



2<sup>nd</sup> ICHMS & 2<sup>nd</sup> LSC

PROCEEDING

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## The 2nd International Conference of Medical and Health Sciences (ICMHS) and The 2nd Life Sciences Conference (LSC) 2016

*"Towards a Better Quality of Life  
through Interdisciplinary Research"*

Yogyakarta, 9<sup>th</sup>-10<sup>th</sup> December 2016  
The Alana Hotel and Convention Center

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**The 2<sup>nd</sup> International Conference of Medical & Health Sciences  
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**Committee of ICMHS & LSC 2016**

Supervisor	dr. Ardi Pramono, Sp.An, M.Kes
Chair	dr Iman Permana, M.Kes, Ph.D
Partner	Dr Zahid Iqbal, Ph.D
Secretary	Winnie Setyonugroho, S.Ked, MT, Ph.D
Secretariat	dr Bramantyas Kusuma H, M.Sc Futuh Hidayat, SEI Elida Tri Grahani, SE
Treasury	dr Hidayatul Kurniawati, M.Sc
Scientific section	Dr dr Ikhlas M Jenie, M.Med, Sc Dr Sri Nabawiyati Nurul Makiyah, S.Si, M.Kes Lia Fitriana, SP
Programme section	dr Ika Setyawati, M.Sc dr Imaniar Ranti, M.Sc dr Ahmad Ikliludin, SpM
Publication and Documentation section	dr April Imam Prabowo Arif Hadiano, ST
Logistic and Transportation	dr Muhammad Kurniawan, M.Sc Aris Nuryanta, SH Muhammad Ma'rifatullah Katiga Putra Dwi Hatmo Budi, S.IP
Fund Raiser	dr Maria Ulfa, MMR dr Akhmad Syaiful Fatah Husein, SpAn



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**Chair person of The 2<sup>nd</sup> International Conference of Medical and  
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Welcome to Jogja, sugeng rawuh!

For the second time, the Faculty of Medicine and Health Sciences Universitas Muhammadiyah Yogyakarta is going to conduct the 2nd International Conference of Medical and Health Sciences (ICMHS) this December in vibrant Yogyakarta, Indonesia. This year we are going to collaborate with the Life Sciences Society of Pakistan for their 2<sup>nd</sup> Life Sciences Conference (LSC) with Dr. Zahid Iqbal as the general secretary.

This year's conference theme "Towards a better quality of life through interdisciplinary research" will be celebrating an era of seamless interdisciplinary integration and collaboration in scientific innovations with the involvement of more extensive topics and disciplines in the conference. We aim to exhibit the products of that kind of approach in solving challenges, improving the quality of life, and creating sustainable developments. We are happy to announce that our conference is filled with Invited speakers from Pakistan, United States of America, Uni Emirates Arab, Malaysia and Indonesia. Presentations will be conducted in oral as well as poster that covers topics from medicine, public health, dentistry, pharmacy, biomedical to agriculture. To put more credibility to the conference we are collaborating with Isra Medical Journal and the Asian Journal of Agriculture and Biology to publish selected papers from the event. Other paper will be published in the ISBN Proceeding book.

The last but not least, enjoy the conference, start networking and sharing ideas, and let immerse yourself to the heritage cultural ambient of Jogja, sumonggo!

Yogyakarta, 1<sup>st</sup> December 2016

dr. Iman Permana, M.Kes, Ph.D.

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**Dean of Faculty of Medicine and Health Sciences,  
Universitas Muhammadiyah Yogyakarta**



Assalamu'alaikum Wr. Wb.

Science, especially in the areas of health and life growing more rapidly. We need to work together in the research of various disciplines to the advancement of science and to provide benefits to human life.

After successfully organized international scientific meeting last year, the Faculty of Medical and Health Sciences Universitas Muhammadiyah Yogyakarta, held the second scientific meeting ICMHS along with "2nd Life Sciences Conference". In this second scientific meeting, FKIK UMY collaborates with various researchers, among others from Pakistan, Malaysia, and the United States. Taking the theme "Towards a better quality of life through interdisciplinary research" we hope to establish cooperation with various parties to be able to contribute ideas to the civilization of human life.

Finally, we congratulate the scientific meeting in the city of Yogyakarta Indonesia. Enjoy the beautiful city of Yogyakarta with priceless historical relics. We hope that this meeting can run smoothly and provide benefits to the advancement of knowledge.

Wassalamu'alaikum Wr. Wb.

Yogyakarta, 1<sup>st</sup> December 2016

dr. Ardi Pramono, M.Kes, Sp.An.

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**Rector of Universitas Muhammadiyah Yogyakarta**



Assalaamu'alaikum Wr. Wb.

Ladies and Gentlemen,

Welcome to the 2<sup>nd</sup> International Conference on Medical and Health Science in conjunction with the 2<sup>nd</sup> Life Sciences Conference 2016

Welcome to Yogyakarta City of Tolerance

Our Faculty of Medicine and Health Sciences has been doing such international conference almost every year for the last ten years. This and other previous conferences are the things that supporting our vision as an excellence and Islamic university, a young and global university. We will always try to keep monitoring the development of science through sending more lecturers to do the sabbatical leave overseas, doing international research collaborations and also the international conference. Each department should do this strategy of internationalization so that each department has its own network. Faculty of medicine and health science is one of the most progressive units in implementing this strategy by inviting international experts on a regular basis. This program will certainly strengthen our vision.

International conference on medicine and health sciences is a smart choice to offer our lecturers access to the most recent development of the subjects. The participants will also gain the same knowledge and latest information on medicine and health sciences. As everyone knows that the development of science and technology are faster today compared to the previous period. Information technology, computer, and other development havefastened the transformation of medicine and health science into the different and more complex stage.

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Cellular technology, for instance, can be used for several functions including those that directly impacts our daily life. There is no long distance call anymore today because cellular phone can do everything we need to contact other people far from where we stand anytime anywhere. People will finally innovate cellular phone for the sake of personal health services. We will in the future using our simple cellular phone to detect our body temperature, blood pressure, even how much fat we have in our body and how much it is supposed to be. We may also be able to check the health of our body without leaving our house and order medicine without going into the drug store. Everything is almost possible as long as we think hard for the better of people in the future. Enjoy the conference and don't forget to visit our rich tourist destinations, mountains, beaches or caves (underground waterways).

Thank you

Wassalaamu'alaikum Wr. Wb.

Prof. Dr. Bambang Cipto, MA

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***Keynote Speech***

**by Head of Provincial Health Office Special Region of Yogyakarta  
in International Conference  
of Medical and Health Sciences and Life Sciences Conference**

**The Alana Hotel and Convention Center, Yogyakarta, December 9-10, 2016**

The honorable:

- Rector of Muhammadiyah University of Yogyakarta,
- The Dean of Medical and Health Sciences Muhammadiyah University of Yogyakarta,
- The chairman of organizing committee of the international conference of medical and health,
- Distinguished guests and colleagues.

*Assalamu'alaikum Warahmatullahi Wabarakatuh,*

First of all, we thank God for His blessings that today we may attend the International Conference of Medical Health Towards a Better Quality of Life Through Interdisciplinary Research in Yogyakarta.

My distinguished colleagues,

In Indonesia National Long Term Development Plan (2005-2024), the Indonesian Ministry of Health have determined a paradigm shift that have governed health services in health development plan. There has been a shift from Curative Health Services to Preventive and Promotive Health Services.

Recently, Indonesia suffers from a triple burden of diseases as health development challenges. The triple burden of diseases are: 1) the backlog of common infections, undernutrition, and maternal mortality; 2) the emerging challenges of non-communicable diseases (NCDs), such as cancer, diabetes, heart disease; and 3) mental illness, and the problems directly related to globalization, like pandemics and the health consequences of climate change.

Dear colleagues,

Here are some data that show several health problems in Indonesia:

1. Maternal mortality rate in 2015 is 4,809 cases, infant mortality rate in 2015 is 22,267 cases;
2. Regarding to children under the age of five, the national stunting rate is 37.2% which consists of 18% for very short dan 19.2% for short (Riskesdas 2013);

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3. HIV testing coverage is 14% dan antiretroviral (ARV) therapy coverage is 65.58% (Directorate General of Disease Control and Prevention Ministry of Health, 2015);
4. Tuberculosis (TB) notification rate in 2015 is 73.5% and tuberculosis treatment success rate is 72% (Directorate General of Disease Control and Prevention Ministry of Health, 2015).

Distinguished guests,

Indonesia Health Development Program in 2015-2019 strengths in improving human quality life through Health Indonesia Program with family approach. The Indonesian Ministry of Health issued The Minister of Health Regulation (Permenkes) No. 39 Year 2016 as a Guideline of Implementation of Health Indonesia Program with Family Approach. This program has 12 main indicators as markers of a family health status. Currently, many health programs have been implemented by Indonesian Ministry of Health, Provincial Health Offices, and District Health Offices. However, many health problems, some as mentioned above, still become health burdens. We may ask a question whether the programs that we conducted have answered the health problems we have in Indonesia.

It would be better if all health programs that we implement based on scientific health research, especially interdisciplinary research. The research should be related to detection, prevention, and treatment of diseases or problem solving for better health.

My dear colleagues,

Being a province with speciality, Special Region of Yogyakarta placed Traditional Medicine as one of the priority programs in Provincial Medium Term Development Plan (2017-2022). We still encounter many challenges in developing Traditional Medicine, especially in providing services which are based on scientific evidence.

Distinguished colleagues,

We look forward to results of interdisciplinary research which would support health problem solving, especially by developing traditional medicine in Yogyakarta. We believe that collaboration in interdisciplinary research would improve quality of human life.

Finally,

Thank you for your attention. We wish you a successful conference.

Wassalamu'alaikum Warahmatullahi Wabarakatuh,

On behalf of  
the Head of Provincial Health Office  
Special Region of Yogyakarta

**Drg. Pembajun Setyaningastutie, M.Kes**

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**SPEAKER OF  
INTERNATIONAL CONFERENCE**

**Zahid Iqbal**

Al-Nafees Medical College Isra University Islamabad Campus Islamabad, Pakistan  
*“One Health Program for Public Health Benefit”*

**Prof. Dr. Abdul Khaliq**

Professor, Department of Agronomy, University of Agriculture, Faisalabad  
*“Role of Agriculture in Poverty Alleviation of Rural Areas”*

**Fitri Arofati**

Universitas Muhammadiyah Yogyakarta, Indonesia  
*“Continuing Professional Development of Practicing Nurses in Indonesia”*

**Tri Wahyuliati**

Universitas Muhammadiyah Yogyakarta, Indonesia  
*“Diabetic Neuropathy - A Chance Towards A Better Treatment”*

**Mohammad Khalid Ashfaq**

University of Mississippi, USA  
*“Natural Products –Use or Misuse”*

**Muhammad Mukhtar**

American University of Ras Al Khaimah, United Arab Emirates  
*“Emerging Biotechnologies and Genomic Medicines in Human Health and Well-Being”*

**Muhammad Sasmito Djati**

Brawijaya University Malang, Indonesia  
*“Herbal Medicine a Holistic Approach: in case of food supplement formulation of Sauropusandrogynus and Elephantopuscaberto modulate immune and hormonal system in pregnant Salmonella typhi infected mice”*

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**REVIEWER**

1. Dr. Zahid Iqbal, Ph.D (Isra University, Islamabad, Pakistan)
2. Prof. Dr. Abdul Khaliq (University of Agriculture, Faisalabad)
3. Dr. Mohammad Khalid Ashfaq, DVM, DTVM, MS, Ph.D (University of Mississippi, USA)
4. Dr. Muhammad Mukhtar, Ph.D (American University of Ras Al Khaimah, United Arab Emirates)
5. Dr. Ir. Muhammad Sasmito Djati, MS. (Brawijaya University Malang, Indonesia)
6. Fitri Arofiati, S.Kep., Ns., MAN., Ph.D (Universitas Muhammadiyah Yogyakarta, Indonesia)
7. Dr. SN Nurul Makiyah, S.Si., M.Kes (Universitas Muhammadiyah Yogyakarta, Indonesia)
8. dr. Iman Permana, M.Kes, Ph.D (Universitas Muhammadiyah Yogyakarta, Indonesia)
9. Dr. dr. Ikhlas M. Jenie, M.Med, Sc (Universitas Muhammadiyah Yogyakarta, Indonesia)
10. Dr. dr. Arlina Dewi, M.Kes, AAK (Universitas Muhammadiyah Yogyakarta, Indonesia)
11. dr. Oryzati Hilman, M.Sc, CMFM (Universitas Muhammadiyah Yogyakarta, Indonesia)
12. Dr. Dra. Yoni Astuti, M.Kes, Ph.D (Universitas Muhammadiyah Yogyakarta, Indonesia)
13. Dr. drg. Tita Ratya Utari, Sp. Ort (Universitas Muhammadiyah Yogyakarta, Indonesia)
14. Dr. dr. Tri Wahyuliati, Sp.S, M.Kes (Universitas Muhammadiyah Yogyakarta, Indonesia)
15. Dr. Elsy Maria Rosa, M.Kep (Universitas Muhammadiyah Yogyakarta, Indonesia)
16. Dr. dr. Titiek Hidayati, M.Kes (Universitas Muhammadiyah Yogyakarta, Indonesia)
17. Dr. Shanti Wardaningsih, M.Kep., Ns., Sp.Kep.J., Ph.D. (Universitas Muhammadiyah Yogyakarta, Indonesia)
18. Dr. dr. Sri Sundari, M.Ke (Universitas Muhammadiyah Yogyakarta, Indonesia)
19. Dra. Lilis Suryani, M.Kes (Universitas Muhammadiyah Yogyakarta, Indonesia)
20. Drh. Tri Wulandari K, M.Kes (Universitas Muhammadiyah Yogyakarta, Indonesia)
21. Dr. dr. Wiwik Kusumawati, M.Kes (Universitas Muhammadiyah Yogyakarta, Indonesia)
22. Sabtanti Harimurti, S.Si., M.Sc., Ph.D., Apt. (Universitas Muhammadiyah Yogyakarta, Indonesia)



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**SPEAKER OF  
INTERNATIONAL CONFERENCE**

## **Continuing Competence of Practicing Nurses in Indonesia**

**Fitri Arofiati, SKep.,Ns, MAN Ph.D**

Master of Nursing Science, Universitas Muhammadiyah Yogyakarta

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### **BACKGROUND**

The dynamic changing in the world life may influence to many sectors such as culture, geographic, socioeconomic, technology, politic and demographic. It is also involve the process of globalisation when people may have different thinking and action. In globalisation era, we are facing of borderless and competitiveness that can improve the opportunity and challenge among people and countries in the world including in nursing areas. Since Asian Economic Community (AEC) 2015 has been announced, there is an open access among ASEAN (Association of South East Asia Nations) countries, which is including in health sectors. As well as the challenge, there is also competition to have great health services among countries including at the area of nursing services.

In Indonesia, there is a regulation for only new graduates to do national examination of nursing competence. However, there is no mandate to continue their competence, because the process of renewing their license is without any examination. When practicing nurses want to continue their license for every five years, they can show their 25 credits hours of training which is not always significantly related with their present competence needed. Based on INQF, the process of maintaining work is a periodic re-licensure every 5 years without examination for all of professional workers. It is because every practicing nurse develops as per their own daily experiences and how they interact with patients and society (INQF, 2014). This process amid every single interaction involves their thoughts, understanding, attitudes, and what the concept of competence in the course of health care means to them. It also means that every practicing nurse may have different perceptions, values, and meanings of competence which can impact on their quality of care provided. In addition, diversity could be interesting owing to the symbolic meaning that might improve from any individual's own capability of coping.

Even though nursing council in Indonesia does not established yet to protect nurses through a credential system, workforce system, and neither regulations of types and levels of nursing education, there is a collaboration and coordination among ministry of higher education and culture and ministry of health. Under Indonesia Commission of Higher Education (ICHEd), Association of Indonesia Nursing Education (AINEC) and Indonesia National Nurses Association (INNA) regulation about nursing competence

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have been implemented all around Indonesia. There are minimum competencies for new graduates including professional practice, ethic legal of practice, cultural sensitivity, nursing care management and services, and quality of personal and professional development.

## **CONCEPT OF NURSING**

Nurses' area is form of health care professional as part of health care services, which are comprehensively supplied to patient as individuals, groups, families and or communities according to the entire process of human life including physical, psychosocial, spiritual, and cultural aspects based on knowledge, skills, and attitudes, which have been gathered from formal education. According to Creasia (2006),<sup>1</sup> a profession is characterized by prolonged formal education that takes place in a college or university. This characteristics are based on the result of a body of knowledge based on nursing theory and research, including values, beliefs, and ethics related to the profession. Nurses have their own autonomous in decision making and are responsible and accountable for their practice. They need to have a strong sense of personal identification and commitment to improve their capacity and individuals are unlikely to change profession.

Miller B.K (1984) in Creasia (2006),<sup>1</sup> described professionalism in nursing which has eight dimensions adherence to code of nurses, theory development and evaluation use, community service orientation, continuing education and competence, research development and use of evaluation, self-regulation and autonomy, participation in professional organizations, and publication and communication. It is evident that as professional career, practicing nurses need to maintain the knowledge, skills, and ethical grounding of nurses directly in order to affect the quality of care provided.

## **NURSING COMPETENCE**

According to Tilley (2008), the definition of competency does not clear yet to be accepted across nursing education and practice. However, there is a common aim, although competency is defined in different ways; to assure nurses have the knowledge, skills, and abilities presumed and needed for their practice settings. The word "competent" is derived from Latin and means having the essential qualities and abilities to function in specific ways. In addition, the American Nurses Association (ANA) (2011),<sup>2</sup> stated with regard of competence is carrying out successfully at an expected level, while competency is a presumed level of performance that results from an integration of knowledge, skills, abilities, and judgement within the context of current and projected professional direction.

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Competencies are also identified based on the the dynamic nature of contemporary practice that has been recognized. As the dynamic changing of information, technologies, or practice challenges surface, the expectation of practice may also be changing as well as the current practice requirement. Practicing nurses have responsibility to examine their up to date of practice competency requirements, and look to what competencies may be required in the future. Continuing competence requires a review of expectations as the external and internal environments change, adjusting expectations accordingly.

### **ROLE OF PROFESSIONAL NURSE**

The roles of professional nurses has elaborated in accordance with the dramatic changing of demographics. The roles are including practitioners, caregivers, advocates, educators, leaders, managers, collaborators, and researchers. (Masters K., 2014). What's more, according to Hood (2010),<sup>3</sup> additional roles expected of professional nurses are change agents, coordinators, counsellors, and colleagues.

**Caregiver.** During the past century, related to the role of professional nurse as a caregiver things have changed tremendously. Nurse use nursing process and critical thinking skills to provide interventions in order to reach data related to the physical, psychosocial, spiritual, and environmental needs of patients and families. As an individual has uniqueness, it is important for a nurse to use a holistic approach because the knowledge in nursing becomes the art of nursing through caring. So knowledge, skills and attitude, which are including emphatic feeling and caring are the dimentions of the caregiver.

**Advocator.** The aim of this role is to respect patient decisions and boost patient autonomy. Blais et al., (2006),<sup>4</sup> stated that practicing nurses responsible to advocate patients that are include in protecting of patient rights and developing a therapeutic nurse-client relationship to secure patient self-determination. In the clinical setting areas, practicing nurses act as an intermediary among the patients and their significant others and health care providers. To illustrate further, Hood L. J., (2010),<sup>3</sup> described this role; providing adequate information and resources to make decision are one of the roles of practicing nurses on behalf of the clinet. In this process, the client's wishes are respected at all times.

**Manager.** Based on the concept of manager in nursing practice, all nurses are managers because on the expected outcomes of care, they need to directly work with professionals and nonprofessionals. Delegation process is important task in nursing practice because not all nursing activity will be done by one's self. Therefore, the acceptance of the delegation process require a strong understanding. According to Sullivan & Decker, 2005 practicing nurses who accept the delegation must be clearly understand to do and ensure to accomplish the task with regard to the definition of

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delegation which is the process of transferring the responsibility and authority to another person.

**Collaborator.** Collaborative system among health care providers is necessarily needed to meet and develop client health care outcome owing to the complexity of health care today. Within this role, the nurse needs to achieve health-quality client care as well as client satisfaction. This collaboration includes nurse-physician interaction, nurse-nurse-interaction, or the interaction of interdisciplinary teams or committees.<sup>4</sup> It is the challenges to correlate the best knowledge and abilities among health care providers to produce positive client outcomes.<sup>5</sup>

### CONCEPT OF CONTINUING COMPETENCE

In today's era, the understanding of competence and continuing competence are extremely debated.<sup>6,7</sup> (Chiarella, M. (2006); International Council of Nurses 2007; Vernon et al. 2010). It is important for practicing nurses should be valued for their quality patient care and their commitment to organizational goals and objectives. Continuing competence is one way of investment in the educational development of practicing nurses and of demonstrating appreciation and support. Hospitals have a significant role to facilitate continuing competence programs for their staff that can encourage a culture of excellence. This in turn relates with high levels of job satisfaction and high self-esteem among practicing nurses. Continuing Nursing Education (CNE) within the Nursing Practice Environment (NPE) is important in determining issues associated with unsafe practice, unproductiveness or incompetent nurses. Marzuki, 2011 stated that CNE is the best initiative to maintain and develop practicing nurses' knowledge and skills up to date in the nursing career and profession.

Meanwhile, the continuing competence of an individual is interrelated to current nursing practice (Meretoja et al. 2004).<sup>8</sup> In the current situation, assessment of the competence need to be more flexible due to the differing evidence of the basic and the highest levels of competence. (Vernon et al., 2011).

Vernon, 2013 stated that the standards set by Nursing Council proved the quantity of professional development that practicing nurses have to perform and remain the number of time that they need to be in real practice in order to maintain their competence. It provides clarity, is a way of creating and ensuring a standard which replaces the previous system of having no standard of what people were engaged in. Eraut's (2004, 2007)<sup>9</sup> and Eraut et al. (2004) found that organizational support is one of the most important components in maintaining competence. This in turn impacts staff motivation, empowerment and learning culture.

Dickerson (2010),<sup>10</sup> found that the awareness of the continuing nursing education provider both internal and external influences to nursing professional development may

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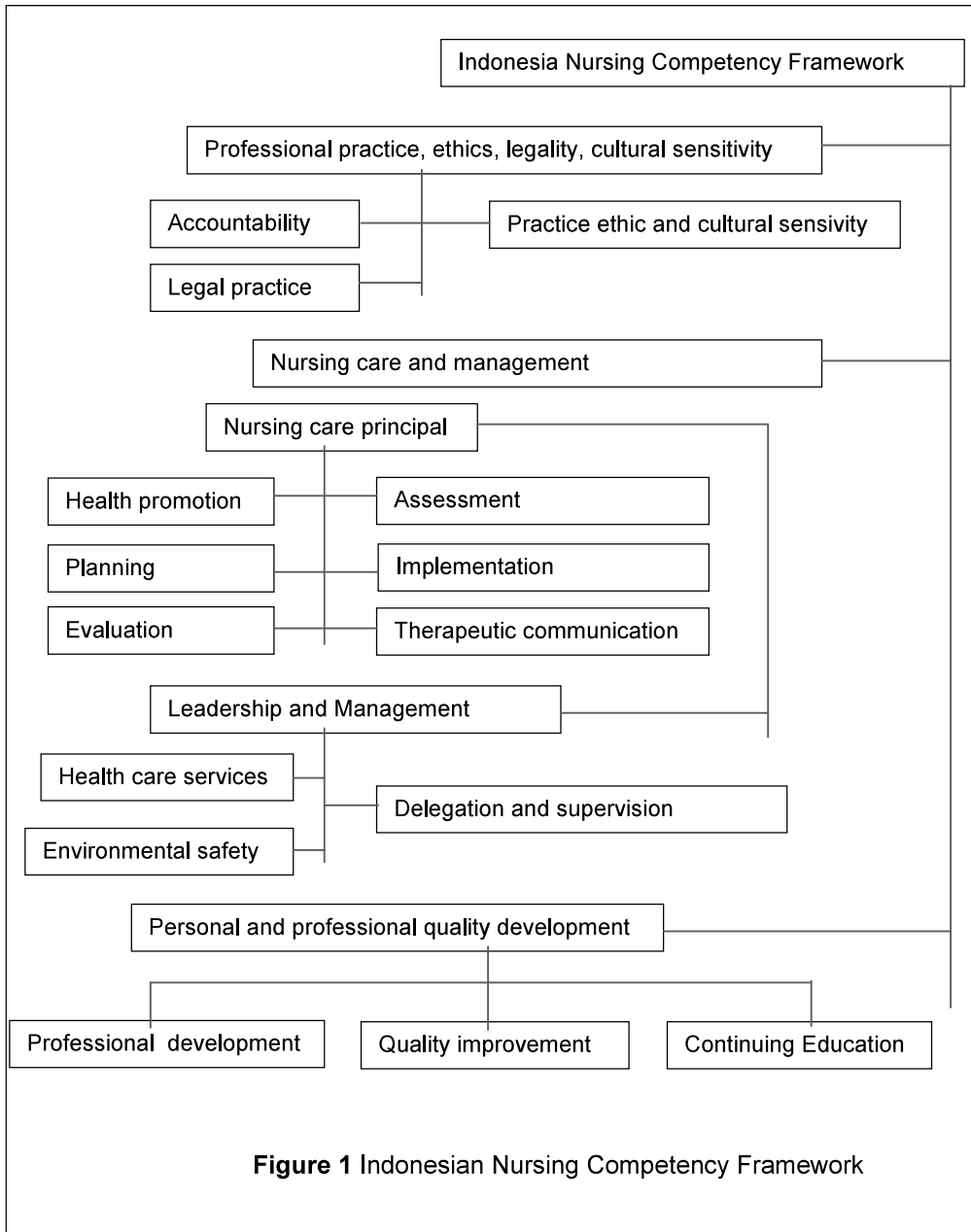
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influence to the plans, implementations, and evaluation of learning activities. Nursing has the foundation, framework, and opportunity to contribute in framing the future of professional development in health care. The creation of Continuing Competence Programs (CCPs), with the goals of promoting good nursing practice, encouraging continuous learning, contributing to the quality of nursing practice, and optimizing client outcomes. It is proven that the availability of continuing education increases staff satisfaction, self-esteem, and self-confidence, might not only in the program participants yet also in the colleagues with whom they share their new knowledge and skills. Continuing education will improve the capability of practicing nurses to deliver quality care at controlled cost. Meanwhile, in the changing health care environment, education not only increases knowledge and clinical skills but further improve the quality of behaviors and attitudes necessary. Furthermore, continuing education has the chance to improve attributes such as analytical ability, critical thinking, communication, teamwork, flexibility, and the ability to adapt to change.

### **COMPETENCY FRAMEWORK IN INDONESIA**

In collaboration between professional nursing organisations and Indonesian government (Indonesia National Nurse Association /INNA), Association of Indonesia Nursing Education (AINEC) and Ministry of Education and Culture, Ministry of Health formulate a competency framework for nurses creates a standard of competency in order to meet quality care needs of clients.

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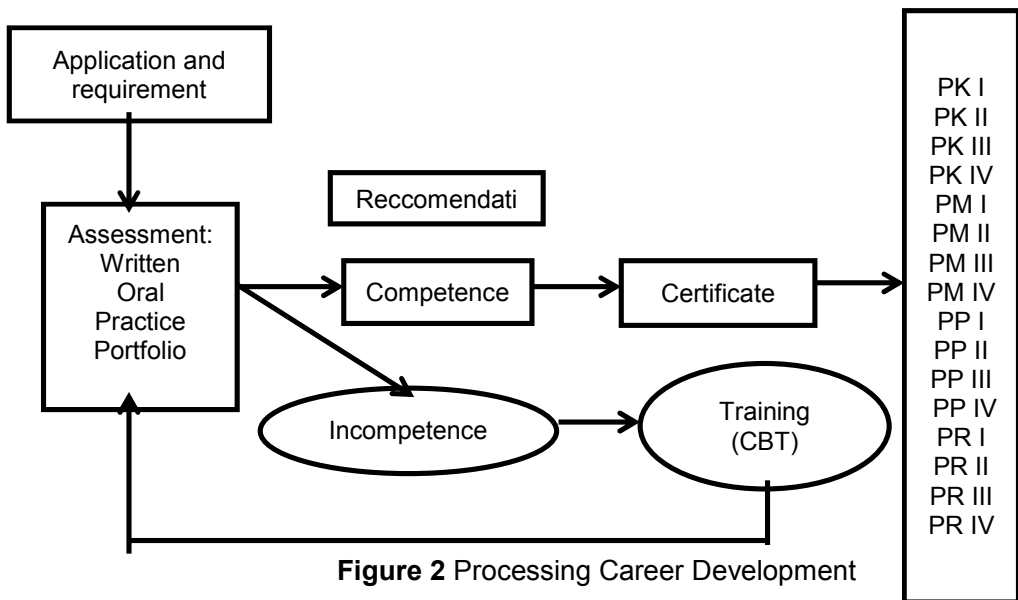
**Figure 1 Indonesian Nursing Competency Framework**

As part of this framework, it is essential for every nurse in Indonesia to implement personal and professional quality development along of their career from both formal and informal continuing competence which is related with IQF program. It is important

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to be understood that professional quality development mainly refer to be individual responsibility as well as Institution.

Practicing nurses have to maintain their performance of nursing practice throught continuing competence program whether formal nor non-formal program. Within 5 years they need to conduct and meet 25 credits hour to maintain their SIPP.



**Figure 2 Processing Career Development**

**ISLAMIC CONCEPT RELATED CONTINUING COMPETENCE**

The basic concept of life long learning was stated clearly in the Qur’an, as Muslims’ guideline of life in the surah Al ‘Alaq verse 1.<sup>11</sup> This was the first verse in the Qur’an sent to Muhammad as the last prophet, means that Allah SWT has been ordered to all of humankind to search knowledge.

أَقْرَأْ بِاسْمِ رَبِّكَ الَّذِي خَلَقَ ﴿١﴾

**“Read (Proclaim!) In the Name of your Lord Who created”**

*“Bacalah dengan (menyebut) nama Rabbmu Yang menciptakan”  
(Indonesia version)*



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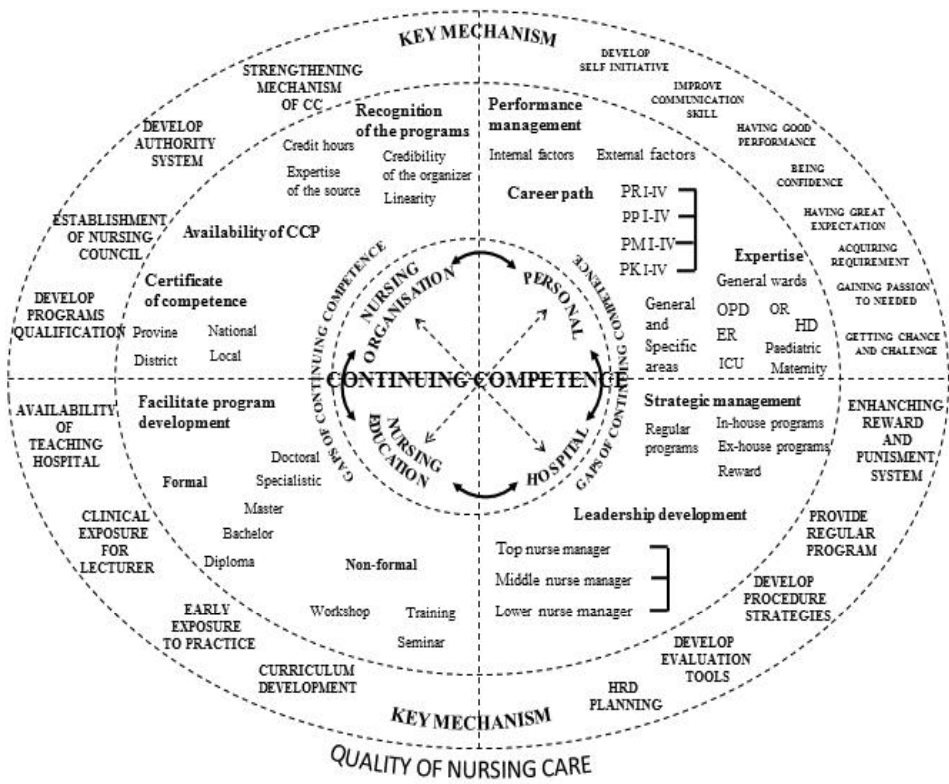
Knowledge knows no boundaries and defeats any limitations. This has been dictated by Allah S.W.T in the Quranic chapter of al-Kahfi, verse 109:<sup>11</sup>

قُلْ لَوْ كَانَ الْبَحْرُ مِدَادًا لِكَلِمَاتِ رَبِّي لَنَفِدَ الْبَحْرُ قَبْلَ أَنْ نُنْفِدَ كَلِمَاتِ رَبِّي  
وَلَوْ جِئْنَا بِمِثْلِهِ مَدَدًا ﴿١٠٩﴾

“Say (Dear Muhammad): “If the sea were ink<sup>1</sup> for [writing] the words of my Lord, the sea would be exhausted before the words of my Lord were exhausted, even if We brought the Like of it as a supplement”

“Katakanlah: “Kalau sekiranya lautan menjadi tinta untuk (menulis) kalimat-kalimat Tuhanku, sungguh habislah lautan itu sebelum habis (ditulis) kalimat-kalimat Tuhanku, meskipun Kami datangkan tambahan sebanyak itu (pula).” (Indonesia version)

**CONTINUING COMPETENCE MODEL FOR PRACTICING NURSES IN INDONESIA**



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## CONCLUSION

Understanding the definition of competence and continuing competence by practicing nurses at any different areas of practice provide a good influence on the implementation of nursing care. They compared and shared their own ideas to improve their positive mind set to support role and function as one of health care professional. This paper concludes with a model of Continuing Competence which was based on the result of the study to improve the quality of nursing services. The model consist of 4 (four) critical components namely: 1) personal career path, 2) hospital strategic management, 3) nursing education development system and 4) nursing organisation recognition system.

## REFERENCES

1. Creasia J. L. (2006). Conceptual Foundations The Bridge to Professional Nursing Practice. 4<sup>rd</sup> ed. Mosby, Inc., an affiliate of Elsevier Inc.
2. American Nurse Association. (2011). ANA position statement Professional Role Competence. Retrieved November 5, 2014, from <http://gm6.Nursingworld.org/MainMenu>
3. Hood L. J., (2010). Conceptual Bases for Professional Nursing. 7<sup>th</sup> ed.. Lippincot, William & Wilkins
4. Blais K.K., Hayes J. S., Kozier B., & Erb G. (2006). Professional Nursing Practice Concept and Perspectives. 5<sup>th</sup> ed.. Upper Saddle River, NJ: Pearson Prentice Hall.
5. Lindeke I. L., & Seickert A. M. (2005). Nurse-Physician Wrokplace Collaboration. Retrieved on 2 January 2015 from <http://www.nursingworld.org/ojin>
6. Chiarella, M., Thoms, D., Lau, C. & Mcinnes, E. (2008). An overview of the competency movement in nursing and midwifery. *Collegian*, 15 (2), 45–53
7. Hendry, C., Lauder, W. & Roxburgh, M. (2007) The dissemination and uptake of competency frameworks. *Journal of Research in Nursing*, 12 (6), 689–700.
8. Meretoja, R., Isoaho, H. & Leino-Kilpi, H. (2004) Nurse Competence Scale: development and psychometric testing, *Journal of Advanced Nursing*, 47(2), 124-133
9. Eraut, M., 2007. Learning from other people in the workplace. *Oxford Review of Education*, 33(4), 403–422.
10. Dickerson P. S. (2010). Continuing Nursing Education: Enhancing Professional Development, *The Journal of Continuing Education in Nursing*, 41(3), SLACK Incorporated
11. Al Qur'an

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12. Indonesian Nursing Act.-38 year- 2014. <http://www.observatorisdmkindonesia.org/wp-content/uploads/2015/01/3.-Indonesian-Nursing-Act-No.-38-year-2014.pdf>. Accessed May 2, 2015.
13. The Indonesian National Nurses Association (INNA) homepage. <http://pages.icad-cisd.com/partners/the-indonesian-national-nursesassociation-inna>. Accessed May 2, 2015.