Human Resources Development in the Health Sector

Strengthening and Enhancement of the Quality of Government Health Care Services Provided by Nurses and Midwives

The Design and Implementation of an Assessment of the Educational Systems in Nusa Tenggara Timur (NTT) and Nusa Tenggara Barat (NTB)

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gtz
KERJA SAMA REPUBLIK INDONESIA REPUBLIK FEDERAL JERMAN
BAKTI HUSADA
Australia Indonesia Partnership
Kemitraan Australia Indonesia

World Health Assembly Resolution 59. 23 2006

Rapid Scaling up of Quality Health Workforce Production
…shortages of quality health workers are interfering with efforts to achieve the internationally agreed health-related development goals and MDGs.

Strengthening Nursing and Midwifery
… equitable geographical distribution, in sufficient numbers of a balanced skill mix, and a skilled and motivated nursing and midwifery workforce within their health services.

Urges Member States

4)… to promote the concept of training partnerships between schools in industrialized and developing countries involving exchanges of faculty and students;

6)…to promote training in accredited institutions of high quality professionals…, and to us innovative approaches to teaching in industrialized and developing countries, with state-of-the-art teaching materials and continuing education through the innovative use of information and communications technology.

Completion Report Prepared for
the Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH, EPOS Health Consultants and the Australia Indonesia Partnership for Maternal and Neo-Natal Health.

October 2008

The findings, views, and interpretations published in this report are those of the authors and should not be attributed to any of the agencies providing financial support for the report.

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Acronyms and Abbreviations

ACE	Association for Community Empowerment
APN	Asuhan Persalinan Normal (Normal Delivery Care)
ANC	Antenatal Care (Perawatan antenatal)
ASEAN	Association of Southeast Asian Nations
AIPMNH	Australia Indonesia Partnership for Maternal and Neo-natal Health
AusAID	Australian Overseas AID Programme
BKD	Personal Bureau of Province / District
BPPSDMK	Board of Development and Empowerment of Health Human Resources
CDC	Communicable Disease Control
CHO	City Health Office
CI	Clinical Instructor
CPNS	Candidate for Government Employment
CT	Clinical Teacher
CTG	Cardiotocography
DHO	District Health Office
DoH	Department of Health
D-III	Diploma III – a Three Year Course
D-IV	Diploma IV – a Four Year Course
ECG	Electrocardiogram
EPOS	International Health consultants contracted by GTZ
FGD	Focus Group Discussion
GTZ	Gesellschaft für Technische Zusammenarbeit
HIV/AIDS	Human Immunodeficiency Virus / Acquired Immune Deficiency Syndrome
HRD	Human Resource Development
HRH	Human Resources for Health
IBI	Indonesian Midwives Association
IUD	Intrauterine Device (Alat Kontrasepsi Dalam Rahim)
MenPan	State Minister for Enhancement of Efficiency of State Apparatus
MDGs	Millennium Development Goals
MCH	Maternal and Child Health
MoH	Ministry of Health
MoNE/MoE	Ministry of National Education
NGT	Nasogastric Tube
NTB	Nusa Tenggara Barat Province
NTT	Nusa Tenggara Timur Province
PEO	Provincial Education Office
PHO	Provincial Health Office
POLTEKKES	Government Health Technical College
PNS	Government Employee
PPNI	Indonesian Nurses Association
PTT	Temporary Government Employee
PUSDAKES	Health Data and Information Centre
PUSDINAKES	Centre for Health Workforce Education
PUSKESMAS	Community Health Centre
PUSRENGUN	Centre for Planning and Health Resources Management
PUSTU	Satellites of Puskesmas (Puskesmas Pembantu)

S1	Bachelor Degree
TB	Tuberculosis
TBA	Traditional Birth Attendant (Dukun)
WHO	World Health Organization
WISN	Workload Indictors of Staffing Needs

Executive Summary

The Sint Carolus School of Health Sciences and an international consultant were contracted by GTZ/EPOS and AIPMNH to design and implement an assessment study of the training systems for nurses and midwives in Nusa Tenggara Timur (NTT) and Nusa Tenggara Barat (NTB).

Results are to be used as the basis for strategic planning with national and local counterparts.

The title, rational and objectives agreed to were:

Title

Study to Find Strategies to Enhance the Quality of Government Health Care Services Provided by Nurses and Midwives

Rational

Anecdotal evidence indicates that the pre-services training in NTT and NTB is not producing nurses and midwives with the capacity to meet the needs of the health services. Many gaps have been identified, particularly in their clinical experience, which has necessitated them to undergo in-service training following graduation in order to raise them to the required level of competence.

A number of problems have been reported, including confusion over the clinical capacity of newly graduated health workers in NTT and NTB, as well as the ad hoc nature of in-service training.

Evidence presented by a study undertaken on “Patient Safety and Medical Error in 3 Hospitals in NTB” by participants in the Hospital Management Training indicates that the practice of basic universal precautions for nosocomial infection is extremely poor.

All three of the hospitals surveyed are clinical training sites for students from Pre-service Training Institutions in NTB.

Objectives

- Identify Competencies of Poltekkes Nursing and Midwifery Graduates to Deliver Safe Health Services in Government Hospitals and Puskesmas.
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- Identify Capacities of Government Poltekkes to Produce Appropriately Competent Nurses and Midwifery Graduates.

Poltekkes are educational institutions directly funded by the Central DoH. Nurses and midwives are educated at these government institutions. Private educational institutions also exist, but were not included in this study. In addition, a number of public hospitals and Community Health Centres (Puskesmas) regulated by Provincial and District Health Offices, are used for clinical and practical training for nursing and midwifery students. The

use of these institutions for clinical training is regulated by Memorandums of Understanding (MoU) between Poltekkes and hospitals and Poltekkes and District Health Offices.

This study concentrated on gathering reliable and valid information on the 'outcomes' agreed to for the study. The recommendations have been developed based on the current data.

It is hoped that this study will provide the provincial and national governments with achievable options for improving the competencies of nurses and midwives, which will in turn strengthen the health system.

Data collection methods included:

- Face-to-Face interviews with first time employees who had graduated from Poltekkes and been employed within the last three years, regardless of their type of employment. The interviews were used to generate in-depth descriptions of the subjects' perception of their competency.
- Focus group discussions (FGD) to enrich the findings gathered through other data collection methods. The information from these sessions was used to validate infor mation provided in face to face interviews.
- Workshops for senior management staff from the PHO, DHO, CHO, hospitals and Puskesmas. These workshops provided a forum for stakeholders to discuss their perceptions of the capacity of the Poltekkes to produce competent graduates. Also these workshops produced information on the competencies expected of the graduates.
- Observation visits to Poltekkes, hospitals and Puskesmas to record details pertaining to the teaching and clinical practices of the graduates.

Analysis of the data identified the major issues for both the Poltekkes and clinical placement sites related to pre-service clinical practice. The data also indicated that new graduates felt anxious in their first placement when they had to work without supervision. Respondents stated that they were not provided with enough support and clinical orientation in their workplace.

Other areas of concern are addressed in the following recommendations.

Recommendations to Improve the Capacity of the Poltekkes:

1. BPPSDMK should provide additional support to the nursing and midwifery faculties of Poltekkes to review their policy on the employment of nursing and midwifery lecturers. This should include:

    - Ensuring lecturers hold qualifications relevant to the subjects they teach; i.e. Law No.14 /2005 states all lecturers of diploma level must have a master degree. In the nursing and midwifery faculties of the Poltekkes this master degree must be relevant

to the subjects taught and lecturers should have a minimum of two years relevant practical experience in their area of expertise. (Nursing and Midwifery Programme WHO, 2001).

- Maintaining clinical competence. For example, the nursing and midwifery faculties of Poltekkes should develop evaluation processes to determine the level of clinical competence of lecturers every five years (Nursing and Midwifery professional associations – PPNI and IBI - 2002).

- Ongoing professional development of lecturers to improve their educational skills through twinning arrangements with prominent Nursing and Midwifery Schools in Indonesia and/or overseas.

2. Support should be given to students who receive marginal passes on the entry examinations through the provision of additional tutorials.

   - These additional tutorials will require extra effort from the nursing and midwifery faculties of Poltekkes.

   - This will require an increase in tuition fees, part of which should be allocated for staff time used to enable the students to reach the competencies required for graduation.

   - Poltekkes management will need to be strengthened to accommodate these additional tasks effectively

3. A taskforce should be established to review and adapt the national curriculum to ensure it meets the local health priorities as proposed by the PHO and Poltekkes. This will help to ensure that graduates are competent in the delivery of safe health services in the local health settings (hospitals, Puskesmas etc).

   - The taskforce should include representatives from Pusdiknakes, the planning section of PHO, the surveillance sections of CHO-DHO-PHO, the Heads of Nursing and Midwifery Departments of hospitals and the Heads of Puskesmas.

   - The taskforce should develop a working agenda that allows the nursing and midwifery faculties of Poltekkes to obtain all demographic and epidemiological information required to adapt the national curriculum to meet local health needs in a timely manner.

4. The MoU between Poltekkes and the relevant institutions on the utilization of hospitals and Puskesmas for student's clinical training is reviewed annually to accommodate the clinical requirements of students. The MoU should specify:

   - The number of students appointed to each clinical area/unit based on viability, for example, by taking into consideration the average number of deliveries

per month in a specific site. The number of students from private schools, standards of clinical supervision and the number and capacity of clinical instructors should also be taken into account. (Clinical instructors are from hospitals or Puskesmas).

- Recommended clinical placement areas for students.
- The roles of clinical teachers from the nursing and midwifery faculties of Poltekkes.
- Prerequisites for students undertaking clinical placements.

5. Provision of support for the nursing and midwifery faculties of the Poltekkes to upgrade the Library, Clinical Laboratories and Electronic Facilities to improve the competencies of lecturers and students through:

   - Financial and technical support to upgrade the library (including electronic library resources, hard copies of up-to-date textbooks and online journals), to ensure adequate and reliable access to the internet.
   - Upgrade teaching resources in the clinical laboratory
   - Computer training programmes for lecturers and students.
   - Computer and English language laboratories in the nursing and midwifery schools.
   - Ongoing budget allocations for regular maintenance, renewal and upgrade of computer hardware and software.

6. To ensure adherence to the recommended full-time equivalent student/lecturer ratio, a detailed analysis should be undertaken by PHO, HRD and Provincial Education Office (PEO) to identify the number of lecturers in both public and private schools.

7. Ensure that decree No.30 (1980), referred to in a letter dated 2004 from BPPSDMK, is applied rigorously to all lecturers in the nursing and midwifery faculties of the Poltekkes. This will ensure lecturers only teach in private schools after working hours and do not hold a staff position in private schools.

8. Consideration should be given to the use of an independent body for the accreditation process based on appropriate standards. This body could include representatives from Pusdiknakes, professional associations, PEO, PHO, the community (representing the people who access health services) and the Governor's office. The body would require training and could be used for conducting other quality reviews of the nursing and midwifery faculties in the Poltekkes.

9. The nursing and midwifery faculties of Poltekkes (especially in NTT) should develop multi-sectoral committees consisting of representatives from local government, donor agencies and other relevant stakeholders to overcome the issue of lack of water in clinical laboratories and offer solutions to the problems of nosocomial infections. In the interim, the nursing and midwifery faculties of the Poltekkes should endeavour to provide water in all the clinical laboratories.

10. All related national and provincial departments and external agencies (GTZ, AusAID, and WHO etc) should strengthen partnerships with the nursing and midwifery faculties of the Poltekkes to ensure a more synchronized approach to nursing and midwifery education. This will contribute to improvements in overall population health outcomes and MDGs through graduates with relevant competencies. PUSRENGUN supports the coordination of a national health workforce planning committee of all stakeholders.

Recommendations to Enhance Competencies of Graduates

Pre-service

1. Improved quality of clinical placements through:

- Training of health service unit managers in the management of clinical training sites including the identification of key staff as clinical instructors.

- Implementing requirements for nursing and midwifery lecturers to have a certificate of clinical proficiency in their field of teaching. In addition, ensuring current lecturers upgrade and maintain their clinical experience and are regularly evaluated on their performance.

- Implementing requirements for clinical instructors in the clinical setting to have the required teaching abilities i.e. certificate or in-service training.

- Increasing the time and exposure of students' clinical placements in each location with continued supervision from clinical lecturers and/or clinical instructors.

- Extending the length of clinical placements in Puskesmas – the current one week placement is insufficient.

- PHO/DHO carrying out an analysis of the level of Puskesmas activity to identify suitable training sites based on the level of activity and capacity of clinical instructors to provide training support at these sites.

- Reducing the number of students in each clinical placement to enable each student to apply the theory they have learnt to cases/patients in real settings. This can be achieved by nursing and midwifery faculties of the Poltekkes arranging and changing their clinical calendar to prevent all students from going to the field at the same time (Law No. 19 year 2005). These arrangements could be outlined in the MoU.

2. Basic essential equipment provided in Nursing and Midwifery Schools should be relatively compatible with the equipment used in the clinical settings. Skills in the use of equipment taught at the schools should enable graduates to utilize equipment in the clinical setting. For example, electrocardiogram (ECG) machines, nebulizers and cardiotocography machines (CTG). All equipment should be in working order and regularly maintained or replaced as necessary.

3. Lecturers of specific subjects should be included in the training courses on local diseases/health programmes provided by relevant technical programs. For example, the Communicable Disease Control (CDC) and Maternal and Child Health (MCH) programs. They should also liaise with the local PHO and DHO to obtain the latest data on disease rates, new prevention methods, as well as care and treatment protocols. This will increase student awareness of local health issues.

4. The nursing and midwifery faculties of the Poltekkes should coordinate with local health authorities to place groups of students in rural Puskesmas. They should be accompanied by a clinical instructor (local Honorer) to facilitate and monitor their clinical experience.

New Graduates

1. Each newly employed graduate is allocated a specific senior nurse/midwife who will mentor and support them in their workplace. This supervision and support should continue for at least 6 months in the unit or placement to ensure they receive sufficient clinical orientation and a comprehensive understanding of clinical practices.

2. Implementation of needs based workforce planning (for example, WISN - Workload Indicators of Staffing Needs) based on national and provincial strategic planning. Results should be used as a basis for posting new graduates.

3. Dental assistants should NEVER be assigned to provide nursing care services.

4. Nurses/midwives who are employed without civil servant (PNS) status should have less responsibility.

5. The PHO/HRD section and Personnel Bureau (BKD) should consult with the Directorate of Nursing, professional associations and clinical areas to continue to develop provincial and district job descriptions for different levels of nurses and midwives. This will ensure new graduates are aware of their expected roles and functions.

6. Clinical procedures that graduates are required to deliver in their workplace, for example, suturing, dispensing, NGT, health promotion and facilitating communications/partnerships

with Traditional Birth Attendants (TBAs), need to be included in the locally adapted curriculum.

7. The clinical practice checklist should be reviewed and an improved assessment process be formulated for feedback to Poltekkes. This should be done in collaboration with clinical teachers and clinical instructors.

8. All nurses and midwifes employed by the hospitals and Puskesmas (regardless of their employment status) should be given access to in-service training programmes in accordance with their job descriptions. Development of in-service programmes should include:

   - Hospitals and Puskesmas developing and using 'incident reports' and 'performance reports' as the basis for improving in-service/continuing professional development programs.

   - Normal Delivery Care training (APN) for graduates of the three year midwifery diploma should not be provided unless there is clear evidence of need.

9. Traditional Birth Attendants (TBAs) should be encouraged to partner with the community midwives as a policy to support the reduction in infant and maternal mortality rates. Currently the TBAs work separately from the midwives and complicated births do not utilise midwives at the appropriate time. (Workshops)

10. Funding should be provided for in-service training of new midwifery graduates placed in the community on how to develop partnerships between TBAs and Midwives.

Presentation of Findings

The findings from the study were presented to the local government in NTT and NTB as well as the BPPSDMK and other relevant Departments of MoH (Annex 4)

Follow up Activities

The follow up strategy from this study will be developed by the respective Poltekkes in each province together with the PHO in collaboration with Pusdiknakes, Pusrengun, donors and other relevant stakeholders.

Section I
Introduction

1. Rational for Undertaking the Study

Anecdotal evidence indicates that pre-services training in NTT and NTB is not producing nurses and midwives with the capacity to meet the needs of the health services. Many gaps have been identified, particularly in their clinical experience, which has necessitated them to undergo in-service training following graduation in order to raise them to the required level of competence.

Many issues have been identified in hospitals and community health clinics in the Provinces NTT and NTB. There was some confusion expressed by hospital administrators over the clinical capacity of newly graduated health workers which resulted in graduates being unable to properly deliver services. In addition, in-service training is currently being provided on an ad hoc basis.

Moreover, evidence presented by participants in the Hospital Management Training from a study undertaken on “Patient Safety and Medical Error in 3 Hospitals in NTB” indicates that the practice of basic universal precautions for nosocomial infection is extremely poor. All three of the hospitals surveyed in the study are clinical training sites for students from Pre-service Training Institutions in NTB (Poltekkes).

Government Health Polytechnic (Poltekkes) plays a pivotal role in preparing nursing and midwifery students with the required competencies to provide safe, skilled and ethical care in a variety of settings. It was therefore felt that the Poltekkes would benefit from an independent review of their capacities.

2. Purpose of the Study

The study aims to achieve the following outcomes:

1. Identify Competencies of Poltekkes Nursing and Midwifery Graduates to Deliver Safe Health Services in Government Hospitals and Puskesmas.

2. Identify Capacities of Government Poltekkes to Produce Appropriately Competent Nurses and Midwifery Graduates.

Section II
Background

1. Indonesia

Like many other countries experiencing disparate socio-economic development and a demographic transition, Indonesia presents a divergent epidemiological pattern:

While infectious diseases such as tuberculosis, malaria, respiratory infections, and diarrhoea continue to be a major health problem, non-communicable and life-style diseases are emerging.

In 1999 the MOH released the national programme, Healthy Indonesia 2010 (HI 2010) – (Annex 5).

After defining health goals and priorities for reform, the initiative gave way to a new paradigm. While the public in the past were considered passive recipients of health services, where service orientation and client satisfaction did not really exist, HI 2010 promotes health as a national movement, being the mutual responsibility of individuals, families, communities, political stakeholders and the private sector. The aim is now to educate patients and therefore to create a national momentum aimed at improving the overall national health situation.

The HI 2010 prioritised the following main elements of health sector development:

- Disease prevention and health promotion
- Decentralisation and strengthening of district health services
- Family health
- Strengthening the individual's responsibility for one's own health
- Public-private partnership

The decentralization effort in Indonesia, which started in 2001, is rated as an overall success; however it has contributed to a lack of coordination between Central Government and Local Governments causing unintended problems in the delivery of health services in provinces and districts.

The decentralisation process also raised issues of regulation as well as quality assurance.

1.1 Health Services in Provinces

Community Health Centres (Puskesmas), located at the sub-district level, represent the middle tier of the basic health care system. They usually consist of a doctor, nurse and/or midwife and other assistants and combine curative care and maternal and child health care. Basic health care is also provided by mobile health clinics.

Health Care Centres in the peripheral areas of the Provinces provide beds – this is to replace the basic level/type D community hospitals (hospitals with minimum care facilites). All community health care centres are owned by the District Governments.

Hospitals are classified into three categories. At the district level there is at least one district public hospital with some specialists. At the provincial level, there is at least one public hospital with more specialised services. At the national level (i.e. in the capital city) there is at least one top referral hospital served by at least a specialist for each area.

1.2 Delivery of Health Services

Health professionals, especially nurses and midwives, can provide high quality care, but variations in performance standards exist. Until now, no mechanism has been established to evaluate and guarantee a minimum performance.

Nurses and Midwives are trained in either Poltekkes or private schools. Although an obligatory accreditation system for these educational institutions has been introduced, application of sanctions is very weak.

In the face of fundamental HRH reform and development and increasingly complex health problems, nurses and midwives are more commonly being seen as key resources for the delivery of safe health care services and HRH strategies.

As the largest group of health care professionals in Indonesia, working in a wide range of health care settings, nurses and midwives can make a major contribution to the achievement of better health for the Indonesian people and achieving the Millennium Development Goals (MDGs).

However, the nurses and midwives need to be educated and trained to meet the challenges posed by the new emphasis on health promotion and disease prevention, community development, multi-disciplinary team working, and the provision of safe health services.

1.3 Millennium Development Goals

The Millennium Development Goals (MDGs) are eight international development goals that 189 United Nations member states and at least 23 international organizations have agreed to achieve by the year 2015. They include halving extreme poverty, reducing child mortality rates, fighting disease epidemics such as AIDS, and developing a global partnership for development.

The Association for Community Empowerment (ACE) is spearheading the movement for the achievement of the Millennium Development Goals (MDGs) in Indonesia. The ACE comprises 22 core members, each representing a network of civil society organizations working under the broad thematic areas of poverty and globalization; health, education and gender, and poverty and the environment.

Healthy populations underpin progressive sustainable development. The Millennium

Development Goals endeavour is to deliver quality and safe care to populations within Indonesia. However, these health development targets will remain unfulfilled if resources at the provincial level are inadequate or uncoordinated.

Health has a major impact on the development of Indonesia and significant progress can be achieved through effective strategies and policies, The inclusion of relevant modules in nursing and midwifery curriculum will support the GoI endeavour to reach the health related MDGs in the provinces of NTT and NTB.

Indonesia's progress for related MDGs

Goal 4 – Reduce Child Mortality

Under five mortality (per 1000 live births)	1997- 70.6	2002 - 46
Infant Mortality (per 1000 live birth)	1997 - 52.2	2005 - 32
Proportion of 1-year old children immunized against measles	1997– 70.9/1000	2005 – 72/1000

Goal 5 – Improve Maternal Mortality

Maternal mortality (per 100,000 live births)	1994 – 390	2000– 370
Proportion of births attended by skilled health personnel (TBAs not included)	2000 – 61.2%	2004 – 72%

(www.searo.who.int/EN/section1243/section1921.htm)

1.4 NTT and NTB

The Province of NTT is a large grouping of more than 500 islands, with 5 major islands – (West) Timor, Flores, Sumba, Aloe and Rote. The province has 16 districts and the municipality of Kupang.

The main constraints to development are transportation and communication difficulties associated with the geography of the province, scarcity of water and poor soils which limit agricultural production.

Anecdotal evidence indicates that in NTT and NTB the quality of the education of nurses and midwives is highly variable, and many are not educated to meet local and national health challenges. Therefore, their potential to contribute to the improvement of the health of the people is not being realized.

The urgent need to improve nursing and midwifery education and competency was the main driving force behind the GTZ/EPOS and AIPMNH study. The study focused on the initial education of nurses and midwives, which prepares them to be competent to practice safely as qualified nurses or midwifes.

It was also a priority to analyse the capacities of the Poltekkes to provide the pre-service education that would ensure their graduates are competent and safe to practice. One of the major shortcomings of health services is the availability of trained staff. Many Puskesmas

lack a doctor, and the midwife or senior nurse often double as the senior health provider.

The Province of NTB consists of two major islands – Lombok and Sumbawa. Lombok is divided into 3 districts and 1 municipality, as is Sumbawa. Staffing levels in NTB are more satisfactory, with at least one doctor together with nurses and midwives in most Puskesmas.

Transport and communications are not such a problem on the island of Lombok, although it is difficult in the more remote areas of Bima and Dompu.

In both provinces, the standards of facilities and availability of equipment and supplies further limit the provision of services.

NTT has a population of 4 million and NTB 3.9 million. Economically weak, these two provinces are amongst the poorest provinces in the country.

This is reflected in basic health indicators.

Table 1 Percentage of Poor Population and Illiterate in NTT and NTB

	National	NTT	NTB
Poor Population in 2004	16.66	27.86	25.38
Illiterate in 2005	11.05	15.36	20.81

Resource: Biro Pusat Statistik Indonesai–BPS
www.BPS.go.id/leaflet/leaflet-Jul05.ind.pdf
Indonesia Health Profile 2005 (Ministry of Health of Indonesia)
www.depkes.go.id/downloads/profle/en2005.pdf

Table 2 Infant Mortality Rate in NTB and NTT in 1999

	National	NTT	NTB
IMR (per 1000 live birth)	46	56	81
Under-five Mortality Rate	59.55	74.89	113.63

Resource: Indonesia Health Profile 2005 (Ministry of Health of Indonesia)
www.depkes.go.id/downloads/profle/en2005.pdf

Table 3 Percentage of Delivery Assisted by Health Providers in 2005

	National	NTT	NTB
Delivery assisted by Health Providers	72.34	59.31	74.16

Resource: Indonesia Health Profile 2005 (Ministry of Health of Indonesia)
www.depkes.go.id/downloads/profle/en2005.pdf

2. Nursing and Midwifery Education

The nursing and midwifery workforce are integral to the effectiveness of health services. No health system can afford the risk of giving health workers a poor education. And yet education in many countries is neglected and slow to change, even when people's health needs are changing rapidly.

Education for health professionals takes a student from being a layperson to having a role in health care that reflects expectations within cultures and societies. However, what all health sector managers must ensure is that each practitioner is competent to deliver the services for which they are qualified. All health sector managers need to know what each health worker is capable of delivering within the services for which they are educated.

Competence is the ability to perform a specific task in a manner that yields desirable outcomes. This definition implies the ability to apply knowledge, skills and abilities successfully to new situations as well as to familiar tasks for which prescribed standards exist. (Kak N, Burkhalter B, Cooper M-A. Measuring the competence of health care providers. Operations Research Issue Paper 2 (1), 2001, Bethesda MA. USA).

Creating job descriptions for each cadre of health workers has been shown to be an effective tool for improving performance (Mathauer, Inke, Imhoff, Ingo (2004) - GTZ paper). Therefore, if job descriptions are not already available, creating them will not only help increase performance but also provide a link between the health sector and the education sector, by outlining clear targets for education professionals. .

In many cases, the education of health personnel is a territory with overlapping ownership, particularly when many stakeholders are involved. Universities, other educational institutions, professional associations, departments of education and health, private interest groups, and others can all be stakeholders in education. Convening these often diverse partners and building consensus and long-term agreements appears to be integral to the development of a sustainable and appropriate education system for health workers.

Twinning arrangements are a proven way of improving capacities. James Cook University, School of Nursing, Australia, and Fiji School of Nursing, Fiji, entered into a Twinning arrangement in 2001. Anecdotally this has been a successful arrangement. An evaluation of this program will be carried out later this year supported by AusAID.

Twinning arrangements could be established between national universities and the provincial training institutions to strengthen training capacities at the provincial level. It could later expand to include international universities experienced in Twinning on an international level.

Staff from provincial training institutions could undertake e-training in these partner universities to become specialised trainers on specific topics. Experts from the national/ international training institutions could be included in a pool of experts which the provincial training institutions can utilise to train in areas that they cannot adequately cover themselves.

The additional advantage of the Twinning concept is that other areas of the training

institutions, such as Libraries, Administration, IT services etc, can also be improved.

The term “in-service training” is now often referred to as continuous professional development or lifelong learning. The rapid increase of health-related knowledge means that after graduation, nurses and midwives must constantly update their knowledge of safe and effective practice.

Continuous professional development for the health workforce poses some specific challenges. Health professionals comprise a spectrum of cadres ranging from basic health care workers with weeks to months of pre-service education, to doctors or nurses with a decade or more of pre-service and post-graduate education. Although they often share a set of core competences, each subgroup also has a highly specific set of skills and competences they are expected to perform. This set of competences not only varies according to cadre but also according to the setting of the practice. Nurses and midwives in rural USA will obviously have to deal with a different set of challenges in their everyday practices than nurses and midwives in rural Indonesia.

2.1 Central HRH in DoH

In 2002 the Ministry of Health established the “Board of Development and Empowerment of Health Human Resources”. The structure is as follows:

2.2 Poltekkes

Poltekkes are educational institutions under the responsibility of the Central DoH. Nurses and midwives are educated at these government institutions. There are also private educational institutions but these were not considered in this study.

The Poltekkes offer many health programmes in areas including Nutrition, Laboratory, Physical Therapy and the Nursing and Midwifery faculties. The nursing and midwifery programmes require 3 years of study and students graduate with a Diploma III. In NTB there is one (1) Poltekkes which trains nurses and midwives with 1 satellite that offers only Nursing programmes. In NTT there is 1 Poltekkes with 2 satellites both of which offer Midwifery and Nursing programmes.

Accreditation of the Poltekkes is conducted through DoH. There are 4 levels of accreditation, namely level A, B, C which is inspected every 5 years and level D which is reassessed after 2 years and closed down if there is shown to be no improvement. The recommended student intake is based on the accreditation level awarded. The only incentive for the Poltekkes to achieve a higher level of accreditation is to increase the prestige of the school, which could in turn attract more students.

The accreditation process has not been validated or evaluated so there is no information on the efficacy of this process.

Some of the private schools are accredited by the DoE and some are accredited by the DoH. They use different methods to accredit the schools and although they are working towards improving accreditation procedures there is not yet a common approach.

The accreditation and certification of nurses and midwives needs to be carried out by an independent body. This would enable these health professionals to obtain standardized credibility and competences which would be recognised in each province and other countries.

ASEAN Ministers have agreed on a mutual recognition arrangement and have said that ASEAN states will mutually recognize qualifications and standards of nurses as well as accountants, dentists and medical practitioners so they can practice in any ASEAN country. (www.aseansec.org/19210).

This will enable registered nurses from Indonesia to travel and work in other ASEAN countries and expand their skills and experience.

2.3 Clinical Experience for Nurses and Midwives

Based on the national curriculum, 60% of the training for nurses and midwives must be clinical experience and 40% theory. However, providing adequate clinical training is a serious challenge for Poltekkes as the hospitals and community health clinics (Puskesmas) used for clinical and practical training for students in nursing and midwifery are controlled by Provincial and District Health Offices. Access to clinical experience in these provinces is governed by Memorandums of Understanding (MoU) between Poltekkes and hospitals

and Poltekkes and District Health Offices who sign on behalf of Puskesmas. The purpose of the MoU is to regulate the access to clinical practice areas for nursing and midwifery students.

Private school students are also placed in the hospitals and Puskesmas for their clinical experience. This can restrict the opportunity for each and every student to individually carry out their required clinical activities. For example, midwives are required to carry out 50 normal deliveries; however, there are not enough births for all students from Poltekkes and private schools to achieve this during their clinical placements.

As a result, the midwifery students have to attend births in their off time and need to negotiate with the Puskesmas or hospital staff to be called when there is a delivery they can perform.

3. Literature Review of Training Needs Analysis for NTT and NTB

The work performance quality of graduates directly relates to the academic preparation they experience. In response to the need for high performance levels, assessment and evaluation must be conducted to facilitate improvements to nursing and midwifery practice and education in Indonesia. However, there has been minimal research conducted in this area. Nonetheless there are two studies that emphasize the importance of training to boost the clinical competence of nurses.

The study conducted by Hennessy et al aimed to find out the occupational profile and training needs of nurses, and the roles and training needs as perceived by nurses themselves. This study was conducted in 5 provinces with a total of 524 nurses selected at random and employed the quantitative methodology through the use of a questionnaire.

Based on the findings of the study, the following conclusions and recommendations were provided:

1. Nurses from each province demonstrated significant differences in their ability to perform 40 defined nursing tasks.

2. The nature of the roles is determined by the geographical location of practice.

3. The roles of hospital and community nurses and the different grades of nurses were fairly similar.

4. The nurses reported significant training needs from each of the provinces for all 40 tasks.

This study recommended the need to provide a continuing education for Indonesian nurses (Hennessy, 2006).

The Barber et al study on ‘Differences in Access to High-Quality Outpatient Care in Indonesia in 2007’ was conducted in 13 provinces with a total of 2,751 public and private health providers. This cross-sectional study focused on the assessment of technical quality

for prenatal care and adult and child curative care. The study found that variation in the clinical quality of health care providers directly reflected their level of knowledge. This can be seen as a manifestation of the overarching education, policy and regulatory framework in the health care system.

The study recommended improvements to the professional development of nurses in private settings in islands outside of Java and Bali. In-service training could assist in the development of nursing skills and strengthening of prominent sources of health care professional development and regulations, which could potentially have a significant impact on the quality of health care services. (Barber et al, 2007)

4. Conceptual Framework

The concept behind this study is depicted in Figure 1. The arrows explain the potential flow of connectedness of each component. This framework was the basis for the design of the study methodology.

Section IIII
Methodology

1. Design of the Study

This study utilizes qualitative and quantitative research methodology to undertake an analysis of the capacity of the government's health polytechnic to produce competent nursing and midwifery graduates. The conceptual framework and the methodology used were presented and discussed with representatives from PUSDINAKES and heads of nursing and midwifery faculties of both Poltekkes. The research was undertaken from July to September 2008.

The study used the following approaches to collect data:

- Initial survey to gather socio-demographic profile of the individual respondents
- Face-to-face interviews with individual respondents
- Focus group discussions (FGDs)
- Workshops for stakeholders, and
- Observation visits.

The data gathered through face-to-face in-depth interviews, FGDs, workshops and observation visits was analyzed utilizing the content analysis approach. The ethical responsibility to recognize and protect the rights of human research subjects was applied in this study.

The following information shows the implementation of the study design to assess the capacities of Poltekkes and competencies of the graduates in NTT and NTB (Annex 2 and Annex 3).

a. Stakeholders identified by their levels of involvement in this study

Level 1: Senior level of National Government (Health, Education and Home Affairs) and professional associations; Deputy Governors for Health and Education; Senior level Provincial and District Government - Mayor and DoH.

Level 2: National Managers of HR Health Programmes in DoH; Provincial and District Health Managers; Heads of Poltekkes.

Level 3A: Directors of Government Hospitals and Puskesmas in provinces and districts; Heads of Nursing and Midwifery Programmes in Poltekkes; Vice Director Academic Affairs; Provincial and District Professional Associations and Heads of District Health Office.
NTT – Provincial Health Office – Director of Division of Development of Health Human Resources
NTB – Provincial Health Office Training and Education Section

Level 3B: Individual Respondents – 'respondents' are defined as Nursing and Midwifery Graduates (direct entry) from NTT and NTB Poltekkes in first time employment in Government Health Facility Clinical Areas within agreed geographical area. The inclusive criteria for the individual respondents were:

1. First time employment
2. Employed within the last 3 years regardless of their type of employment
3. Graduated within 3 years from Nursing and Midwifery D-III Regular Programme under Poltekkes
4. Assigned to health facilities (hospitals/public health centres) 2 hours from the centre of the chosen placement city using public transportation

b. Government Facilities identified as employing defined 'respondents' – hospitals and Puskesmas. This was carried out by provincial staff of GTZ/EPOS and AIPMNH programs. These facilities are no more than 2 hours from Poltekkes using public transportation.

c. Defined 'respondents' were identified by provincial staff of GTZ/EPOS and AIPMNH programs.

d. Draft letters to each level of stakeholders under the auspices of GTZ/EPOS and AIPMNH who were signatories on the letters.

e. Follow-up letters of invitations to 'respondents' (level 3B) with telephone calls for first contact. List of subjects to be covered in telephone conversation were identified.

f. Information and data requirements that level 3A stakeholders were required to bring to the workshop were developed. This was attached to invitations.

g. Interview Guide was developed for face-to-face interviews with level 3B 'respondents' - pre-test to be done on demographically equivalent subjects for appropriateness and clarity.

h. Focus Group Discussion instrument developed for level 3B 'respondents'.

i. Focus Group Discussion instrument developed for Provincial staff from GTZ's Provincial projects.

j. Workshop programme for level 3A developed.

k. Areas to be checked on observation visits and questions developed.

l. Meetings held with GTZ/EPOS project staff in each province to debrief and include their comments in outcomes.

m. Outline of programme and activities for implementation of study in NTT and NTB developed.

2. Visits to NTT and NTB

This study was conducted in NTB and NTT Provinces, primarily in Mataram and Kupang. These two areas were chosen because the Poltekkes offer nursing and midwifery study programmes and produce graduates who are later posted in these cities.

The following approaches were used to collect data:

1. **Courtesy Visits** - people identified by the Provincial GTZ/EPOS staff

2. **Telephone calls** - for initial contact with 'respondents' from level 3B

3. **Face to Face Interviews** - approximately 5 interviews per day and 'respondents' travelled to central meeting place with overnight stay if necessary

4. **Observation visits** - to Government hospitals and Puskesmas and Poltekkes – these were conducted on alternate days to the Interview days

5. **Focus group meeting with 'respondents'** – the number of respondents was set at between 10 and 15 people for each Focus Group meeting and if necessary two meetings were held.

6. **Focus Group meeting** for Provincial staff from GTZ's other projects.

3. Limitation of the Methodology

A number of limitations in the methodology were encountered during the implementation of this study as outlined below:

1. The communication method was inadequate.

   - Postal services were inefficient, therefore up-dated technologies were used instead. i.e SMS, Mobile phones, facsimile.
   - Letters from GTZ to stakeholders were sent from GTZ to PHO and PHO to stakeholders. This resulted in time constraints.

2. The technique for identifying the defined respondents was inadequate.

   - Respondents who met the criteria of the methodology were difficult to locate due to the lack of data available in the provinces.
   - Many identified candidates who were sent for face- to-face interviews did not meet the criteria and therefore had to be refused and not included in the study. They were however reimbursed for their travel and time.
   - This issue of identifying the correct candidates was resolved by utilizing the snowball technique.

3. Due to time constraints and limited resources, visits to the Poltekkes satellites were not possible.

4. The time frame of this study proved to be very short.

- More time in NTT and NTB would have enabled the collection of more data.
- The time frame meant the visits had to be made in semester break and therefore lecturers and students were not on campus. Actual lectures and clinical teaching and practice could not be observed.

Section IV
Summary Reports on Study

1. Face-to-Face Interviews

Voluntary principles were applied in this study. Prior to face-to-face interviews respondents were briefly informed about the goals of the study and ensured that confidentiality would be maintained. All respondents signed informed consent letters after agreeing to participate.

A. Face-to-face Interviews in NTT

- More than 30% of graduate respondents are working as PNS and CPNS and the remaining graduates are employed as honourer or PTT (contracted staff). The majority of graduates feel they were placed in an unstructured clinical orientation program.

- The duration of orientation programs varied from a week to two (2) months and during that time no one was specifically assigned to them for clinical orientation. Most supervisors had lower levels of education than the graduates themselves.

  The respondents said they felt it was important to have supervisors/mentors with the capacity to properly orientate them into their place of practice. .

  The following statement outline a respondents concerns about the orientation program:

  > *"We were not orientated into the program; seniors always told us that once we graduate we are ready to do any activities/procedures that they tell us to do … no one monitors my development …. I think I need help with the development of my skills, so that I will be more confident … because I have no mentor, I routinely follow the customs of the unit rather than the modern techniques I was taught"*

  Graduates stated that some of their roles and responsibilities were not adequately covered in their training. For example, individual patient care including ante-natal care (ANC), delivery, immunization, as well as health educationand dispensing medication/ drugs. A number of the midwife and nurse respondents working at Puskesmas or Pustu (satellite) stated that they were required to dispense medication.

- Some of the nurse respondents working in Puskesmas stated that they conducted ANC, assisting deliveries conducted by midwives or helped deliver babies in the absence of midwives. However, they had not been encouraged to become involved in the desa siaga (village alert) program.

  A midwife graduate employed in satellites (Pustu) stated that many complicated cases

were referred to them by TBAs.

"I am called by families only after the TBAs are unable to handle cases".

- Many graduates voiced concerns over their clinical experience in relation to patient safety, infection control, incident documentation, referral and collaboration.

  70% said they had difficulty with infection control due to the lack of running water and limited equipment. Many said that they did not wash their hands every time they were in the laboratory because there was no running water. Although lecturers reminded them of the importance of hand washing before and after each activity, they did not teach them the principles of Universal Precautions.

- In general, graduates stated that they were provided with theoretical information but that this information was extremely limited on the issues of CDC, pharmacology, and their relationship to the TBAs.

- Only a small number of graduates felt satisfied with the capability of lecturers in the classroom and the practice areas.

  "We only learned about nutrition for one semester…, minimal information on malaria theory … not enough TB cases were discussed"

- The graduates were concerned about the large number of students in each class and the presence of private school students in clinical settings.

- Some lecturers neglected to go to classes to teach and were not available in clinical practice areas as they were teaching in private schools instead. Graduates also said that the assistant lecturers in the laboratories and clinical settings lacked adequate skills when they took over from the lecturers.

- Many respondents expressed concern about the limited amount of learning resources in the classrooms and laboratories. Graduates also complained about the limited access to computers and absence of language and computer laboratories in the Nursing and Midwifery Faculties.

- The textbooks and journals in the library were limited and out of date. There were also limited and out of date laboratory resources and therefore students often had to share the equipment in groups and did not always get the opportunity to practice.

B. Face-to-face Interviews in NTB

New graduates:

- Most have no written job descriptions; they are verbally informed of what to do and sometimes do not completely understand the instructions as many procedures are completed differently to how they were taught by lecturers in Poltekkes.

- For first time employment; orientation varied from one day to two (2) months, there was not adequate clinical orientation, and no specific assigned supervisor for new graduates. However, they were able to consult any senior as needed.

- There is no difference in the level or amount of tasks assigned. If they are new graduates they get more tasks and are told: "The younger, the stronger, it is an opportunity to learn, gain more experience." But they are paid less.

Pre- service:

- Some respondents were concerned about the abilities of the clinical teachers

  "Some [teachers] are good lecturers, but when it comes to practice they cannot perform what has been taught".

- Some were concerned about the lack of teaching equipment:

  "Some equipment was just for display, and had never been used".

  "Lots of the equipment is broken and it is not properly maintained".

- Nurses posted within the community felt they were not well equipped to dispense drugs:

  "I only have two credits in pharmacology".

- General comments made were:

  "We need more [training] on communication skills".
  "Many students need more hands on clinical experience".

- Most respondents knew the principals of infection control but there were limited resources in their clinical placements at Puskesmas. E.g. no equipment for sterilizing or boiling.

- Due to limited access to internet and text books in the library, graduates stated that they had difficulty completing written assignments.

  "[There are] plenty of books, but old editions, [so] we went to the Regional Library, or bought it, or went to an Internet cafe".

  "The computer lab was in the other campus and we couldn't use it because we had to travel there and it was far away."

2. Focus Group Discussions

A. Focus Group Discussions (FGDs) in NTT

- Participants said they had limited learning resources in the classrooms and

laboratories and a lack of supervision from the Clinical Instructors in the field because all of them were heads of the units and therefore didn't have time for students.

- According to the FGD participants, the different methods of supervision employed by Clinical Teachers caused them confusion.

- The experience gained in the Puskesmas was extremely limited and there was a lack of opportunity to work with Midwives in Pustu (satellites).

  They stated a need to be involved with the activities run by midwives/nurses in the remote places in order to have a better understanding and more experience and familiarity with day-to-day activities.

- Participants also said they needed to increase their readiness/confidence during pre-service training. They felt that Poltekkes concentrated more on the quantity of students rather than the quality and stated that there was a need to increase the length of time for clinical experience.

- Participants defined a competent nurse/midwife as possessing the skills to complete all procedures, deliver nursing care, uphold nursing/midwifery etiquette, collaborate with colleagues, completely apply logic to activities, utilise self-learning, and capable of working in any situation.

- Participants were concerned about the lack of communication and collaboration with doctors when they carried out orders. They said that doctors' orders were not always clear and that doctors failed to help them understand.

  "....there are some things that we know but some we do not. So, we are sort of following doctors' orders without knowing exactly what [they want us to do]"

- Midwifery graduates stated that there were some practices that needed to be taught for at least 3 months, such as, cervical dilation examination, normal delivery, episiotomy, and insertion of Intra-Uterine Devices and implants.

- Nurses from Puskesmas stated that they were required to be supervised for at least a month in each Puskesmas program, while nurses in hospitals spent at least 6 months being rotated in each unit to enrich their skills before being placed in a specific unit. They also said that it was difficult to find professional role models to learn from.

- Respondents stated that infection control was the most important aspect in protecting the safety of patients, yet they found it difficult to maintain a high standard of infection control due to the limited amount of running water and equipment in the clinical settings.

B. Focus Group Discussions (FGDs) in NTB

- Compared to individual interviews, the graduates spoke more openly in FGD regarding learning processes and the abilities of lecturers.

- All the procedures that they were not confident to perform after graduation were due to the lack of cases during the pre-service period. These included inserting and feeding through NGT, applying ECG, dispensing drugs, taking care of premature babies.

- They felt there were too many students in clinical areas. Often one student was performing a procedure and the others were just watching.

- They also expressed concern about approaching the community and their ability to provide the community with adequate health education information:

  "We only have superficial knowledge"

- In the laboratory work, the clinical teacher to student ratio was 1 to 40. Teachers demonstrated on the theatre stage and students watched from a distance.

  "[The demonstration was] unclear, many [people] were talking".

- Due to time constraints not all lecturers provided re-demonstration procedures. Mostly students had to borrow equipment and re-demonstrate among themselves without supervision from clinical teachers.

  "We did it in the afternoon, after class time and no clinical teachers were available".

  "Some lecturers were very good, but in practice they could not perform properly...when asked any clinical questions they turned away and were unable to [provide] satisfactory answers".

- There were many books in the library but they were old editions. The internet was in the other campus and it cost time and money to get there so they mostly went to internet cafes. In addition, some of the laboratory equipment/models were damaged and not properly maintained.

- They were also concerned that many teachers taught in other schools.
  "Don't treat us as step children".
  "Assignment were not discussed or assessed"

- According to respondents, clinical orientation at hospitals was inadequate and usually only involved introductions to the director and ward managers. The orientation focused on hospital structures, hospital capacity, beds, what to do

and what not to do. They felt they needed a lot more clinical orientation and support to feel confident to carry out clinical procedures.

In Puskesmas, orientation was about coverage territory, health programmes, types of reports, Social Safety Net (Askeskin).

3. Workshops

A. Workshop in NTT

- Participants brought up the issues surrounding the Memorandum of Understandings (MoUs) that are reviewed every four (4) years. They would like to see Poltekkes, hospitals and Puskesmas use the MoUs more efficiently.

- Due to the increased intake beyond the accreditation criteria for level B, the ratio of lecturers to students was 1:25. This affected the usage of classrooms, laboratories, clinical areas, and also increased the workload of lecturers.

- Some of the respondents identified limited clinical learning processes as one of the reasons for the graduates' lack of skills. Others felt lack of experience rather than competence was the issue.

  > *"Graduates lack of experience rather than lack of competence/skills … developing student and graduate competencies will increase the quality of health services"*

  PPNI and IBI complained about the graduates' lack of competence. IBI mentioned the low motivation of D-III midwife graduates to coordinate and communicate as well as their lack of confidence in delivery.

  > *"Their lack of skills is affected by the limited number and ability of CIs and CTs.*

- The lack of communication on monitoring and evaluation process between CIs and CTs was identified by respondents as an issue. In addition, the need to increase the skills and abilities of CIs was also highlighted.

- Hospitals recruit honorer but PHO employ PNS and assign them to health services. New graduates in hospitals join the orientation program for 3 days under the management of unit heads. There was a lack of any orientation program for new graduates and their job descriptions are described in the following statement:

  > *"Supposedly, the skills/abilities are integrated on TB, malnutrition, malaria and also treatment regimen. Graduates are not knowledgeable on Puskesmas programs. Orientation program is set the same for everyone, in fact midwives who are going to be placed in the remote [areas] need different orientation programs"*

- Dental assistants employed to deliver nursing care in the hospital deliver unsafe care to patients.

- A significant number of lecturers (87%) have a background education lower than Strata I (S-1)

- There is misunderstanding regarding the ratio of theory and practice and how this relates to the role of Poltekkes and the clinical settings.

  > *"[The} curriculum states 40% for theoretical aspects and 60% for clinical practice; therefore the graduates' performance is determined by field practice (hospital/Puskesmas). Hospitals don't have enough Clinical Instructors to guide/mentor students to standard competence. 60% practice indicates that 60% of the learning process is the hospital and Puskesmas' responsibility"*

- PPNI and IBI at the provincial and district levels hold orientation or socialization programmes for members of the associations on practice standards, legislation and policy that affect their practice. They are planning to implement a competency test.

- 60%-70% of Human Health Resources in the provinces are Poltekkes graduates. Poltekkes recruit from the top ten graduates of D-III Nursing and Midwifery schools to be honorer who are then given priority for PNS recruitment. These graduates are then sent to take up further study, either in D-IV or S-1 to become educators.

B. Workshop in NTB

Recruitment

- PHO, DHO and CHO stated that for recruitment there is no need to conduct a competency test, only an administrative assessment and writing test.

- Administrative orientation programmes for new employees are conducted in DHO/CHO but there is no clinical orientation for new employees; all orientation is held in DHO/CHO.

- Nurses and midwives are recruited to fill available positions in PHO or DHO/CHO

- There is no career ladder, no risk and safety management policies, and no planned in-service training program.

- The only incentive for high performance is civil service status following the existing government policies

- Only one hospital has incident reports and there is no orientation for graduates regarding the processes to follow if incidents occur.

Memorandums of Understanding

There are (4) yearly MoUs between DHO and hospitals, but there are no MoUs for community health centres. Poltekkes currently has MoUs with four public hospitals in different cities and two universities.

MoUs determine clinical instructors, finances, and the number of students in each practice area. They are rarely adhered to as no one knows what is written in them. Financial arrangements between hospital and Poltekkes are not discussed in detail.
The cost of clinical instructors, basic clinical equipment such as gloves, syringe, soap, antiseptics etc should be included in the MoU finances.

Hospitals

- A large number of students from many different schools are placed in hospitals at the same time. Due to the limited number of instructors and facilities this is problematic.

- The hospitals would like to have more Clinical Instructors and hope the Poltekkes will re-arrange the distribution of students and schedules.

- Clinical Teachers are supposed to play a more active role in supervising students in clinical areas.

- One hospital requires a pre–placement competency test for students to ensure safe practice.

Poltekkes Group

- Poltekkes have MoUs with four public hospitals in different cities and two universities.

- The system of learning and teaching is considered sufficient to equip students with adequate competencies when they graduate. However this is not the case in all instances.

- Since 2008, Poltekkes have been striving to improve the recruitment system to avoid having to recruit graduates with marginal passes. They are considering implementing a Competency Based Curriculum.

  Problems encountered were:
  - Limited space in units for students and Clinical Instructors.

  - Unrealistic ratio of students and Clinical Instructors.

  - Clinical practice does not follow theoretical principles.

  - Finances between hospital and Poltekkes are not discussed in detail.

Professional Associations:

PPNI (National Nursing Association):

- According to PPNI data, 5% of Poltekkes graduates work in hospitals and 95% in the community. PPNI recommend that the curriculum be re-assessed.

- The role of PPNI is to develop standards for clinical practice and nursing care fees, as well as draft the nurses' competencies assessment and certification procedures.

- All in-service training for nurses in NTB must have approval from PPNI.

IBI (Midwives Association):

The role of IBI is to:

- Actively inform members of all new legislation and policies that affect their practice.

- Prepare competencies assessment procedures at the province level working together with local provincial government.

IBI expressed concern that there are already 12 private midwifery schools in NTB; this may affect the competencies of graduates. The increasing number of students competing for clinical practice has resulted in insufficient clinical experience for all students from both government and private schools.

4. Observation Visits

A. Observation Visits in NTT

During observation visits to Nursing and Midwifery faculties of Poltekkes, the following issues emerged:

- The level of education of most lecturers (87%) is lower than Strata 1 (S-1).

- The entry test is applied to each student yet students with marginal passes continue to be considered.

- The strata of accreditation for both faculties is level B, but the number of intakes, ratio of lecturers to students, the faculty environments and facilities are not coherent with their strata of accreditation.

- Poor internet connection, lack of computer and language laboratories in both faculties, as well as limited new editions of books/journals.

- Limited running water affects the overall cleanliness of the school environment and also the learning process in the laboratories.

- There is a considerable difference between nursing and midwifery faculties in terms of cleanliness and room arrangements; the later was cleaner and well arranged. However, there were limited mannequins, models, catheters, NGTs, or ECG machines (broken and old fashioned).

- There are faucets but no running water. In midwifery laboratories there are water jars/containers for washing hands.

- Staff and dining rooms are being used/redesigned as classrooms.

- During the observation visit, the fact the national curriculum needs to be redesigned to meet the needs of the province was discussed.

- In general, nursing faculty graduated its student 90% on time, but in midwifery faculty only 60% of the students graduated. The remaining 40% of students were extended up to 4-7 months to enable them to graduate.

  Observation visits to Hospitals and Puskesmas identified the following differences between the Poltekkes and private schools:
  - The Clinical Instructors receive different fees from Poltekkes and private schools
  - Student attitudes
  - The minimum presence of clinical teachers for bedside teaching
  - The lack of standard evaluation
  - Student performance
  - The criteria for becoming a midwifery Clinical Instructor in Puskesmas is lower than in a hospital

B. Observation Visits in NTB

Observation visits to Nursing and Midwifery Faculties of Poltekkes determined the following:

- The library has the capacity to hold between 40 – 50 students. However, according to the librarian, an average of only 15 – 20 students per day frequents the library. No nursing and midwifery journals are available.

- There are a limited number of textbooks in Indonesian for nursing and midwifery studies.

- Library access times are from 8am to 2pm only.

- There are two computers available for internet access but with very low speed making it difficult for students to use them.

- There is a main Computer Lab at the Faculty of Nutrition but it is a considerable distance from the Midwifery and Nursing faculty.

- There is no Language Laboratory available for the Nursing and Midwifery Faculties.
- There is a theatre in the Nursing Faculty with the capacity for 40 students to observe a demonstration, making it difficult for students at the back of the room to observe.
- There are small rooms with the capacity to hold 5-8 students for each subject of study. Equipment in general was reasonable, but not in good working condition.
- Not all laboratories had running water, but some had buckets and water containers.
- 92% of lecturers with first degree levels (S1, D4, or D3) with teaching certificates (Akta IV) had minimal clinical experience.
- The head of the midwifery school said that the DIII did not need the APN; however they were being encouraged to pay for it.
- The average graduate passing rate for Faculties of Nursing and Midwifery is more that 80% (completed within six semesters). There are some marginal pass students who needed extra assistance and time (more than six semesters) to finish their nursing/midwifery studies.
- There seems to be concern over the limited number of qualified Clinical Instructors. The school trains the Clinical Instructors and have only trained two for hospitals and four for community health centres.
- Clinical Instructors in hospitals and community health centres expect the Poltekkes Clinical Teachers to play a more active role in the supervision of the clinical learning, but this is not happening.
- Due to the large number of students from Poltekkes and private schools, not all of them are able to obtain sufficient clinical practice.
- Some midwifery students coordinate with staff in Delivery Suites to enable them to come to health centres in their own time. This is to ensure they attend the required number of deliveries, in order to fulfil the criteria prior to graduation.
- Clinical Instructors for nursing students in Puskesmas are mostly medical general practitioners.
- In two of the Puskesmas with beds there are well equipped incubators available but “they had never have been used”. This was not due to inadequate electricity capacity but rather that according to the local health policy all premature babies in need of incubators had to be referred to hospitals. This restricts the students’ clinical experience in Prenatal or Neonatal clinical practice.

Section V
Findings, Recommendations and Follow up

Data was collected from 'interviews' with recent graduates (quantitative data) and focus group discussions, observation visits and workshops (qualitative data).

In order to enhance the quality of NTT and NTB government health services provided by nurses and midwives and improve the capacities of the Nursing and Midwifery faculties of Poltekkes and competencies of the nursing and midwifery graduates, the study recommends the following:

1. Capacities of Poltekkes

1. The competencies required of nurse and midwife lecturers are expertise in practice and education. The lecturers must also be committed to maintaining their clinical expertise and be supportive of regular reviews and evaluations of their work (WHO Strategy for Nursing and Midwifery Education, 2001 page 139).

92% of the nursing and midwifery faculty in the Poltekkes in NTB are employed as lecturers with only D-III, D-IV and S-I qualifications. D4s have only been graduates for one year and only have theoretical teaching experience and minimal clinical experience (Observation visits and Workshops).

In NTT 87% of lecturers were employed with the same qualifications as in NTB.

In the Focus Group Discussions graduates stated that they were confused about the clinical teaching in the Poltekkes as this teaching did not always meet the required clinical competencies they were required to have in their clinical placements. Moreover, the clinical teachers from Poltekkes were not always available when the students were in their clinical placements.

In the workshops, respondents expressed concern over the level of clinical competencies as a result of the low quality of the Poltekkes clinical teaching. Only one hospital required students to complete a competency test prior to their clinical placements.

45% of the graduate respondents stated that in the clinical laboratories the lecturer's assistant taught them and they were unable to provide satisfactory answers to their clinical questions. This situation is more common in NTT.

Recommendations:

BPPSDMK should provide necessary support to the nursing and midwifery faculties of Poltekkes to review their policy on the employment of nursing and midwifery lecturers to ensure that they:

- Hold a qualification for the subjects they teach i.e. Law No. 14/2005 (Annex 6) states that all lecturers of diploma level must have a Masters degree. In the nursing and midwifery faculties of Poltekkes this Masters degree must be relevant to the subject they teach.
- Have a minimum of two years of relevant practical experience in the subject they teach. (WHO Strategy for Nursing and Midwifery Education, 2001)
- Maintain their clinical competence e.g. Nursing and midwifery faculties of Poltekkes should evaluate the clinical competence of lecturers every 5 years as recommended by Nursing and Midwifery Professional Associations – PPNI (2001) and IBI (2002) (Annex 7).
- Ongoing professional development of lecturers to develop their educational skills through twinning arrangements with prominent nursing and midwifery schools in Indonesia and/or overseas with experience providing support to developing countries.

2. Each nursing and midwifery faculty of Poltekkes has an entry exam which all prospective nursing and midwifery students must pass. However, some students with marginal passes are accepted (Workshop results). This would only be viable if Poltekkes changed their status to allow them to legally use their student fee revenues.

Recommendations:

Students who obtain marginal passes on the entry examinations should be given additional tutorials. These additional tutorials would require:

- Extra effort from the nursing and midwifery faculties of Poltekkes.
- An increase in tuition fees, part of which should be allocated for staff time utilised to enable students to reach the competencies required for graduation.
- An improvement in Poltekkes management to accommodate these additional tasks effectively.

3. Currently the national curriculum is reviewed and approved by the Department of Health (Pusdiknakes).

The nursing and midwifery faculties of Poltekkes have the authority (Law No. 19/2005 [Annex 8]) to adapt the curriculum to meet the local health service needs in each province. However, all respondents stated that there is not enough local health service needs content in the curriculum.

Recommendations:

- The nursing and midwifery faculties of Poltekkes should consider establishing a health sector taskforce to review and adapt the national curriculum to ensure it meets local health priorities. This will ensure that graduate respondents will be capable of delivering safe health services in local health settings (hospitals, Puskesmas etc).
- The taskforce should include Pusdiknakes, planning section of PHO, surveillance sections of CHO, DHO, PHO, Head of Nursing and Midwifery Department of Hospitals, Head of Puskesmas.

- The taskforce should develop a working agenda that allows the nursing and midwifery faculties of Poltekkes to get all demographic and epidemiological information required to adapt the national curriculum to meet the local health needs in a timely manner.

4. The Memorandum of Understanding (MoU) is an agreement between the PHO and Director of the Local Hospital and Poltekkes and is renewed every 4 to 5 years. The purpose of the MoU is to regulate nursing and midwifery students' access to clinical practice areas. (Workshop results)

Recommendations:

The MoU between Poltekkes and the relevant parties on the utilization of hospitals and Puskesmas for student's clinical experience is reviewed annually to accommodate the clinical requirements of the students. The MoU should specify:

- The number of students placed in each clinical area based on the amount of activity (e.g. average number of deliveries per month) and the total number of expected students, including those from the private schools.
- Standard of clinical supervision, with specific criteria for clinical instructors from hospitals or Puskesmas.
- Units where students are to be placed,
- The role of clinical teachers from nursing and midwifery faculties of Poltekkes
- Standards for preparation of students for clinical placement.

5. Library and laboratory facilities in nursing and midwifery faculties of Poltekkes are essential to support academic and clinical teaching and develop the competencies of students and lecturers.

78% of graduate respondents in the Focus Group Discussions, observation visits and workshops raised the issue of the poorly resourced library facilities and out of date equipment in the clinical laboratories. Respondents stated that textbooks were scarce and often out of date. Moreover, there are very few textbooks in Indonesian.

There are no professional journals either in the library or available online due to the lack of computers and internet facilities and slow internet download speed in the nursing and midwifery faculties and limited amount of IT facilities in the whole campus.

(Also refer to Competencies Recommendation 4)

Recommendations:

- Support should be given to the nursing and midwifery faculties of the Poltekkes to upgrade the Library, Clinical Laboratories and Electronic Facilities
- Financial and technical support to upgrade the library including electronic library resources, hard copies of up-to-date textbooks and online journals

- Ensure adequate and reliable access to the internet
- Upgrade teaching resources such as clinical laboratory equipment
- Conduct computer training programmes for lecturers and students
- Establish computer and English language laboratories in nursing and midwifery schools
- Provide ongoing budget allowances for the regular maintenance, renewal and upgrade of the School of Nursing and Midwifery computer hardware and software.

6. Some lecturers have neglected their role as a teacher in classrooms and clinical laboratories in order to teach at private schools during working hours (Focus Group Discussions)

Decree No.30/1980 and a Letter from the Head of BPPSDMK, dated January 2004, (Annex 9) states that lecturers are not permitted to hold (staff) position in the private schools but are allowed to teach in other localities after their working hours.

Recommendations:

- This regulation should be applied rigorously to all lecturers in nursing and midwifery schools.
- A detailed analysis should be undertaken by PHO HRD and the provincial education office (PEO) to identify the number of lecturers in both public and private schools. This will ensure the recommended full-time equivalent student lecturer ratio.

7. Poltekkes accreditation is carried out every five (5) years and is controlled by the Pre-service Education Section (PUSDINAKES) of the National Board for Development and Empowerment of Health Human Resources (BPPSDMK). Observations from visits to the nursing and midwifery faculties of Poltekkes indicate that their current level of accreditation is not in line with the actual situation.

Recommendations

- Consideration should be given to establishing an independent body to carry out accreditation processes based on appropriate standards. This independent body should include representatives from Pusdiknakes, Professional Associations, PEO, PHO, the community, clients, and the Governor's Office.
- This body could also be utilised for conducting other quality reviews of nursing and midwifery faculties in the Poltekkes.
- Support should be given for further training of the accreditation body.

8. The physical environment influences the processes of teaching and learning.

In NTT there is limited running water which affects levels of hygiene and the capacity of the nursing and midwifery faculties in the Poltekkes to function effectively. (Observation visits)

Recommendations:

- Nursing and midwifery faculties of Poltekkes (especially in NTT) should develop a multi-sectoral local government and donor agencies committee to overcome the lack of water in clinical laboratories and offer some solution to the problems of nosocomial infections.
- In the interim, nursing and midwifery faculties of the Poltekkes should endeavour to provide water in all the clinical laboratories.

9. Since the decentralization process began in 2001 the responsibility to provide quality nursing and midwifery education has been shared by Ministry of Health, Ministry of Education and Local Government, in particular PHO, DHO and external agencies. However, there are still no clear protocols on leadership. This has had a negative impact on the development of the nursing and midwifery faculties of Poltekkes because advice from each agency is often conflicting (workshops).

Recommendations:

- National level planning for development coordination of health professional institutions needs to be considered until further decentralization of responsibilities is clarified.

- All related national and provincial departments and external agencies (GTZ, AusAID, and WHO etc) are encouraged to strengthen partnerships with nursing and midwifery Faculties of the Poltekkes to ensure a more synchronized approach to nursing and midwifery education. This will contribute to overall population health outcomes and MDGs will improve through graduates with relevant competencies.
- PUSRENGUN supports coordinating a national planning committee of all stakeholders.

2. Competencies of Graduates

A. Pre-service

1. The two major concerns in relation to developing the competences of the graduate respondents are the poor quality of clinical experience and inadequate amount of clinical orientation resulting from a lack of supervision in the workplace.

These concerns emerged in all the data gathering methodologies (Interviews, Focus Group Discussions, Workshops).

Recommendations

- Provide training for health service unit managers in the management of clinical training sites including identification of key staff as clinical instructors.

- Ensure nursing and midwifery lecturers have the required certificate of clinical proficiency in their field of teaching.
- Ensure current lecturers upgrade and maintain their clinical experience and are regularly evaluated on their performance.
- Ensure clinical instructors in the clinical settings have the required teaching ability – certificate or in-service training.
- The student clinical placements period needs to be increased and placements should be carried out in each location with continual supervision from clinical lecturers and/or clinical instructors.
- Increase the length of clinical placements in Puskesmas – the current one week is insufficient.
- PHO/DHO should conduct an analysis of the level of Puskesmas activity to identify suitable training sites. Clinical instructors from these Puskesmas should undergo training.
- Reduce the number of students in each clinical placement to enable each student to apply what they have learnt to cases/patients. This can be achieved by nursing and midwifery faculties of the Poltekkes arranging and changing their clinical calendar to prevent all students from going to the field at the same time (Law No.19/2005 [Annex 8]). These arrangements could be outlined in the MoU.

2. 61% of graduate respondents interviewed felt that the clinical equipment in the schools was an important part of preparing students for clinical practice. Students need to practice on equipment relevant to their clinical placements to enable them to acquire the necessary skills prior to their clinical placements. Some respondents stated that although the equipment was available in the laboratories it was not offered for student practice.

Recommendations:

- Basic essential appropriate equipment provided in nursing and midwifery schools should be relatively compatible to that which is used in the clinical settings e.g.Electrocardiogram (ECG) machine, Nebulizers, Cardiotocography machine (CTG).
- All equipment should be in working order and regularly maintained or replaced as necessary.

3. 80% of the graduate respondents interviewed voiced concern that they had limited and superficial knowledge of the local health needs (Malaria, TB, HIV/AIDS, Expanded Programme on Immunization [EPI], Maternal Child Health [MCH] etc).

Recommendations:

- Include lecturers of specific subjects in the training of new aspects of local diseases/health programmes which are conducted through the Communicable Disease Control [CDC]/MCH/etc programmes to health care providers
- Liaise with the local PHO and DHO programmes to obtain the latest data on diseases and any new prevention, care and treatment related to their own districts and provinces to ensure students are aware of local needs.

- Also refer to Capacity Recommendation 3.

4. 71% of graduate respondents interviewed mentioned they had very limited access to internet references in the nursing and midwifery faculties of Poltekkes (one computer lab for all of faculties of Poltekkes schools). As a result, nursing and midwifery students are unable to access computers and learn of current or new scientific findings.

Recommendations:

- Refer to Capacity Recommendation 5.

5. Observation visits and Workshops showed that clinical experience in rural placements was limited to only a few students because of the lack of clinical lecturers in these placements.

It is important to have this clinical experience to enable graduates to function more effectively if they are placed in a rural setting after they graduate. Moreover, placing students in rural areas could improve the retention of nurses and midwives in underserved areas.

Recommendations:

- The nursing and midwifery faculties of the Poltekkes should place a group of students in a rural Puskesmas to be accompanied by one clinical lecturer (local Honorer) to facilitate this clinical experience.
- The placements should be conducted in coordination with the local health authority.

B. Competencies of Graduates

1. The confidence and competence of the graduate respondents in the first employment setting was influenced by the level of support they received from the staff in the unit where they were assigned.

73% of respondents interviewed stated that there was no one assigned to clinically orientate them to their workplace.

In the Focus Group Discussions the new graduates expressed concern that the currently employed midwives in the community had not undertaken in-service to upgrade on evidence based practice. Therefore there was conflict between new graduates and the graduates of different eras.

Recommendations:

- Each new employed graduate should be allocated to a senior nurse/midwife who has participated in continuing education. This supervision should continue for at least 6 months in the unit or placement to enable comprehensive clinical orientation

- The allocated senior nurse/midwife should be provided with the opportunity to upgrade their knowledge and skills.

2. Graduate respondents are employed through the PHO and DHO and are placed at the facility without a clinical selection process.

The employment of nurses and midwives is unrelated to any needs-based health workforce planning.

Their employment status can vary from Honorer (80% salary - no other benefits), PTT (temporary employment – approximately 80% - no other benefits), CPNS (80% salary with benefits), PNS (100% permanent government employee).

The graduates are placed in the hospital/Puskesmas where they are needed rather than where their clinical interest has developed.

On more than one occasion assistant “Dental Nurses” have been allocated to a hospital and put in units as a ‘nurse’. They are expected to provide ‘nursing’ care which is not their area of competence. (Workshops)

This could possibly be the reason ‘nurses’ are judged as less than competent on graduation.

Volunteers (no salary), are occasionally allocated to units within the Puskesmas.

All levels of nurse/midwife employees (as above) are expected to provide the same level of service but receive different salaries and benefits.

Recommendations

- Needs based workforce planning linked to national and provincial strategic planning should be implemented (WISN [Workload Indictors of Staffing Needs]).
- No dental assistant should EVER be assigned to provide nursing care services
- Nurses/midwives who are employed without PNS status should have less responsibility.

3. There are no national written job descriptions for scope of practice for any level of nurse or midwife. However, there are some local senior nurse/midwife job descriptions. (Focus group discussions, Workshops)

Recommendations:

- The Directorate of Nursing should consult with BPPSDMK, professional associations and clinical areas to continue to develop national job descriptions for the scope of practice for different levels of nurses and midwives to ensure new graduates are not required to carry out services without some supervised experience.

4. 59% of the graduate respondents acknowledged they had limited knowledge of the local and general clinical procedures required in their employment positions e.g. suturing, dispensing, Naso Gastric Tube (NGT), and communication/partnership with Traditional Birth Attendants (TBAs)/health promotion.

All of these procedures are included in the national curriculum.

Recommendations:

- More emphasis should be placed on the clinical aspects of the locally adapted national curriculum.
- The checklist for assessment of clinical practice should be reviewed and an improved process for assessment implemented (for feedback to Poltekkes). This should be completed in collaboration with clinical teachers and clinical instructors.
- Clinical orientation should be implemented by placing new graduates with a specific senior supervisor for 6 months.

5. In-service/Continuing Professional Development is necessary to enable nurses and midwives to continue to provide competent and safe health care services. In-service should be provided by the places of employment; however respondents stated that unless they were employed as CPNS and PNS they were not eligible to attend. (Focus Group Discussions)

All graduate respondents stated that they would like to attend in-service in order to enhance their practice. Respondents were unaware of how the content of the in-service programmes is decided.

The APN is encouraged for all midwifery graduates. All the midwives stated that this was not really necessary for D-III graduates although many of them attended.

There has been no evaluation of the impact or effectiveness of APN course in reducing Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR).

Partnerships between midwives and TBA have not been implemented or encouraged

Recommendations:

- All nurses and midwifes employed by the hospitals and Puskesmas (regardless of employment status) should be given access to training in-service programmes relating to their practice. To develop in-service programmes :
    - Hospitals and Puskesmas could develop and use ‘incident reports’ and ‘performance reports’ as the basis for developing in-service/continuing professional development programmes.
    - The APN for the graduates of Midwifery DIII should not be provided unless there is evidence of need.

- Funding should be provided for the continuation of partnerships between TBAs and Midwives.

3. Follow up Activities

The follow up strategy of this study will be developed by the respective Poltekkes in each province together with the PHO, in collaboration with PUSDIKNAKES and PUSRENGUN as well as external agencies.

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ANNEXES