

**ANALYSIS OF ROLE OF FACULTY OF MEDICINE AND HEALTH  
SCIENCE MUHAMMADIYAH UNIVERSITY OF YOGYAKARTA  
TOWARDS PREPARATION OF HUMAN RESOURCES QUALITY  
WITH THE CONCEPT OF ACADEMIC HEALTH CENTER**

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**ABSTRACT**

**Background:** The concept of Academic Health Center (AHC) is a combination of education, research and health services functions. Faculty of Medicine and Health Sciences University of Muhammadiyah Yogyakarta (FKIK UMY) is educational institution with study program of Medical, Dentistry, Nursing, and Pharmacy. The concept of AHC is potentially applied in Indonesia especially in FKIK UMY to improve the quality of human resources in accordance with Competency Standard of Indonesian Doctor 2012 (SKDI 2012) and WHO 5 star doctors. The purpose of this research is to determine the role of FKIK UMY towards preparation of human resources in realizing the concept of AHC.

**Subject and Method:** This study used a qualitative research design by doing 7 interview questions. Interview was given to 6 informants from representatives of the Dean of FKIK UMY, several teaching staff of Medical and Nursing of FKIK UMY. This research was conducted in April - May 2018 which is located in FKIK UMY. The results of interview transcripts were processed using descriptive method.

**Result:** The role of FKIK UMY in attempt to realize the concept of AHC based on 4 aspects consisting of organizational aspects namely bureaucracy, policy aspects namely regulations, financial aspects namely financial support, and aspects of resources namely competent human resources and teaching

hospital. The concept of AHC may facilitate the role of FKIK UMY in implementing the Tridarma of higher education and it is expected to have merger organization among FKIK UMY manager with teaching hospital manager and involving the role of Health Advisory of Muhammadiyah Central Board (MPKU).

**Conclusion:** The role of FKIK UMY has just reached the stage of legal collaboration and coordination with the Health Advisory of Muhammadiyah Central Board (MPKU) and teaching hospital to realize the concept of AHC.

**Keywords:** FKIK UMY, Tridarma of Higher Education, Academic Health Center

## **BACKGROUND**

Indonesian Law Number 20 year 2013 concerning Medical Education states that the government must support the Primary Care Physician Program and medical education must be able to serve holistically (promotive, preventive, curative, rehabilitative and palliative).

Academic Health Center (AHC) is a functional organization which is a combination of educational functions, research functions and health service functions of various health institutions. Integrated AHC from various institutions including University Community, Teaching Hospital and Practice Plan. AHC is developing to achieve equal distribution of doctors in primary care and universal coverage. AHC has the concept of integration between the national health system, the vehicle for clinical education, and the national higher education system (tridarma higher education). So when all can be integrated with the AHC concept, it can improve the quality of health services in the community.

Muhammadiyah is an educational institution founded by Ahmad Dahlan which has a vertical and horizontal organizational structure. MPKU is one of the charity movements in the field of public health and welfare. MPKU stands for the Health Advisory of Muhammadiyah Central Board in charge of fostering hospitals belonging to Muhammadiyah (Pujodjokusumo 1998).

Muhammadiyah University of Yogyakarta is one of the universities belonging to Muhammadiyah in Yogyakarta which has the Faculty of Medicine and Health Sciences (FKIK). FKIK UMY has a vision of being an independent, well-managed Faculty of Medicine and Health Sciences rooted in Indonesian Islamic socio-cultural and national evidence-based, regional and even international evidence-based medicine (Pujodjokusumo 1998).

The concept of AHC can be applied in Muhammadiyah organizations which have three elements in realizing the AHC. There are FKIK UMY as medical and health education institutions that carry out education, research, and service/community service.

## **SUBJECTS AND METHOD**

The subjects of this study are 6 informants from representatives of the Dean of FKIK UMY (1 person), secretary of the Medical Education Study Program FKIK UMY (1 person), teaching staff of Medical Education Study Program FKIK UMY (3 people), secretary of FKIK Nursing Study Program UMY (1 person), teaching staff of Nursing Study Program FKIK UMY (1 person). This study used a qualitative research design by interviewing 7 questions on 6 informants. The results of the interview transcript were processed using descriptive method.

## **RESULTS**

### **1. Overview of Research Subjects**

Information was obtained from 6 (six) informants representing a number of institutions. The brief description of the informant is the Dean of FKIK UMY (1 person), secretary of Medical Education Study Program FKIK UMY (1 person), teaching staff of Medical Education Study Program FKIK UMY (3 people), secretary of Nursing Study Program FKIK UMY (1 person), teaching staff of FKIK Nursing Study Program UMY (1 person). The list of people who are the subjects of research as shown in table 1.

Table 1. Overview of Research Subjects

No	Subject's affiliation and institutional origin	Knowledge about the role of institutions related to the concept of AHC
1	The subject is the Dean of FKIK UMY (R1)	FKIK must have their own academic hospital
2	The subject is the secretary of medical education program FKIK UMY (R2)	The AHC will be established in medical, nursing, pharmacy, midwifery education institutions with medical faculty as its centers. The hospitals below are called satellite hospitals
3	Teaching staff of medical education program FKIK UMY (R3)	Doctors who are lecturers at UMY are doctors who provide services in hospitals. FKIK lecturers can carry out the Tridarma of Higher Education
4	The teaching staff of the medical education program of FKIK UMY (R4)	AHC consists of three stakeholders, first there is a medical institution, an academic institution. AHC must consist of several supporters, one of them is a satellite hospital
5	Secretary of Nursing Study Program FKIK UMY (R5)	There is no policy regarding AHC for nursing profession. AHC is one of the systems that must be used in medical education
6	Teaching staff of nursing study program FKIK UMY (R6)	Health education cannot be separated between practice in the clinic and the development of science. Services also require good research or technology to help improve the quality of service.

The result of coding data obtained from interviews shows that there are informants who already know the concept of AHC. Coding data about subject's knowledge towards AHC is presented in Table 2 below.

Table 2. Knowledge about the Concept of Academic Health Center (AHC)

Subject	Category
R1	Knowing
R2	Well knowing
R3	Very well knowing and trying to give solutions
R4	Well knowing
R5	Knowing
R6	Knowing

The role asked in relation to the AHC included the role in the concept of AHC, the role taken in preparing the quality of human resources and quality of graduated students, the efforts made to realize the AHC, and the obstacles faced to realize the AHC. The results of coding data about roles in AHC are presented in Tables 3, 4, 5, and 6.

Table 3. Knowledge of the role of FKIK UMY in the concept of Academic Health Center

<b>Subject</b>	<b>Category</b>
R1	Provides human resources (HR)
R2	Educate and shape the system
R3	In accordance with the function of the Tridarma of Higher Education
R4	Provides human resources, makes policies, researches
R5	Creating an AHC Pilot project
R6	In accordance with Tridarma of Higher Education

Table 4. The Role of FKIK UMY in Preparing the Quality of human resources and the Quality of Graduates

Subject	Category
R1	Prepare human resources and academic hospitals
R2	Prepares human resources, especially specialists and consultants
R3	Improves the quality of educators / lecturers
R4	Prepare superior service quality and map of human resources
R5	Form a team to realize the AHC
R6	Preparing educators with specialistic graduate included in nursing

Table 5. Efforts Made to Realize the Concept of AHC

Subject	Category
R1	There have been efforts to realize it
R2	There have been efforts to realize it
R3	There have been efforts to realize it
R4	There have been efforts to realize it
R5	There have been efforts to realize it
R6	There have been efforts to realize it

Table 6. Constraints faced related to the Process of human resources preparation in the Concept of Academic Health Center

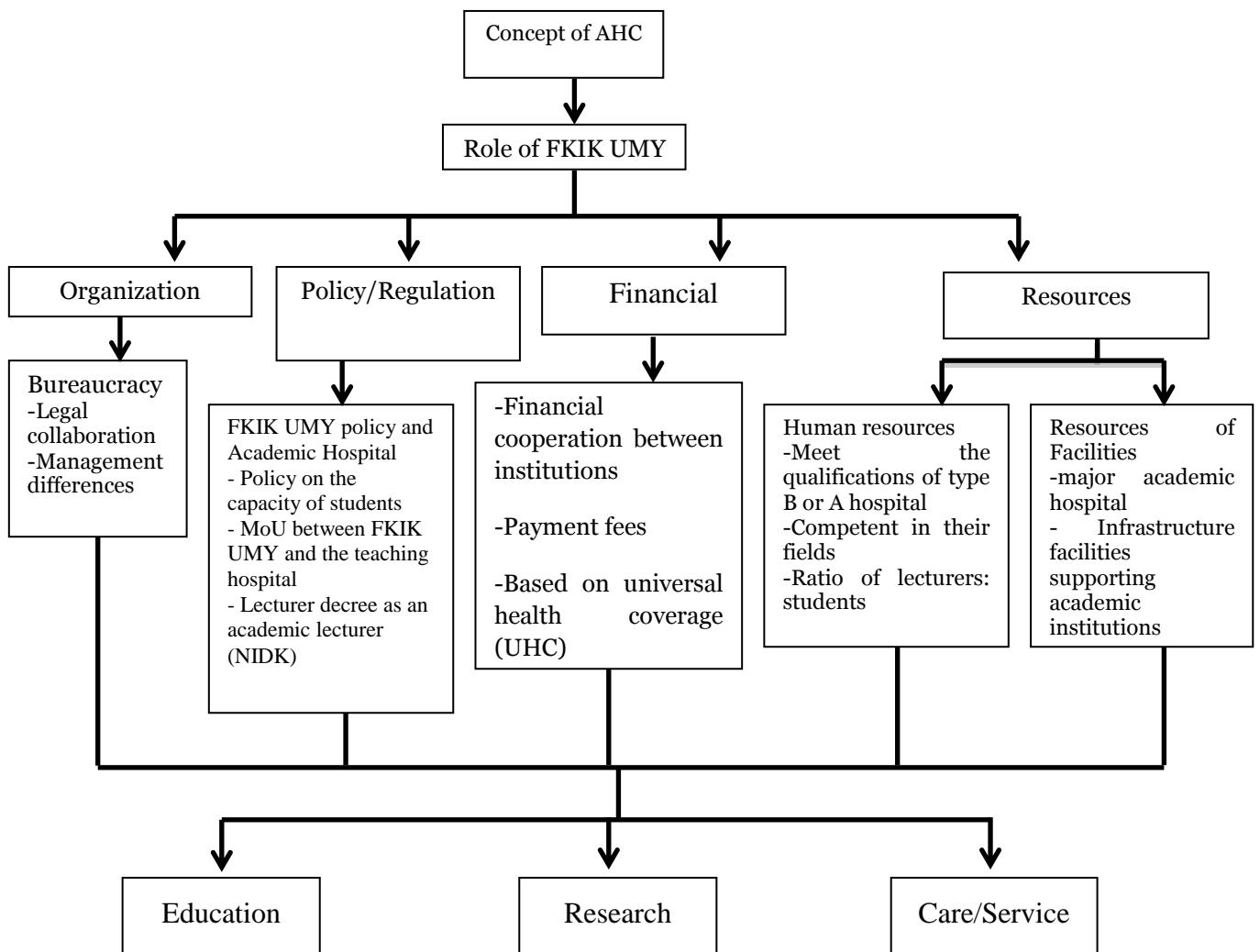
Informant	Category
R1	Human resources capacity is still lacking
R2	Not comparative studies, managers of hospitals and clinics are different
R3	The ratio of lecturers: students is not yet ideal, NIDK is complicated
R4	Management differences and there is no legal collaboration

Informant	Category
R5	Cooperation is not yet strong
R6	There has not been any attempt to realize the AHC

## DISCUSSION

The role of FKIK UMY in preparing the quality of human resources and quality of graduates in realizing the concept of AHC is as follows

Figure 1. Role of FKIK UMY in Realizing the concept of AHC



Based on the picture above, in simple terms, there are 4 aspects of implementation in FKIK UMY to realize the concept of AHC, namely

## 1. Organizational / Management Aspects

To manage AHC it has to be balance between academic and commercial interests of the institution. AHC must have a good strategy in financing because a teaching hospital will have more operational costs compared to non-education hospitals. Maximizing resources, academic facilities, and maximizing research maximizing the referral system will make the management system run well. In addition, with support from the government also plays a role in the AHC (Feifer et al. 2003).

The difference in management of medical education institutions with health care institutions makes AHC difficult to implement. Theoretical science sometimes makes a lot of diagnostic examination important so there is an increase in health costs. On the other hand, practical science is sometimes not in line with theory but costs can be minimized. This becomes a dilemma if it is discussed at different levels of management. Hospital management prioritizes patient satisfaction, one of which is at an affordable cost, while the management of educational institutions aims to carry out a complete examination in accordance with the tridarma of higher education, education, research, and care (Washington, Coye, and Feinberg 2013). So that the ideal AHC is led by one management or joint management under the same legal collaboration to be aligned in the vision and mission of the AHC (Lencioni 2002).

## 2. Regulation Aspects

There has been a policy in the form of assignment of medical and / or non-medical staff programmed as educators. In addition, every clinical educator at PKU Gamping Hospital, especially the doctor's professional education program, has the legalization of an extraordinary lecturer decision letter on medical education institutions and their academic positions. However, there are several educators who do not have the decree. Every year there will be an evaluation related to the existing clinical teaching staff. However, the evaluation sometimes does not work optimally because there is no assessment / supervisor team that specifically assesses the performance of clinical educators. The evaluation is used to discuss each other about how to teach



that is good and contains forms that have been provided by educational institutions so that the same competencies can be achieved (Parasuraman and Valerie 2001).

FKIK UMY also has written policies, regulations and provisions regarding education that can guarantee the implementation of high quality education. Included in this are policies regarding the capacity of students (Stefani 2014).

FKIK UMY also has an agreement document concerning the medicolegal aspects, human resources, financing, infrastructure, and education management. However, the document is not directly carried out by the leaders of both parties and only represented by the implementers in the field. The agreement has been mutually binding in terms of the entire process of medical education in FKIK UMY and the education hospital.

Medical education institutions must determine the number of new students each generation based on institutional capacity and educational efficiency with an explanation of the number of students of medical education institutions based on the fulfillment of the standard of educational facilities and means. The ratio of all students and lecturers of the Equivalent Full Teaching Time (EWWP) for Academic Stage is a maximum of 10: 1 and a Maximum Professional Stage of 5: 1 according to related disciplines (Konsil Kedokteran Indonesia 2012).

### 3. Financial Aspects

The current health care system has changed with the existence of Universal Health Coverage which demands every hospital and other health services to make changes in the financial management system. The role of activity-based costing, life cycle costs, and value chain analysis is becoming increasingly important because payment for health care shifts from service replacement costs to capitation arrangements between insurance companies and health care providers. Health care organizations that design and implement accurate costing and evaluation systems will enhance their ability to compete successfully in this rapidly changing environment (Kirch et al. 2005).

With the AHC, the financing system is also based on Evidence Based Policy (EBP) which bases its services on cost control quality, control analysis, to realize effective and efficient services. Remuneration and financial cooperation mechanisms between educational institutions and hospital institutions need to be implemented to maintain the sustainability of both parties.

#### 4. Resources Aspects

##### a. Human Resources

The preparation of education personnel and trainers and clinical learning programs in the context of medical services in hospitals is a shared responsibility between the Academic Hospital and the Medical Education Institution. Currently PKU Muhammadiyah Gamping Hospital has collaborated with the University of Muhammadiyah Yogyakarta in terms of fulfilling clinical educators in hospitals.

Prepared human resources must be able to become leaders of change instead of protecting the current status. Mentally-educated human resources leaders must be able to operate the AHC system, overcome the shortcomings of the primary health care system, and resolve relationships with problematic communities, improve experience in managing contract risks, manage high-risk structures, and establish alliances for improving service quality (Enders and Conroy 2014).

The human resources that are prepared to realize the AHC are qualified human resources for type B or type A hospitals. The human resources referred to are subspecialty S2 or S3 consultants, at least large specialistic of 2. FKIK UMY itself has had a specialist in hematology oncology consultant, head and neck consultant surgeon, and other supporting consultants such as a thoracic radiology consultant specialist, and a hematology consultant clinical pathology doctor. In addition, FKIK UMY also prepared S2 or S3 specialists in 4 major fields in each of the fields, S2 or S3 specialists in the medium field at least 4 in each field, and S2 or S3 specialists in a small field of at least 3 in each field. FKIK UMY is also completing facilities and infrastructure that support the achievement of good quality graduates.

## b. Academic Resources

Academic support standards at FKIK UMY must provide adequate facilities, infrastructure and equipment for the implementation of learning in accordance with the education module including the availability of numbers and variations of mannequins or patients who interact with students. FKIK UMY has begun to improve the facilities and infrastructure that exist in this institution. The facilities and infrastructure began with facilities for education and facilities for the patient's research process (Trisnantoro 1998). Educational infrastructure facilities include study rooms, discussion rooms, and information technology systems of FKIK UMY. In FKIK UMY the infrastructure facilities are already in the skills lab room and in the lecture building. In addition there are libraries, e-learning, and e-libraries owned by FKIK UMY. Accommodation for students is adequate with a corner and garden room to rest. The existing infrastructure for the learning process of doctor education, dentistry, nursing, and pharmacy is almost sufficient according to the standards.

One of the hospitals prepared in the AHC concept was PKU Muhammadiyah Gamping Hospital. PKU Muhammadiyah Gamping Hospital has various specialist services including 4 basic specialists and more than 7 other specialists. These specialist services are obstetrics and gynecology, pediatricians, internal medicine, pulmonary, heart, general surgery, orthopedic surgery, pediatric dental, ENT, ophthalmologists, neurologists, skin & genital specialists.

The role of FKIK UMY in preparing the quality and quality of human resources in realizing the concept of AHC is as follows

### 1. Education

All doctors in the world must meet the five stars doctor criteria, which is a doctor who acts as a care provider, decision maker, communicator, community leader, manager (Korschun et al. 2007). So that in 2012 Indonesia required the implementation of a new model curriculum which is currently known as the Competency Based Curriculum (KBK) on the medical education system (Konsil Kedokteran Indonesia 2012).

The achievement of the KBK's objectives is assessed based on the achievement of competencies compiled based on the Indonesian Doctors Competency Standards 2012 (SKDI 2012) from the Indonesian Medical Council (KKI). The area of physician competence set out in the SKDI 2012 includes effective communication, clinical skills, scientific basis for medical science, management of health problems, information management, self-awareness and self-development, as well as professionalism that prioritizes patient safety (Idris 2007).

Human resources readiness of FKIK UMY in terms of quality lecturer and quality to shape and create graduates according to the concept of AHC is one of them with educational accreditation, which is currently still accredited B. Quality improvement is done by, first, filtering quality students starting from the academic admission selection of the program with twice selection process at the university and faculty stages. Secondly, the FKIK UMY academic module has been adjusted to the SKDI 2012. Third, tightening in the academic learning process in accordance with DIKTI regulations that the maximum S1 category is taken within 7 years, plus an evaluation in the first year or 1-2 semester with results if it is unable to follow, students are welcome to resign. So that when students have entered professional programs, students are considered qualified. Fourth, tightened visitation in hospitals for all stages so that the best graduates will be produced who can improve study program accreditation and are ready to be used to realize the AHC.

Meanwhile, the nursing study program also made preparations that were not much different from the medical education study program, but output produced graduates with a far different role, namely as independent nurses who were still able to collaborate with other professions.

## 2. Research

The role of research in the AHC concept contains four dimensions, namely health, innovation, society, and policy. In this case, research

must be carried out from one patient to another and research to develop medical technology. In addition, research must also examine how AHC integration with the community. Regarding policy, research also needs to examine the quality of health services (Borden et al, 2015). In this case, FKIK UMY has not thought about the role in a wider direction, except only in research for the development of the medical profession.

The role of FKIK UMY research in the concept of AHC has not been thought towards how medical record data in a number of hospitals and clinics also become research data. This is different from Eugene and Coye which revealed that in the United States there are 135 AHCs that are integrated between service, research, and education. AHC in the United States provides medical record data to be accessed for research purposes (Eugene and Coye 2013).

### 3. Community Care

The role of community care in Tridarma of Higher Education concept has become a classic role for lecturers. In the concept of AHC, this role becomes more interesting because of the role of integrated service in the form of health services to the community in the academic hospital as well as hospitals and networking clinics. Lecturers who practice as doctors in the care place indirectly also devote their knowledge and technology to helping the community (McCurdy et al. 2004).

Health services in the concept of AHC provide better quality of lecturer and quality of services because the services provided are the result of continuous research so that from time to time health services at the academic hospital will be better (Aaron 2001).

Benefits of AHC for health care institutions include better health services, availability of superior health professionals, financial stability, and resource management efficiency (Enders and Conroy 2014).

While the benefits of AHC for educational institutions and research include the provision of excellent education, a platform for developing

interdisciplinary research, retention of teaching staff and excellent students, the development of innovative health professional education models, obtaining a good vehicle for education, competent teaching staff in substance and education, and basic advanced clinical lecturer (Dzau et al. 2014).

The role of FKIK UMY in the effort to realize the concept of AHC consists of organizational aspects namely bureaucracy, policy aspects namely regulation or cooperation, financial aspects namely financial support, and aspects of resources, namely the existence of competent human resources and type B education hospitals. The concept of AHC will facilitate the role of FKIK UMY to run the Tridarma of Higher Education, namely education, research, and community care.

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