group adopted the six competency domains: patient/client/family/community-centred care; interprofessional communication; team functioning; role clarification; collaborative leadership; and dealing with interprofessional conflict. The AIH leadership team decided early on that changes in the way that the clinic was to operate should reflect these competencies and philosophies in the management style. Therefore the first few meetings of the management team were spent in the education of these models and allowing robust discussion on how the IPE and CP model would be facilitated in the AIH clinic. Any decision on how things were run and managed in the clinic therefore had to be collaborative but most of all it had to be aimed at improving the outcomes of the patients who used the clinic services. Once the philosophy of the group was established, future meetings were focused on the types of work and projects that should be run in the clinic. Reports from the clinical management group came to this meeting particularly as the projects got under way.

Selection of a clinical site to implement the IPE model

The Akoranga Integrated Health Clinic was chosen as this was a clinic that already existed on the Akoranga Campus of the AUT Faculty of Health and Environmental Sciences. It was a clinic that in the past had operated successfully in a strong uni-professional model. The key disciplines of physiotherapy (neurological and cardio-respiratory rehabilitation, and musculoskeletal outpatients), podiatry, oral health, occupational therapy, nursing and counselling psychology all operated on a full or part-time basis in the clinic. In the early 1990s the clinic had also previously run a multi-disciplinary clinic to provide care to patients with chronic pain but this had been disbanded due to a lack of student engagement via placements and teaching opportunities and a lack of research and evaluation support. Ultimately the clinic was chosen for the following reasons: the clinic provides services to a wide range of the public who have conditions that could require treatment from more than one health professional; a wide range of health professional students have regular and consistent placements in the clinic; and the clinical education staff who supervise the students were keen to explore the model. The current clinic was therefore deemed to have the ideal elements for potential change, to be an appropriate testing group for new developments in IPE and CP and to provide the opportunity to deliver the model that met all the goals of the NCIECP.

Selection of a key health condition that could be used to implement the model of care

Osteoarthritis (OA) was chosen as it is the most common type of arthritis in Western society (Jordan et al., 2003) and is a leading cause of disability (Juby et al., 2005). The condition affects a large percentage of the community, is a chronic disease and is amenable to treatment from a number of the health disciplines trained at AUT. AUT had already developed a strong relationship with a non-governmental provider, Arthritis New Zealand (ANZ), and this group was looking for areas of improved services for it members. Therefore ANZ supported the chosen target group. A series of information evenings were hosted by the university to provide information to the public about the diagnosis and management of arthritis. These sessions proved valuable in being able to recruit patients to the clinic. In time other services were developed using this model. These included patients with chronic heart failure,

breathing disorders and other chronic musculoskeletal pain conditions. These patient groups allowed further interaction between the disciplines of physiotherapy, nursing, occupational therapy and counselling psychology.

Implementation of a single electronic patient record

One of the key issues in the provision of health services is the ability to have clear lines of communication between health professionals so that the patient receives the best care without conflicting advice from multiple health professionals. It is not uncommon for health professionals to request the same information from patients multiple times. One of the goals of the AIH clinic was to explore the use of an electronic patient management system that would allow all students and registered health professionals (clinical supervisors) practising in the clinic to have access to the key elements of patient information at all times and be able to complete patient notes in real time. This was achieved via a web-based software package called Gensolve®. While this was initially a physiotherapy oriented software package, the developers of Gensolve® were very keen to expand the product to other disciplines so they quickly adapted the package to suit podiatry and oral health (to some degree). This allowed all the demographic and health information (medications, allergies and so on) to be available to those staff and students dealing with the patients. This meant there was no need to wait for students to finish with a hard-copy file before the patient transferred to another discipline. It also facilitated interprofessional practice (IPP) consultations as the information could be accessed via the computer screen during the treatment session. This innovation required the practice areas to have computer terminals rather than hard-copy notes. While this was an upfront cost, the long-term benefits in terms of improved communication have been significant.

Establishment of a model of patient management based on IPE and CP

A process of assessment and management of these patients through the clinic was devised to facilitate the IPE and CP approach. Patients were first assessed by an experienced nurse practitioner who completed a holistic assessment of the patient, establishing the current health status, key health issues requiring management and goals of management. This information was then presented to a case management

team consisting of the discipline clinical educators leads and, whenever possible, students on placement in the clinic that might interact with the patient. A summary of the key issues was presented followed by an open discussion on what might be the best options for the patients and which disciplines would be best to commence the management. The patient then decided which of the management options they preferred and commenced the treatment at their earliest convenience. The clinical educators then facilitated wherever possible the opportunity for two or more students to be involved in the patient management. This was left to be reasonably flexible in the delivery. For example, if physiotherapy was the discipline the patient first consulted, then the physiotherapy team would lead the care. However, a podiatry student, for example, would observe the treatment to see what physiotherapy had to offer. The initial physiotherapy treatment might involve strengthening and mobilization of the arthritic joint. If the condition required a progression to podiatry then the roles of the students would reverse. At this stage an orthotic might be prescribed by the podiatrist to take the stress off a joint. In some cases a combined assessment of the patient's gait might be the best starting point for the two professions to interact. As the treatment progressed the weekly interprofessional case conferences of the management team would receive an update and provide further suggestions and feedback on the patient management. Other discipline interventions for the patient care might be required as progress was assessed. For example, a session with a counselling psychology student might be required to improve pain management and mindfulness skills.

Once patients had completed their planned treatment from the clinic's services, they were offered a review assessment with the nurse practitioner. This allowed the nurse practitioner to repeat the initial outcome measures (arthritis impairment scale, pain visual analogue scale and so on) and evaluate the patient's progress (see Figure 11.1 below). From there it was decided whether additional intervention was required. Furthermore, patients were followed up at a six-month post-initial assessment to further evaluate their progress. As the arthritis project progressed modifications were made depending on availability of staff. For example, when it became difficult to get an appointment with the nurse practitioner other discipline clinical educators undertook the initial holistic assessment. It also became evident that other patients who accessed the clinic (who did not have arthritis) would also benefit from the IPE and CP approach. Therefore, where practical, two or more health students would be allocated to a patient when a more CP approach was required. This facilitated new services, as mentioned above.

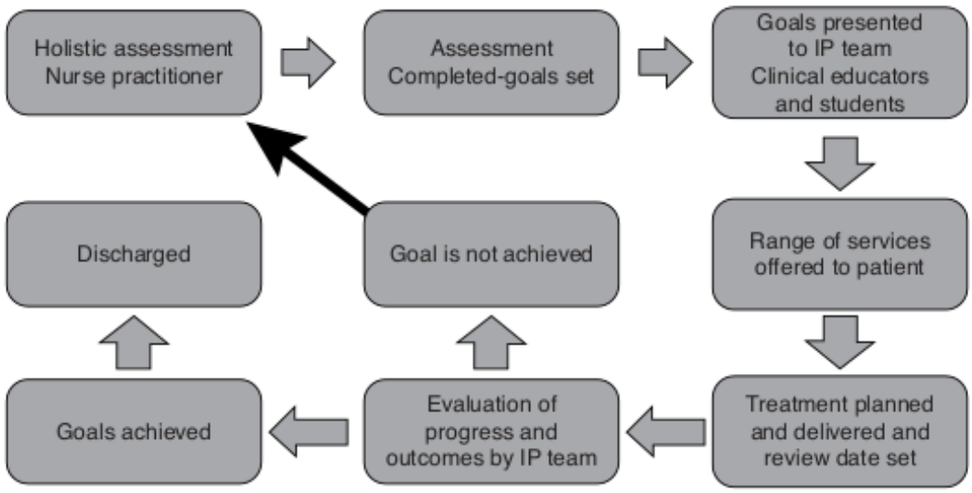

Figure 11.1 The patient pathway in the AIH clinic

Planning a program of education for staff and students working in the clinic

Building staff capacity was a key factor in developing an interprofessional approach to the education of students and the provision of clinical services at the AIH clinic. While many staff were supportive of the concept of interprofessional collaborative practice, there were differing interpretations of what it meant and how it could be enacted. Therefore, a series of three interprofessional staff workshops were set up for all of the clinical supervisors who were based at the AIH clinic. There are approximately 17 clinical educators based in the AIH clinic, and while the workshops were not mandatory there were timetables designed to maximize staff attendance and they were well attended, usually having between 12 and 15 attendees. The workshops provided a forum to discuss topics such as how AIH would define the way it facilitates IPE and CP; how to provide feedback to students from professions other than one's own; and how to develop IP research projects within the clinic. As the workshops involved clinical supervisors from different professions (oral health, podiatry, physiotherapy, psychology, occupational therapy, nursing) working in small groups, the workshops exposed the staff to some of the barriers that the student would encounter (difference in language, process, professional culture and pedagogy). The workshops were facilitated by a combination of presenters from both within and outside the clinic staff. AIH staff facilitated workshop topics that focused on clinic practice whereas for more generic topics such as developing clinic-based

research or facilitating communication for change, external presenters were brought in from the university research centre and learning and teaching centre respectively. The workshops also allowed the staff to see the commonalities of the clinical supervisors' roles across professions (such as managing the poorly performing student) and develop a respect and understanding for the other professions and professionals within the clinic, an important step in the development of trusting relationships and power sharing (Orchard et al., 2005). At the end of each workshop staff completed a short evaluation form that was used to plan and develop future workshops.

Setting a goal for a minimal funding model

One of the challenges of this type of project is that often funding is sought either internally or externally to seed the developments. Patients who access the AIH clinic currently pay NZ$30 for the first consultation and NZ$15 for a follow-up. These fees are less than market rates and mostly contribute to running costs of the clinic and the salaries of the reception staff and the clinic manager. The clinical educator salaries are funded from discipline teaching budgets, not patient fees. Other IPE projects have often sought external funding. An example of this was the New Zealand Government-funded rural community IPE and CP project undertaken in a small town (Wellsford) some 80 kilometers out of Auckland (Boyd and Horne, 2008). The project was funded for US$80,000 as a clinical experience placement. The project was successful at facilitating IPE and CP in clinical placement setting but when funding ceased sustainability became a challenge. Therefore one of the key goals of the AIH clinic project was to ensure that where possible no additional funding was required to ensure the day-to-day viability of the project. Student placements are the key role of the clinic, and the public utilizes the clinic in consistently high numbers (approximately 150 per day across all the discipline areas). Having established this model, some additional funding was required for two designated staff within the leadership team charged with the education of the students in the clinic around IPE and CP and the clinical staff who worked in the clinic.

Seeking additional funding where possible to ensure key staff can manage and run the project

As the work of the clinic developed, it became apparent that for the work to be sustainable some key staff would need to continue to lead the

on-going developments. To this end one staff member applied for and received a teaching scholarship from AUT to foster IPE and CP in the clinic and another was appointed in a seconded role to the NCIECP to ensure the goals and education that was taking place in the clinic were aligned with the goals of the NCIECP. The teaching scholarship allowed the staff member one day per week to facilitate IPE and CP-related activities within the clinic. This involved the development and facilitation of the following actions: weekly in-services sessions for all students based in the clinic; combined tutorial groups (where two or more professions were represented); combined care (two students from different professions undertaking a joint assessment); assessment planning forms and procedures; staff workshops; and an evaluation of student experiences (O'Brien et al., 2013).

Undertaking constant review of the processes in the clinic

The development of IPE and CP within the clinic was under constant review, as there were few identified university clinics working in this manner in New Zealand. As there were no established role models offering a clinic in this way, this involved an element of trial and error. Therefore, if a project, service or system within the AIH clinic was working then efforts were made to develop it. However, where a project or service or system was not working, the barriers were assessed and a new strategy was decided upon. This constant review process was driven both by the monthly AIH management meetings and by the clinic staff themselves. Finally at the end of each year all the clinic staff met for a half-day workshop to evaluate the progress made within the clinic in that year and to plan the strategic direction for the following year. This workshop was a very collaborative process.

Evaluation of the outcomes of the clinic

The development and implementation of IPE and CP within the AIH clinic occurred at three different levels: at a staff level, at a student level and at a patient level. Staff in the clinic were involved in the evaluation of IPE and CP activities in two ways. Firstly, activities were presented, discussed and viewed at the monthly AIH management meetings. This was an example of using the possible barriers to change as enablers, as Orchard et al. (2005) emphasized, and recognized the vision and commitment of the clinic staff. Secondly, all projects and activities and services occurring within the clinic were presented at the end-of-year

workshop. This provided the opportunity for clinic staff to gain a better understanding of activities that were occurring in different parts of the clinic and enabled those clinic staff who were leading projects to receive suggestions or feedback.

The students evaluated the IPE and CP components of their clinical placements within the AIH Clinic through the use of an anonymous questionnaire (O'Brien et al., 2012; O'Brien et al., 2013). The questionnaire has been repeated annually and the results used to assist the development of IPE and CP-related activities within the clinic. The feedback revealed that the students valued the interprofessional learning opportunities. Forty-two students participated in the study and the questionnaire had a response rate of 42 per cent. The results suggest that 83 per cent of students had a good experience of IPE; 91 per cent stated it changed how they related to other health professionals; and 78 per cent believed they had gained a better understanding of how other health professionals practice. Results suggest that students' interprofessional experience was valuable (O'Brien et al., 2013). However, the results also indicated that work needed to be done to improve the experience for the 17 per cent of students who did not report having a good experience of IPL during their placement. Students cited factors such as information overload and wanting to focus on what their profession did as reasons for not having a good experience. There was no significant difference between the different student groups (professions) in terms of the value that the students placed on IPL. The feedback indicated possible changes to the student placements for the following year along with further enabling IPE and IPCP within the clinic.

Patients' experiences of treatment within the AIH Clinic were also evaluated (Tucker, 2012) with the findings being presented back to the AIH Clinic staff and management. The study by Tucker (2012) involved interviewing previous AIH clinic patients regarding their experiences of receiving treatment in the clinic. In the interviews the patients described treatment and management that was interpreted by the researcher as being patient-centred care, and patients noted effective health professional communication within the professional groups. However, they were not aware of and had not experienced a collaborative interprofessional approach to the management of their condition. Limitations of this study include the following: of those patients who received care from only one health professional, results did not indicate whether these patients required care from more than one professional; furthermore it was not clear whether the patients understood the concepts or the terms associated with interprofessional collaborative practice.

Recommendations from this study included developing learning packages for patients to support student learning; marketing of the clinic; clarifying the model of care to service users; and increasing clinic hours to make it available for service throughout the year, including during semester breaks and holiday periods.

A pragmatic view was taken with regard to the provision of interprofessional practice sessions in the clinic. Patients could enter the clinic on referral from a medical professional, be referred from Arthritis NZ or self-refer. Once in the clinic, patients had three potential pathways. Firstly, patients may have entered the service seeking assistance from a single profession but on consultation with that health professional (and/or student) it became apparent that a second or third profession should be involved, and subsequently, in consultation with the patient and the assessing health professional, they were offered an IPE and CP approach. Secondly, for some patients only being seen by one profession was deemed their most appropriate management pathway and that is what the patient was seeking. Thirdly, for some patients, they actively requested an interprofessional management approach (that is, those attending the OA service). Which of these three approaches are still the best will require further evaluation.

Conclusion

In conclusion, there was a strong desire within the AUT Faculty of Health and Environmental Science to deliver a practical model of IPE and CP that built on the known theoretical frameworks. The ability to deliver this innovative clinical service required strong leadership using a transformational model, and significant education of the health professional staff running the clinical services and the students who were undertaking training in the clinic. There also needed to be an appropriate patient group to allow implementation of the sustainable model, and finally evaluation of the service from the patient and student perspective. Further research is required to ascertain health benefits to the patients and the ability of interprofessional education programs to change clinical practice.

Reflective questions

1. What were the main incentives for developing the IPE and CP model at AUT and how would you need to adapt it to use it in your environment?

2. What other leadership models could be used to facilitate this development? How was the project evaluated and what other strategies could be used?
3. What are the next steps that could be taken to ensure such a project remains viable?

References

Bass, B. M. (1985). *Leadership and performance*. New York: Free Press.

Boyd, M. and Horne, W. (2008). *Primary health care in New Zealand: Team working and collaborative practice -- interprofessional learning 2008*. Auckland: Waitemata District Health Board.

Burns, J. M. (1978). *Leadership*. New York: Harper and Row.

Canadian Interprofessional Health Collaborative (CIHC). (2010). *A national interprofessional competency framework*. *College of health disciplines*. University of British Columbia, Vancouver, 1–36. Available online at: www.cihc.ca/files/CIHC_IPCompetencies_Feb1210.pdf [Accessed 17 April 2014].

Gilbert, J. H. V. (2005). Interprofessional education for collaborative patient-centered practice. *Nursing Leadership*, 18(2): 32–8.

Jordan, K., Arden, N. K., Doherty, M., Bannwarth, B., Bijlsma, J. W. J., Dieppe, P. and Dougados, M. (2003). *EULAR Recommendations 2003*: *An evidence-based approach to the management of knee osteoarthritis: Report of a task force of the standing committee for international clinical studies including therapeutic trials (ESCISIT). Annals of the Rheumatic Diseases, 62*: 1145–55.

Juby, A. G., Skeith, K. and Davis, P. (2005). Patients' awareness, utilization, and satisfaction with treatment modalities for the management of their osteoarthritis. *Clinical Rheumatology, 24*: 535–8.

Northouse, P. G. (2001). *Leadership theory and practice* (2nd ed.). Thousand Oaks: Sage Publications.

O'Brien, D., McCallin, A. and Bassett, S. (2013). Student perceptions of an interprofessional clinical experience at a university clinic. *New Zealand Journal of Physiotherapy, 41*(3): 81–9.

O'Brien, D., Reid, D., Heap, N. and Leef, N. (2012). *Assessing students' perceived benefit of learning and practicing in an interprofessional health clinic*. Paper presented at the 2012 Physiotherapy New Zealand Biennial Conference. Expanding Horizons. 4–6 May 2012, Wellington Convention Centre, Wellington. Paper presented on 5 May (15 minutes) (conference proceedings, p. 50).

Orchard, C., Curran, V. and Kabene, S. (2005). Creating a culture for interdisciplinary collaborative professional practice. *Medical Education Online, 10*(11): 1–13.

Tucker, L. (2012). *Service users' views of collaborative care: A descriptive exploratory study*. Unpublished Master of Philosophy Thesis, AUT University, Auckland.

World Health Organization. (2010). *Interprofessional education and collaborative practice*. Technical Report. Geneva: World Health Organization.

12

Health LEADS Australia and Interprofessional Education

Monica Moran, Carole Steketee and Kirsty Marles (Australia)

Introduction

Modern health services are amongst the most complex systems in the world and this complexity places huge demands on those identified as leaders. The image of the individual trailblazing leader, much valued in the business world, has also been pervasive within healthcare environments in Australia and beyond (Fulop and Day, 2010). This model focuses on the capacity-building of individuals as leaders so that they take on a mantle of heroic characteristics and traits, managing teams, juggling budgets and driving development of service policies and procedures. The emphasis is on one individual to manage the organizational challenges of an entire service or team, the hero-leader, the one person at the top of a hierarchy who works alone to take his/her followers to new heights (Dickson and Tholl, 2014).

Healthcare services in Australia, as well as being complex, are, in common with health services overseas, in an almost constant state of change. Existing service delivery models are no longer effectively meeting needs. Australian federal and state governments, inspired by international examples of service delivery models, are looking for local services to provide efficient, efficacious and economical provisions (Council of Australian Governments, 2006; World Health Organization, 2010). The urgency is exacerbated as the population ages and medical advances support people to live longer.

In the past decade reports such as the Australian Productivity Commission Position Paper (Productivity Commission, 2005) have firmly identified the need for improved team-based models of health delivery. This imperative has also been recognized by Australian health ministers (COAG). International influences fuelling these trends include

a spate of high-profile inquiries into health service breakdown, including the Bristol Inquiry (Dyer, 2001), and the recent Mid Staffordshire NHS Inquiry (Francis, 2013). While many of these reports have been instigated in response to critical events in service provision and were driven by an imperative to reduce negative outcomes, the twin imperative is to offer services that remain financially viable now and going into the future.

Delivery of 21st-century healthcare is a complex mission requiring complex responses. The drive toward more interprofessional models for health service delivery has gradually gained traction in Australia and other countries. The milestone World Health Organization report (2010) set a clear direction for the roll-out of interprofessional health services and the associated interprofessional education of the health professionals who will provide such team-based services.

In Australia, health ministers have encouraged such a change and federally funded research and practice projects have been instigated in order to create the frameworks required for such changes. A number of questions resonate with health service planners related to what type of leadership is needed to maximize interprofessional collaboration. What leadership style will embed integrated services and how can we train health students to graduate with the skills and experiences to thrive within new practice delivery models? New models that reflect the idea that the discipline of leadership in a health context needs to be acknowledged as distinct from other sectors (Dickson and Tholl, 2014) are being considered in Australia. Coupled with this attention to leadership models is a focus on the way teams can operate within organizations.

Despite all this activity, change has been slow, particularly in the sphere of health leadership. Hierarchical models of individualistic leadership persist. Not infrequently leadership positions are linked to medical practitioner roles, and a complex set of intersecting tensions result that reflect professional differences, priorities and entrenched world views. Power struggles and professional tribalism within health services and their teams undermine genuine progress towards more interprofessional models of service delivery.

In Canada, a country often compared with Australia in terms of its health and social frameworks, significant investment has been made to develop a research-validated framework to guide health leadership development. A collaboration between the Canadian Health leadership Network (CHLNet), the Health Care Leaders Association of BCs (HCLABCs) Leaders for Life program, and the Canadian College of Health Service Executives (College) identified the need for a research-validated, practical

and memorable framework to define the qualities of exceptional health leadership in order to maximize their collective investments in leadership development. The result was the LEADS in a Caring Environment Leadership Capability Framework, developed by researchers at Royal Roads University (Dickson and Tholl, 2014). In 2009 it was adopted by CHLNet, the College, and Leaders for Life as the standard for the development of leadership in Canada's health sector.

Locally in Australia, the need for leadership development was articulated in the National Health Workforce Innovation and Reform Strategic Framework for Action 2011–2015 which provides the overarching, national platform to guide future health workforce policy and planning in Australia.

In 2011 Health Workforce Australia undertook research and extensive industry consultation to inform the development of a national leadership framework. In 2013 Health LEADS Australia: the Australian Health Leadership Framework was endorsed by the Australian Health Ministers' Advisory Council. While Health LEADS Australia shares the acronym 'L-E-A-D-S' with the Canadian LEADS, the acronyms stand for different capabilities. However, one key similarity between the respective frameworks is that they both include concepts of distributed leadership.

This chapter aims to explore the theoretical underpinnings of Health LEADS Australia, to provide insight into the reasons why one aged-care organization has adopted Health LEADS Australia to inform planning around maximizing interprofessional collaboration, and to examine its potential to contribute to improved interprofessional team functioning.

What is the Health LEADS Australia Framework?

Health Workforce Australia (HWA) was formed by the Council of Australian Governments (representing all states and territories) to act as a cross-sectoral body to guide health workforce planning and training. HWA has a strong focus on development of big-picture policy for sustainable and innovative health service delivery now and into the future. In 2011 the National Health Workforce Innovation and Reform Strategic Framework for Action 2011–2015 (HWA, 2011) produced a policy framework for the Australian healthcare system to meet future healthcare needs. Leadership was recognized as being vital to innovation and change and the need to develop leadership capacity was identified as a priority. Consequently, an environmental scan of national and international leadership activity was conducted, and stakeholders were

consulted about the current status of leadership development in their organizations. The literature was also reviewed for theories underpinning various leadership models and research was analysed to identify enablers and barriers to effective leadership practices in healthcare.

One of the outcomes from this extensive consultation and review process was the development of Health LEADS Australia: the Australian Health Leadership Framework (HWA, 2013). This framework outlines the generic capabilities inherent in effective leadership and classifies these according to five areas:

1. Leads self
2. Engages others
3. Achieves outcomes
4. Drives innovation, and
5. Shapes systems

Each of these areas comprises a set of capabilities and descriptors that provide service providers with a reference point and a common language for developing leadership capacity. Table 12.1 provides a detailed description of each of these leadership capabilities. The goal of this framework is to support the development of leadership for a healthcare system that is people-centred, equitable and sustainable (HWA, 2013). This type of leadership is different from the traditional top-down 'command-and-control' (Pearce, 2007) leadership models where one individual is solely responsible for making decisions and is accountable for outcomes. Rather, the Health LEADS framework is based on a distributed leadership model whereby teams and networks of individuals work collaboratively and share the responsibility for achieving outcomes.

Theoretical foundations

The Health LEADS framework is predicated on the concept of 'distributed leadership'. This term is often used interchangeably with 'shared leadership', 'co-leadership' and 'collaborative leadership'. Definitions can differ slightly, but all of them tend to share similar theoretical underpinnings; that leadership activity is *stretched over* the social and situational contexts of an organization (Spillane et al., 2004). In stretching the boundary as to what might be traditionally viewed as a leadership group, other individuals and groups with a range of diverse talents and skills are able to contribute to outcomes. Bennett et al. write: 'Where people work together in such a way that they pool their initiative and

Table 12.1 Health LEADS framework – capability descriptors

	Capabilities	Descriptors
Leads self	Is self-aware.	Understands and manages the impact of their background, assumptions, values and attitudes on themselves and others.
	Seeks out and takes opportunities for personal development.	Actively reflects on their performance as a leader and assumes responsibility for engaging in learning and growth.
	Has strength of character.	Is honest, trustworthy and ethical and models integrity, courage and resilience.
Engages self	Values diversity and models cultural responsiveness.	Recognizes first Australians and ensures all people, consumers and workers are treated with dignity and respect in all healthcare settings.
	Communicates with honesty and respect.	Is approachable, listens well, presents ideas and issues clearly, and participates in difficult conversations with consumers and colleagues with humility and respect.
	Strengthens consumers, colleagues and others.	Inspires and enables others to share ideas and information, to take opportunities to grow and lead and to collaborate for high-performing groups and teams.
Achieves outcomes	Influences and communicates the direction.	Collaborates with consumers, colleagues and others to identify, influence and set goals that achieve the vision.
	Is focused and goal-oriented.	Influences alignment of resources and decisions with goals and evidence to enable quality, people-centred health work and continuous improvement.
	Evaluates progress and is accountable for results.	Continually monitors and improves, celebrates achievements and holds self and others accountable for individual and service outcomes.
Drives innovation	Champions the need for innovation and improvement.	Inspires and leads others to question, recognize where change is needed, canvass possibilities, support fresh thinking, take risks and collaborate for improvement.
	Builds support for change.	Influences informed discussion on health issues in every encounter, encourages diverse voices and consumer involvement and advocates for better outcomes.
	Positively contributes to spreading innovative practice.	Initiates and maintains momentum for assessing, sharing and celebrating changes for people-centred service and system improvement.
Shapes systems	Understands and applies systems thinking.	Communicates system awareness and negotiates within and across health teams, services and sectors to improve individual and local health outcomes.
	Engages and partners with consumers and communities.	Involves consumers and communities in decision-making for health policy, education and training and healthcare delivery and improvement.
	Builds alliances.	Promotes understanding, respect and trust between different groups, professions, organizations, sectors and points of view to enable effective collaboration, enhance connectivity and minimize unintended consequences.

expertise, the outcome is a product or energy which is greater than the sum of their individual actions.' (2003, p. 7). Gronn (2002) draws on activity theory in an attempt to explain this phenomenon and suggests that through the collective, conjoint actions of two or more individuals, goals and behaviours are synchronized and co-leadership 'emerges' as an outcome.

Viewed in this way, leadership is an outcome of interactions between individuals, their colleagues and the situation that has brought them together (Spillane et al., 2004). While some leaders might be described as charismatic and powerful, distributed leadership asks us to look beyond personal traits to the actual *practice* of leadership and how contextual influences can transform ordinary people into leaders.

At the heart of this conception is the notion that thinking and reasoning (which is foundational to leadership) cannot be decontextualized from the physical, social and cultural nuances of a situation (Cole and Engeström, 1993; Hatch and Gardner, 1993; Hewitt and Scardamalia, 1998; Norman, 1993; Pea, 1993). Indeed, thinking, reasoning and action is accomplished *through* interaction with the environment; it is not possessed by any one individual alone (Pea, 1993). An example of this is provided by Hutchins (cited in Resnick, 1987) in his analysis of navigational practices of US navy ships. While the individual responsibilities of sailors are important, Hutchins contends that it is the distributed nature of these responsibilities between sailors which determines the ship's position around the world at any one time. The individual sailor's knowledge alone amounts to little until it is integrated and coordinated with the knowledge of others.

The question then arises, how is distributed leadership operationalized within a given context? Is it an assumed outcome of grouping individuals and encouraging them to interact as a team? Youngs (2009) suggests that although leadership capacity might be innately evident within individuals, they must be given the space and opportunity for leadership practices to emerge. While Gronn (2002) would argue that distributed leadership can spontaneously or intuitively emerge, this is generally in response to special circumstances such as a crisis in the organization or as a result of relationships that have been nurtured over time. More often than not, distributed leadership is a deliberate practice implemented in response to an identified institutional need (Gronn, 2002). In its raw form, however, it remains somewhat nebulous and ill-defined, rendering 'implementation' an imprecise and potentially vulnerable activity. Health LEADS Australia aims to give clarity to implementation by clarifying the shared goal, outlining the fundamental

dimensions of distributed leadership and by defining the capabilities organizations should aim to develop in its workforce.

Distributed leadership and interprofessional practice

In attempting to understand how distributed leadership and the Health LEADS Australia framework might be used to effectively promote and implement interprofessional collaborative practice, it is important to first understand what interprofessional collaborative practice actually is. The Canadian Interprofessional Health Collaborative (CIHC, 2010) define interprofessional practice (IPP) as a partnership between a team of professional healthcare providers and a patient, who work together in a participatory, collaborative and coordinated approach to share in decision-making and overall care of the patient. This suggests that not only are individual members of the team working towards a shared goal, they are mutually reliant on one another in achieving it. It also suggests that this collaborative practice is highly coordinated, synchronized and harmonized.

The two properties of distributed leadership, as proposed by Gronn (2002), go some way in explaining why this phenomenon might be considered a catalyst for the collaborative and coordinated nature of IPP. For example, the first property, interdependence, relates to the mutual reliance members of a team have on one another. Although individuals have their own strengths, they also capitalize on the strengths of others in carrying out a task or meeting a mutual goal. As is evident in the definition above, this is an important facet of IPP where the blending together of a diverse set of professional knowledge and skills will lead to improved patient outcomes. The second property of distributed leadership proposed by Gronn (2002) is known as 'coordination' which relates to the management of people and resources such that there are no gaps or overlaps when carrying out a task. Effective coordination in IPP is paramount as the mismanagement of people and resources could result in errors being made and poor healthcare outcomes for the patient.

The literature on IPP suggests that for health professionals to work collaboratively in this type of service delivery model, they need to have certain competencies. For example, knowledge of others' roles and responsibilities, open communication, cooperation and a mutual trust and respect for all members of the team are critical. Various bodies around the world have developed IPP competency frameworks that provide insight into the depth and breadth of core competencies required for effective collaborative practice (for example, Interprofessional

Education Collaborative [IPEC, 2011] USA, Canadian Interprofessional Competency Framework [CIHC, 2010] Canada, Combined Universities Interprofessional Learning Unit [CUILU, 2004]).

In trying to discern the relationship between leadership capabilities in the Health Leads framework, and IPP competencies, it is not difficult to draw the conclusion that they are compatible and interrelated. Indeed, Thistlethwaite in this book (Chapter 9) has described leadership activities that align with IPP competencies in two of the competency frameworks listed above. It would appear that competencies in IPP underpin and support the development of leadership capabilities (as proposed by the Health LEADS Australia framework), and vice versa. Both are based on the principles of valuing and respecting colleagues and that effective collaboration is key to providing safe, high-quality, patient-centred care to patients, families and communities. Importantly, both are focused on creating opportunities for individuals within a team to co-lead; to mutually influence one another and collectively share duties and responsibilities that would otherwise be allocated to a single, central leader. Table 12.2 attempts to provide insight into the alignment between competency domains for a range of IPP competency frameworks and the capability domains as identified in the Health LEADS Australia framework.

Given that 'the quality of patient care often depends on how well a diverse group of medical and administrative experts work together' (Kocolowski, 2010, p. 26), the healthcare environment is ripe for interprofessional practice as operationalized in a distributed leadership model. Due to the 'inverted power structure' of healthcare organizations, where staff at the service level generally coordinate patient care (HWA, 2012, p. 20), there is a need for a range of varied leadership roles at various levels, not just top-down.

The Health LEADS Australia framework goes some way in facilitating this process. Its capabilities provide explicit insight into the types of attributes and competencies a distributed network of leaders need. The next section explains why the Health LEADS Australia framework is being operationalized in an aged-care facility with the aim of developing sustainable interprofessional collaborative practice in service delivery.

Case study: Operationalizing distributed leadership in an aged care context

The capacity of the Health LEADS Australia Framework is yet to be tested, although a number of organizations across Australia have signed up to use it. One such organization is the Aged Care Housing (ACH) Group

Table 12.2 IPP competency domains mapped against Health LEADS capabilities

Framework	Competency Domains	Health LEADS Capabilities
CIHC	• Interprofessional communication	• Communicates with honesty and respect. • Understands and applies systems thinking.
	• Patient/client-centred care	• Strengthens consumers, colleagues and others. • Engages and partners with consumers and communities. • Builds support for change.
	• Role clarification	• Is self-aware.
	• Team functioning	• Influences and communicates the direction. • Is focused and goal-oriented.
	• Collaborative leadership	• Positively contributes to spreading innovative practice. • Understands and applies systems thinking.
	• Interprofessional conflict resolution	• Builds alliances.
IPEC	• Values and ethics	• Values diversity and models cultural responsiveness. • Has strength of character.
	• Roles and responsibilities	• Is self-aware.
	• Interprofessional communication	• Communicates with honesty and respect. • Understands and applies systems thinking. • Influences and communicates the direction.
	• Teamwork and team-based care	• Is focused and goal-oriented. • Champions the need for innovation and improvement. • Positively contributes to spreading innovative practice. • Engages and partners with consumers and communities.
CUILU	• Knowledge in practice	• Is self-aware. • Seeks out and takes opportunities for personal development.
	• Ethical practice	• Has strength of character. • Values diversity and models cultural responsiveness.
	• Interprofessional working	• Communicates with honesty and respect. • Understands and applies systems thinking. • Influences and communicates the direction. • Builds alliances
	• Reflection (learning)	• Seeks out and takes opportunities for personal development. • Evaluates progress and is accountable for results.

which is an aged-care organization operating in the states of South Australia and Victoria. The decision to apply distributed leadership within a new operational model was informed by a key group of operational staff across ACH Group who are members of an *Interprofessional*

Leadership Group. This group is made up of 16 members who represent a range of professional roles (for example care worker, nurse, occupational therapist, physiotherapist and so on) from different business divisions across *the organization*. The group acts as a reference group to guide the development of strategies and initiatives which are designed to create interprofessional learning opportunities to improve and maximize collaborative practice across ACH Group.

One of the activities undertaken by the *Interprofessional Leadership Group* was to review the *Health LEADS Australia Framework Draft Consultation Paper* which at the time had been recently identified by the Australian Health Ministers' Advisory Council as a nationally agreed health leadership framework (HWA, 2012).

Members of the *Interprofessional Leadership Group* were asked to draw on their individual and collective experiences in practice to determine if they saw the potential for the Health LEADS Australia Framework to be used as the foundation for interprofessional leadership development and collaborative practice within ACH Group. The outcome was unanimous agreement that 'if staff exercised these capabilities within practice they had the potential to maximize sustained collaboration'.

Consequently, the group made a recommendation that the Health LEADS Australia Framework be adopted as the foundation for interprofessional leadership development and collaborative practice within ACH Group. The following comment from one of the members provides some insight into why the group felt that Health LEADS has the potential to develop leadership capacity and promote collaborative practice across the organization:

> Support Workers, because of the nature of their relationship with customers, can [care for] someone for years. They develop a bond and trust with the person. [While a] physio/OT may come into a customer's life to undertake an assessment or deliver a short term intervention, perhaps after a fall ... [they] cannot be at the home every day, [but] possibly a support worker can. In the current service delivery model we do not maximize interprofessional collaboration and as such opportunities to share knowledge and insight into the person can go missed. If we truly want the best for the customer, we need to have the IPL approach.
>
> The leadership capabilities articulated in the Health LEADS Australia framework provide new opportunities to develop the capacity of support workers. Currently support workers in the community are at an operational level with customers but their knowledge around

> identifying issues and being part of the team that sets goals to achieve positive outcomes is often underutilized and unclear. Support workers are looking for an opportunity to contribute to 'shaping systems' by celebrating achievements, sharing ideas, participating in dialogue with customers and collaborating with other health care professionals. There is a current underestimation of the influence and trust that this group of people develop through interaction with customers. Who better to engage in supporting the customer to complete the exercise program designed by the physiotherapist than the person visiting the customer on a regular basis? Taking it one step further, to actually include the support worker in the knowledge behind why the exercises are important and what they are designed to achieve can only enhance the probable outcome. Support workers who are more engaged with others to influence positive health outcomes for their customers will better reflect on their own performances and engage in learning and growth.

In addition to exploring the Health LEADS Australia Framework, the ACH Group *Interprofessional Leadership Group* were also asked to explore other frameworks specifically designed to influence interprofessional practice. While members of the group identified the potential use of these frameworks in guiding education and research, the group felt that Health LEADS Australia offered an easy to understand, practical set of capabilities which had particular applicability to the workplace setting.

Consequently, the decision has been made by the *Interprofessional Leadership Group* to implement the Health LEADS Australian Framework into *ViTA*, which is a 'teaching nursing home' and a partnership between ACH Group, Flinders University and the South Australian Department of Health (SA Health). A teaching nursing home (or a 'teaching research aged-care service' as it is otherwise known) is an aged-care facility which has an affiliation with an education or training provider and brings together research and service delivery with education and training (Barnett et al., 2011). The teaching nursing home is designed to support collaborative practice and learning between clinicians, teachers, researchers, students and managers (Barnett et al., 2011).

While many teaching nursing homes have aspired to achieve an interprofessional approach to practice and learning, it is reported that few have realized this goal (Barnett et al., 2011). In a review of the literature, Chilvers and Jones (1997) concluded that the originally intended multidisciplinary focus of a teaching nursing home should be re-emphasized in developing future models in Australia. Given current Australian

aged-care workforce evidence-based knowledge about the importance of holistic care of older people and the benefits of multidisciplinary team work (Department of Health and Ageing, 2012), ACH Group are striving to fill this gap within their operational model for ViTA. It believes that an interprofessional approach would contribute to a holistic approach to research and knowledge development and bring together the skills and expertise of these professionals to create a culture of learning which will contribute toward improving quality of life for older people. The goals for ViTA are similar to those articulated in the teaching nursing home scoping study undertaken by Barnett et al. (2011). They are:

- To become a best-practice example of a teaching aged-care service
- To create an environment that models a culture of learning
- To promote and facilitate interprofessional learning
- To educate and prepare future aged-care leaders and workforce
- To deliver services which contribute to maximizing quality of life for older people
- To test and disseminate evidence-based best practice
- To showcase a culture that supports a rights-based approach to person-centred care
- To promote positive perceptions and images of older people and aged-care services.

For the goals for ViTA to be realized, ACH Group recognize the need to drive changes to organizational practice and extend collaboration beyond just the traditional aged-care workforce to include teachers, researchers, students and managers.

Discussion

Organizational implementation

The benefits of distributed leadership in a healthcare setting have been examined in this chapter mostly in relation to the augmented and enriched outcomes that can emerge from a shared approach to patient care. In the case of ViTA, the Health LEADS Australia Framework will be implemented within the operational model which has been developed to guide the implementation of integrated systems at ViTA, as an attempt to harness the wealth of talent present within and across all levels and disciplines of health service providers in a teaching nursing home. The ViTA leadership team (of which one of the authors of this chapter is a member) expects that by adopting a distributed leadership

operational model, sustained collaborative practice will result in a better outcome for patients as well as provide a distinct economic and competitive advantage in the industry. Furthermore, the implementation of the framework within the operational model for ViTA is part of a doctoral research study currently being undertaken by the author involved in the ViTA leadership team.

The interprofessional leadership team acknowledge, however, that for the operational model to be successful, all stakeholders will need to be provided with intensive preparation and induction with regards to the principles underpinning the capabilities comprising the Health LEADS Framework. They will also require insight into strategies that will allow these capabilities to be enacted, practised and exercised. Given the complexities associated with demarcations and boundaries around health professions, this will require a sensitive roll-out to ensure cross-organizational commitment.

A second challenge to implementation is that while the Health LEADS Framework provides insight into attributes and capabilities, it doesn't provide an implementation framework. This is where the relationship between IPP competency frameworks and the Health LEADS Australia Framework becomes important. Given the synergy between the two, perhaps the IPP competency frameworks pave the way for effective implementation of leadership capabilities. The literature suggests that IPP competencies should be taught at the pre-registration phase of a health professional's educational development, that is, before she enters the workforce. In the same way that Thistlethwaite has provided examples of activities that demonstrate to an employer/educator whether an individual has achieved an IPP competency (see Chapter 9), it would be useful for Health LEADS to provide descriptions of activities that facilitate both the development and achievement of leadership capabilities.

Health LEADS and interprofessional education

The potential to reduce negative stereotyping and resulting role conflicts is a powerful motivation for the introduction of an alternative institutional leadership model such as Health LEADS. Students are very susceptible to organizational influences, and the impact of the hidden curriculum – the unwritten but potent messages encoded in workplace behaviours – is powerful. Health LEADS, with its focus on distributed leadership across the organization, may have capacity to re-write the hidden curriculum, providing students with a vision of all team members having opportunity to be leaders and equal contributors

to the success of the organization and the quality of service provided to clients. Institutional support for participation in interprofessional practice from people within the organization whom the learners perceive as influential provides a positive condition for enhancing interprofessional attitudes. Again the distributed leadership model within Health LEADS may contribute to creating the environment that facilitates this condition and motivates students towards commitment to interprofessional practice in their current and future professional roles (Carpenter and Dickinson, 2011).

Many studies of interprofessional teams describe three underlying characteristics (Sharpe and Curran, 2011, p. 75):

1. Team members have a shared understanding of roles, norms and values with the team
2. The team functions in an egalitarian, cooperative, interdependent manner
3. The combined efforts of shared, cooperative decision-making are of greater benefit to the patient than the individual efforts of the disciplines on their own.

Teams that lack a shared understanding of and commitment to these team characteristics are at risk of becoming alienated (Sharpe and Curran, 2011) leading to negative consequences for clients receiving fragmented services and student health professionals who may be learning within that team. The risks in this scenario are well known and have been illuminated in many recent enquiries following negative events. In particular the need for more shared goals to ensure patient safety has been a common refrain (Chesters and Burley, 2011; Garling, 2008). Frameworks such as Health LEADS (as it currently stands) provide new opportunities to articulate team leadership capabilities at a conceptual level. How these capabilities are articulated and embedded in practice at a local (on the ground) level is less than clear. The subtle but real changes required in daily practice are yet to be described. Parallels with the social practice perspective (Lave and Wenger, 1991) with its focus on context, culture and interdependence are hard to avoid.

The Health LEADS Australia framework refers to consumers throughout its capabilities and explicitly highlights the importance of involving consumers in decision-making, education and training, and improvement activities. The importance of non-technical language is also acknowledged and demonstrated throughout the framework. However the patient/consumer voice in the distributed leadership literature

remains limited and mechanisms to truly involve service users in service leadership models remain scarce. The ACH Group team has a consumer on their planning group and it will be interesting to see how consumers and service users are embedded in the action leadership with the facility on a daily basis.

Summary

The benefits of the Health LEADS framework in Australia are largely untested. A doctoral research study is planned to examine the process of strategizing and planning toward distributed leadership modelling within ViTA. This study will examine the intentionally chosen strategies intended to create the conditions for staff to exercise the leadership capabilities articulated in Health LEADS Australia. This doctoral research study will specifically draw on distributed leadership theory to explore and explain why the strategies chosen were adopted and how these strategies are intended to work in practice toward maximizing sustained collaborative practice. In addition the *Australia New Zealand Academy of Management Health Management and Organization Special Interest Group* has established a national group focused on Health LEADS implementation in order to:

- Develop a richer understanding of the questions needed to guide practice-based research around Health LEADS implementation
- Facilitate engagement of health practitioners and researchers across the professions who are interested in developing a research agenda around Health LEADS.

The outcomes of these and other localized studies will be important in illuminating the capacity of the Health LEADS framework to bring about fundamental change in team functioning and move from the heroic leadership model to a more distributed leadership framework.

Acknowledgement

The authors acknowledge the contribution of ACH Group for their contribution of an organizational case study. The authors also acknowledge the assistance of Andi Sebastian (Health Workforce Australia) for her assistance with reviewing this chapter.

References

Barnett, K., Abbey, J. and Eyre, J. (2011). *Implementing the teaching nursing home initiative: Scoping study final report.* Available online at: www.sapo.org.au/pub/pub18903.html

Bennett, N., Wise, C., Woods, P. A. and Harvey, J. A. (2003). *Distributed leadership: A review of literature*. Nottingham: National College of School Leadership.

Canadian Interprofessional Health Collaborative. (2010). *A National Interprofessional Competency Framework*.

Carpenter, J. and Dickinson, C. (2011). Contact is not enough: A social psychological perspective on interprofessional education. In S. Kitto, J. Chesters, J. Thistlethwaite and S. Reeves (eds), *Sociology of interprofessional health care practice*. New York: Nova Science Publishers, Inc.

Chesters, J. and Burley, M. (2011). Beyond professional conflict. In S. Kitto, J. Chesters, J. Thistlethwaite and S. Reeves (eds), *Sociology of interprofessional health care practice*. New York: Nova Science Publishers, Inc.

Chilvers, J. R. and Jones, D. (1997). The teaching nursing homes innovation: a literature review. *Journal of Advanced Nursing*, *26*(3): 463–9.

Cole, M. and Engeström, Y. (1993). A cultural-historical approach to distributed cognition. In G. Salomon (ed.), *Distributed cognitions: Psychological and educational considerations*. Cambridge: Cambridge University Press: 1–46.

Combined Universities Interprofessional Learning Unit. (2004). *Interprofessional Capability Framework: A framework containing capabilities and learning levels leading to interprofessional capability.* Sheffield: University of Sheffield and Sheffield Hallam University.

Council of Australian Governments. (2006). *Meeting communiqué: Health workforce*. 2–5.

Department of Health and Ageing. (2012). *Living longer living better*. Department of Health and Ageing. Available online at: www.health.gov.au/internet/publications/publishing

Dickson, G. and Tholl, B. (2014). *Bringing leadership to life in health: LEADS in a caring environment.* London: Springer-Verlag.

Dyer, C. (2001). Bristol inquiry condemns hospital's 'club culture'. *British Medical Journal*, *323*(7306): 181.

Francis, R. (2013). *Report of the Mid Staffordshire NHS Foundation Trust Public Inquiry*. London: The Stationery Office.

Fulop, L. and Day, G. E. (2010). From leader to leadership: Clinician managers and where to next? *Australian Health Review, 34*: 344–51

Garling, P. (2008). *Final report of the special commission of inquiry acute care services in NSW public hospitals overview.* Sydney: State of New South Wales.

Gronn, P. (2002). Distributed leadership as a unit of analysis. *The Leadership Quarterly, 13*(4): 423–51.

Hatch, T. and Gardner, H. (1993). Finding cognition in the classroom: An expanded view of human intelligence. In G. Salomon (ed.), *Distributed cognitions: Psychological and educational considerations*. Cambridge: Cambridge University Press: 164–87

Hewitt, J. and Scardamalia, M. (1998). Design principles for distributed knowledge. *Educational Psychology Review, 10*(1): 75–96.

HWA (Health Workforce Australia). (2011). *National Health Workforce innovation and reform strategic framework for action 2011–2015*. Adelaide: HWA.

HWA (Health Workforce Australia). (2012). *Leadership for the sustainability of the health system. Part1-A: Literature Review.* Adelaide: HWA.

HWA (Health Workforce Australia). (2013). *Health LEADS Australia: The Australian health leadership framework*. Adelaide: HWA.

Interprofessional Education Collaborative Expert Panel. (2011). *Core competencies for interprofessional collaborative practice: Report of an expert panel*. Washington, DC: Interprofessional Education Collaborative.

Kocolowski, M. D. (2010). Shared leadership: Is it time for a change? *Emerging Leadership Journeys, 3*(1): 22–32

Lave, J. and Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge: Cambridge University Press.

Norman, D. A. (1993). *Things that make us smart: Defending human attributes in the age of the machine*. Reading: Addison-Wesley.

Pea, R. D. (1993). Distributed intelligence and designs for education. In G. Salomon (ed.), *Distributed cognitions: Psychological and educational considerations*. Cambridge: Cambridge University Press: 47–87.

Pearce, C. L. (2007). The future of leadership development: The importance of identity, multi-level approaches, self-leadership, physical fitness, shared leadership, networking, creativity, emotions, spirituality and on-boarding processes. *Human Resource Management Review, 17*(4): 355–9.

Productivity Commission. (2005). *Australia's health workforce*. Position Paper. Canberra: Productivity Commission.

Resnick, L. B. (1987). Learning in school and out. *Educational Researcher, 16*: 13–20.

Sharpe, D. and Curran, V. (2011). Professional socialization and interprofessional education. In S. Kitto, J. Chesters, J. Thistlethwaite and S. Reeves (eds), *Sociology of interprofessional health care practice*. New York: Nova Science Publishers, Inc.

Spillane, J., Halverson, R. and Diamond, J. (2004). Towards a theory of school leadership practice: Implications of a distributed perspective. *Journal of Curriculum Studies, 36*(1): 3–34.

Youngs, H. (2009). (Un)Critical times? Situating distributed leadership in the field. *Journal of Educational Administration and History, 41*(4): 377–89, DOI: 10.1080/00220620903211588

World Health Organization. (2010). *Framework for action on interprofessional education and collaborative practice*. Geneva: WHO.

13

Developing Pharmacy Leaders – Interprofessional Education at Work

Avril Lee, Dale Sheehan and Pat Alley (*New Zealand*)

Introduction

This chapter outlines a project in a hospital environment where one profession (pharmacy) took a leadership role in interprofessional education experience. This enhanced understanding between the professions of medicine and pharmacy had a positive effect on medication and safety. This chapter describes the theoretical and practical approach taken to implement this initiative, the program as it evolved, and the outcomes for the professions and the service provider. At the end of the project we reflected that what had emerged from the project was an active, engaged interprofessional community of practice that included two strong and diverse professional groups who have a major influence on medication safety.

Background

Patient safety is currently a key aim of all healthcare systems – initially highlighted in *To err is human – building a safer health system* (Institute of Medicine USA, 2000) and rapidly followed by the UK report *A spoonful of sugar – medicines management in NHS hospitals* (Audit Commission UK, 2001). The recurring theme is that safety demands effective communication and collaboration across professions. Since these influential texts were published, patient safety has become well established in healthcare agendas worldwide. In New Zealand this agenda is led by the Health, Quality and Safety Commission (www.hqsc.govt.nz). Quality Improvement, with its continuous team-based learning activities to improve the quality of organizational processes, is a perfect fit for delivering continuing interprofessional education (CIPE). CIPE (also termed continuing interprofessional development) is undertaken after initial

qualification when members of two or more health and/or social care professions learn with, from and about each other to improve collaboration and the quality of care (Barr et al., 2005).

Wilcock et al. (2009) state that individual professionals and healthcare teams must share an understanding of continuously improving their practice by integrating CIPE as part of everyday work. They discuss how situating interprofessional learning, working and quality improvement within a framework of social learning theory can create a continuum between interprofessional learning and service improvement. They also outline how various healthcare stakeholders could work together to promote CIPE jointly to enhance patient outcomes.

A key focus for the NZ Health Quality and Safety Commission is medication safety, so it was a natural focus for a project to enhance patient outcomes through interprofessional collaboration (interprofessional collaboration is an active and ongoing partnership, between two or more professions, who work together to solve problems or provide services [Hammick et al., 2007]). A review by Barr et al. (2005) revealed that quality improvement approaches such as Continuous Quality Improvement and Total Quality Management underpinned a large number of CIPE initiatives, accounting for 41 of the 107 included studies.

Prescribing is the commonest therapeutic intervention. It is also a major source of inadvertent harm for hospital patients. Medication errors and adverse drug events affect an unacceptable number of New Zealanders each year, sometimes with resultant permanent disability or death. Improving prescribing practice is part of a nationwide patient safety agenda and is included as a key component of the New Zealand Medical Council Curriculum requirements for Post-Graduate Year 1 (www.mcnz.org.nz).

Prescribing is often thought of as just the act of writing a prescription, but it is a high-risk intervention to decide which medication to use, and how to use it. The prescription is the means by which these decisions are communicated. Safe prescribing must include cognitive and decision-making steps before the prescriptions are written (Lum et al., 2013). Medication safety is a theme that is specifically addressed within the junior doctor (Post Graduate Year 1, PGY1) curriculum in New Zealand and is usually taught by specialist medical staff with the occasional session by a pharmacist. In contrast this project was a collaboration between medical education staff and the hospital quality improvement pharmacist to bring the two professions closer and enhance interprofessional understanding and to improve patient safety through safer prescribing by junior medical staff. We sought to enhance the clinical

leadership role of the team pharmacist and to create as many opportunities as possible for collaborative learning and practice.

Theoretical background

This project focused on developing clinical leadership of hospital pharmacists with a view to increasing their skills and confidence to engage in interprofessional teaching and learning, with the goal of impacting positively on the prescribing practices of junior doctors. We also note that stress and the provision of quality care by junior doctors are linked (Firth-Cozens and Rayner, 2001). The unanimous goal of all health workers – managers and practitioners – is to be assured that they have done their best possible work in a given situation. Failure to achieve that goal is a major stressor for doctors as well as others (Graham et al., 2002). Reducing the stress of junior doctors by providing robust clinical leadership and support from team pharmacists would therefore be expected to impact positively on safe prescribing.

Firth-Cozens and Mowbray (2001) note that in healthcare there is a long-standing distinction between leadership from the management team and clinical leadership, especially clinical leadership in multidisciplinary teams which is where the face of care and the quality of care is most apparent. We saw clinical leadership as a natural starting point for promoting development of collaborative practice and interprofessional learning activities.

Leadership research covers the personality and behaviour of the leader, the context and the people who are led. In healthcare, leadership is recognized as a shifting role, not necessarily a static, hierarchical one. One such model is that of leaders as servants (Alimo-Metcalfe and Alban-Metcalfe, 2001). These authors stress the importance of leaders engaging others as partners in the way forward and forming an environment for creative thinking and the ability to provide discretion and control. Opinion leaders are also recognized as important in the quality literature, being shown to be influential in bringing about change in terms of evidence-based practice (Flodgren et al., 2011; Locock et al., 2001), especially when their opinions are in line with the goals of the organization (Firth-Cozens and Mowbray, 2001). Opinion leaders:

- Provide strong role models for the beliefs and values they wish others to adopt
- Appear competent to those being led
- Articulate ideological goals.

Firth-Cozens and Mowbray (2001) suggest these opinion leaders are informal in their relationships, always seeking to develop individuals and respond to their needs and interests. In this project we looked to develop interprofessional transformation leaders who might engage in the process and inspire others to perform beyond expectations. Transformational leadership is often seen as desirable but hard to achieve because the desire for change is imposed on leaders and outcomes are detailed and linked to audit, quality control and assurance processes are in conflict with this style. Essential to the success of transformational leadership are these criteria:

- Expertise: We chose pharmacists with a proven record of professional expertise and the ability to educate in their field.
- Credibility: Those most involved in the process are highly regarded within the organization as excellent health professionals. They have earned the respect of the workforce.
- Trust: Because of a combination of the above two criteria a high level of trust has developed.

This study sought to develop transformational leadership in pharmacists by focusing on the development of the experienced clinical pharmacist as a leader and as the face of safe prescribing for junior doctors. We set out to encourage these pharmacists to 'lead' by being available – offering quiet coaching – and modelling behavioural change through a focus on support and teamwork.

Firth-Cozens (2001) refers to a study of health in Navy teams dating back to 1986, yet the comments seemed relevant to healthcare environments today:

- Members monitored one another's performance and stepped in to help out, trust being implicit and important
- Giving and receiving feedback – with understanding one another's role as important in this
- Communication made 'real' and involving checking of understanding.

These became the goals and focus for our activities, and our attention was devoted to achieving these same goals within the constraints of our health environment.

Traditionally individual clinicians are viewed as the knowledge bases for quality and safety, and training to prevent and solve problems has

been focused on them. Most junior doctors and pharmacists lack the knowledge and skills around service improvement, and doctors especially seem to discount these skills as 'organizational issues' not necessary to their work. Professional education usually lacks a focus on improvement processes.

Horder (2004) claims that good interprofessional working will be enhanced by effective interprofessional education (IPE) – defined as 'Occasions when two or more professionals learn with, from and about each other to improve collaboration and the quality of care'.

A WHO report (2010) identified evidence of a link between IPE and improvement in interprofessional working, and while we could find no evidence base for a link between collaborative practice and safer prescribing we felt that IPE made sense. Interprofessional learning promotes collaboration between professionals, reinforces collaborative competence and relates collaborative learning to collaborative practice. It also brings together two strong and influential communities of practice as they deliver patient care. Helping doctors understand the 'how and why' of prescribing processes forms part of their pathway to becoming expert practitioners. In turn the pharmacist will come to better understand the role of the junior doctor and their learning needs in relation to safe prescribing, and as a result be better able to undertake a leadership role in medication safety.

Learning and working together, focused on patients' needs, reconnects health professionals with the deep feelings that brought them into healthcare and taps into their innate enjoyment of learning. Improvement learning is very active. It stimulates interprofessional conversations that promote collaboration, as professionals come to understand and value one another's experiences and perspectives in pursuit of their shared goal of providing the best patient-focused care.

The project

Each year a group of junior doctors start their first year of professional practice (PGY1). Prescribing is a key component of the role for junior doctors but it can also be a stressful one because this is the first year that they can legally prescribe. In New Zealand it is one of the few clinical skills that they cannot carry out during their training intern year when they are gaining experience in a clinical environment. So this first professional year is where prescribing skills are usually learned. We wanted to support these new prescribers and provide a sustainable way to prevent prescribing errors from occurring, rather than the more

traditional/individual-pharmacist approach of taking corrective action after errors have been made.

One of the key learning needs that they identified centres around safe prescribing and professionals' fear of doing serious patient harm by getting it wrong. Newer initiatives such as the introduction of a New Zealand National Medication Chart (for hospital in-patients), e-prescribing and e-medicines reconciliation have added to the complexity of the workplace learning requirements. There is an inherent risk that this key prescribing role could be reduced to a time-pressured task, rather than a cognitive function based on patient need and patient safety, especially in the context of constant pressure to discharge patients and reduce waiting times.

Waitemata District Health Board has included medication safety as a consistent theme throughout the PGY1 curriculum, in order to address this issue. Our aim was to demonstrate and profile the role of our clinical pharmacists and quality teams by including them in formal teaching and clinical learning. Utilizing pharmacists within the program brings the two professions closer and enhances interprofessional understanding.

Our traditional model of clinical pharmacy has developed and strengthened over the previous 10 years, supported by strong CEO leadership and focus on medication safety. Pharmacists are attached to clinical teams, they focus on medicine reconciliation processes, identify and take corrective action on prescribing errors and ensure that the correct medicines are administered to patients. Opportunities to advise on the appropriate use of medicines are usually given by pharmacists on post-acute ward rounds, or when the doctor asks for advice.

Intervention

A chance conversation with Medical Education Training Unit (METU) staff members led to a unique opportunity for pharmacists to provide some leadership on medication safety to assist junior doctors to improve their prescribing and administration of medicines. Through this initial conversation it became clear that we could switch to a more proactive approach in order to attempt to prevent the errors from happening in the first place.

Our plan was to develop pharmacists as clinical leaders to provide support to training junior medical staff on medication safety, weaving it in as a consistent theme throughout the entire teaching program and in so doing taking an interprofessional team-based approach with elements of peer learning. Our goal was to promote collaboration between doctors

and pharmacists and to role-model high-performance interprofessional teams in action, emphasizing teamwork as one of the most effective approaches to ensure safe patient care.

The clinical pharmacists presented vignettes on specific topics linked to the teaching program, which highlighted and developed their clinical skills. This required coaching for the pharmacists to demonstrate their ability to lead on these topics.

An underlying premise of this project was that the way in which we manage ourselves is a core part of being an effective leader. Coaching focused on developing personal qualities such as self-awareness, self-confidence, self-knowledge, personal reflection, resilience and determination. Each pharmacist involved with the teaching program had differing levels of these qualities, and hence coaching was individualized to their requirements. We created a shared purpose for teaching, helping them to understand the wider meaning in what they do day in and day out. This helped them to keep an open mind, investigate what is happening on their wards, and think in a more informed way to improve the doctors' knowledge. It was a shift in their paradigm thinking, from formal teaching to an active focus on learning outcomes, a broader understanding of how easily prescribing errors sneak into practice and what learning is required to prevent these errors.

All the pharmacists reflected that this teaching has really helped build their relationships with the junior medical staff into strong collaborative relationships, early in their rotations.

This project was supported by METU staff – stimulating the pharmacists on an intellectual level by challenging points of view, inviting input and soliciting feedback. All of those staff involved in supervising this teaching offered specific and expert support and guidance to ensure the pharmacists coped with the change in teaching style. It helped motivate them to constantly improve their teaching, adapt to changing circumstances and keep the messages relevant to practice (Firth-Cozens and Mowbray, 2001; Batalden and Davidoff, 2007). The quality improvement pharmacist was acting as a role model and mentor for the other pharmacists – articulating a positive and achievable vision for the pharmacists, and championing learning and capability development so that they gained the requisite skills to act as clinical leaders. The quality improvement pharmacist role is focused on change management and process-improvement methodology within the hospital and during transfer of care settings, to assist in reducing medication error rates. We shared issues and information to assist the pharmacists to understand what we were trying to achieve, and the importance of avoiding

jargon and keeping the language simple. This helped adapt communication style to meet the needs of the junior doctors. The use of patient stories to illustrate key lessons helped to keep it real, particularly where one would reasonably expect that things would not go wrong. This helped to develop their understanding of a 'systems approach' and to acknowledge that we all get it wrong sometimes. The systems approach concentrates on the conditions under which individuals work and tries to build defences to avert errors or mitigate their effects, rather than simply blaming the individual (Reason, 1995). The creation of a positive reflective learning environment where near misses are discussed and historical errors explored and understood is an important part of this learning intervention.

Involving individual pharmacists in teaching reinforced the view that their skills and ideas were valued and important for delivering outcomes. This is turn promoted teamwork, mutual respect and a growing appreciation by the doctors of pharmacists' key attributes of attention to detail.

Pharmacists became increasingly aware of the pressures that this group of doctors work under every day, and more likely to communicate and co-operate more effectively to provide a seamless service when resources are tight (reality in a busy teaching hospital). The quality improvement pharmacist (an author) was co-opted onto the medical education team to incorporate and weave medication safety into the PGY1 program. The two core goals were:

1. To lead, promote and support workplace collaborative practice between pharmacists and PGY1 doctors, through IPE
2. To support junior doctors to become proficient and safe in their prescribing practice during their probationary registration year (PGY1).

Methods introduced to achieve these goals were as follows:

1. Exposure to and interaction between pharmacists and junior doctors (PGY1) at medical orientation:
   - Pharmacists provided a formal teaching session including the basics of medication safety; high-risk medicines (and situations), prescribing during admission and discharge, medicines-reconciliation processes and legislative/pharmaceutical schedule requirements are covered. To reduce the risk of boredom creeping in, three or four pharmacists took turns to present on their specific areas of expertise. Feedback from attendees was extremely positive

and helped set the scene for doctor–pharmacist collaboration within the hospital environment.

- Skill Stations: Prescribing on the national medication chart. Doctors needed to accurately complete the medication chart in accordance with a clinical scenario. Feedback was provided immediately after the session so they could reflect on their prescribing practice and understand the requirements of safer prescribing.

2. Ongoing exposure to pharmacists and vice versa
   - Pharmacists were involved in interactive, case-based activities that were aligned to formal teaching presentations on a regular basis during the teaching year. The quality improvement pharmacist contributed to PGY1 teaching twice a month, and was regularly present to contribute and answer questions.
   - The clinical-based pharmacists were able to meet the PGY1s and contribute to the formal teaching program by delivering content from their specialist area as well as working alongside them on the wards.
3. Role modelling collaboration and teaching
   - The pharmacists' engagement with the traditional consultant-led formal teaching program and the ongoing co-teaching that occurred helped to develop, enhance and model medical and pharmacy communities of practice at the expert end of the knowledge spectrum.
   - Specific medications were linked into relevant consultant-led teaching sessions in the weekly timetable. The House Officers were offered relevant e-learning courses to support their learning. When the consultants were presenting on conditions involving medications, the pharmacist joined him or her to co-teach and demonstrate collaboration between disciplines. Where relevant, that pharmacist could also link them to organizational goals (for example, management of diabetes), which helped the doctors understand the bigger picture of health provision.
   - Later in the teaching year, although there was less direct teaching on specific medications, medications and pharmacist presence was woven into sessions, for example with diabetes and stroke (working with dieticians and nurses as prescribers). Prescribing inevitably featured in PGY1 peer-reviewed case presentations and the author attended these, in order to respond to medication-related questions as they arose.
   - Bringing the pharmacist from the clinical floor into the teaching room highlighted their skills and encouraged ongoing engagement between the two professions on the wards. We linked

teaching and practice in meaningful ways that engaged PGY1s actively in the pursuit of medication safety by problem-solving and discussion on the wards. This ensured integration of collaborative practice into the workplace education program so that the classroom-teaching program mirrored the clinical experience of the junior medical staff, and vice versa.

- This has become a two-way learning process with the pharmacists learning some diagnostic skills from the doctor and the doctor learning about safe prescribing from the pharmacist. We are now able to identify prescribing patterns and concerns, and link those back into teaching.
- Collaboration between pharmacists, medical staff and the quality team in teaching was demonstrated. The management of medication safety incidents as they occurred was achieved. Feedback about reported events and near misses was provided to the group on a monthly basis, including local and national errors and/or any recent patient complaints.

Impact – monitoring and outcomes

We wanted to make an impact on patient care through improved prescribing accuracy and also to enhance understanding and collaboration between pharmacists and doctors.

We used the following tools to evaluate the impact:

1. The scale of attitudes toward physician and pharmacist collaboration (Hojat and Gonnella, 2011)
2. Feedback from the junior doctors on their learning experience
3. The change in prescribing errors.

Attitude scale

In 2011, Hojat and Gonnella published a validated questionnaire – the Scale of Attitudes toward physician and pharmacist collaboration.

We used this tool to gain a view of how effective our approach had been in improving collaborative relationships between pharmacists and doctors. Unfortunately we did not complete a 'pre' data collection, as we had taken the initiative to become more proactive around medication safety and doctor education at the beginning of their professional year.

Towards the end of the teaching year, we used the questionnaire and had an 87.5 per cent response rate from respondents with a mean age of 27.9 years and almost equal ratio of male and female. The results

showed that attitudes to physician–pharmacy collaboration are very positive, and while we have no baseline to show we made a difference we can say we did no harm.

Feedback from junior doctors on their learning experience

Feedback on all teaching is regularly collected by METU. The pharmacy input shone through as successful and enjoyed by the PGY1s. Comments about pharmacy input into the orientation sessions included 'Excellent', 'Most useful part of orientation', 'Good – we all need feedback on individual med charts'. Consistently positive comments emerged throughout the formal teaching program evaluation 'The pharmacist excellent', 'Very clear ideas from the pharmacist'. It seems that the reaction to the pharmacist was positive and their presence acknowledged and valued. The pharmacists also identified successes and challenges, and so could strengthen the successes, and identify problems and solve them for the next session.

Changes in prescribing errors

We had completed previous prescribing audits in order to assess the impact of implementing the National Medication Chart during the previous two years. Ten months into the program we audited 100 random medication charts, reviewing the key components of prescribing.

There are multiple prescribers on any given chart – and not all prescribers had identified themselves on the front of the chart as required by NZ national standards of prescribing. However we noted that the majority of this cohort of PGY1s had become clear and competent prescribers. Less desirable prescribing practice tended to be from the medical staff at a more senior level who had not been exposed to this method of learning about prescribing. The particular aspects which had improved were:

- First prescriber identified they had the correct patient
- Documented allergy and adverse event status – either current episode or previous record
- Signing and dating starting and stopping dates
- Legibility – using the structured letter format correctly
- Correct use of decimal point and dose range
- Using approved abbreviations only.

All of these components of clear prescribing ensure that nursing staff are able to administer medications safely, without the need to try and interpret what the prescriber intended.

Anecdotally the clinical pharmacists tell us that this group of doctors are the best prescribers that we have seen. Our approach in building sustainable change in prescribing practice (transformational leadership) and acceptance that we need to learn from medication errors (systems approach) has been successful. We have created a collaborative workforce which is focused on patient safety, and keen to learn from one another's areas of expertise.

The future

Change is inevitable and flexible thinking is going to be a requirement for all those who are involved in education of the future health workforce at any level. There is the remorseless impact of the ageing population that our healthcare systems are charged with caring for. The attendant co-morbidity almost always consequent upon the ageing of our population raises the complexity of our patients to new levels. Add to this mix an increasingly complex world of pharmacy, and finally a novice medical workforce charged with prescribing these powerful new additions to the pharmacopeia. Unless robust interprofessional initiatives are put in place for this domain of intervention then tragedy is not a possibility – it will be a reality.

This means the days are gone when junior medical staff can learn on an apprentice basis from their seniors about safe prescribing. Now is the time – as we have demonstrated – for education to be led by those who know most about the subject – pharmacists. There is much work to be done, however, in changing the minds and attitudes of those who cling to a pyramidal notion of healthcare education. This is a system whereby all knowledge emanates from a single (usually medical) authority. Fortunately, as we have described, there is an eminently possible and alternative pathway to follow. This style of transformational leadership of pharmacists does improve prescribing practice, as evidenced in this chapter. Yet it has gone beyond this, forming effective clinical partnerships, role-modelling collaborative interprofessional practice and a strong culture of learning in the workplace. It is about stepping up, being responsible for our own practice, learning from errors and being able to communicate effectively. We have shown that creating leaders as servants (Alimo-Metcalfe and Alban-Metcalfe, 2001) works in the healthcare context.

Conclusion

Pharmacists and doctors work and learn within their own communities of practice (as defined by Wenger, 1998; Wenger and Snyder, 2000)

coming together at their professional boundaries or borders as they deliver patient care. Reflecting on this project, we note that this program focuses the clinical pharmacist's expertise at this practice boundary to create different learning opportunities for both themselves and for junior doctors. Are there other boundaries and borders between other professions at the point of delivery of patient care where IPE e-learning opportunities can flourish? Is it here also that IP understanding can be enhanced by paying particular attention to documentation and communication processes as a way to enhance not just understanding but also patient safety?

The goal of this program was initially to help the doctors understand the 'how and why' of prescribing processes, as an essential part of their pathway to becoming expert practitioners. They have learned new skills that can improve services and outcomes for patients. In turn the pharmacists have come to better understand the role of the junior doctor and their learning needs as they relate to safe prescribing and as a result be able to undertake a leadership role in medication safety. Through the pharmacists' engagement with the consultant-led formal teaching program and the co-teaching that occurs, medical and pharmacy communities of practice at the expert knowledge end of the spectrum are also developed, enhanced and modelled. We know that role modelling in clinical education is a powerful learning tool (Cruess et al., 2008) with both positive and negative outcomes. Are we making the most of this powerful strategy in IPE? Is this an area that we can give more attention to as we develop to encourage collaborative practice in workplaces?

The learnings from this unique collaboration of pharmacy and specialist medical practice can easily inform other domains of practice and can also be adapted for other professions within the broad domain of healthcare.

References

Audit Commission, United Kingdom. (2001). *A spoonful of sugar – medicine management in NHS hospitals*. Available online at: www.audit-commission.gov.uk

Alimo-Metcalfe, B. and Alban-Metcalfe, J. (2001). The development of a new transformational leadership questionnaire. *Journal of Occupational and Organizational Psychology*, 74(1): 1–27.

Barr, H., Koppel, I., Reeves, S., Hammick, M. and Freeth, D. (2005). *Effective interprofessional education: Argument, assumption and evidence*. London: Blackwell.

Batalden, P. and Davidoff, F. (2007). What is 'quality improvement' and how can it transform healthcare? *British Medical Journal Quality and Safety in Healthcare*, *16*: 2–3.

Cruess S., Cruess, R. and Steinart, Y. (2008). Role modeling – making the most of a powerful teaching strategy. *British Medical Journal, 336* (7646): 718–21.

Firth-Cozens, J. (2001). Cultures for improving patient safety through learning: the role of teamwork. *British Medical Journal Quality in Health Care 10* (Supplement 11): ii26–ii31.

Firth-Cozens, J. and Mowbray, D. (2001). Leadership and the quality of care. *British Medical Journal: Quality in Healthcare, 10* (Supplement 11).

Firth-Cozens, J. and Rayner, K. (2001). *Report on the training experiences of pre-registration house officers and comparing two systems*. Report for North Thames Postgraduate Deanery. Newcastle upon Tyne: University of Northumbria.

Flodgren, G., Parmelli, E., Doumit, G., Gattellari, M., O'Brien, M. A., Grimshaw, J. and Eccles, M. P. (2011). Local opinion leaders: Effects on professional practice and healthcare outcomes. *Cochrane Database System Review* (8): CD000125.

Graham, J., Potts, H. W. W. and Ramirez, A. J. (2002). Stress and burnout in doctors. *The Lancet*, 360(9349): 1975–6.

Hammick, M., Freeth, D., Koppel, I., Reeves, S. and Barr, H. (2007). A best evidence systematic review of interprofessional education: *BEME Guide No. 9. Medical Teacher 29*(8): 735–51.

Hojat, M. and Gonnella, J. (2011). An instrument for measuring pharmacist and physician attitudes towards collaboration: preliminary psychometric data. *Journal of Interprofessional Care, 25*: 66–72.

Horder, J. (2004). Interprofessional collaboration and interprofessional education. *British Journal of General Practice, 54*(501): 243–5.

Kohn, L. T., Corrigan J. M. and Donaldson, M., S. (eds) (2000) *To err is human: Building a safer health system*. Washington, DC: Institute of Medicine; National Academy Press.

Locock, K., Dopson, S., Chambers, D. and Gabbay, J. (2001). Understanding the role of opinion leaders in improving clinical effectiveness. *Social Science and Medicine, 53*: 745–57.

Lum, E., Mitchell, C. and Coombes, I. (2013). The competent prescriber: 12 core competencies for safe prescribing. *Australian Prescriber, 36*: 13–16.

Reason, J. (1995). Understanding adverse events: human factors. *British Medical Journal Quality in Health Care, 4*(2): 80–9.

Thomson, H. O'Brien, M. A., Oxman, A. D., Haynes, R. B., Davis, D. A., Freemantle N. and Harvey, E. L. (1999). Local opinion leaders: Effects on professional practice and healthcare outcomes (Cochrane Review). In the *Cochrane Library*, issue 3, 1999, Oxford, United Kingdom: Software update.

Wenger, E. (1998). *Communities of practice: learning, meaning and identity*. Cambridge: Cambridge University Press.

Wenger, E. and Snyder, W. (2000) Communities of practice: The organizational frontier. *Harvard Business Review*, 78(1): 139–45.

Wilcock, P., Janes, G. and Chambers, A. (2009). Health care improvement and continuing interprofessional education: Strange bedfellows or perfect partners? *Journal of Continuing Education in the Health Professions, 29*: 84–90.

World Health Organization. (2010). *Interprofessional Education and Collaborative Practice. Technical Report.* Geneva: World Health Organization.

14

Shaping Interprofessional Education – Educators in Action

Payal Bansal, Rashmi Vyas, Pramila Menon, Seema Patrikar and Arun Jamka (India)

Introduction

The World Health Organization long ago recognized the value of interprofessional education (IPE) as a strategy to promote *Health for all by the year 2000* (WHO, 1978). This led to endorsement by other agencies such as the World Federation of Medical Education (WFME, 1988), encouraging countries to adopt it at a national level (Oandasan and Reeves, 2005). Projects and initiatives to tackle the fragmented healthcare practices at the public health delivery level resulted in its expansion. Countries adopted interprofessional education to varying extents, with the best emerging examples from a Canadian government initiative and the United Kingdom (Oandasan and Reeves, 2005). Over the past two decades, what started as a 'top-down' initiative from these government agencies has become established as a well conceptualized educational strategy, informed by a rich variety of experiences, models, evaluation evidence and research, towards collaborative care for improved patient and healthcare outcomes.

Today there is an abundance of literature on all aspects of IPE in the form of country initiatives (Cook, 2005; Barr, 2005; Oandasan and Reeves, 2005), projects in community settings, and tertiary care settings, involving clinicians, non-clinicians and all types of health professionals. (Nandan and Scott, 2014; De Los Santos et al., 2014; Menard and Varpio, 2014).

The Indian context

Health Science Universities in India developed in response to a call to reorganize human resources for health in the education and healthcare

delivery sectors in order to overcome manpower deficits and improve processes for better healthcare delivery and outcomes. The recommendations for this reorganization were documented as the Bajaj Committee Report (1987), and were motivated by the WHO imperative to streamline human resources for health, including educational reform. The health university concept was proposed in this report and later implemented.

Preparing the ground for interprofessional education

In the previous edition of this book (Forman et al., 2014), we described the birth and development of the Maharashtra University of Health Sciences (MUHS) (Bansal and Jamkar, 2014) with over 300 affiliated health professions colleges and the department of medical education which is its key arm for educational growth through faculty development. The interprofessional faculty development program in education methods, run by the institute of medical education, has created a faculty which we believe has the requisite skills to launch an IPE initiative.

In this chapter the preparatory phase of this initiative is described and consists of a review of the relevant literature, development of the educator team's perspective, a study of the faculty's readiness for IPE using a modified version of RIPLS (Readiness for Interprofessional Learning Scale) (Parsell and Bligh, 1999), and a case study of an MUHS initiative in public health.

The vision of the leadership, the organizational advantages of a university and a dedicated faculty development program are the key strengths that we believe can lead and guide successful implementation of interprofessional education at the prequalification level.

Theoretical frameworks

A review of relevant literature was carried out with the aim of better understanding the concept of IPE and to determine the feasibility of its implementation. The term interprofessionality was first introduced by D'Amour and Oandasan (2005) who define it as 'an education and practice orientation, an approach to care and education where educators and practitioners collaborate synergistically', with the ultimate goal of improving patient care and healthcare delivery outcomes. They emphasized the link between IPE and Inter Professional Collaborative Practice (IPCP) and the interdependency of the two spheres.

While the learner is at the centre of IPE, the patient is at the centre of interprofessional collaborative practice. For the learner outcomes to be achieved successfully in IPE, the context needs to be clearly defined and understood by the faculty and at institutional level. Additionally, faculty who will be involved in the curriculum need to recognize their own beliefs and attitudes towards IPE and IPCP in order to successfully facilitate learning. Institutions need to have a vision of interprofessional education and the administrative processes to support this.

Similarly, the frameworks for collaborative practice focus on the patient, interactional factors and organizational factors (D'Amour et al., 2005). Outcomes of collaboration are measured at the individual level of the patient and the professional as well as at institutional and system level.

Other frameworks for interprofessional education are the WHO Framework for Action on IPE and Collaborative Practice (2010) that highlights mechanisms for IPE and IPCC to be successful in tackling local health and health system needs. Frenk et al. (2010) have also recommended IPE and transformative education approaches and breaking down of professional silos towards better and cohesive teamwork. Understanding the theoretical framework for learning process and context underpins the curricular content and strategy.

Experiences in interprofessional education

We explored studies to increase our understanding of the contexts in which IPE is being implemented. Hammick et al. (2007), in their systematic review, selected studies which were well designed and clearly reported. They identified 21 studies the majority of which were in pre-qualification studies. Practice contexts included are for older people, neonatal care, communication skills, breaking bad news, emergency care, palliative care, mental health and others. So, a number of contexts are available to teach interprofessional dynamics, team skills and collaborative management and practice. The principles learnt in one setting can be applied to another, with necessary adjustments according to the context.

Another trend that we noted in recent literature is linking the educational intervention to a theoretical model. Menard and Vaprio (2014) identified five models of IPE in an attempt to find one that suits the tertiary care setting, for which they chose the Reeves et al. (2009) seven trends model, while also recommending that a new model was needed

for tertiary care. The seven-step approach of Nandan and Scott (2014) for community and non-clinical faculty was examined while De Los Santos et al. (2014) describe a community-based service learning model where students get first-hand experience. We also reviewed country experiences including the Canadian experience (Barr, 2005; Cook, 2005), the Singapore experience (Jacobs et al., 2013) and the emerging experiences reported from Brazil (da Costa et al., 2014).

Good sustainability comes from a sound theoretical rationale, systematic implementation, careful analysis of what works and improvement based on the lessons learnt. Lawlis et al. (2014) describe three stakeholder levels and their review identifies various barriers and enablers. While individual-level issues are more attitudinal, the institutional or government-related issues are resource and structure-related. It is worthwhile to consider these factors at the planning stage to improve chances of success. All these will be useful to go back to when we develop our work further.

Based on our review of theory, learning context and the organizational and implementation literature, we felt it necessary to clarify our vision and develop a concept map (Figure 14.1) to guide our new development.

Faculty readiness

While student readiness has been studied (Parsell and Bligh, 1999) and validated in many studies, it is faculty-related factors that can decide the fate of an IPE project. Faculty attitudes and perceptions can be an enabler or a barrier to IPE implementation (Lawlis et al., 2014). We therefore decided to study the readiness of faculty towards IPE first. We examined the readiness of faculty who have completed the advanced course in health sciences education methodology, a six-month program with an interprofessional setting at Maharashtra University of Health Sciences (Bansal and Jamkar, 2014). This cohort, we feel, is best positioned to implement our first pilot project. Having experienced an interprofessional program that is intensely active-learning and collaborative-learning-based, they have the requisite knowledge and skills. They are likely to demonstrate a positive attitude as well. Web-based survey software was used to collect data. The Readiness for Interprofessional Learning Scale (RIPLS) (Parsell and Bligh, 1999) was used after obtaining permission and making modifications for faculty. The 5-point Likert Scale rating from strongly disagree = 1 to strongly agree = 5 was used. The link for the survey was posted on the group listserv of the advanced course.

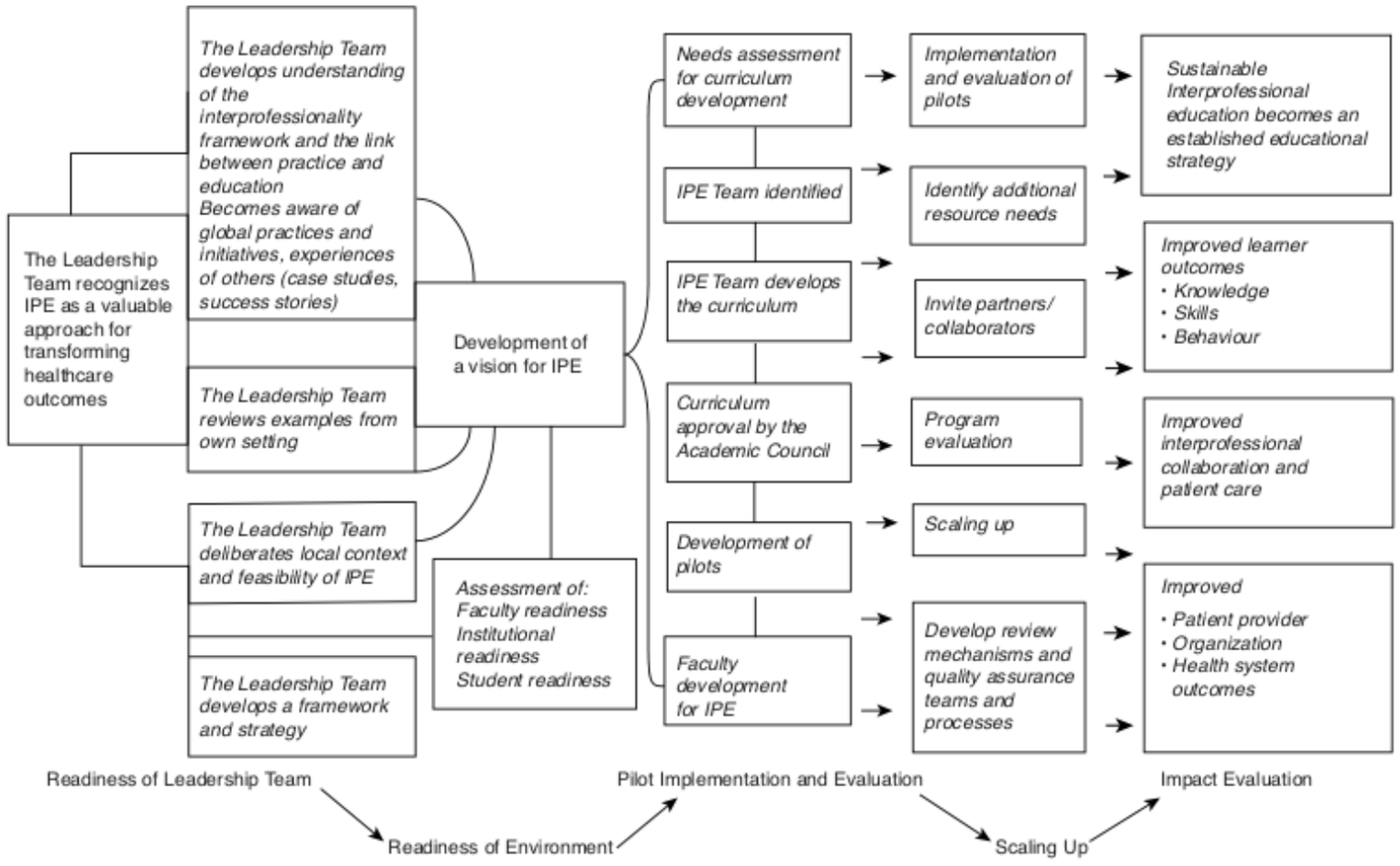

Figure 14.1 Shaping interprofessional education – concept map

Results

Of the 54 respondents that completed the survey, 26 were female and 28 were male; 20.4 per cent participants were from the Ayurveda faculty, 57.4 per cent were from medicine, 16.7 per cent physiotherapy and one participant each from dentistry, pharmaceutical medicine and other; 30 (55.6 per cent) were assistant professors, 15 (27.8 per cent) were associate professors and 9 (16.7 per cent) were professors. Mean age of the faculty was 38.76 years (range 29–59). Mean teaching experience was 10.01 years (range 1–30).

Table 14.1 summarizes the individual items and overall mean and standard deviation for each item. The Overall Mean Scale Score was 3.78. There was no significant difference observed in gender, designation, department or specialty nor previous experience of IPE.

Table 14.1 Summary of mean scores – modified readiness for interprofessional learning for faculty

Faculty attitudes towards interprofessional learning	Mean	Std deviation
Learning with students from other health profession disciplines will make students a more effective member of a healthcare team	4.13	.866
Patients would ultimately benefit if medical and allied healthcare students/professionals worked together	4.47	.616
Shared learning with students from other health profession disciplines will increase students' ability to understand clinical problems	4.33	.658
Communication skills should be learned with students from other health profession disciplines	4.08	1.028
It is vital for students from all health profession disciplines to learn team skills	4.73	.446
Shared learning will help students to understand their own professional limitations	4.50	.505
Learning between students from all health profession disciplines before qualification and professionals after qualification would improve working relationships/collaborative practice	4.29	.582
Shared learning will help students think positively about other healthcare professionals	4.22	.878

Continued

Table 14.1 Continued

Faculty attitudes towards interprofessional learning	**Mean**	**Std deviation**
For small-group learning to work, students/ professionals need to respect and trust each other	4.59	.497
It is a waste of time learning with other healthcare students/professionals	1.78	.743
It is not necessary for undergraduate/ postgraduate medical and allied healthcare students/professionals to learn together	2.22	1.141
Students can learn clinical problem-solving effectively only with students/professionals from their own school/college/organization	2.35	.805
Shared learning with other medical and allied healthcare professionals will help students to communicate better with patients and other professionals	4.16	.717
Students will welcome the opportunity to work on small group projects with other health and social care students/professionals	3.90	.848
Students will welcome the opportunity to share some generic lectures, tutorials or workshops with other health and social care students/professionals	3.86	.736
Shared learning and practice will help students clarify the nature of patients' problems	4.12	.634
Shared learning before and after qualification will help students become better team workers	4.31	.548
I am not sure what my students' professional role will be/is	2.35	.948
My students have to acquire much more knowledge and skill than other health professions students	3.43	1.080
Overall Mean	3.78	

To the questions, 'What do you think about feasibility of interprofessional education in the context of the Indian educational and healthcare setting? What factors favour it? What might be the hindrances?' the thematic analysis showed that 36 out of 46 who responded to the open-ended question said it was needed and feasible. Five felt it was difficult

and five were not sure. The enabling factors identified are geographical proximity of schools on the same campus and an adequate amount of clinical material. Hindrances include lack of time for planning, poorly defined outcomes, lack of resources, regulatory challenges and knowledge gaps. Faculty thus demonstrated an overall positive attitude and motivation towards interprofessional education.

The positive faculty attitudes are encouraging. We also intend to examine the readiness of other stakeholders – for example, the faculty who facilitate our education workshops are also an interprofessional mix – whom we would also like to involve in this initiative. Getting the view of organizational and system leadership is also very important. This will be done through personal interactions and structured interviews. These faculty who have trained in education methods as an interprofessional group are those who are most primed and motivated, as also shown by the survey. They will be willing and enthusiastic to take the IPE initiative forward.

Organizational strengths

Positioning as a health science university

The MUHS is an autonomous body created by an Act of the Legislative Assembly of the state of Maharashtra in India. Structurally, it is very strategically positioned to play a catalytic role to link the two critical components of interprofessional education that is the learner and the patient, both in the tertiary care setting and the community setting. Deans of the faculties of medicine, dentistry, nursing, physiotherapy, Ayurveda, homeopathy and Unani are key elected stakeholders, representing their respective professional teachers in the Academic Council, the highest academic body of the university. The Academic Council is the approving authority for various curricular changes and the university administration ensures implementation of its directives up to required standards. Many of the Institutes affiliated to the university have medical and allied health professional colleges in close geographical proximity, often under one administrative management authority.

Expertise and institutional mechanism in health professions education

The Institute of Medical Education Technology and Teachers' Training (previously the Department of Medical Education Technology), with its work and expertise in health professions education, conducts faculty development programs for teachers from various health professions

colleges. These teachers train in education methods in an interprofessional setting and we believe they are the best group with which to start IPE. Not only are they positive regarding the implementation as shown, they also have the expertise in curriculum development and active engagement and other innovative teaching learning and assessment strategies.

The faculty team for the project, including the authors of this chapter, are educators with expertise in curriculum development and program evaluation. The entire program including the faculty development will be systematically designed and implemented under their leadership. Ongoing program evaluation with modifications based on the evaluation findings is critical not only for quality assurance but to ensure that faculty development in IPE helps incorporate IPE in health professions education with the aim of improving the health of society.

The following case study is an example of the implementation of an IPE program in an academic department of MUHS. The lead faculty is an alumnus of the advanced program in education methods and well versed with newer approaches to teaching-learning and assessment.

Interprofessional education in postgraduate curriculum in India – case study

Background

Malnutrition is a major challenge in India. Until recently most health and nutrition professionals have been contributing independently with limited impact to address critical maternal–child health and nutrition concerns. A comprehensive approach to building the capacity of professionals in public health nutrition was much needed. Integration of knowledge of public health and nutrition sciences and an interprofessional approach to capacity building for reaching underserved communities could bridge this gap.

The intervention

MUHS conducts regular workshops on infant and child health nutrition with funding support from UNICEF. A collaborative master's program in Public Health Nutrition as a pilot capacity-building initiative was proposed with the objective of enhancing knowledge and skills for improved program planning, management and evaluation of programs in a Public Health Nutrition setting and to build capability to undertake research in the area of Public Health Nutrition.

The interprofessional approach

This two-year program enrolls health sciences graduates from all streams who have successfully completed the undergraduate program and passed the admission test. These include medical and allied health graduates, science with nutrition major and graduates from Ayurveda and homeopathic systems of medicine. The modular curriculum based on WHO guidelines is delivered by faculty experts from various fields, including medicine, pediatrics, obstetrics and gynaecology, community medicine, biochemistry and nutrition.

The curriculum uses active learning and small-group strategies that promote critical thinking and understanding of public health nutrition concepts and their application. It has a very strong community and skill-based learning focus. Workshops and community visits to urban slums and remote rural locations in tribal areas which are the worst affected involve nutritionists, doctors and health workers, both faculty and students. Community nutrition was taught through home visits and staying with families. Community health workers and identified 'champions' from the local community helped students to understand the community issues and problems.

Assessment methods are aligned with these experiences and include OSCE, logs and structured oral exams. They are problem-centred and test critical analysis, diagnostic and management ability.

Graduates from the first cohort were offered a paid internship by UNICEF to work in underserved regions in state and national-level mission programs, providing and managing the services and also training at grassroots level; 198 participants have been trained through workshops to manage Severe Acute Malnutrition (SAM) and Infant and Young Child Nutrition (IYCF). These include medical college teachers, nutritionists, nurses, and postgraduate students of MPH, PSM, pediatrics and gynaecology. Five IYCF and SAM research projects were completed by the students as part of the Master's course.

Feedback

Students express that they are confident in the workplace and enjoy the learning format and interactions with diverse professionals during their training as well as the teaching. Faculty are also happy to contribute and like the methodology, which was new for some of them.

Challenges

It is a resource-intensive program. For a small group, a lot of time and faculty are needed and numbers of faculty experts are limited. A

supportive leadership and external funding played an important role in implementation. In the classroom and teaching setting, conflict-management skills are essential as tensions sometime arise, for example while conducting workshops the seating arrangement of different groups of professionals needs special attention.

Overall, this need-based educational program in an interprofessional setting has proved to be a successful innovation in a real workplace service context and can serve as a platform for the scaling-up of inter-professional training and capacity-building initiatives in tune with health service needs.

Interprofessional education in undergraduate curriculum in an institution in India

An example of interprofessional education in an undergraduate curriculum in India comes from the Christian Medical College, Vellore, India. The model of community-based medical education applied for first-year medical students has incorporated an interprofessional experience as one of its components (Pulimood et al., 2014). As part of the community-based IPE, the first-year medical students are put together with first-year students of physiotherapy, occupational therapy, biostatistics and chaplaincy. All the students either live in the village or spend the whole day there for three weeks to gain an immersion experience through a structured educational program. One of the thrusts of this program is for the students to learn the importance of the roles of different members of the team, and to plan and implement a health education program together as a team. The mental health team also works interprofessionally where the decision-making process includes all professionals as well as the family (Chandy and Jacob, 2010). Nursing students are taught about interprofessional teamwork and collaboration in the context of strengthening referral services, and health workers participate in providing care in health clinics (Jacob et al., 2010).

Barriers, enablers and the role of leadership

Implementing interprofessional education is not easy. Various stakeholders are involved and a systematic and clear strategy is required for successful and sustainable implementation. Incorporating IPE means significant change, and change is usually met with resistance, particularly when there is complexity and a cost involved.

Lawlis et al. (2014) describe three levels of primary stakeholders, that is, government and professional, institutional and individual, in the context of IPE implementation. In their review, they state that while barriers are widely reported in the literature, there are far fewer articles on enabling experiences. In comparison with the enablers and barriers in higher education highlighted in their study, we find our system, and its institutional and individual climate, to be more enabling than hindering (Lawlis et al., 2014). The enablers are present at all levels.

Organizational leadership

At the government and professional level (Lawlis et al., 2014), the inherent interprofessional structure of the organization and its departments, autonomy in functioning with government funding, and strong leadership are the key enablers. The university decision-making process is democratic – results are in shared ownership, issues are discussed and resolved, and differences are sorted out amicably. Moreover, being a health science university places all faculty on an equal platform and gives the stakeholders a shared identity and a sense of belongingness to one unit.

This structural strength is supported by a strong, visionary organizational leadership. The required stimulus for IPE is very much present through the transformative leadership style of the organizational leader (senior author) and his team. High energy, vision and collaboration are evident through regular interaction with the deans, academic and administrative stakeholders, access to the viewpoint of the political leadership, representation from all professional disciplines, and a positive and proactive approach to problems and concerns. This is complemented by an encouraging and appreciative leadership style. As founder leader of the Association of Vice Chancellors of Health Sciences Universities the project leader has encouraged communication and collaboration in order to promote learning from others' experiences and strengthen the role of the Health Science University, a relatively new organization. He has the positive and enabling characteristics of a transformative leader – energy, vision, a desire for alignment and an appropriate process architecture (Hill, 2002). A strong emotional intelligence is reflected in self-awareness, self-management, social awareness and social skills; as well, the application of a range of learning styles (Goleman, 2000) is evident, which is a hallmark of successful leadership.

Though resources remain a challenge, the leadership is continuously engaged in exploring strategies and avenues to bring in funding, often successfully. The overall approach is appreciative, transformative and

collaborative. The right attitude is very important for the successful implementation of IPE, and this is an important asset of the leadership.

The faculty development leadership

At both the institutional and individual level (Lawlis et al., 2014), the presence of a department that carries out large scale IPE faculty development work successfully is a key enabler. The transformative energy of the organizational leader is complemented by the energy of this team, its alignment with the IPE vision and the development of processes to achieve it. Through strong faculty development and capacity-building initiatives, interdepartmental and inter-institutional collaborations are being developed slowly, steadily and surely in the direction of sustainability. All authors are faculty in the programs, have curriculum design as a key strength and are highly trained and well versed in appreciative and change management strategies. These leadership skills of the faculty are key strengths for successful implementation. The potential implementers of IPE – the faculty group – are already implementing educational innovation and change projects as part of their coursework.

Leading by example, both positive direction and hand-holding whenever required and providing mentorship to the team have played major roles in each member eventually becoming a leader. In relation to the final factor, Parsell and Bligh (2000) have cited the critical role of individual mentors in the development of educational leadership.

Execution and sustainability

This is a work-in-progress. Interactions with various other stakeholders are needed to get their buy-in and also allow hurdles or barriers to be anticipated. Very importantly, such interactions also identify potential supporters of the program. Required resources can be identified, budgeted for and requested so that pilots can be carried out. Institutions that make contact and interact can be awarded both small grants and recognition by the university. With closer reference to the literature and a more refined definition of learning contexts, a feasible plan for a pilot can be worked out and implemented quite quickly. Colleges which have multiple professional colleges on the same campus are likely to volunteer or can be invited to take the lead on the project. The supportive role of the leadership is a vital asset in this process. The concept map (Figure 14.1) will continue to evolve.

Resource constraints remain a challenge and funding sources will have to be explored further. They may pose a significant barrier in spite of the otherwise very enabling environment already described. Collaboration with the social sciences and social services can strengthen initiatives by providing access to new experiences and strategies. Finally, ongoing program evaluation and modifications based on evaluation findings is critical not only for quality assurance but to ensure that faculty development in IPE helps incorporate IPE into health professions education with the aim of improving health in society.

Reflective questions

1. What factors are important in the implementation of IPE? What are the key enabling factors?
2. What are the barriers you may encounter in implementing IPE?
3. How should organizations and institutions plan for successful implementation of IPE?

References

Bansal, P. K. and Jamkar, A. (2014). Faculty development in health professions education – the health science university model: Interprofessional education leadership in action. In D. Forman, M. Jones and J. Thistlethwaite (eds), *Leadership development for interprofessional education and collaborative practice.* Basingstoke: Palgrave Macmillan.

Barr, H. (2005). Canada as a case study. *Journal of Interprofessional Care, 19*(S1): 5–7.

Chandy, S. and Jacob, B. (2008) A collaborative practice case study from a mental health center in India. Vellore: Christian Medical College. In WHO (2010) *Framework for action on interprofessional education and collaborative practice*: 28. Available online at: www.who.int/hrh/resources/framework_action/en

Cook, D. A. (2005). Models of interprofessional learning in Canada. *Journal of Interprofessional Care, 19*(S1): 107–15.

da Costa, M. V., Vilar, M. J., de Azevedo, G. D. and Reeves, S. (2014). Interprofessional education as an approach for reforming health professions education in Brazil: Emerging findings. *Journal of Interprofessional Care, 28*(4): 379–80.

D'Amour, D. and Oandasan, I. (2005). Interprofessionality as the field of interprofessional practice and interprofessional education: An emerging concept. *Journal of Interprofessional Care, 19*(S1): 8–20.

D'Amour, D., Ferrada-Videla, M., San Martin Rodriguez, L. and Beaulieu, M. D. (2005). The conceptual basis for interprofessional collaboration: Core concepts and theoretical frameworks. *Journal of Interprofessional Care, 19*(S1): 116–31.

De Los Santos, M., McFarlin, C. D. and Martin, L. (2014). Interprofessional education and service learning: A model for the future of health professions education. *Journal of Interprofessional Care, 28*(4): 374–5.

Forman, D., Jones, M. and Thistlethwaite, J. (eds). (2014). *Leadership development for interprofessional education and collaborative practice*. Basinngstoke: Palgrave Macmillan.

Frenk, J., Chen, L., Bhutta, Z. A., Cohen, J., Crisp, N., Evans, T. et al., (2010). Health professionals for a new century: Transforming education to strengthen health systems in an interdependent world. *The Lancet Commissions*. DOI: 10.1016/S0140-6736(10)61854-5. Available online at: www.thelancet.com

Hammick, M., Freeth, D., Koppel, I., Reeves, S. and Barr, H. (2007). A best evidence systematic review of interprofessional education: BEME Guide no. 9. *Medical Teacher, 29*(8): 735–51.

Hill, M. H. (2002). Transformational leadership in nursing education. *Nurse Educator, 27*(4): 162–4.

Jacob, B., Vijayakumar, C. and Jayakaran, R. (2008) A collaborative practice case study describing the College of Nursing Community Health Program in India. Vellore, Christian Medical College. In WHO (2010) *Framework for action on interprofessional education and collaborative practice*: 25. Available online at: www.who.int/hrh/resources/framework_action/en/

Jacobs, J. L., Samarasekera, D. D., Chui, W. K., Chan, S. Y., Wong, L. L., Liaw, S. Y. et al. (2013). Building a successful platform for interprofessional education for health professions in an Asian university. *Medical Teacher, 35*(5): 343–7.

Lawlis, T. R., Anson, J. and Greenfield, D. (2014). Barriers and enablers that influence sustainable interprofessional education: A literature review. *Journal of Interprofessional Care, 28*(4): 305–10.

Menard, P. and Varpio, L. (2014). Selecting an interprofessional education model for a tertiary health care setting. *Journal of Interprofessional Care, 28*(4): 311–16.

Nandan, M. and Scott, P. (2014). An innovative interprofessional education model to engage community and nonclinical participants. *Journal of Interprofessional Care, 28*(4): 376–8.

Oandasan, I. and Reeves, S. (2005). Key elements for interprofessional education. Part 1: The learner, the educator and the learning context. *Journal of Interprofessional Care, 19*(S1): 21–38.

Parsell, G. and Bligh, J. (1999). The development of a questionnaire to assess the readiness of health care students for interprofessional learning (RIPLS). *Medical Education, 33*(2): 95–100.

Parsell, G. and Bligh, J. (2000). Encouraging educational leadership. *Medical Education, 34*: 199–200.

Pulimood, A. B., George, K. and Daniel, A. J. (2014). A dream come true: Community-based education in CMC Vellore. In W. Talaat and Z. Ladhani (eds), *Community based education in health professions: Global perspective:* Chapter 6. Available online at: http://mesau.mak.ac.ug/sites/default/files/Community%20Based%20Education%20in%20Health%20Professions%20Global%20Perspectives%20Electronic%20Copy_0.pdf [Accessed 4 August 2014].

Reeves, S., Rice, K., Conn, L. G., Miller, K. L., Kenaszchuk, C. and Zwarenstein, M. (2009). Interprofessional interaction, negotiation and non-negotiation on general internal medicine wards. *Journal of Interprofessional Care, 23*(6): 633–45.

Report of the expert committee on health manpower planning, production and management (Bajaj Committee). (1987). Available online at: https://

nrhm-mis.nic.in/ui/who/PDF/Health%20Manpower%20Planning%20%20Production%20&%20Management%20(Bajaj)%201987.pdf. [Accessed 29 July 2013].

Steinert, Y. (2005). Learning together to teach together: Interprofessional education and faculty development. *Journal of Interprofessional Care, 19*(S1): 60–75.

WFME (World Federation for Medical Education). (1988). The Edinburgh Declaration. *The Lancet*, ii 8068: 464.

WHO. (1978). *The Alma Ata Declaration* (*Health for all by the year 2000*). Available online at: www.who.int/publications/almaata_declaration_en.pdf [Accessed 4 August 2014].

WHO. (2010). *Framework for action on interprofessional education and collaborative practice*. Available online at: www.who.int/hrh/resources/framework_action/en

15
Leadership into the Future

Jill Thistlethwaite and Marion Jones

In these concluding pages of the two volumes dedicated to leadership within interprofessional education and collaborative practice, we look back over the main learning points of the chapters and forward into a future of better practice and healthcare delivery. While the authors, educators and health professionals in these pages have shown that much progress has been made in the field over the last decades, we realize that there is still much to be done: enhanced evaluation of IPE interventions and collaborative care; generating evidence to translate into practice; and nurturing of the next generations of leaders to deliver and promote best practice. However, we have also learnt through the chapters of this book that there are many champions worldwide who are leading the way and building on the work of others, growing new ways of leading and working interprofessionally.

Leaders often emerge from unexpected sources. They are not necessarily the most experienced or more senior people. Leadership is a fluid concept but in true interprofessional settings is unlikely to be hierarchical but rather collaborative, shared or rotating, and often within teams of health professionals. The concept of the emergent leader will resonate with many. We step up when we need to; we may need to challenge the 'official' boss if we consider patient care is at risk or values are being undermined. Chapter 2 provides a detailed look at leadership models and emphasizes that for quality care teams need to be continuously learning together. Of course we emphasize to our students that education does not stop on graduation: we need to be lifelong learners but this should not be a solitary process. Whether face-to-face or online, adult learning is exemplified by learning 'with, from and about' – those familiar interprofessional prepositions in particular the '*with*'.

The change from traditional healthcare delivery to wider innovative services has been highlighted by the WHO (2010) and strengthens the argument for leaders of interprofessional education and collaborative practice to be evident in positions at all levels of influence within the health workforce. Leadership includes responding to challenges. We see this in the chapters from Indonesia and Japan: two countries with different cultures, religions and geography but similar health and social care priorities. Japan is facing a future of a very rapidly ageing population and a dwindling birth rate. Not only is team-based care being recommended for the complex needs of elderly citizens, but also community-based care, care by the community in the community, and not solely care delivered by health and social care professionals. Indonesia is planning to introduce a universal healthcare system for lower-income residents and requires a healthcare workforce able to provide such care in a cost-effective manner. Hence the national mandate to include IPE in all health professional curricula.

Innovation in practice

The motivation and enthusiasm that emanates from this section of the book is exciting in that it traverses New Zealand, Australian and Indian contexts within practice and education, striving to enhance student and health professionals' interprofessional experiences. A faculty framework from India, and how the staff development prepared them for interprofessional working, complements health clinic innovation and health workforce development in the other two settings. How health professionals act in response to new ideas and change in practice influences how they function in interprofessional teams (Jones, 2000). Effective communication, adaptation to change, team development and valuing difference are all capabilities needed for effective interprofessional practice opportunities to be realized. Motivation strategies are needed to help the team move forward as a cohesive group along with the recognition that ongoing innovation in practice is context, time and space-driven. Leadership competence is a critical element to be achieved as the team develops to work interprofessionally. Working together to create a shared vision gives direction and enables the team to jointly agree on the innovations required for a particular context. This book clearly shows that the context is very influential in the strategy and practice that result. Soubhi et al. (2009, p. 53) emphasized that the 'greatest resource for improving interprofessional learning and practice is the knowledge, wisdom, and energy of professionals who adapt to challenging situations in their everyday work'.

Leadership

Transformative (Chapter 5) and transformational leadership (Chapter 7) have meaning for both the 'leader' and the team. We often talk of the need for health professional students to learn the competencies for 'followership'; for example the CanMeds 2015 framework states under the leadership domain that a key concept is 'collaborative leadership and "followership"' (Frank and Snell, 2014, p. 17), though interestingly the other competency frameworks (IPEC and CIHC) discussed in Chapter 9 do not include the word. All three, however, acknowledge the need for students and health professionals to be able to deal with professional and interprofessional conflict. The Interprofessional Education Collaborative states:

> A potential source of conflict among team members is the diversity of their expertise areas and professional abilities. Conflicts may arise over leadership, especially when status or power is confused with authority based on professional expertise. Whatever the source, staying focused on patient-centered goals and dealing with the conflict openly and constructively through effective interprofessional communication and shared problem-solving, strengthen the ability to work together and create a more effective team (IPEC, 2011, p. 24).

A clash of values because of the lack of discussion of individual team members' values can trigger conflict. This conflict may extend to a values imbalance between the client and the team, hampering care delivery and communication. Professional cultures both at an individual and an institutional level function as barriers to interprofessional education and tensions are evident. As change progresses, perceived barriers become more transparent and hinder moving forward in interprofessional practice. Leaders can reinforce the common values, beliefs and practices of interprofessional practice within different settings, as evidenced throughout this book. However, leadership recognizes that conflict, if handled well, can be a force for positive change (Tekleab et al., 2009). Time needs to be set aside for a discussion and sharing of values; new members should be invited to share in this collective knowledge and be orientated into team values and processes (Thistlethwaite, 2012).

The IPE community has a duty to share good practice and advocate for interprofessional practice and collaboration in the workplace and to policymakers. Interprofessional projects across institutions and jurisdictions, such as that described in Chapter 8, role model what collaboration might look like with strong shared leadership and mutual goals.

This way of working to transform health systems is further discussed in Chapter 10. However, funding models continue to hamper interdisciplinary research and the provision of team-based care, the latter particularly where the item-of-service payment system is still in place and favours the physician rather than the team. To understand and conceptualize good practice we require quality research and evaluation that is shared and published for access by the global community. Providing the leadership and champions to achieve this has been emphasized by both Barker et al. (2005) and the WHO (2010) as critical enablers for promoting and sustaining IPE and IPP (Bennett et al., 2011). The aim of interprofessional practice is to improve patient outcomes through achieving the reality of empowerment and collegiality of health professionals built from mutual trust and respect (Jones, 2000).

Chapter 5 also highlights the importance of students as the next generation of health and social care professionals and leaders. The student voice is becoming more powerful and, when IPE is delivered well, students advocate for more IPE and for team-based experiences. All of us who teach and practice need to remember we are interprofessional role models and that we should demonstrate respect and collaboration in our daily work.

Evaluation

Evaluation features prominently as a component of the initiatives described in this volume. This is important because as longstanding proponents of IPE we are often asked the question: what is the evidence that IPE works? The first consideration here is what would successful IPE look like and what are the outcomes on which we should base such success? Taking the CAIPE definition of IPE into account (CAIPE, 2002), success should focus on patient and client outcomes through improvement to health and social care delivery. But, as the chapter authors write, more effort is required to evaluate changes in quality of care.

The triple aim of the Institute of Health Improvement (IHI) of the United States has been adopted by the National Center for Interprofessional Practice and Education as the outcome measure for its evaluation of IPECP. The triple aim's three dimensions are:

- Improving the patient experience of care (including quality and satisfaction)
- Improving the health of populations

- Reducing the per capita cost of healthcare (Berwick et al. 2008).

The rising cost of healthcare is not confined to the United States. Health costs as a proportion of gross national product are increasing globally. Educators and practitioners cannot ignore this facet of practice and, indeed, the argument that team-based care and collaborative practice has the potential to decrease, or at least stabilize, a national healthcare budget is likely to have a major influence on policy and strategy.

The objective of program evaluation is to answer questions about cost and efficiency, outcome or impact, whether the implementation is going to plan, whether the design and theory behind the program are working and what the need for the program is (Rossi et al., 2004). However the majority of health professional education evaluation in general, and IPE in particular, is still limited to levels 1–2b of the modified Kirkpatrick framework of outcomes-based evaluation (Kirkpatrick and Kirkpatrick, 2006; Barr et al., 1999; Barr et al., 2000; The Interprofessional Curriculum Renewal Consortium, Australia, 2013).

This type of evaluation will continue to be important at a local or program level but is usually of less interest to the broader community and will not answer the question of efficacy in any meaningful way. Rarely does education evaluation involve a health economist or consideration of short or long-term costs in terms of time, resources and dollars. Moreover, to look for improvements in quality of care and health outcomes resulting from a pre-qualification interprofessional learning activity requires longer-term follow-up than is practical for higher education institutions. In addition outcomes should not be the sole focus of educational evaluation. To explore theories behind the education, and make judgments about whether an intervention is transferable to other settings, other approaches are required. For example, realist evaluation aims at exploring what works, for whom, in what circumstances, in what respects, to what extent and why (Pawson and Tilley, 1997). For IPE, realist evaluators would focus on the following questions: what kinds of educational interventions tend to work, for what kinds of learners, in what kinds of contexts, to what degree, and what explains such patterns? (Wong et al., 2012). And in terms of teamwork and interprofessional collaborative practice we might try to answer:

- What types of teams work best in what contexts?
- Which model of team-based or collaborative care improves the quality of care for the lowest cost in specified contexts (for example, in resi-

dential homes, for patients with long-term conditions, in primary-care settings, in intensive-care units and so on)?
- What model of leadership is optimal for what type of team and in what context?
- Why is this particular model of care effective in setting A and will it be as effective in setting B?

In posing such questions realist evaluators will be working with hypotheses drawn from published evidence to define middle-level theories of mechanisms of action. A major issue, though, is the lack of funding for health professional education research, reducing the ability for most of us to conduct the necessary longitudinal and multi-centre studies to show change and explore the mechanisms leading to such change. As a recent perspective in the *New England Journal of Medicine* states in relation to the United States:

> Our nation's lack of research in medical education contrasts starkly with the large and essential commitment to biomedical research funded by industry, philanthropic organizations, and the public. No one questions the need for sustained support for research in cancer, heart disease, or dementia. But despite medical education's central role in creating a workforce capable of delivering the resulting biomedical advances ... funding for medical education research is conspicuously absent. As a result, we lack evidence that is essential for guiding improvements in the clinical workforce' (Ash and Weber, 2014).

Similar sentiments may be expressed about health professional education research across the board and as such the education research leadership needs to be advocating for support and funding to advance our understanding of learning processes and interventions required for the future workforce. However Bennett et al. (2011, p. 575), from an Australian perspective, see that 'a coordinated and comprehensive approach to IPC is absolutely necessary to meet government's future healthcare objectives'.

Conclusion

Interprofessional education and collaborative practice are global initiatives. They take many forms and come in many guises. Leaders are not always the most obvious candidates. We still have a lot to learn

and explore in relation to optimal health and social care delivery in the diverse settings in which we practise. The continual change in how the world functions, and both human progress and human crises, shape our understanding of interactions and collaborations. No doubt if we revisit leadership for IPECP in a few years' time the landscape will be very different, though the need for compassionate and quality care will continue for many decades to come.

References

Asch, D. A. and Weinstein, D. F. (2014). Innovation in medical education. *New England Journal of Medicine*. DOI: 10.1056/NEJMp1407463.

Barker, K. K., Bosco, C. and Oandasan, I. F. (2005). Factors in implementing interprofessional education and collaborative practice initiatives. *Journal of Interprofessional Care*, *1*: 166–76.

Barr, H., Freeth, D., Hammick, M., Koppel, I. and Reeves S. (2000). *Evaluations for interprofessional education. A United Kingdom review for health and social care.* London: CAIPE/BERA.

Barr, H., Hammick, M., Koppel, I. and Reeves, S. (1999). Evaluating interprofessional education: two systematic reviews for health and social care. *British Educational Research Journal, 25*(4), 533–43.

Bennett, P. N., Gum, L., Lindeman, I., Lawn, S., McAllister, S., Richards, J., Kelton, M. and Ward, H. (2011). Faculty perceptions of interprofessional education. *Nurse Education Today, 31*(2), 208–13.

Berwick, D. M., Nolan, T. W and Whittington, J. (2008). The triple aim: Care, health and cost. *Health Affairs, 27*: 759–69.

CAIPE. (2002). *Interprofessional education: A definition*. London: Centre for the Advancement of Interprofessional Education.

Frank, J. R. and Snell, L. (eds). (2014). *Draft CanMEDS 2015. Physician competency framework – Series I*. Ottawa: The Royal College of Physicians and Surgeons of Canada.

IPEC (Interprofessional Education Collaborative Expert Panel). (2011) *Core competencies for interprofessional collaborative practice: Report of an expert panel*. Washington, DC: Interprofessional Education Collaborative. Available online at: www.aacn.nche.edu/educationresources/ipecreport.pdf

Jones, E. M. (2000). *Shaping team practice in the context of health reform*. Unpublished PhD thesis, Flinders University, South Australia.

Kirkpatrick, D. and Kirkpatrick, J. (2006). *Evaluating training programs: The four level model*. San Francisco: Berrett-Koehler.

Pawson, R. and Tilley, N. (1997). *Realistic evaluation*. London: Sage.

Rossi, P., Lipsey, M. W. and Freeman, H. E. (2004). *Evaluation: A systematic approach (7th ed.)*. Thousand Oaks: Sage.

Soubhi , H., Colet, N. R., Gilbert, J. V., Lebel, P., Thivierge, R. L., Hudson, C. and Fortin, M. (2009). Interprofessional learning in the trenches: Fostering collective capability. *Journal of Interprofessional Care, 23*(1): 52–7.

Tekleab, A. G., Quigley, N. R. and Tesluk, P. E. (2009). A longitudinal study of team conflict, conflict management, cohesion and team effectiveness. *Group and Organization Management, 34*: 170–205.

The Interprofessional Curriculum Renewal Consortium, Australia. (2013). *Curriculum renewal for interprofessional education in health*. Sydney, Centre for Research in Learning and Change, University of Technology, Sydney.

Thistlethwaite, J. E. (2012). *Values-based interprofessional collaborative practice*. Cambridge: Cambridge University Press.

Wong, G., Greenhalgh, T., Westhorp, G. and Pawson, R. (2012). Realist methods in medical education research: What are they and what can they contribute? *Medical Education*, *46*: 89–96.

WHO (World Health Organization). (2010). *Framework for action on interprofessional education and collaborative practice*. Geneva: WHO Department of Human Resources for Health.

Appendix

A.1 Useful definitions

Term	Definition or Interpretation
Change management	Change management is an approach to transitioning individuals, teams, and organizations to a desired future state: http://en.wikipedia.org/wiki/Change_management
Coaching	'Coaching is unlocking people's potential to maximize their own performance' (Whitmore, 2009, cited in Forman et al., 2013)
Collaborative/ shared leadership	Collaborative leadership is an influence relationship, which engenders safety, trust and commitment among leaders and their partners who intend substantive or transforming change that reflects their mutual purpose, shared vision and common goals
Communication	' ... is the activity of conveying information through the exchange of thoughts, messages, or information, as by speech, visuals, signals, writing, or behavior. It is the meaningful exchange of information between two or a group of persons' (http://en.wikipedia.org/wiki/Communication)
Community engagement	The process of working collaboratively with and through groups of people (Clinical and Translational Science Awards Consortium, 2011, p. 3). For the Community Health and Development Program (CHDP) the term particularly means involving community members in all aspects of a program, from deciding on what program should be initiated, to drafting, implementing, monitoring and evaluating the program.
Community immersion (or field practicum) programs	These are embedded in the pre-licensure curricula of many of the health professional disciplines. Students, usually in their final year, are required to immerse in rural communities to practise the skills they have acquired under the supervision of discipline-specific university faculty preceptors.
Competence and capability	Thistlethwaite et al. (2014) define competency as 'identify specific knowledge, skills, attitudes, values and judgments that are dynamic, developmental and evolutionary' and differentiate this from capability which they state 'has been used in preference to competence in one IPE framework, as it is considered by some educators to reflect more optimally the necessity that learners and professionals respond and adapt to health care and systems changes'.

(*continued*)

Term	Definition or Interpretation
Crew resource management (CRM)	Human Factors is included within CRM which is defined as 'a management system which makes optimum use of all available resources – equipment, procedures and people – to promote safety' (RAeS, 1999). Implicitly CRM is a holistic management system involving leadership and team skills that extend across interprofessional boundaries and that include a knowledge and application of human factors.
Culture	The main definition of culture we use is: 'Culture is all aspects of life, the totality of meanings, ideas and beliefs shared by individuals within a group of people. Culture is learned, it includes language, values, norms, customs. Art has played a central, integral role in most cultures' (www.design.iastate.edu/NAB/about/thinkingskills/cultural_context/cultural.html)
Distributed leadership	'Distributed leadership is primarily concerned with mobilizing leadership at all levels in the organization not just relying on leadership from the top. It is about engaging the many rather than the few in leadership activity and actively distributing leadership practice. The emphasis here is about leadership practice and not leadership functions. A distributed model of leadership is one premised upon the interactions between many leaders rather than the actions of an individual leader.' Harris (2008)
Emotional intelligence	'The ability to monitor one's own and others' feelings and emotions, to discriminate amongst them and to use this information to guide one's thinking and actions' Salovey and Mayer (1989)
Effective interprofessional education	Reeves et al. (2011) provide an update on effective interprofessional education from that of Reeves et al. (2010) which reported on a Cochrane review with the objective of assessing the effectiveness of IPE interventions compared to education interventions in which the same health and social care professionals learn separately from one another; and to assess the effectiveness of IPE interventions compared to no education intervention.
Empowerment	'Empowerment is a process that challenges our assumptions about the way things are and can be. It challenges our basic assumptions about power, helping, achieving, and succeeding' (www.joe.org/joe/1999october/comm1.php)
Human factors	These are about enhancing clinical performance through an understanding of the effects of teamwork, tasks, equipment, workspace, culture and organization on human behavior and abilities, and the application of that knowledge in clinical settings (see www.chfg.org)

(*continued*)

Term	Definition or Interpretation
Interdisciplinary approach (IDA)	Frequently used synonymously with interprofessional education; that is, it occurs when 'students from two or more professions learn with, from and about each other' (CAIPE, 2002). It is also used to mean different disciplines within the same profession, for example, surgery, pediatrics, gynecology and so on.
Interprofessional collaboration (IPC) Cited in* IHE	The process of developing and maintaining effective interprofessional working relationships with learners, practitioners, patients/clients/families and communities to enable optimal health outcomes (Canadian Interprofessional Health Collaborative, 2010, p. 8)
Interprofessional competency domain Cited in IECEP**	A generally identified cluster of more specific interprofessional competencies that are conceptually linked, and serve as theoretical constructs (Cate and Scheele, 2007)
IPE	'Interprofessional Education occurs when two or more professions learn with, from and about each other to improve collaboration and the quality of care. (CAIPE, 2002; see also www.caipe.org.uk/about-us/defining-ipe)
Interprofessional education Cited in IECEP**	When students from two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes (WHO, 2010)
Interprofessional education (IPE)	Involves learning *with, from and about* other professions to build a mutual respect between the health and social care professions with the aim of working together to improve patient care (CAIPE, 2007; www.caipe.org.uk)
Interprofessional learning (IPL) Cited in IHE*	'Learning arising from interaction between members (or students) of two or more professions. This may be a product of interprofessional education or happen spontaneously in the workplace or in education settings' (Freeth et al., 2005, p. 15)
Interprofessional practice (IPP) Cited in IHE*	'Occurs when all members of the health service delivery team participate in the team's activities and rely on one another to accomplish common goals and improve health care delivery, thus improving patient's quality experience' (Australasian Interprofessional Practice and Education Network)
Interprofessional team-based care Cited in IECEP**	Care delivered by intentionally created, usually relatively small work groups in healthcare, who are recognized by others as well as by themselves as having a collective identity and shared responsibility for a patient or group of patients; for example, rapid response teams, palliative care teams, primary care teams, operating room teams

(*continued*)

Term	Definition or Interpretation
Interprofessional teams	A group of people from different professional backgrounds who work together to deliver services and coordinate care programs across agencies throughout the patient pathway; goals are set collaboratively through consensual decision-making to improve practice for patient safety, which results in individualized care plans/quality services delivered by one or more team members, which maximizes the value of shared expertise and minimizes the barriers of professional autonomy.
Interprofessional teamwork: Cited in IECEP**	The levels of cooperation, coordination and collaboration characterizing the relationships between professions in delivering patient-centered care
Interprofessionality Cited in IHE*	The development of a cohesive practice between professionals from different disciplines. It is the process by which professionals reflect on and develop ways of practising that provides an integrated and cohesive answer to the needs of the client/family population (D'Amour and Oandasan, 2005, p. 9)
Integrated care	Leutz (1999) defines integrated care as: 'The search to connect the healthcare system (acute, primary medical and skilled) with other human service systems (for example long-term care, education and vocational and housing services) to improve outcomes (clinical, satisfaction and efficiency).'
Leadership	The act of stimulating, engaging, and satisfying the motives of followers that result in the followers taking a course of action towards a mutually shared vision (Boseman, 2008, p. 36).
Motivation	'Motivation is a psychological feature that arouses an organism to act towards a desired goal and elicits, controls and sustains certain goal-directed behaviors. It can be considered a driving force; a psychological one that compels or reinforces an action toward a desired goal.' (http://en.wikipedia.org/wiki/Motivation)
Patient safety	'Freedom from accidental injury; ensuring patient safety involves the establishment of operational systems and processes that minimize the likelihood of errors and maximize the likelihood of intercepting them when they occur' (Kohn et al., 1999)
Professional competencies in healthcare Cited in IECEP**	Integrated enactment of knowledge, skills, and values/attitudes that define the domains of work of a particular health profession applied in specific care contexts Interprofessional competencies in healthcare: integrated enactment of knowledge, skills and values/attitudes that define working together across the professions, with other healthcare workers and with patients, along with families and communities, as appropriate to improve health outcomes in specific care contexts

(*continued*)

Term	Definition or Interpretation
Power relationships	Baker et al. (2011) state 'Power, it has been argued, is the ability or capacity to act or to exercise influence. As such, it has many dimensions (gender, race, class, knowledge, and so on) which can impact interprofessional relations.'
Resilience	Tugade and Fredrickson (2004) suggest that individual resilience is the ability to bounce back from negative emotional experiences, and flexible adaptation to the changing demands of stressful experiences.
Social accountability	Social accountability is defined as: 'The measures that are made by an organization to be aware of concerns to the community surrounding it. It is reflected in a commitment to health and safety, civil and human rights and betterment of the community.' (http://thelawdictionary.org/social-accountability/)
Servant-leadership	While not defining the concept, Greenleaf (1997, in Spears, 2004) leads the reader to understand that servant-leaders are individuals chosen as leaders because they are proven and trusted as servants (the group of workers themselves).
Servant-leadership	Neill et al. (2007, pp. 426–7, described servant-leadership as: 'These principles (of servant leadership) include listening, awareness, conceptualization, foresight, stewardship, commitment to the growth of people, and community building. Servant leaders are encouraged to build and strengthen relationships with other team members and appreciate and value the expertise and contribution of other disciplines in planning and provision of care.'
Social networks	A social network is a theoretical construct useful in the social sciences to study relationships between individuals, groups, organizations, or even entire societies. The concept emerged from social psychology and is now a major theme in in contemporary sociology. For more information see http://en.wikipedia.org/wiki/Social_network
Standard Operation Policy (SOP)	SOP is often defined as 'detailed, written instructions to achieve uniformity of the performance of a specific function'. It refers to standards in policy and procedures to achieve a quality output
Systems theory/ systems approach	'Systems theory is the interdisciplinary study of systems in general, with the goal of elucidating principles that can be applied to all types of systems at all nesting levels in all fields of research' (http://en.wikipedia.org/wiki/System_theory)
Teamwork	Teamwork is 'work done by several associates with each doing a part but all subordinating personal prominence to the efficiency of the whole.' (http://en.wikipedia.org/wiki/Teamwork)

(*continued*)

Term	Definition or Interpretation
Transformational leaders	Gumusluoglu and Llsev (2009, p. 464), in their study of this leadership approach, stated: 'Transformational leaders, by intellectually stimulating their followers, championing innovation, and articulating a compelling vision throughout their organizations, help establish an organizational climate where employees feel challenged and energized to seek innovative approaches in their jobs.'
Transformational leadership	Bass and Avolio (1990), building on the work of Burns (1978), are often credited with having advanced the conceptualization of this leadership approach. Transformational leadership is defined as: 'Occur[ring] when leaders broaden and elevate the interest for their employees, when they generate awareness and acceptance of the purpose and mission of the group, and when they stir their employees to look beyond their own self-interest for the good of the group' (Bass and Avolio, 1990, p. 21)

Sources: *IHE: From: *Interprofessional Health Education – A literature review: overview of international and Australian developments in interprofessional health education* (IPE), May 2011
** IECEP: From: Interprofessional Education Collaborative Expert Panel (2011) *Core competencies for interprofessional collaborative practice: Report of an expert panel.* (Washington, DC: Interprofessional Education Collaborative), May 2011

References

Australasian Interprofessional Practice and Education Network. www.aippen.net

Baker, L., Egan Lee, E., Martimianakis, M. A. and Reeves, S. (2011). Relationships of power: implications for interprofessional education. *Journal of Interprofessional Care, 25*: 98-104.

Bass, B. M. and Avolio, B. J. (1990). *MLQ multifactor leadership questionnaire.* Redwood City: Mind Garden.

Burns, J. M. (1978). *Leadership.* New York: Harper & Row.

Boseman, G. (2008). Effective leadership in a changing world. *Journal of Financial Service Professionals, May*, 36–8.

CAIPE (2002). The Centre for the Advancement of Interprofessional Education. www.caipe.org.uk: Interprofessional education – a definition. London: CAIPE.

CAIPE. (2007). The Centre for the Advancement of Interprofessional Education. www.caipe.org.uk

Canadian Interprofessional Health Collaborative (CIHC). www.cihc.ca

Canadian Interprofessional Health Collaborative. (2010). *A national competency framework for interprofessional collaboration.* www.cihc.ca/files/CIHC_IPCompetencies_Feb. 2010.pdf

Cate, O. and Scheele, F. (2007). Competency based postgraduate training: Can we bridge the gap between theory and clinical practice? *Academic Medicine, 82*(6): 542–7.

Clinical and Translational Science Awards Consortium: community engagement key function committee taskforce on the principles of community engagement. (June 2011). *Principles of community engagement*, 2nd ed. Bethesda: National Institutes of Health.

D'Amour, D. and Oandasan, I. (2005). Interprofessionality and interprofessional education for collaborative patient-centered practice: An evolving framework. *Journal of Interprofessional Care*. Supplement 1: 8-20.

Freeth, D., Hammick, M., Reeves, S., Koppel, I. and Barr, H. (2005). *Effective interprofessional education: Development, delivery and evaluation*. Oxford: Blackwell Publishing and CAIPE.

Gumusluoglu, L. and Lisev, A. (2009) Transformational leadership, creativity, and organizational innovation. *Journal of Business Research, 62*(4): 461–73

Harris, A. (2008). *Distributed Leadership*. Oxford: Routledge.

Kohn, L. T., Corrigan, J. M. and Donaldson, M. S. (eds) (1999). *To err is human: Building a safer health system*. Committee on Quality of Health Care in America, Institute of Medicine. Washington, DC: National Academies Press.

Royal Aeronautical Society (RAeS). (1999). *Crew Resource Management*. A paper by the CRM standing group of the Royal Aeronautical Society, October.

Salovey, P. and Mayer, J. D. (1989) Emotional intelligence. *Imagination, Cognition and Personality*. 9131: 185–211. Amityville: Baywood Publishing Co.

World Health Organization. (2010). *Framework for action on interprofessional education and collaborative practice*. Geneva: WHO Department of Human Resources for Health, at: www2.rgu.ac.uk/ipe/WHO_report_Interprofessional%20Ed%20Sep2509.pdf

Index

Bold page numbers indicate figures; italics indicate tables.

4 dimensional framework (4DF) 126–9, **127**

accountability 153
adaptive leadership 101–3
advocacy 63
Aged Care Housing (ACH) Group 189–94
Akoranga Integrated Health Clinic 173
Alban-Metcalfe, J. 201, 210
Alimo-Metcalfe, B. 201, 210
altruism 158
Amin, Z. 146
Anderson, P. 75
Anderson, R. R. 113
Arnstein, S. 103
assessment
  of leadership 148
  of/for learning 145–6
  peer assessment 148
  personal opinion 146
  programmatic assessment 149
  self-assessment 148
Assessment of Interprofessional Team Collaboration Scale (AITCS) 90
assessors training and choice of 147
attitude shift, clinical settings 172
Auckland University of Technology, Faculty of Health and Environmental Science
  programs and mission 171
  see also clinical settings
Australia
  characteristics of IPE 124
  health leadership framework 1–2
  research and practice projects 183
  see also curriculum renewal studies; Health LEADS Australia
Australia New Zealand Academy of Management Health Management and Organization Special Interest Group 196
Australian Productivity Commission Position Paper 182
authentic leadership 74, 156–7
Axelsson, R. 158–9
Axelsson, S. 158–9
axes of leadership *17*

Bajaj Committee Report 214
Barnett, K. 192–3
Barr, H. 200, 233
barriers 223–4
belongingness 142
Bennett, N. 185, 187, 234
Berwick, D. M. 98
blended learning approaches 95
Bligh, J. 214, 216, 225
Bligh, M. 79
Bloom, B. S. 136
Bloom's taxonomy 136
book
  approach taken 2
  chapters and leadership aspects *4–5*
  how to use 3
  overall conclusion 234–5
  summary and conclusions 229–35
Boud, D. 146
boundary work 160
Boyle, D. K. 86
Brander, R. A. 159
Burns, L. R. 73, 110, 136, 172

Caldwell, C. 85
Canada
  health leadership framework 183–4
  staff layoffs 76

Canadian Interprofessional Health Leadership Collaborative (CIHLC)
and boundary work 160
collaborative leadership model 155–7
context and overview 153–5
phases 154–5, 162
proof-of-concept pilot 161, 162
requirements 161
sustainable model **155**
Canadian Interprofessional Healthcare Collaborative (CIHC) 88–9, 137, 143–4, 172, 188
CanMeds 2015 framework 231
capability 137
capability enhancement 161–2
capacity to effect change 87–8
care imperatives 77–8
Careau, E. 161
Cassel, J. 116
Centre for the Advancement of Interprofessional Education (CAIPE) 52, 95–6
Certification Board for Diabetes Educators in Japan (CDEJ) 59
cervical cancer vaccination 58
challenging process 82
champions 64, 170
change
capacity to effect 87–8
as constant 182
Chilvers, J. R. 192
Chreim, S. 160
Chuetsu Earthquake 58, 62
clash of values 231
clinical commissioning groups (CCGs) 96
clinical leadership 72, 78
vs. management leadership 201
clinical placements 142
clinical rotations
and IPE 44
length of 142
clinical settings
additional funding 177–8
Akoranga Integrated Health (AIH) management group 172
attitude shift 172
clinic leadership group 171–2
competency domains 172
constant review process 178
context and overview 169
development of leadership and governance team 171–3
evaluation of outcomes 178–9
framework 169–71
interdisciplinary collaborative practice (IDCP) 172
management style 172
minimal funding model 177
patient assessment 174–5
patient choice 175
patient feedback 179
patient management 174
patient pathway **176**
patient recruitment 173–4
pragmatism 180
programs and mission 171
recommendations 180
reflective questions 180–1
review assessment 175
selection of health condition for implementation 173–4
selection of implementation site 173
service development 173–4
single electronic patient record 174
staff education program 176–7
student allocation 175
student feedback 179
summary and conclusions 180
transformational leadership 170, 172
workshops 176–7
coaching 19–20, 205
coercive power 17
collaboration, micro- and macro-levels 156–7
collaborative leadership
care imperatives 77–8
case study 80–1
challenges to 87–8
characteristics, by authors *89*
competence 89–90
competencies 156–7
complementary leadership framework 72–4
context and overview 71
defining 79

collaborative leadership – *continued*
evaluation 88–91
for health systems transformation
see health systems transformation
integration with vertical leadership **73**, **84**
intersection with vertical **85**
new models 78–84
organizational hierarchies 72
reflective questions 92
summary and conclusions 91–2
systematic review 161
see also vertical collaborative leadership
collaborative practice 23
disease prevention and control 59–61
hospital-centred regional collaboration 55–6
JAIPE 54–62
Japan Interprofessional Working and Education Network (JIPWEN) 52
medical association-centred regional collaboration 57–8
multi-professional disaster collaboration (Japan) 61–2
social care-centred regional collaboration 59
universities-centred regional collaboration 56–7
command and control 72–3
commitment 43
communication, single electronic patient record 174
communities of practice 142, 162, 210–11
community-based soft powers 54
community coalitions 156
community diagnosis experience 115–18
Community Oriented Primary Care (COPC) 110–11
development and application 115–18
evaluation 118–19
objectives of exercise 114–15
student assessment 118
student experience 116–17
summary and conclusions 119
competence 137–8
clinical settings 172
for interprofessional practice (IPP) *139*, 188–9, *190*, 194
for leadership *140*
leadership as 138–41
leadership components 89–90
perceptions of 85–6
competency-based education (CBE) 136–7
complementary leadership framework 72–4, 91
complex adaptive systems 14, 15–16, 24, 113–14, 119
complexity 72
complexity theory 75–6, 158
conflicting viewpoints, as drivers of change 231
Consortium for Interprofessional Education Strategy-21 (CIPES-21) 52–4
constant review process 178
construct validity 147
constructive alignment 136
continuing interprofessional education (CIPE) 199–200
see also interprofessional education (IPE)
continuous learning 14–15
coordination 188
costs 233
credibility 202
Crossing the Quality Chasm (IOM) 76
Cruess, S. 211
Curran, V. 195
curriculum
overcrowding 130
use of term 126
curriculum development, student participation 111–12
curriculum renewal studies
4 dimensional framework (4DF) 126–9, **127**
competencies and learning outcomes 128
context and overview 121
development and capacity building 130–1

curriculum renewal studies – *continued*
discussion 131
enablers and constraints of IPE 129–30
L-TIPP study (Learning and teaching for interprofessional practice) 123–4, 132
NAS (National Audit Study) 124–6, 130–1, 132–3
National Forum 131
national picture 128–9
other reports and consultations 131–2
program elements 122–3
recommendations 130–1
reflective questions 133
research approach 125–6
summary and conclusions 132
teaching, learning and assessment 129
team 123

Dahlgren, G. 116
D'Amour, D. 214, 215
De Maeseneer, J. 110–11
decision-making, participation 19
delegation 23
dementia, prevention and control 61
Denning, S. 2
diabetes mellitus, prevention and control 59
Dickson, G. 182, 183, 184
disaster headquarters, Chuetsu earthquake 58
Disaster Medical Assistance Teams (DMATs) 61–2
disease prevention and control 59–61
distributed-coordinated leadership 21
distributed-fragmented leadership 21
distributed leadership 185–8
case study: Aged Care Housing (ACH) Group 189–94
and interprofessional practice 188–9
organizational implementation 193–4
patient/consumer voice 195–6
divided leadership 21
Donabedian, A. 76
Dunston, R. 123–4
dynamic delegation 23
e-learning 52, 53, 207, 211
Edmondson, A. 15, 19
Edmondstone, J. 72, 78
effective learning teams 14–15
effective practice 121–2
elder care
Japan 54–5
Total Care Centre for the Aged, Nagaoka City 59
emergent leadership 15–16, 229
emotional intelligence (EI) 74–5, 224
empowering leaders 73, 156, 157
enablers 171, 223–4, 232
enabling environment 105
enabling others 82
encouraging the heart 82
Epstein, R.M. 85
Equity and Excellence – Liberating the NHS 96–9
escalation 23
evaluation 232–4
evidence base, interprofessional education (IPE) 130
expert power 17–18
expertise 202
external leaders 16–17

facilitating leaders 156, 157
faculty development leadership 225
Faculty of Medicine and Health Sciences Universitas Muhammadiyah Yogyakarta (FKIK UMY) *see* FKIK UMY
faculty readiness 216–20, *218–19*
feedback
clinical settings 179
multisource 147
pharmacy leaders 209
reconceptualization 145–6
feedback and reflection, FKIK UMY 35–41
field experience activities, FKIK UMY 32
Firth-Cozens, J. 201–2

FKIK UMY
  bedside teaching (BST) 33–4
  case study presentation 35
  clinical pilot 32–6
  context and overview 29–30
  discussion and reflection 42
  evaluation of preclinical pilots 32
  field experience activities 32
  implementation difficulties 41–2
  leadership 43–5
  learning scenarios 30–1
  module development 33
  preclinical pilots 30–2
  preparation for IPE 30
  reflection and feedback 35–41
  reflective questions 46
  small group discussions 35
  summary and conclusions 45
  task force teams 30, 32–3
  teamwork activities 45
  see also Indonesia
fluidity, of teams 23
followership 138, 231
formal leaders 16
formal leadership 17, 18
Forman, D. 110–11
formative assessment 145
frameworks, education and practice 215
Frenk, J. 215
functional leadership theory 13
funding 177–8, 232, 234
further reading, leadership aspects *6–7*
future scenario planning 125

Gaffney, D. 88
generic professionals 76–7
Gensolve® 174
Ghaferi, A. A. 158
Ghent University 111ff
Gittell, J. H. 84
Global Health Workforce Alliance (GHWA) 52
Goleman, D. 74, 224
Gonnella, J. 208–9
good practice, responsibility to share 231–2
Great Eastern Japan Earthquake 62
great man theory 74
Greenhalgh, T. 113
Grint, K. 102
Gronn, P. 187, 188

Hall, P. 160
Hammick, M. 215
Hannah, S. 159
Hanshin and Awaji Great Earthquake 61–2
Harvard Business School 144
Hayes, L. A. 85
Healey, M. 103–5
Health and Social Care Act 2012 96
health costs 233
Health Education England (HEE) 1, 96, 99
health leadership framework (Australia) 1–2
Health LEADS Australia
  case study: Aged Care Housing (ACH) Group 189–94
  context and overview 182–4
  distributed leadership 185–8
  framework 184–5
  international influences 182–4
  and interprofessional education (IPE) 194–6
  leadership capabilities 185, *186*
  national focus group 196
  organizational implementation 193–4
  patient/consumer voice 195–6
  summary and conclusions 196
  theoretical basis 185–8
Health LEADS Australia Framework Draft Consultation Paper 191
Health Quality and Safety Commission (NZ) 200
Health Science Universities, India 213–14
health systems transformation
  capability enhancement 161–2
  collaborative leadership model 155–7
  context and overview 153–5
  reflective questions 162–3
  summary and conclusions 162
  sustainable model **155**
  theory to action 157–60

Health Workforce Australia (HWA) 124, 184
healthcare
  as complex adaptive system 14, 15–16, 24
  and shared leadership 14–16
  socialized/non-socialized 78
healthcare delivery, locus 142
Healthcare Environment Inspectorates (HEIs) 99
Heifetz, R. A. 101, 102
hero-leaders 182
hierarchy of leadership, and urgency 20–1
Higher Education Academy (HEA) framework 103–5
Hoffman, S. 105
Hojat, M. 208–9
Horder, J. 203
hospital-centred regional collaboration, Japan 55–6
human resources frame 43
Hundert, E. M. 85
Hutchins, E. 187

identity, organizational 113
inclusiveness, demonstrating 18, 20
independent clinical judgement 87
India study
  case study: post-graduate curriculum 221–3
  case study: undergraduate curriculum 223
  challenges 222–3
  concept map **217**
  context and overview 213–14
  data collection 216
  execution and sustainability 225–6
  expertise 220–1
  faculty development leadership 225
  faculty readiness 216–20
  feedback 222
  Health Science Universities 213–14
  Institute of Medical Technology and Teachers' Training 220–1
  institutional mechanisms 220–1
  organizational leadership 224–5
  organizational strengths 220–1
  preparation for IPE 214
  reflective questions 226
  research review 215–16
  results 218–20, *218–19*
  theoretical basis 214
Indonesia
  requirement to introduce IPE 29
  see also FKIK UMY
influence 85–6
informal leaders 16
informal leadership 17
information age, and leadership 75–7
information and communication technology (ICT)
  and leadership 75–7
  role of 63
information power 17, 18
innovation in practice 230
inquiries 183
inspiring shared vision 82
Institute for Healthcare Improvement Triple Aim initiative 157–8
Institute if Health Improvement (IHI), triple aim 232–3
Institute of Medical Technology and Teachers' Training 220–1
Institute of Medicine (Canada) 76, 161
integration
  IPE and collaborative practice 63
  vertical and collaborative leadership **84**
interaction 85–6
interdependence 153, 188, 214
interdisciplinary collaborative practice (IDCP), clinical settings 172
internal leaders 16
Interprofessional Capability Tool (ICAT) 147–8
interprofessional collaborative leadership *see* collaborative leadership
interprofessional collaborative practice 77, 215
Interprofessional Curriculum Renewal Consortium, Australia 128–9, 138, 143, 233

Interprofessional Education Collaborative (IPEC) 137, 231
interprofessional education (IPE)
awareness of purpose 138
characteristics, Australia 124
concept map **217**
country experiences 216
enablers and constraints 129–30
frameworks 215
Health LEADS Australia 194–6
impact in Japan 49
international endorsements 213
learning outcomes 136–8
models 215–16
practical steps 106
reflective questions 46
terminology 136–8
university-led and service-led IPE **50**
university networks, Japan 51–4
see also continuing interprofessional education (CIPE); FKIK UMY; Japan Association for Interprofessional Education (JAIPE)
Interprofessional Leadership Group (ACH) 191–2
interprofessional learning (IPL)
development factors 100–1
as Wicked Issue **103**
see also United Kingdom
interprofessional learning ladder **104**
interprofessional practice (IPP)
attitudes to 24
competences *139*, 188–9
competencies *190*, 194
definition 188
training implications 24–5
interprofessional teams, characteristics 195
interprofessional teamwork, international perspective
assessment of/for learning 145–6
challenges of assessment 142–3
context and overview 135–6
existing teamwork instruments 143–5
leadership as outcome and competence 138–41
leadership assessment 148
learning outcomes/competences *139–40*
practice-based learning 141–2
programmatic assessment 149
reflective questions 149
summary and conclusions 149
work-based assessment (WBA) 146–8
see also teams
interprofessionality 214
intersection between vertical and collaborative leadership **85**

Japan
life expectancy 47, 55
super-ageing society 48, 54
Japan Association for Interprofessional Education (JAIPE)
annual meetings 49–51
background 47–9
collaborative practice 54–62
context and overview 47
disease prevention and control 59–61
hospital-centred regional collaboration 55–6
international collaboration 52
medical association-centred regional collaboration 57–8
multi-professional disaster collaboration 61–2
proposal 48–9
reflective questions 64
social care-centred regional collaboration 59
summary and conclusions 62–4
universities-centred regional collaboration 56–7
university-led and service-led IPE **50**
university networks 51–4
Japan Fragility Fracture Network 60
Japan Interprofessional Working and Education Network (JIPWEN) 51–2

Japan Locomotive Syndrome Research Society 61
Japan Medical Association Teams (JMATs) 61–2
Japan Osteoporosis Society 60
Japan Primary Care Association 62
Japan Stop the Locomo Council 61
Japanese Society for Fall Prevention 60
Jichi Medical University 56–7
Jones, A. 159–60
Jones, D. 159–60, 192

Kark, Emily 115–16
Kark, Sidney 115–16
Katayama, Hisashi 57
key leadership tasks, complex adaptive systems 114
Kings Fund report (UK) 98
Kirkpatrick outcomes evaluation framework 143, 233
knowledge base, interprofessional education (IPE) 130
knowledge, skills and attitudes (KSA) 136
Kochinda, C. 86
Koidego Cultural Hall 58
Kouzes, J. 82, 148
Koyama, Takeshi 62
Koyama, Tsuyoshi 59
Kumamoto Rehabilitation Research Society 56
Kumamoto Seamless Care Network for Hip Fracture (SCAN-HF) 56
Kumamoto University 56

L-TIPP study (Learning and teaching for interprofessional practice) 123–4, 132
ladder of participation 103
Lancet Commission report 2010 153, 161
language, of IPE 136–8
Lave, J. 142, 162, 195
Lawlis, T. R. 216, 224, 225
leader-member exchange (LMEX) models 74
leader's position, within team 16–18
leaders, unexpected 229
leadership
  assessment 148
  capabilities 185, *186*
  development of concept 13–14
  as dynamic 201
  learning outcomes/competences *140*
  and mission 63
  as outcome and competence 138–41
  practices for good teamwork 91
  as responding to challenges 230
  theories and models 74–5
  traditional perspective 13
  leadership aspects
  chapters of book *4–5*
  further reading *6–7*
leadership elements, transformative leadership *83*
'Leadership for Change' (UK) 159
leadership frames 43
leadership practices 82
leadership skills, developing 44, 45
leadership styles 72–3
  characteristics *80*
leadership types, and performance 21–2
LEADS in a Caring Environment Leadership Capability Framework 184
learner expectations 99–100
learners, responsibility for learning 102
learning goals/objectives, tailoring 44
learning outcomes
  for interprofessional practice *139*
  for leadership *140*
learning scenarios, FKIK UMY 30–1
Lee, A. 126
legitimacy, interprofessional education (IPE) 130
legitimate power 17
Lester, P. 159
Levett-Jones, T. 142
Liddell, A, 98
life expectancy, Japan 47, 55
Lingard, L. 137, 161
Linsky, M. 102
living on the edge of chaos 75–6

local education and training bodies (LETBs) 96
Locomo Coordinators 61
locomotive syndrome, prevention and control 60–1
Lurie, S. J. 137

Maharashtra University of Health Sciences (MUHS) 214, 220
malnutrition 221–3
management leadership, vs. clinical leadership 201
management style, clinical settings 172
'Managing health care organizations: where professionalism meets complexity sciences' (Anderson and McDaniel) 113
McDaniel, R. R. 113
medical association-centred regional collaboration, Japan 57–8
medication safety 200–1, 203–8
Medway Hospital case study 80–1
Menard, P. 215
mental boundarylessness 158
mentoring 205, 225
metabolic syndrome, prevention and control 59–60
Mid-Staffordshire NHS Foundation Trust Public Inquiry 98
mini-CEX 146
minimal funding model 177
mission, and leadership 63
modelling the way 82
Molesworth, M. 99–100
Molloy, E. 146
Moran, M. 138
Morgeson, F. 16–18
Mowbray, D. 201–2
multi-professional disaster collaboration (Japan) 61–2
multi-team systems 21–2, 23
multidisciplinary care 77
multiple frames 43
multisource feedback (MSF) 147
mutual reliance 188
mutual respect 18

Nakamura, K. 60
National Advisory Group on the Safety of Patients in England 98
national agendas 1–2
National Audit Study (NAS) 124–6, 130–1, 132
National Centre for Interprofessional Education and Collaborative Practice (NCIEP) 169–70
National Forum, Australia 131
National Health Science students' Association (Canada) 105
National Health Service (NHS), UK 159
National Health Workforce Innovation and Reform Strategic Framework for Action (Australia) 121–2, 184
Navy teams study 202
network theory 22
new managerialism 76
new models of team leadership 78–84
New Zealand *see* pharmacy leaders
Nicholson, D. 96
Niwayama, Masaaki 58
non-socialized healthcare 78
Northouse, P. G. 170

Oandasan, I. 214
O'Keefe, M. 131
Onomichi City Medical Association 57–8
Ontario studies 159–60
opinion leaders 201
Orange Plan (Japan) 61
Orchard, C. 171, 172, 177, 90
organizational environments
  conflicting viewpoints 113
  and transformational leadership 113–14
organizational hierarchies 72
organizational identity 113
organizational leadership 224–5
Orrell, J. 141
osteoarthritis (OA) 173–4
osteoporosis and osteoporotic hip fracture, prevention and control 60
outcomes, leadership as 138–41
overcrowded curriculum 130

Parsell, G. 214, 216, 225
participation, in decision making 19
participative action research (PAR) 159
patient assessment 174–5
patient choice 175
patient/consumer voice 195–6
patient feedback, clinical settings 179
patient management 174–6
patient pathway, clinical settings **176**
patient safety 45, 98, 199
  medication safety 200–1, 203–8
patients, feedback and reflection 39–41
Pavlov, I. 74
Pawson, R. 136, 233
Pearce, C. L. 72–3, 78–9, 86
peer assessment 148
performance, and leadership types 21–2
personal power 17, 18
pharmacy leaders
  attitude scale 208–9
  background 199–201
  coaching 205
  context and overview 199
  evaluation 208–10
  feedback 209
  future 209–10
  goal of project 204–5
  intervention 204–8
  prescribing errors 209–10
  project 203–4
  summary and conclusions 210–11
  support for project 205
  systems approach 206
  theoretical basis 201–3
physicians' responsibilities 112
placements 142
Plesk, P. E. 113
population ageing
  and prescribing 210
  United Kingdom 97
positional power 17, 18
positive reflective learning environment 206
Posner, B. 82, 148
power, types and sources of 17
practice-based learning 141–2
practice innovation 230
pragmatism, clinical settings 180
pre-clinical placement preparation 141
prequalification level education 135–6
prescribing and safety 200–1, 203–4
  prescribing errors 209–10
Primary Care for All Team (PCAT) 62
professional bureaucracy, and complex adaptive systems 113
professional cultures, as barriers 231
professional divides 24
proficiency, maintaining 18
program evaluation, objectives 233
programmatic assessment 149
psychological safety 15, 19
psychometrics 144
Public Health Nutrition 221–3
Pulimood, A. B. 223
pyramidal education 210

quality improvement pharmacist 205–6
Quality Improvement (QI) 76, 199
quality of care, basis of 189
quantitative tools 143–4

Raelin, J. A. 79
Rayner, K. 201
Readiness for Interprofessional Learning Scale (RIPLS) 214, 216
realist approach 136, 233–4
recent developments 1
reciprocity 74, 80
Reeves, S. 215
referent power 17, 18
reflection and feedback, FKIK UMY 35–41
reflective questions
  clinical settings 180–1
  collaborative leadership 92
  curriculum renewal studies 133
  health systems transformation 162–3
  India study 226
  interprofessional education (IPE) 46

reflective questions – *continued*
interprofessional teamwork, international perspective 149
JAIPE 64
shared leadership 26
transformational leadership 119
regional collaboration
hospital-centred 55–6
medical association-centred 57–8
social care-centred 59
universities-centred 56–7
regulation 87
relational-based integration 79–80
relational coordination 84, 85
relational leadership 84–7
research, lack of funding 234
resistance 223
resonant leadership 74
review assessment 175
reward power 17
Robert Gordon University 105–6
role modelling 205, 207, 211, 232

Saku Central Hospital 55
Scale of Attitudes toward physician and pharmacist collaboration 208–9
scapegoating 88
self-assessment 148
self-awareness 156
self-directed learning 64
sensemaking 158
servant leaders 201, 210
shared leadership *17*, 72–3
context and overview 13
as divided leadership 21
elements of 18–20
evidence for 20–2
and healthcare 14–16
in healthcare context 22–4
leader's position 16–18
and leadership 13–14
measuring 22
necessity 122
reflective questions 26
summary and conclusions 25
training implications 24–5
shared mental models 18–19
shared purpose 18–19
sharing of good practice 231–2
Sharpe, D. 195
Shulman, L. S. 76
signature pedagogies 76
Sims, H. P. Jr. 72–3, 79
simulation, for assessment 144–5, 147
Sinek, S. 2
single electronic patient record 174
skill stations 207
skills mix, transferable skills 98–9
Skinner, B. F. 74
social accountability 153
social care-centred regional collaboration 59
social media, for information sharing 1
social network analysis 22
social practice perspective 195
social support 18, 19
socialized healthcare 78
Society of Fall Prevention Medicine 60
soft powers 54
Soubhi, H. 230
SPARK 148
Spillane, J. 185, 187
staff layoffs, Canada 76
stakeholders 224
standard operating procedures (SOP) 43
standards of practice 87
storytelling 2
stress, and quality of care 201
structural frame 43
student allocation, clinical settings 175
student-initiated IPL, United Kingdom 105–6
Student Leadership Practices Inventory 148
student participation, in curriculum development 111–12
Student Workgroup on Medical Education, Ghent University 111–12

students
  active role 110
  assessment of 143
  organizational influences 194–5
  recommendations to 107
  voice 232
students as partners 103–5, **104**
success criteria 232
summative assessment 145
super-ageing society, Japan 48, 54, 63, 64
supportive coaching 19–20, 205
sustainability 216, 225–6, 232
sustaining leaders 156
Sweden, welfare transformation 158–9
Swenson, S. 157–8
systems approach 206

T-TAQ 145
Tame Issues 102
targets 78
teaching nursing homes 192–3
team assessment behaviour (TAB) 147
team OSCE (T-OSCE) 143
teams
  characteristics 195
  construction of 23
  continuous learning 14–15
  effective membership 138, 141
  as evolving and emergent 160
  leader's position 16–18
  relationships 79
  skills mix 97
  see also interprofessional teamwork, international perspective
TeamSTEPPS 145
teamwork
  existing assessment instruments 143–5
  leadership practices 91
  task assessment 144–5
  work-based assessment (WBA) 146–8
technology-enhanced learning 95
terminology 136–8, 161
territoriality 158
theories and models of leadership 74–5
Thistlethwaite, J. 138, 141, 142, 189
Tholl, B. 182, 183, 184
Tilley, N. 136, 233
Total Care Centre for the Aged, Nagaoka City 59
training and development, in differing contexts 23
training implications, interprofessional practice 24–5
transactional leadership 73, 74, 82
transferable skills 98–9
transformational leadership 110–14, 136, 202, 231
  reflective questions 119
transformative leadership 72, 74, 80–1, 82, 156, 224, 231
  comparison of elements for leaders and interprofessional teams *83*
transformative learning 153
triple aim 232–3
trust 85–6, 202
Tucker, L. 179
two-way learning 208

uncertainty 72
United Kingdom
  adaptive leadership 101–3
  ageing NHS workforce 97
  capacity for transformational IPL 101
  context and overview 95
  development of IPL 100–1
  health teams, composition 97
  healthcare predictions 96–9
  IPL reviews 95–6
  learner expectations 99–100
  new medical challenges and innovations 97
  out-of-hospital care 96–7
  population ageing 97
  practical steps 106
  recommendations to students 107
  revolution in healthcare delivery 96–9
  student-initiated IPL 105–6
  students as partners 103–5, **104**
  summary and conclusions 107
  transferable skills 98–9
  triggers for change 95–6
  workforce needs and educational direction 99

universities-centred regional collaboration, Japan 56–7
University Health Network (UHN), Collaborative Change Leadership program 153–5, 161, 162
university-led and service-led IPE **50**
university networks, Japan 51–4
Uonuma City Medical Association 58
Uonuma Community School for Health and Social Care 58
urgency, and hierarchy of leadership 20–1
US Navy study 187

vaccination, cervical cancer 58
value clashes 231
Varpio, L. 215
vertical collaborative leadership
  case study 80–1
  skill set 82
  see also vertical leadership
vertical leadership 14, 78
  combined with shared leadership 78–80
  flexibility 86
  integration with collaborative **84**
  intersection with collaborative **85**
ViTA 192–3
voice 19
  patient/consumer 195–6
  students 232

Wakatsuki, Toshikazu 55
welfare transformation, Sweden 158–9
Wellsford project 177
Wenger, E. 142, 162, 195, 210–11
Western Australia, IPE development study 124–5
Whitehead, M. 116
WHO/JIPWEN action plan 52
whole-system approach 45
Wicked Issues 102–3
Wide-area Social Care Support Network for Disaster (Thunderbird) 62
Wilcock, P. 200
Wong, G. 233
work-based assessment (WBA) 146–8
work-integrated learning (WIL) 141
workforce flexibility 1
World Health Organization (WHO)
  guidelines 1, 135, 169
  Health for all by the year 2000 213
  JIPWEN mission 52
  recommendations 77
  report 2010 183, 203, 230
  study group on IPE 138

Youngs, H. 187

zone of trust 85

BUKU LEADERSHIP AND COLLABORATIVE cek turnitin

ORIGINALITY REPORT

96%	18%	97%	4%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

MATCH ALL SOURCES (ONLY SELECTED SOURCE PRINTED)

2%

★ eprints.brighton.ac.uk

Internet Source

Exclude quotes	On	Exclude matches	< 1%
Exclude bibliography	On		