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BENCANA ALAM DAN PENDIDIKAN INTERPROFESI NATURAL DISASTER AND INTERPROFESSIONAL EDUCATION

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ABSTRAK

Petugas kesehatan mempunyai kewajiban dalam menangani pasien akibat bencana alam. Institusi pendidikan dokter dan kesehatan di Indonesia yang memproduksi tenaga kesehatan masih dalam tahap awal pengembangan pendidikan interprofesi. Kenyataannya, tenaga kesehatan belum terbiasa dengan kerja tim untuk melayani pasien, sehingga mereka belum siap betul dalam merespon masalah kesehatan atau penyakit yang timbul akibat bencana alam. Artikel ini bertujuan untuk memberikan pemahaman kepada institusi kesehatan tentang konsep interprofessional education (IPE) dalam kondisi bencana alam. Metode review artikel dengan menganalisis artikel ilmiah dari jurnal dan buku teks. IPE merupakan langkah penting dalam mempersiapkan tenaga kesehatan bekerja secara kolaboratif untuk mengantisipasi penyakit sebagai akibat bencana alam agar kesembuhan pasien menjadi lebih baik. Pasien adalah fokus utama dari setiap kondisi darurat seperti pada bencana alam. Dalam kondisi bencana alam, kerja tim yang efektif merupakan kompetensi penting dalam IPE. Kinerja tim yang tidak efektif dapat mengakibatkan penanganan pasien yang tidak optimal. Penerapan praktik kolaboratif oleh tenaga kesehatan dalam menangani kondisi darurat akan menghasilkan kesembuhan pasien yang lebih baik jika tim memiliki pengetahuan dan keterampilan yang memadai sesuai peran masing-masing profesi. Untuk mengoptimalkan peran tenaga kesehatan, institusi pendidikan kesehatan perlu mengembangkan IPE termasuk modul tentang bencana. Latihan langsung di masyarakat juga diperlukan untuk memastikan bahwa keterlibatan mahasiswa selama bencana sebenarnya juga dibutuhkan sebagai bagian dari rencana penanggulangan bencana daerah.

Kata kunci: bencana alam, IPE, kolaboratif, tenaga kesehatan

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ABSTRACT

Health care provider provide first response to patients in disaster. Medical and health institutions in Indonesia which produce health professional are still in early process to develop IPE for their students. Health professional unaccustomed with team work to serve patients, therefore they are not properly prepared to response natural disasters. The aim of this article is to give understanding for health institutions about interprofessional education (IPE) concept related to natural disaster. Review article conducted by analyzing scientific article from journals and text books. IPE is a necessary step in preparing a collaborative practice ready health work force to respond in disaster and getting better patient outcomes. Patients are the primary focus of any emergency response such as disaster. In disaster team work is the crucial competency that must be think first. Team performance however may not be optimal and it is often the patient who suffers from this dysfunction. Improved inter professional practice in emergency response will lead to better patient outcomes when teams have adequate knowledge and skills. They will manage the patients each other appropriately based on their each role. Health institutions should develop IPE including module focus on disaster/emergency preparedness to optimize role of health provider. Real experience into community exercises also

necessary to ensure that student involvement during actual disasters also needed as a part of local disaster management plans.

Key words: natural disaster, IPE, collaborative practice, health care provider

INTRODUCTION

Disasters are hazards that can cause destruction or environment changes. There are two types of disaster, i.e. natural disasters and man made disasters. Natural disaster is the effect of natural hazards. The top 10 natural disasters consist of cyclone, earthquake, tornado, volcano eruption, tsunami, flood, wildfire, drought, avalanche and landslide. Indonesia as an archipelago country is prone to natural disaster such as earthquake, volcano eruption, flood, and landslide.

Natural disaster might affect human's life in either direct or indirect way. The clinical manifestation might affect human beings both physically and psychologically in a short onset or immediately or slowly depending on the causal factors of the disaster. The degree of damage starts from the mild to severe or it might take lives. Health problems caused by natural disasters varies, starting from physical trauma, fractures, bleeding, combustion, infection, septicemia, etc. It might also be manifested in psychological or mental disturbance such as stress, insomnia, depression, and even schizophrenia.

To minimize the impact of natural disaster to humans or patients, health providers play significant role in the early disaster management, particularly in emergency situation. Fast and appropriate initial intervention is highly needed to prevent patients suffered more or even die. Collaborative practice among health providers is needed for optimum handling in natural disaster occurrence. Unfortunately, health providers in general are not used to work well in a team work. Schools of Medicine and Health Sciences in Indonesia are currently working on the development of Interprofessional Education (IPE) for their students. This is a good opportunity for the institutions to prepare the graduates of School of Medicine and Health Sciences to exercise an effective teamwork in

handling emergency cases caused by natural disaster.

The aim of this article is to give understanding for health institutions about interprofessional education (IPE) concept related to natural disaster.

METHOD

This article is written based on analysis of scientific articles about IPE and natural disaster from journals and books. And also, scientific articles from journals and textbooks about medical education and health science.

NATURAL DISASTER AND IPE

Inter professional Education (IPE) occurs when students from two or more professions learn from one another to enable an effective collaboration and improve health outcomes (WHO, 2010). Another definition of IPE i.e. as any conditions when two or more Professionals learn from and about each other in order to cultivate collaboration and professional insights (Barr, 2001). Inter professional collaboration is the process of developing and maintaining effective inter professional working relationships with learners, practitioners, patients/clients/families and communities to enable optimal health outcomes (CIHC, 2010). Based on the definition above, 2 important keywords in IPE are collaboration and improving health outcomes or improving service quality.

There are six competencies need to be developed in a collaborative practice: 1) communication; 2) strength in one's professional role; 3) knowledge of the professional role of the others; 4) leadership; 5) team function; 6) negotiation for conflict resolution (MacDonald *et al.*, 2010). According to panel expert report (2011), collaborative competency comprises of 4 domains, namely: 1) value/ethics for professional

role; 2) role/responsibility; 3) inter professional communication; 4) teams and teamwork. Based on prescribed competency, team work, inter professional communication and professional role are the three competencies need for attention. In emergency case, teamwork is a competency that is significant and requires special attention. Improved inter professional practice in emergency response will lead to better patient outcomes when team members have adequate knowledge and skills of all professions involved and are able work together appropriately based on their each role.

According to Reeves *et al.*, (2010), there are 4 components or factors which are interrelated in an inter professional teamwork, namely: 1) relational; 2) processual; 3) contextual; and 4) organizational (Fig. 1). These factors are influence each other, institutions should consider all of these factors and give full support for developing effective inter professional team work. In critical situation such as natural disaster, it is often found various problems of health, starting from emergency situation that requires immediate intervention to problems following afterwards such as infection, physical disability, hygiene, sanitation, etc. Each health provider is required to manage the situation based on their professional role through a collaborative work approach, since this would result in more optimum handling rather than that of individual work. Hence, developing positive attitude and mutual trust are imperative in a teamwork.

Competencies required in a teamwork includes: 1) team cohesion, the collective forces that influence members to remain become a part of a group; an attraction to the team concept as a strategy for improved efficiency; 2) mutual trust, the positive attitude that team members have for one another; the feeling, mood, or climate of the team's internal environment; 3) collective orientation, the common belief that a team approach is more conducive to problem solving than an individual approach; and 4) importance of teamwork, the positive attitude that team members exhibit with reference to their work as a team. Effective collaboration can promote

positive interaction, trust, reduce stress, and increase quality of patients care (Barr *et al.*, 2005).

Patients are the primary focus in any emergency condition such as disaster. This is in line with the trend of current health service, namely patient center care. In patient care center system, patients are involved in the decision making for any intervention they would receive. In the case of being unable to participate due to unconsciousness or other disturbance, family are allowed to represent him or her in the decision making process. IPE aims to improve the health outcome of patients and this is unseparable from the patients' safety. Patient's safety is one of the driving factors to the implementation of IPE, which is aimed to minimize medical errors.

Each health provider needs to have adequate knowledge and skill to be able to work fast, accurately, and appropriately in a teamwork. To achieve a better health outcome, target of patients' safety needs to be understood and implemented in carrying out intervention in natural disaster occurrence. The targets include (Hospital Accreditation Commission, 2012): 1) maintaining accuracy in patient's identification, 2) improvement on effective communication, 3) improvement on high-alert medicines, 4) assurance of exact-location, procedure-suitability, patient-precision operation, 5) minimizing the risk of nosocomial infection acquired from health service, 6) minimizing the risk of patients' fall. To manage the incidents in natural disaster occurrence, it is necessary to prepare highly skilled health workers with ability to work in team and have a good communication skill. The ability to work in team, together with the affecting factors, needs to be taught and trained to students of health profession so that after completing their education, they are ready to work in team. Meanwhile, the learning materials to develop and exercise students' skill should include modules, teachers as facilitator, media as trigger, resources (simulation patient, real patient, manequin, library) and assessment scheme.

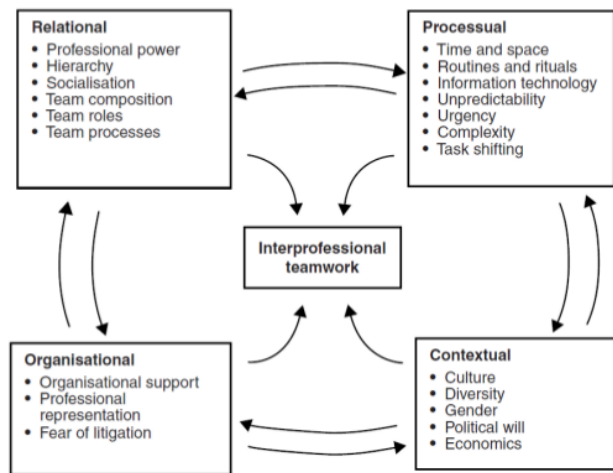


Figure 1. Factors in interprofessional teamwork (Reeves *et al.*, 2010)

Inter Professional Module Development

IPE module comprises of several components, such as: 1) introduction/background; 2) aims and objective of the study; 3) description of topics and discussion; 4) strategy or method of learning; 5) assessment scheme and 6) schedule of activity and resources (human resources, financial resources, equipment and infrastructure, etc.) (Freeth *et al.*, 2005).

IPE modules for natural disaster in the curriculum of health profession education are certainly become a part of overall modules developed in IPE. Modules of natural disaster based on the impact caused by (condition of health problems of disease) could be grouped into module of trauma, infection, mental disorder, malnutrition etc. However, module of natural disaster should be started with another module to give students a background knowledge on team work and interprofession communication. Introduction or background of module should inform the importance of content in the module. Providing factual data related to emergency or natural disaster will make the module more interesting and complete. The aims and objective involving the competency that will be achieved after this module should be formulated clearly.

Topics that will be covered should be relevant to the purpose of the module.

Strategies or method of learning employed could be in the form of in-class lecturing, group discussion, role play and simulation on clinical skill practice, assignment, workshop/seminar, and reflection. Learning scene could be both in campus or off campus such as among the community life, while the simulation could be performed in campus like in skill activity laboratory **community that imitates the real condition. Real experience into community exercises is also necessary to ensure that student involvement during actual disasters is needed as a part of local and provincial disaster management plans.** With the teaching and training of module on health problems and disease that are closely related to natural disaster, it is expected that the graduates are able to work effectively in team to solve the health problems in natural disaster occurrence.

The assessment on the IPE implementation is a new item in the Schools of Medicine and Health Sciences in Indonesia and in other countries. In Indonesia, IPE implementation is in the initial stage of IPE curriculum development, and not all institutions of medical and health education implement it. Principally, the assessment of IPE in relation

with natural disaster module remains based on assessment on attitude, knowledge and skill in both scientific and collaborative aspects. Students learning the modules of natural disasters are advised to have adequate knowledge and skill (meeting the minimum standard of competence) according to the standard of competence required by each profession so that they could learn to develop an effective inter professional collaboration.

Scheduling collaborative module activity, technically is the first problem for health institutions in implementing IPE. It needs strong coordination and good will among coordinators or person in charge to manage this program in order to overcome the difficulty in arranging schedule (to meet various profession in the same time) (Kusumawati & Orbayinah, 2015).

Facilitators and Supporting Preparedness

To become a good facilitator in IPE, strong will, high commitment and serious effort are prerequisite. Thus, the institutions needs to develop special programs such as faculty training so that teachers as facilitators understand the importance of IPE for health profession. It is expected that they could contribute to the optimum learning process, and even, become a good role model in interprofession learning. The followings are the attributes a facilitator needs to possess in IPE (Nisbeth & Thistlethwaite, 2011):

1. Having an up-to-date knowledge on adult learning;
2. Having knowledge and skill on team work and team building;
3. Having experience in working in team in inter profession health service project;
4. Having experience in collaborative work and ability to motivate others at his or her place;
5. Understanding other professions and having responsibility as well as awareness toward issues that might hamper or cause controversy on the role of professions ;
6. Having skill as facilitator and managing conflict;
7. Becoming a role model in IPE;
8. Etc.

Education can play a part in preparing students for collaborative practice and teacher as facilitator is an important factor that must be prepared by institution. Teacher in practice or classroom, planning, commitment enthusiasm and the modeling of collaborative practice with other educational colleagues are all essential elements of successful initiative (Cable, 2003).

Triggers for learning modules in natural disaster, like other modules, could be in the form of scenario, case study, short film or video similar to or depicting real situation in the practice class. Learning aids and resources like manequin or patient of simulation are prepared based on situation of health problem encountered. Even, in certain cases like trauma with all the complication accompanying (bleeding, shock, respiratory arrest, etc.) the combination of simulation patient and manequin could be used simultaneously. Patients of simulation with molase are expected to contribute according to the content and learning objective, while examination and intervention could be done to manequine. Institution has responsibility to prepare learning resources such as manequin, learning media (video), simulated patients, etc., to make the process of teaching and learning more interesting and effective.

Challenge

There are several challenges found in the implementation of IPE such as the commitment of the institution, students' preparedness, curriculum (learning modules and evaluation scheme), technical aspect of schedule management, physical equipment and infrastructures, and fund. The most crucial challenge, among others, are the commitment of the organization and the readiness of the teachers as facilitators in IPE. The arrangement of schedule of inter profession activity that is found as the one of problems in collaborative learning (Nisbeth *et al.*, 2011) should be overcome with the high commitment of the institution and an effective centralized management. Teachers as facilitators in IPE are expected to become a role model in collaborative practice though it is hard to do especially when it concern with the mindset of the individual health workers who are familiar with multi profession work. Policy system in

Health Profession Education related to IPE implementation is found to be unsupportive to system in service.

CONCLUSION

Interprofessional Education (IPE) plays significant role in preparing graduates of health profession to do collaborative, interprofession work to solve health problems or diseases impacted from natural disaster occurrence. Students or graduates need to have competence on knowledge and skill according to standard of each profession and develop the spirit of mutual respect, trustworthiness, and collaborative work in synergical efforts to be able to take a fast, appropriate and accurate action so that the health outcome for patients impacted from natural disaster could be achieved. Curriculum, modules, equipments and infrastructure, needs to be carefully prepared prior to the implementation of IPE. Challenge or obstacles in the implementation of IPE, such as the management of schedule, and similar work should be overcomes with strong commitment and management at all health institutions.

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