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MINISTRY OF HEALTH

REPORT

OF

COMPREHENSIVE MIDWIFERY REVIEW

September 2006

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FOREWORD

This report contains the results and recommendations from a comprehensive review of midwifery in Cambodia undertaken as an important component of the Mid-Term Review (MTR) of the Health Sector Strategic Plan, 2003-07 (HSP), and the Health Sector Support Project, 2003-07 (HSSP).

The death of a mother is not just a matter of personal family tragedy, but also constitutes a huge human and socio-economic loss to the nation. As such a high maternal mortality ratio is one of Cambodia's most pressing health concerns to which the Ministry of Health and its development partners are committed to addressing as a priority. As made clear in the First National Midwifery Forum held in 2005, the evidence is clear that increasing access to skilled and well-trained midwives is crucial to achieving the Cambodia Millennium Development Goal 5 (CMDG5) of reducing maternal mortality. It will also contribute to reducing the numbers of neonatal deaths required to achieve the CMDG4 for child health.

For the MoH, midwives are one of the critical cadres for achieving the overall improvements in health, especially in rural and hard to reach communities. Also, as this report and others have shown, communities hold professional midwives in high regard and their lack is a serious barrier to healthcare for all. However it is increasingly clear that there is a serious shortage of midwives in Cambodia and that increasingly fewer recruits are being attracted into the profession. Therefore, one of the outcomes of the Midwifery Forum was an agreement by all, that action to address the serious shortages of midwives in Cambodia should be based on a sound review of the current situation of midwifery within the country.

Reducing maternal and newborn deaths and disability are human rights issues and as such should be of concern to all in society. Therefore, it should come as no surprise that the report also makes clear, implementing the recommendations will require action by many different actors, not just the MoH and its partners.

The Ministry of Health would like to commend all those who worked on and/or supported this Comprehensive Review of Midwifery, including the consultants. The findings are timely and will be incorporated into the MoH strategic plans. Moreover, they will be used for the benefit of all parts of the MoH, in particular the Department of Human Recourses Development. The findings cover a wide range of issues and point to many steps and activities needed in the forthcoming years to increase the numbers of midwives as well as quality of the training, deployment and retention of midwives.

Phnom Penh, September 2006

Prof. Eng Huot
Secretary of State
Ministry of Health
Kingdom of Cambodia

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Although it is always difficult in such complex pieces of work to single out individuals, the team would like to acknowledge the contribution of the Department of Human Resource Development and Department of Personnel. Gratitude is expressed to Madame Keat Phuong, Director Human Resource Development, and Dr Mey Sambo, Director Personnel, who both put their respective Departments at the disposal of the team. Not only did these two departments provided office space, mountains of documents, access to their databases, etc, but also assisted throughout with all our needs, including helping to arrange the fieldwork. The team would also like to pay tribute to the support provided by HE Prof Koeut Meach, Director General Administration and Finance and HE Dr Tep Lun, Director General Health. Thanks are also due to Dr Char Meng Chuor and HSSP staff for the many administrative and financial arrangements, particularly the team would like to thank Dr Uy Vengky in HSSP and Dr Khuon Vibol (from UNFPA attached to HSSP), without whom we would not have managed to complete this weighty task on time. Dr Lo Veasna Kiry, Director Planning and Health Information Department was also helpful in offering his advice and support, as was Madame Koh Sileap, Chief Nursing and Midwifery Officer, head of the Nursing and Midwifery Bureau based in the Hospital Services Department MoH.

Finally, the team would also like to acknowledge the numerous midwives, nurses and doctors in the many clinical facilities visited, including staff at both ODs and PHDs. Also, the Directors and midwifery teachers at the Regional Training Centres and at the Technical School for Medical Care (TSMC), as well as staff at the National Maternal and Child Health Centre (NMCHC); all of whom were always courteous and willing to assist, even when the team visited unannounced. The Review would not have been possible without the assistance of the national counterparts, in particular a huge debt is owed to national counterparts, Dr Rathavy, National Reproductive Health Programme, Mr Kong Sarann and Mr Phrom Yann from MoH Department of Personnel who accompanied the team on their field visits, to ensure all arrangements went smoothly. Special thanks are offered to Madam Ou Saroeun and Madam Chin Chan Tach, both from the NMCHC. These two women, not only accompanied the team and assisted with arrangements for the field visits, but also applied the clinical assessment tool to the midwives, thus ensuring the assessments devised by the team were as realistic and true as possible under a test situation.

The Comprehensive Review was made possible by funding from UNFPA, who made contractual arrangements for the team on behalf of MoH.

Abbreviations/Acronyms

ARI	Acute Respiratory Infections
CDHS	Cambodia Demographic and Health Survey
CMA	Cambodian Midwives' Association
CPA	Complementary Package of Activities
DFID	Department for International Development
EmOC	Emergency Obstetric Care
FDH	Former district hospital
GTZ	German Technical Cooperation
HC	Health Centre
HRD	Human Resource Department
HP	Health Post
HSP	Health Sector Strategic Plan
HSSP	Health Sector Support Project
IMCI	Integrated Management of Childhood Illnesses
ICM	International Confederation of Midwives
IU	International University, Phnom Penh
JAPR	Joint Annual Performance Review
JICA	Japan International Cooperation Agency
MCC	Midwifery Council of Cambodia
MEF	Ministry of Economy and Finance
MoEYS	Ministry of Education Youth and Sports
MoH	Ministry of Health
MPA	Minimum Package of Activities
MRD	Ministry of Rural Development
NAA	National AIDS Authority
NCHADS	National Centre for HIV/AIDS, Dermatology and STD
NGO	Non-governmental organisation
NMCC	National Medical Council of Cambodia
NMCHC	National Maternal and Child Health Centre
NRHP	National Reproductive Health Programme
OD	Operational District
OI	Opportunistic Infections
PD	Personnel Department
PM	Primary Midwife
PHD	Provincial Health Department
PMTCT	Prevention of Mother to Child Transmission
PR	Principal Recipient, Global Fund, Ministry of Health
PSI	Population Services International
RACHA	Reproductive and Child Health Alliance
RGoC	Royal Government of Cambodia
RHAC	Reproductive Health Association of Cambodia
RH	Referral Hospital
RTC	Regional Training School
SM	Secondary Midwife
STD	Sexually Transmitted Disease
SWiM	Sector wide Management
TSMC	Technical School of Medical Care
UHN	United Health Network
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VCCT	Voluntary and Confidential Counselling and Testing
WHO	World Health Organization

Executive Summary

1. The Comprehensive Midwifery Review found a very positive environment and willingness to prioritise attention on the issue of increasing equitable deployment of quality midwives in order to achieve reductions in maternal and newborn mortality. There was a willingness to contribute to this agenda from all key stakeholders, including The Ministry for Education, Youth and Sport (MoEYS) and Secretariat for Civil Service. As such, the Ministry of Health of the Kingdom of Cambodia (MoH) are to be congratulated on their efforts to date to build consensus on this issue. The work of MoH and all health partners in this area is exemplary, especially in a country facing so many other urgent health issues.
2. Steps have already begun to implement the pay-band increase for all midwives, as requested by the Prime Minister's Office following the High-Level Forum on Midwifery in December 2005. These efforts need to be completed as soon as possible, so that midwives do not loose confidence in Government, more specifically MoH's commitment. Council for Administrative Reform (CAR) was also receptive to assisting MoH, but were unable to offer any concrete suggestions.
3. In terms of general societal support for midwives, the Review Team found a positive view of support for midwives, in keeping with that reported elsewhere.[1] It was clear however, that many members of the community are unaware that there is a shortage of midwives in Cambodia.
4. Data appears to show that a significant improvement has taken place in the last year to increase the numbers of Health Centres (HCs) functioning with a midwife. However, the increase is mainly due to increased postings of primary midwives (PMWs[*]), in HCs. A significant number, 51% of HCs, remain without a secondary midwife (SMW). Given the low numbers of PMWs that have to date received the 4-month midwifery training from NMCHC, this means that many HCs do not have the capacity to save the lives of mothers or babies if a complication arises. This is of concern. Without attention to ensuring that all HCs are adequately staffed with someone with the requisite competencies to save lives, it is likely that all that will happen is to change the place where mothers and newborn die – from the their home to the facility. This will have a negative impact on future utilization of health facilities, especially since the confidence of the community in HCs is still fragile.[2]
5. Significant efforts have already been implemented to increase the numbers of student midwives. These efforts appear to have been undertaken as a direct result of the High-level Midwifery Forum December 2005.
6. The current initiative to roll-out the one-year Primary Nurse-midwife programme (designed specially to address short-term problems in the North-East) is considered to be of limited value in terms of potential impact on reducing maternal and newborn mortality and morbidity. In its' present form, the one-year

[1] MoH HSSP *Obstacles to deliveries by Trained Health Providers to Cambodian Rural Women*. UNFPA Cambodia, February 2006

[*] Included in PMWs are those with 1 year Primary Nurse-midwife Diploma

[2] As noted in the finding from *Obstacles to deliveries by Trained Health Providers* report 2006

programme has serious drawbacks that will lead to long-term problems. In particular, the lack of competency in essential midwifery skills including those that can potentially save the live of a mother and or newborn. This is a major concern given that i) referral systems are generally weak and are in still in the process of being developed and ii) many HCs remain without a SMW who can supervise PMWs.

7. The national standards for midwifery and for midwifery staffing at all levels need to be reviewed and once agreed, made explicit and disseminated widely; as there appears to be general confusion over what the actual standards for both practice and for staffing should be.

8. The standard of 1 SMW and 2 PMWs (as used by MoH Personnel Department) would seem adequate for most HCs offering MCH services, including intrapartum care for up to 100 births per year. Beyond this number of births however, staffing should be based on having sufficient skilled providers available 24/7 who are competent to provide intrapartum care and able to offer first-line management of complications and make effective referrals. This means looking at number of secondary midwives plus PMWs who have undertaken the additional 4 months post-basic Midwifery training. There should be an absolute minimum of 2 healthcare providers with full midwifery competencies to be able to offer 24/7 coverage, but 3 would be ideal.

9. In HCs where there are below 20 births per midwife per year, plans should be made to ensure midwives are able to maintain their competency in management of normal birth and recognition and action for complications in the mother and newborn. This could be by rotating these midwives into the Referral Hospital for a short period each year.

10. Despite results that show a serious gap in the skills possessed by the current midwife workforce (both secondary midwives and primary midwives, with primary being of major concern), Cambodia is fortunate to possess a highly committed and willing midwifery workforce on which it can build its' future efforts on. The Review found that, 50 percent of those midwives assessed, wished to remain at their post.

11. The most common incentive mentioned by student midwives that would keep them in the profession was the opportunity for career advancement and further study, followed by respect offered to them by the MoH and others in the health system. The ability to earn a decent living was understandably a crucial factor for both midwives working in the health system and student midwives.

12. Given that the most frequent reasons for midwives currently in practice wishing to move from their post was, i) to retire, or ii) to be near their family. It appears that the current MoH initiative to recruit from specific areas to fill specific midwifery shortfalls in that area, is likely to be an effective strategy. However will only be successful if the new rules on recruitment into civil services, and the recommendations from the 2 recent reports on recruitment[3],[4], can be implemented in all places.

[3] Hansen J. *Evaluation of the Ministry of Health's 2005 Recruitment Process and Related Factors Affecting the Number of Midwives Employed in Cambodia*. MOH, Phnom Penh, July 2005

[4] Plummer S. *Evaluation of Final Allocation of Midwives in the Ministry of Health Recruitment Process 2005*. Report for WHO Cambodia, Phnom Penh, March 2006

13. Recruitment of midwives from `Nursing' is likely to remain problematic. However, the decision to have midwives on higher salary band appears to have had a positive impact on increasing applications onto the 1-year post-basic programme. Given the growing need for more nurses, to cover the anticipated increased demand for general health care, (e.g. increase in medical technologies and for responding to emergent diseases and illness such as HIV/AIDS etc) plus the expected increase in births (due to the Cambodia's demographic profile), MoH need to re-consider the desired profile for maternity care. MoH need to develop a long-term view of what the overall profile of the midwifery workforce should look like. Once this has been agreed, they should then make plans to achieve this.
14. Midwives desire to live near to their families appears to be very strong and will there continue to impact on deployment. Lessons from how MoEYS are addressing deployment of teachers in rural areas may be useful for MoH to consider.
15. In accordance with the Terms of Reference, a number of concrete recommendations and options have been included in chapter 7 for the four areas the team was asked to look at. The options and recommendations suggested have been successfully implemented in other countries facing similar challenges to those identified by the Review Team. The team however recognize that all the proposals and recommendations need to be considered carefully in the specific context and realities of Cambodia.

MAIN RECOMMENDATIONS - *for Priority Actions in the Four Areas included in the Review*

Options for ways to achieve the below recommendations can be found in chapter 7. An illustrative phased plan of strategic actions is outlines in Annex 3, which may help MoH and Health Partners to consider priority actions.

Area 1. Coverage and Competencies

A. To increase coverage of health facilities staffed by adequate numbers of competent midwives

1. A. annex which, maps out phased increases of numbers of student midwife, as well as options for career pathways that allow advancement for all midwives, including the options for primary midwives to undertake further training to become a secondary midwife, should be developed and added to the current HR development plan.

Ensure the document sets the priorities and strategic directions needed to increase numbers of midwives produced each year to be able to increase coverage of births (short and medium-term action,) as well as increase quality.

B. To strengthen competencies and quality of midwifery services (including current and future midwives),

1. Urgently modify the content and structure of Primary Nurse-midwife programme (short-term action)

2. Address current skills deficit, specifically the need to increase support to Primary Midwives, to include;
    a) Address the need for ongoing support and supervision of all midwives.
    b) Introduction of a probationary period for new graduates of Primary Nurse-midwife programme (Short to Medium-term).
    c) Strengthen and promote a professional midwifery ethic and midwifery identity. For example, scale up the rollout of national midwifery uniform to help create midwife identity. Also, establish Midwifery Council as soon as possible and implement a mandatory registration and licensing mechanism that is based on externally validated assessment of competence and includes the need for periodic re-licensing
3. Increase community support for and dialogue with all midwives
    a) Increase opportunities for dialogue between the community and midwives at all levels
    b) Encourage local midwife and community innovations and partnership
    c) Establish a mechanism for rewarding innovative partnership and action between midwives and women that involve the local community.

Area 2. Pre-Service Education and In-service Training

To strengthen pre-service education and make in-service more efficient and effective there is need to

1. As a matter of urgency, introduce an independent, externally verifiable national examination/assessment of competence graduates from all midwifery programmes.
2. Develop and implement a national plan of action for strengthening the capacities of all midwifery-training institutions; to include introducing quality improvement systems to ensure that Training Centres, including TSMC, are able to delivery quality midwifery programmes.
3. Increase collaboration between training centres and clinical sites.
4. Use of more clinical facilities for training. In particular use of clinical facilities with high numbers of cases, especially births.
5. Improve the availability of quality teaching and learning resources. (Re-equipping institutions with the necessary Teaching & Learning Resources will require short-term action. Overall improvements, including better collaboration with clinical facilities, working with new facilities preparing clinical sites and clinical instructors and mentors, will require medium to long-term action)
6. Increase capacities of teachers and ensure career pathways and adequate preparation for future teachers (requires both short-term and long-term action). As an interim measure, there is need to immediately address the clinical skills of midwife teachers and increase the number of part-time clinical instructors used in RTCs, drawing from competent midwives in current practice at RHs.

Area 3. Recruitment, retention, deployment, especially to rural area and including use of incentives

To increase recruitment and retention and for equitable deployment of Midwives to rural areas, including use of incentives

1. Current plans and agreements for upgrading midwives onto high pay-band should be implemented as quickly as possible
2. Consider lessons leant from the education sector for creating of special hardship postings, which carry with them incentive packages.
3. Incentives for teachers to follow-up students in clinical areas should include travel allowances
4. An incentive package, which could be a mixture of small one-off payments and for support for updating training, could be considered to encourage midwives working in non-midwifery areas agree to being re-deployed to a midwife post
5. Future recruitment of midwives should follow national guidelines and prioritise areas of need.
6. Provincial Health Departments should report annually to MoH on numbers of new midwifery recruits, leavers and numbers of those with midwifery qualification working in non-midwifery areas.
7. Exit interviews should be established for all who leave service and results collated centrally
8. Quota systems can be established for training places for hard to post/ under-served areas, it may be possible to use incentive schemes for supporting students from these areas
9. Establish community support groups for local midwives in rural areas. This will particularly help midwives not from the area, to feel a sense of connection with the community and may result in better retention of staff.

Area 4. Attractiveness of Midwifery as a profession

For maintaining and strengthening midwifery as a attractive profession

1. Strengthen midwifery leadership and midwives contribution to policy-making, by investments in and support for CMA. This to include as an immediate measure, assistance to support the establishment of a central head office. (The office could be shared with the Midwifery Council, but the separate roles and functions of each should be maintained). (Requires short, medium and long-term action)
2. Assist CMA to create partnership between CMA and leading woman's groups and associations, for mutual support and synergies.
3. Assist CMA to re-establish links with ICM
4. Develop and implement a plan of action for creating a national focal point for midwifery.

Finally, it is strongly recommended that all the above should be planned as a cohesive whole and not taken piecemeal, with health partners contributing to this national plan in a coordinated way.

For this reason and, because it is envisaged the above will require a sustained and phased plan of action, central monitoring and accountability, it is further recommended that MoH, as a matter of urgency, appoint a **High-Level Midwifery Taskforce.** The first task of this High-Level Midwifery Taskforce would be to consider all the above issues and decide on strategic actions to move to the next phase of developing midwifery in Cambodia.

The High-Level Midwifery Taskforce will develop a national strategy, as well as oversee and monitor the implementation of a national Operational Plan for Increasing Equitable Access to Quality Midwifery Care. The Chair of this Taskforce should minimally be at the level of Secretary of State. Secretariat could be provided by National Reproductive Health Programme, providing additional support was available.

For proposed membership of this Taskforce, see Annex 8

Chapter 1: Background and Midwifery in Cambodia

1. BACKGROUND

Cambodia has made remarkable progress over the last decade, although the health sector still faces persistent challenges. These include a high maternal mortality rate, high infant, child and neonatal mortality rates, a low level of deliveries assisted by trained health providers, a large unmet need for family planning, relatively high levels of anaemia, and high levels of STI and HIV transmission. The maternal mortality rate estimates suggest there are 437 maternal deaths per 100,000 live births and, although under-five child mortality has shown a significant decline in recent years, from 124 per 1,000 live births in 2000 [5], is estimated to be 83 per 1,000 live births[6].

Some key maternal and child health indicators show significant improvements from 2000, current estimates show that the proportion of women who are anaemic has also reduced, from 57.8[7], to 47% of women having some form of anaemia, of which 33% show only mild anaemia[8]. Additionally, whereas in 2004, less than half of all pregnant women reportedly received 2 or more antenatal care visits, and only a half received adequate tetanus toxoid injections[9], 2006 data shows that 69% of all pregnant women now have at least one antenatal assessment by a trained health care provider and, three quarters of women have tetanus toxoid injections[10]. Whilst the number of births assisted by a trained health provider has increased to an average of 44 percent, it is estimated that approximately 78 percent of babies are still delivered at home, although decreasing more rapidly in urban areas where approximately half of all births now takes place in a health facility[11]. Traditional beliefs that negatively influence delivery practices, health seeking behaviour and child feeding practices remain prevalent across the country, more so in rural areas and in families with low and very low income[12]. Although showing improvements such indicators highlight the major challenges facing the government, especially the Ministry of Health, to make further progress in this area. Specifically this situation places a huge burden on the Government, as is having a negative impact on efforts for meeting Cambodia's international agreements and obligations for improving the health of all its citizens, especially that of it's women and children.

To address the above-mentioned indicators, The Royal Government of Cambodia, The Ministry of Health (MoH) and health sector partners have given high priority to improving reproductive, maternal and child health status and, to increasing the availability of midwives. These priorities are clearly highlighted in the `Cambodian Millennium Development Goals`, the `National Strategic Development Plan`, `The

[5] CDHS, 2000
[6] CDH, 2006
[7] CDHS, 2000
[8] CDHS, 2006
[9] JAPR, 2005
[10] CDHS, 2006
[11] CDHS, 2006
[12] MOH/UNFPA, 2006

Health Sector Strategic Plan`, the `Health Sector Priorities 2005-2006`, and the `Joint Monitoring Indicators` selected by the Technical Working Group for Health. High-level awareness of the current issues related to midwifery shortages and barriers to providing equitable access to quality midwifery care and commitment to move forward on these issues was reinforced during the high-level Midwifery Forum held in December 2005. One of the many outcomes of this high-level Midwifery Forum was the decision to commission a `Comprehensive Review of Midwifery'. It is anticipated that the results of such a `Comprehensive Review of Midwifery' will inform plans for addressing the issue of poor access and utilization of midwifery services.

The `Comprehensive Review of Midwifery' in Cambodia is being conducted at the request of the Ministry of Health of the Kingdom of Cambodia (MoH). Funding support has been provided by UNFPA. In addition, the results will be submitted, as one of the components of the Mid Term Review (MTR) of the Health Sector Strategic Plan, 2003-07 (HSP), and the Health Sector Support Project, 2003-07 (HSSP). The Health Sector Support Project (HSSP), which became effective in 2003 is a five-year programme jointly funded by the MOH, ADB, World Bank, DFID, and UNFPA, with two high-level objectives:

- *to increase the accessibility and the quality of health services*
- *to assist in the implementation of the HSP and strengthen the sector's capacity to manage resources efficiently.*

The `Review Team` appointed by MoH to conduct the `Comprehensive Review of Midwifery' commenced work 4th July 2006 by drafting a detailed work plan. Implementation of the plan started immediately following approval of the work plan by the Technical Working Group Health (TWG-Health) 11th July 2006.

The Review Team formally reports to H.E. Prof. Eng Huot and the TWG-H Secretariat. However, on a day-to-day basis, the review team worked closely with the Human Resource Department, the Personnel Department and the National Reproductive Health Programme.

II. MIDWIFERY IN CAMBODIA

Midwifery training was reintroduced across the country in the early 1980's. This followed the decimation of the health workforce during the Khmer Rouge period. The overall goal of the training at this time was to quickly produce a large number of *trained* skilled midwives, in order to increase the access to midwives throughout the country. It is not clear from available documents just what was meant by the term "basically trained", although those in senior positions today acknowledge that the driving force was to quickly produce large numbers and that quality may have been compromised.

In the early period of reintroduction of midwifery training, there were two basic training programmes. One programme delivered qualifications to become a primary level midwife, the other a secondary level midwife. The primary midwife-training programme was one-year in duration, and the entry requirement called for completion of a secondary school education, although not necessarily attainment of a 12th grade pass. The secondary midwife-training programme on the other hand was three years in duration. The first year was a common year with secondary nursing students, and the last two years were dedicated to midwifery content and developing midwifery

specific knowledge and skills. It is generally acknowledged that although both midwives could work at any level of health care system, the intention was that primary midwife would work at Health centres (HCs) in a supportive role to secondary level midwives. Additionally, secondary level midwives would form the bulk of midwives in Referral and Provincial hospitals.

During the mid 1990s, for reasons that remain unclear, a decision was made to discontinue midwifery training. The net result being that no midwives was produced in Cambodia for 6 years. In 1996, both the primary and secondary midwifery courses were stopped and the new post-basic midwifery programme was eventually introduced in 2002.

The new post basic-nursing midwifery curriculum is one year, following three-years preparation as a nurse, therefore making total length of training four years in duration. Entry requirements call for completion of secondary school, although it is not clear if entrants must have gained 12th Level pass. At the end of the three-year period, successful students who graduate the nursing programme may choose to enter into employment as a nurse, or can apply to enter into a fourth year of studies, devoted to midwifery. This programme, commonly known as the 3+1 programme, saw the first midwifery graduates enter into service in 2003. Graduates exiting from this programme obtain a Diploma in Midwifery and may enter the civil service against the post of Secondary Midwife (SMW).

In 2003, the Ministry of Health also introduced a 1-year Primary Nurse-Midwifery programme specifically for use in the North-East Region. This programme was designed to address the severe shortage of midwives in the North-East, and a lower entry requirement (completed grade 7 schooling) was adopted to ensure that local women who were willing to live and work in that region were eligible for some elementary training in nursing and midwifery. Graduates from this programme may enter into civil service against the post of a Primary Midwife (PMW). The course shares nursing content with those following the Primary Nurse programme, to acknowledge that in many places in the North-East the PMW may well find herself working in isolation as the sole healthcare provider.

In 2005, The Ministry of Health decided to expand this one-year programme nationwide and revised the curriculum. Under the Revised Curriculum guideline[13], entrants outside of the North-East must have completed 10 years schooling. Successful graduates following the midwifery field of study, will get a *Diploma in Primary Midwifery*, and will be eligible to enter Civil Service against the post of Primary Midwife.

In 2004/2005, one private sector post-basic (1 year after nursing) midwifery training programme was initiated at the International University (IU) in Phnom Penh. The University intends to produce 20 graduates per year and use the national 1-year post-basic curriculum. The first batch of graduates is expected in 2006. IU also is planning to start a four-year midwifery course (Bachelor in Midwifery) for none nurse entrants, to commence later in 2006.

Despite all of the above training programmes, there remains a growing shortage of midwives, particularly in rural and remote areas. There is a very low level of applicants to the Post-basic (3+1) Midwifery programme, and the attractiveness of

[13] Curriculum for Primary Nurse-Midwife, Second Reviewed, Human Resource Development Department, MoH January, 2006

midwifery as a profession is considered to be decreasing due to low civil service status, low salaries, limited interest of young people to live and work in rural/remote areas, and fear of health risks, especially HIV/AIDs.

III. PRIMARY FOCUS OF THE COMPREHENSIVE MIDWIFERY REVIEW

The Terms of Reference specify the scope of work for a comprehensive review of midwifery issues in Cambodia comprising: current coverage and competencies, pre-service and in-service training, recruitment and career path, deployment and retention of midwives in rural and remote areas, and attractiveness of midwifery as a profession. The reviewers are expected to analyse the current situation and provide clear conclusions and recommendations for consideration during the Health Sector Mid-Term Review. While the primary focus of the review is on the Cambodia situation, reviewers are expected to provide comparisons and develop conclusions and recommendations based on regional and international best practices. [See Annex 1 for detailed Terms of Reference (TOR) for Comprehensive Review of Midwifery.]

The Review covered 4 specific but interlocking areas:

1. Coverage and Competency (Functional Assessment of Midwives in post)
2. Training (Pre-service, In-service)
3. Recruitment, Deployment and Retention; (especially in rural areas) and Incentives
4. Attractiveness of the Profession

❖ Time-lines

Activities commended 5th July 2006

- **Phase 1:** *(5th –16th July)* Briefing, development and approval of work plan, development of tools
- **Phase 2:** (*17th July – 13th Aug*) Field Data collection
- **Phase 3:** *(14th Aug – 27th Aug)* Cleaning data, preliminary analysis of results
- **Phase 4:** *(28th Aug – 13th Sept)* Development of draft proposals and recommendations & Draft Report
- **Phase 5:** Final Report incorporating stakeholder comments. Date for Final Report 6th October 2006

Chapter 2. Methodology for Conducting Review

I. OVERVIEW OF DATA COLLECTION AND ANALYSIS

In view of the complex nature of the Comprehensive Midwifery Review and to take account of the limited time available to complete the task, it was agreed to divide the working into four areas, as follows

1. Coverage

–Interrogation HRD / Personnel Database

–Data verification in 9 Operational Districts (ODs) [Random selection of 7 outside Phnom Penh + North East as special case]

2. Functional Assessment (competencies of current midwives)

As many midwives as possible (*convenience sample*) were included in the sample ODs, plus a small sample from Phnom Penh (Private and Public) were assessed using a triangulation methodology comprising of

- Midwives own self-assessment of their competencies
- Testing of knowledge required for safe midwifery practice
- Testing of skills, focus was given to those competencies that are considered essential, i.e. critical for maternal and newborn mortality reductions.

3. Education & Training

A simplified Educational Audit was conducted in all training institutions used to train midwives (both pre-service and In-service training sites, with focus on pre-service, as recently there has been review of both Life Saving Skills (LSS) training by RACHA and Evaluation of NMCHC Training by JICA. The Final Report for evaluation of LSS and the preliminary results of JICA evaluation of NMCHC was given to be included as data for the Review. During functional assessment profiles of midwives assessed included what type of in-service training they had attended. The results of skills assessment were disaggregated to compare results of those who had attended Life Saving Skills (LSS) and long course at NMCHC, with those who had no exposure to such trainings.

Semi-structured interviews were conducted with available Midwife Teachers during visit to training centre.

4. Recruitment, Deployment, Retention, Incentives and Attractiveness of Profession

Some of the data collection for this area was integrated into data verification and functional assessment. In addition,

- Multiple Documents were reviewed
- Multiple Semi-structured Interviews were held with Key Stakeholders (see Annex 2 for full list of stakeholders who contributed to the review)
- FGD were held with community groups (community perception survey)
- Survey of high school pupils to assess their attitude towards and knowledge about midwifery - *was planned, but proved not possible –as schools were closed during the time available for data collection.*

The TOR specifically called for incorporation of stakeholder comments. To accommodate this, a *Technical Reference Group*[‡] was established, the members of which helped to analyse the findings. The second mechanism used was a Consensus workshop, held 11th September to discuss preliminary findings and obtain feedback and practical advice, thereby trying to ensure findings were analysed with a cultural lens.

II. SAMPLE

Given time limitations it was decided that it was only feasible to assess the current situation and midwifery practices in a sample of Operational Districts (ODs). As the TOR called for focus on rural areas it was decided to exclude Phnom Penh, although a small sample of midwives from both public and private facilities in Phnom Penh would be selected for inclusion in the competency assessment, for comparison. It was also decided that given the special circumstances of the North-East, both Ratanakkiri and Kratie would be included in the sample. Finally, due to problems with flooding in Koh Kong Province, ODs in this Province would be excluded, as travel would be problematic.

The team aimed for a 10 percent sample of all ODs outside of Phnom Penh. The following ODs were eventually agreed. Key informants felt that the random selection had included ODs with varied characteristics, included at least 1 "contracting out" OD and gave a variety of high and low populated ODs.

The following ODs were selected

1. Oudong; Kampong Speu
2. Preah Sdach; Prey Veng
3. Sampov Loun; Battambang
4. Preah Net Preah; Banteay Meanchey

[‡] Technical Reference Group: comprised of senior experienced midwives from education and practice, Midwife representative from NMCH, National Reproductive Health Programme and Training Center of NMCH, Midwife from RACHA involved in Life Saving Skills Training.

5. Stong, Kampong Thom;
6. Ankor Chey, Kampot;
7. Angkor Chum, Siem Reap.
8. Kratie *(not random)*
9. Rattanakkiri *(not random)*

All RTCs, TSMC and the Training centre at the NMCHC were included in the assessment of training capacities.

III. TOOLS

- **Functional Assessment**

A number of specific tools were developed for the Functional Assessment to assess the competencies of midwives. These were based on tools used in similar assessments conducted in other countries in the Region and elsewhere.

Competencies assessment tools were based on the "Essential Core Competencies of a Midwife" developed by the International Confederation of Midwives (*ICM)*. ICM is the only professional association that solely represents the voice of midwifery globally, having over 79 member Associations in 86 countries, including Cambodia. ICM is a member of the new global *Partnership for Maternal, Newborn and Child Health*. The ICM core competencies were developed through a rigorous Delphi study, that included representatives from both member and non-member countries, many of which were from developing countries. In addition, the ICM competencies are in-line with the essential competencies required of any skilled attendant, as agreed by international consensus and published by the World Health Organization[14].

Tools for testing knowledge and skills, especially those asking midwives to respond to certain hypothetical clinical situations, were based on national protocols for Safe Motherhood and WHO guidelines. Two national experts in midwifery from NMCHC undertook the actual testing of the midwives, using the tools developed by the team in collaboration and with comments from national clinicians.

The self-assessment tool was translated into Khmer by the national consultant, in collaboration with and comments from national midwifery experts and from midwife teachers in RTC Kampong Cham. Recognizing that many midwives may not have completed such a self-assessment tool and to try gain some degree of consistency in how the tool was filled in, the national consultant introduced the self-assessment tool to midwives in each of the field sites.

Keeping in mind that the health system environment in which they work affects performance of health personnel, a simplified `walk-through' assessment was made of all facilities visited. The purpose of this `walk-through` assessment was to identify major challenges to the performance of the midwives. The walk

[14] Making Pregnancy Safer: The critical role of skilled attendants. Joint statement by WHO, ICM , FIGO World Health Organization, Geneva, 2004.

through assessment was a simple checklist focused on identification of key equipment, resources required for practice and general cleanliness and hygiene of the facility, including means for disposal of placentas.

- **Education and Training Assessment**

A simplified education audit tool was used to gather data on institutions and teachers experiences and competencies. A self reporting questionnaire was applied to as many students as possible to gain their perception of midwifery, identify where they hoped to work on completion of their studies and on potential incentives that would keep them in the profession. To ensure the educational audit was also in line with the clinical assessment and national realities, one of the national midwifery experts from NMCHC, who was involved in the Functional Assessments participated in a the assessment of one of the RTCs.

Time available for piloting of all tools, including the Education Audit was limited, however a small pilot was made in Kampong Cham Province.

- **Interview of Key Informants**

Meetings were held with as many key informants that MoH and health partners could identify and, could be accommodated within the time frame available for data collection (See Annex 2 of all stakeholders interviewed). The national consultant or other English speaking Cambodian nationals attended all interviews to provide translation, except for meetings with DFID, USAID and WHO, where interviews were solely conducted in English.

- **Desk Review**

All documents reviewed were available in English with the exception of the curriculum for Post-basic midwifery (3+1) and a number of MPA modules and lessons plans. Where documents were not available in English, discussions were held with technical experts to have them explain the content of the document and answer specific questions raised by the team. (A list of documents sighted is listed in Annex 9).

- **Focus Group Discussions**

A schema for use during Focus Groups Discussions (FDGs) was developed, to obtain information about community perceptions of midwifery. A survey tool for use to obtain similar data from high school pupils could not be applied as initially planned, as the schools were on vacation during the period for data collection.

FDGs were conducted in Khmer by the national consultant and narrative notes in English were kept and analysed by the team, as time limitations prohibited other methods, such as taping (there was no time for transcribing of tapes).

IV. DATA ANALYSIS

The numbers of respondents involved and the number of tools did not permit sophisticated statistical calculations, therefore it was felt there was no need for use of a statistical package. Data was manually analysed using standard excel sheets. All team members reviewed data, with cross checking data entry to reduce errors.

V. LIMITATIONS

The review team faced a number of limitations not least the short time for conducting the review and the complex nature of the scope of work to be included in the Review.

Other limitations include

- Some data was difficult to collected
- Translation issues were a problem, especially for self-assessment tool
- Database was not up to date so it was difficult to identify where new graduates were working
- There was limited time available for piloting of Assessment Tools
- 1 year post-nursing curricular was only available in Khmer

Chapter 3: Coverage Results

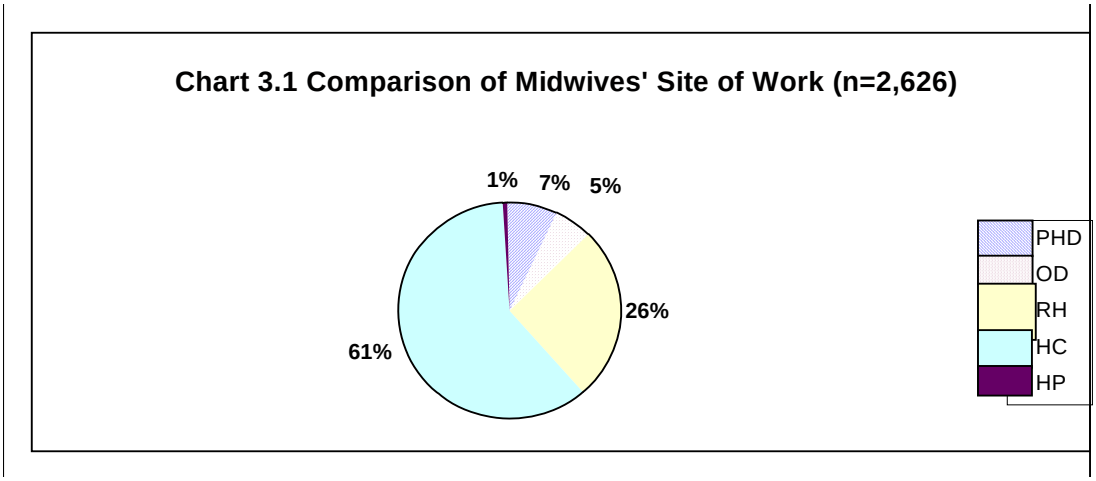
I. MIDWIFE COVERAGE IN CAMBODIA

It is clear that midwives in Cambodia are working in many different sectors throughout the country, including in the private sector and for NGOs. Estimates suggest approaching 4,000 midwives reside in the country. Give that number of these are retired and that some 2,626 are working in the public sector (see Table 3.1), it is obvious that the majority of them are employed in the health sector, mainly in public service.

Table 3.1 Numbers of Midwives working in Public Service at different levels of Health System

	PHD		**OD**		**RH**		**HC**		**HP**	
PM	31	16%	23	17%	150	22%	817	51%	18	95%
SM	158	84%	115	83%	533	78%	780	49%	1	5%
Total	**189**	**100%**	**138**	**100%**	**683**	**100%**	**1,597**	**100%**	**19**	**100%**

According to the data obtained from the Personnel Department, as at August 2006 there were a total of 2,626 midwives working at the four levels of health system, namely in office of Provincial Health Department (PHDs), Operational District office (OD), Referral Hospitals (RHs), Health Centres (HCs) and at Health Posts (HPs). Of these numbers, HCs absorb the most midwives 1,597 (61%), followed by RHs 683 (26%), PHDs have 189 (7%) of the total midwives and in ODs there are 138 (5%) midwives, with HPs absorbing very few midwives, only 19 (1%). (See Chart 3.1).



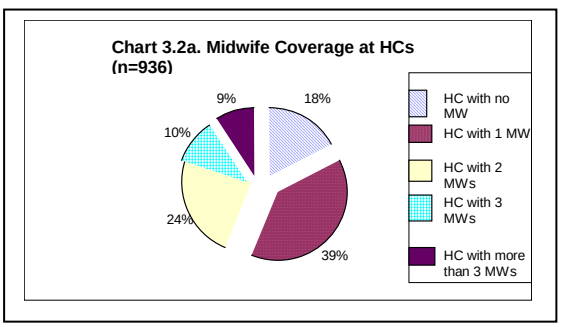
The numbers of midwives working at PHDs appears disproportionate in relation to the numbers working in ODs, given that there are more ODs. The team were unable to identify rationale for this.

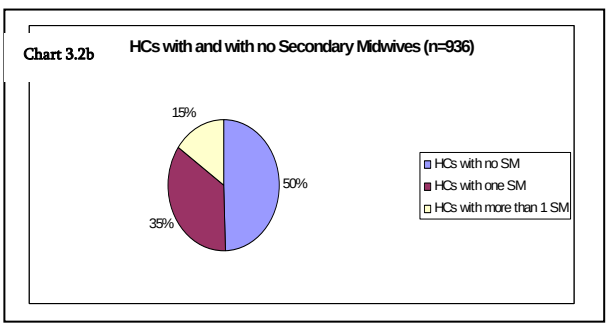
According to the MoH standard, as used by Personnel Department, a HC should have 3 midwives – 2 primary and 1 secondary – and a FDH should also have 3 midwives, 1 primary and 2 secondary. The national MPA document and the original Operational Guidelines for a functioning Health Centre in 1997, state that HCs should have a minimum of 2 midwives, 1PMW and 1 SMW. The Personnel Standard seems more practical, as this means that if at any one time one of the midwives is away from the HC, on leave, study or sickness, etc, the HC can still function, as 1 MW can continue with ANC and postnatal care, if the other is busy attending a woman in labour or making home visits.

Of the 936 HCs (including FDHs), 164 (18%) have no midwife, however this shows a decrease on previous reports.

Some 362 (39%) of HCs have only 1 midwife, 226 (24%) have 2 midwives and 97 (10%) have 3 midwives, with 87 (9%) have more than 3 midwives (ranging from 4 to 19). (See Chart 3.2a).

Of concern is that 463 (50%) of HCs did not have a secondary midwife, (included within this are the 18% of HCs that have no midwife) see chart 3.2b. This is of concern because secondary midwives are expected, under the current situation and job description, to be able to offer basic care in the event of a complication arising. Also, as the Functional Assessment revealed primary midwives had, on average, slightly lower competency levels than secondary midwives.





Appropriate Distribution of Midwives

It appears that the number of primary and secondary midwives (See Table 3.1) is almost the same at HCs (51% primary and 49% secondary). According to the standard however, there should be twice as many primary as secondary midwives functioning at HC level.

At the RH level there are 150 primary midwives (PMs) and 533 secondary midwives (SMs). There are 3 categories of RH designated by the level of Comprehensive care offered: CPA 1, CPA 2 and CPA 3. According to the MoH standard, CPA1 should have from 6 to 8 midwives, CPA2 from 7 to 10, and CPA3 from 15 to 20.

There are 29 CPA2 RHs with a minimum of one (1), to a maximum of 17 midwives; the median number of midwives is 6.

In the 17 CPA3 RHs there are a total 437 midwives, ranging from one RH having 10 midwives and one that had 79 midwives; the median number of midwives in RHs of CPA level 3, is 23.

In the one RH CPA3 facility with what the 79 midwives, the team were unable to identify what they were doing, and if indeed, if they were involved in midwifery care, as it was not located in the ODs used for the assessment.

Of particular note was the finding that, in a number of RH, a significant number of midwives were founded working in non-midwifery areas, such as drug store, x-ray etc. This not only represents a waste of human resources, under utilization of skills, but also gives rise to concerns about the midwives ability to maintain her competence.

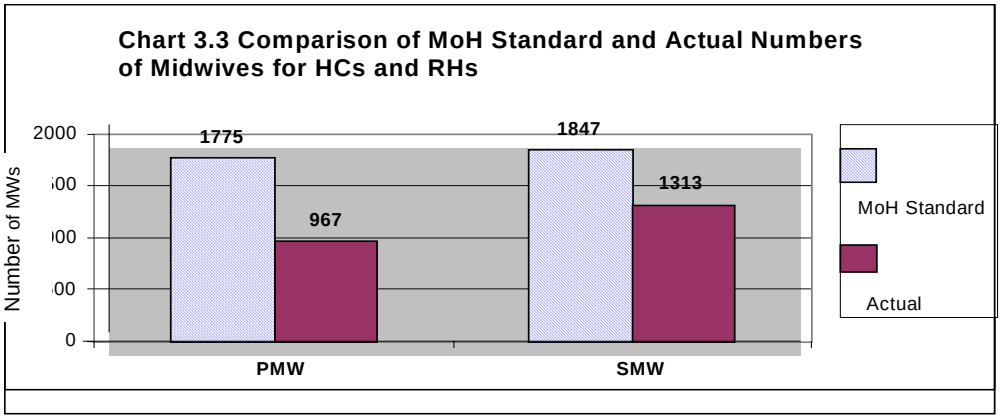
A detailed database (Excel workbook) showing midwife coverage at all HCs, RHs, ODs, PHDs and HPs as of August 2006 has been developed and is available in request. A summary of this can be seen in Table 3.2. However, just as the team completed their review, another recruitment took place and therefore, figures presented in this report are therefore already out-of date. Data was not available in time to update the figures based on numbers recruited in August 2006, although, based on previous recruitments, the numbers are not anticipated to be large

Table 3.2. Total Numbers of Midwives, excluding NGO and Private Sector outside Phnom Penh

Institution	Primary Midwife	Secondary Midwife	Sub-Total
MoH	2	20	22
National Hospitals, including Kantha Bopha 1	4	119	123
CENAT	1	2	3
NCHADS		4	4
NMCHC		108	108
PHD	31	158	189
OD	23	115	138
RH	150	533	683
HC	817	780	1,597
HP	18	1	19
Private clinics in PP		79	79
Grand Total	1,046	1,919	**2,965**

One of the major challenges faced by the team was the lack of an integrated database with reliable data that permits a review of where all midwives are currently working. Different departments within MoH use and keep different data. The workbook created for the purposes of this review could form the basis of a embryonic midwifery database, that could be located in MoH, or in the national Reproductive Health Programme office. If such a database was updated with the location of all new postings and all midwives leaving post, it could be used to identify continuing hard-to-place HCs and for the monitoring of national staffing standards.

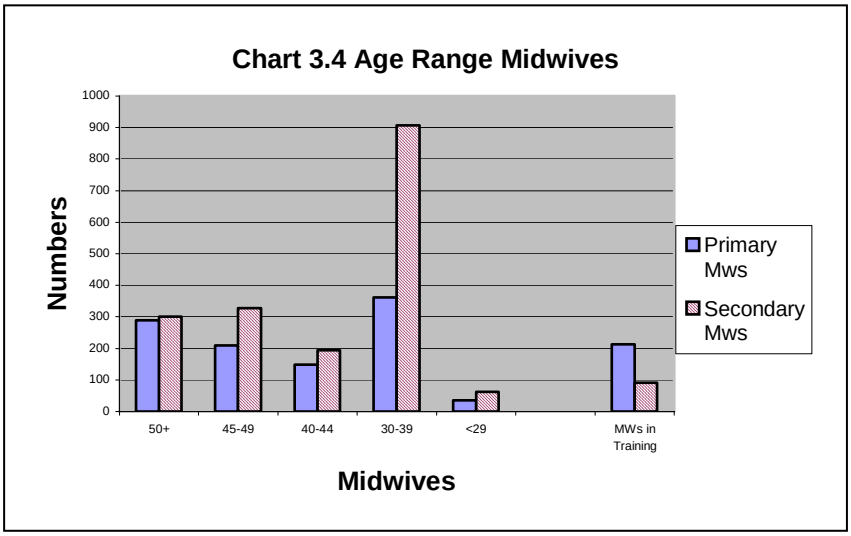
A comparison of the actual number of midwives currently working at HCs and RHs with the MoH standard, shows that there is a need for an additional 808 PMWs and 534 SMWs in order to cover all the current HCs and three levels of RH throughout the country according to the national standard. (See Chart 3.3)



II. AGE PROFILE OF CURRENT MIDWIFERY WORKFORCE

Data on numbers of midwives currently on MoH payroll in age groups was considered. As chart 3.4 demonstrates, almost 30 percent of midwives currently on MoH payroll may be expected to reach the age of retirement in the next five years.

There is a large gap in terms of number of midwives under 30 years of age. This is probably because of the years when there were midwives trained. This may well give rise to serious problems in the future and MoH may like to consider ways in which it can recruit more women between the ages of 23 to 30 into the service, to give a better age balance and not create problems in later years.



III. FUTURE NEEDS

Looking at the current numbers and if production stays at the same level, it appears that efforts to address the current shortfall may well not be successful, at least not for many years. Seatmates in projected numbers, (see chart 3.5) assume the NGO and private sector will not expand and absorb more than they do currently (estimated 10%) and that IU will commence 4 year BSc. 2006 with graduates entering into service 2010.

Chart 3.5. Projected estimated total numbers of Midwives 2006- 2010

Mid Year	Production PMW /SMW (+ IU)	Estimated Annual Total	Projected Total After Attrition (10% graduates not taking up
2007	193/92 (20 IU)	2,946*	***2,931***
2008	193/92 (20 IU)	*3,236*	***2,913***
2009	193/92 (20 IU)	*3,218*	***2,897***
2010	193/92 + 20 IU + 20**	*3,222*	***2,797***

*Estimates exclude current midwives working exclusively in private practice outside Phnom Penh and in NGO sector

**Assumes 20 graduates, and that 4 year BSc programme commences 2006.

On current projections for the total numbers of midwives available in country, it is unlikely the MoH will be able to increase the numbers of midwives working in the public sector by the 1,342 additional midwives needed to staff public facilities at the national standard. Total number available are likely to decrease year on year assuming a 10 percent attrition rate, which given the large numbers due to retire in the next five years would appear to be a reasonable figure to estimate loss from service. It should be noted however, the figures in chart 3.5 exclude the number of midwives working in NGO sector and private sector outside Phnom Penh. It would be advisable to identify these numbers however, and re-calculate the estimates including these figures.

How many midwives are needed for coverage of births?

Data collected during the Midwifery Review suggests that the current number of births per available midwife, i.e. the midwife to births ratio in Cambodia, is 1:75 (1 midwife can give full package of care including ANC, care to women in labour and birth and postnatal care of mothers and babies to 75 birthing women). The estimate is based on an average, taking into account the total number of births that each midwife reported she had attended (in homes, HC and RH) in the last 12 months. (Further details are available in chapter 4).

Estimates show, assuming all midwives currently in post as of August 2006 were conducting an average of 75 births a year, which it is known they do not (many do not conduct any births), the country would have sufficient midwives to cover up to 60 percent of all current births. This would require however better distribution of

midwives across the country. (See Figure 3.6). Data from most recent CDHS suggest only 44% of births are currently with assistance of a trained healthcare provider[15].

Figure 3.6 Estimated Number of Midwives VS Birth Coverage for the Next 5 Years

Year	Projected Pop.(a)	Projected Births (b)	Esti. No MWs Needed 1:75(c)	No. MWs needed for 50% Coverage	No. MWs needed for 60% Coverage	No. MWs needed for 70% Coverage	No. MWs needed for 80% Coverage
2006	14,080,653	359,057	4,787	2,394	2,872	3,351	3,830
2007	14,363,519	366,270	4,884	2,442	2,930	3,419	3,907
2008	14,655,950	370,727	4,983	2,492	2,990	3,488	3,986
2009	14,957,752	381,423	5,086	2,543	3,051	3,560	4,069
2010	15,628,588	389,349	5,191	2,596	3,115	3,634	4,153

(a) Pop Projections for Cambodia 1998-2020, NIS/MoP, June 2004
(b) CBR = 25.50 (DHS 2005)
(c) A ratio of 1 midwife to 75 births per year

IV. SUMMARY AND CONCLUSIONS

The data collected during the Review appears to suggest that increasing the coverage of births attended by a midwife will be a challenge. It is clear however, that the numbers of births taking place in a facility are increasing. The largest increases are to be seen in the RH. This may increase the average births by midwives ratio, as it is known that midwives in RH assist with more births per year than midwives in HCs, as shown in chapter 4.

To increase coverage there is need to increase the average number of births undertaken by each midwife, as well as get many more midwives into practice. To avoid the problems faced other countries, whereby RHs become overcrowded and unable to offer quality care, including offering care for effective management of complications, future efforts in Cambodia need to be focused on increasing the number of births taking place in HCs.

Innovative efforts will be required to recruit some of the midwives who will be due to retire back into service under casual labour contracts and re-deploy some midwives, especially those currently working in non-midwifery areas. In addition, MoH may like to look at other ways of increasing productions, possibly by approving more training places, especially at TSMC. Suggestions for increasing production are addressed later, in Chapter 7.

To increase the number of births that take place in a HC however will require more than just having a health care provider present. Attention is needed to address what is referred to as "*the enabling environment*". The enabling environment is more than just ensuring there are sufficient drugs and equipment available, but also requires that the services are welcoming and friendly, both for clients and for the midwives to work in.

[15] CDHS, 2006

HCs need to be able to offer services 24/7, or women will simply not use them for birth. Referral systems need to be in place and operational, because if women and or babies with complication cannot be transferred quickly there is a risk that deaths may ensue, (either in the HC or on way to RH). If this occurs, communities will lose confidence in the HC and in the staff that work there.

Equally, the same will happen if the midwives do not possess the skills to offer, not just good women-friendly care, but are technically competent to recognise early signs of compilations and able to take action to stabilize the women or baby and make an effective referral.

The evidence from the Functional assessment however (chapter 4) shows that not all midwives functioning in HCs have these technical skills and, not all offer women-friendly care.

Therefore, efforts to increased coverage of births by a trained provider – a midwife, must include strengthening the "enabling environment" and increasing the competencies of the current midwives, so that more women will use midwives in HC.

Finally, studies from many parts of the world show there is a direct positive correlation between births by a formally trained (skilled) healthcare provider and ANC. The same has been found in Cambodia[16]. Efforts should therefore be strengthened to increase ANC coverage, in particular in HCs.

[16] MoH UNFPA Obstacles to deliveries by Trained Health Providers to Cambodian Rural Women, 2006

Chapter 4: Functional Assessment

I. MIDWIFERY CLINICAL ASSESSMENT

The review team assessed almost 200 currently practicing midwives between July 18 and September 25, 2006. More in-depth testing of knowledge and skills was undertaken with about a third of these midwives. Two (2) senior midwifery experts from the National MCH Centre, assisted by the International Midwifery Specialist, performed the assessments.

II. INSTRUMENT DEVELOPMENT

Three tools for the functional assessment were developed:

- Self-assessment of clinical competencies (tool 1)
- Knowledge assessment (tool 2)
- Observed assessment of clinical skills (tool 4)

Tool 1: consisted of 27 essential midwifery competencies from a list of core competencies developed by International Confederation of Midwives (ICM), see Annex 4, for full list.

Respondents were given five (5) answer options, which included

1. Whether they had been taught this during their pre-service training and they felt able to do the skill at the end of their course
2. Whether the skill had been taught in their pre-service programme but they did not feel they could do this at the end of their course
3. Whether they had learnt the skills after pre-service (i.e. during In-service or on-the-job training)
4. Whether they leant the skills during In-service or on-the-job training and now "feel confident" to practice the skills
5. If they "did not feel confident" to practice the skill.

The tool was translated into Khmer and reviewed by members of the midwifery faculty at RTC Kampong Cham. The 27 competencies included in the tool focused on those most needed to reduce maternal and infant mortality and morbidity. The tool was introduced in Khmer by members of the review team and counterparts from Ministry of Health and was completed anonymously; respondents specified only their cadre of midwifery and site of practice (HC, RH, etc).

Tool 2: consisted of 4 case studies concerning prolonged labour, antepartum bleeding, antenatal care (including inadequate weight gain and pregnancy induced hypertension/preeclampsia) and birth spacing. Questions focused on problem recognition, problem assessment and midwifery management.

Tool 4: assessed competency in 4 key clinical areas (infection prevention, infant resuscitation, bimanual compression of the uterus after birth and active management of third stage). Competency was assessed observing the midwife using checklists.

The two senior, clinically experienced, midwives administered both tools 2 and 4 from the NMCHC. The assessors determined whether the midwife correctly answered questions in the case study (tool 2) or gave correct responses to follow up questions to each step on the checklist (tool 4).

Tools were piloted in Angkor Chey OD in Kampot, one of the six randomly selected ODs, and revisions made as required. The revised tools were subsequently used in all other sites.

II. SAMPLE

Midwives, both PMWs and SMWs, were assessed with tools 2 and 4 in RHs and HCs in five of the six randomly selected ODs and in Rattanakkiri, Kratie and later in Phnom Penh.

Table 4.1. Midwives Completing Self-Assessment Questionnaire (Tool 1)

Site of Assessment	Number of Midwives assessed
Oudong OD, Kampong Speu	15
Preah Sdach OD, Prey Veng	4
Sampov Loun OD, Battambang	14
Preah Net Preah OD, Banteay Meanchey	22
Angkor Chum OD, Siem Reap	19
Stong OD, Kampong Thom	26
Rattankkiri OD, Rattankkiri	38
Kratie OD, Kratie	37
Phnom Penh	10
Total:	**185**

A sub-sample of 58 of these midwives was further assessed using tools 2 and 4.

III. FINDINGS

❖ SELF ASSESSED COMPETENCIES (TOOL 1) N=185

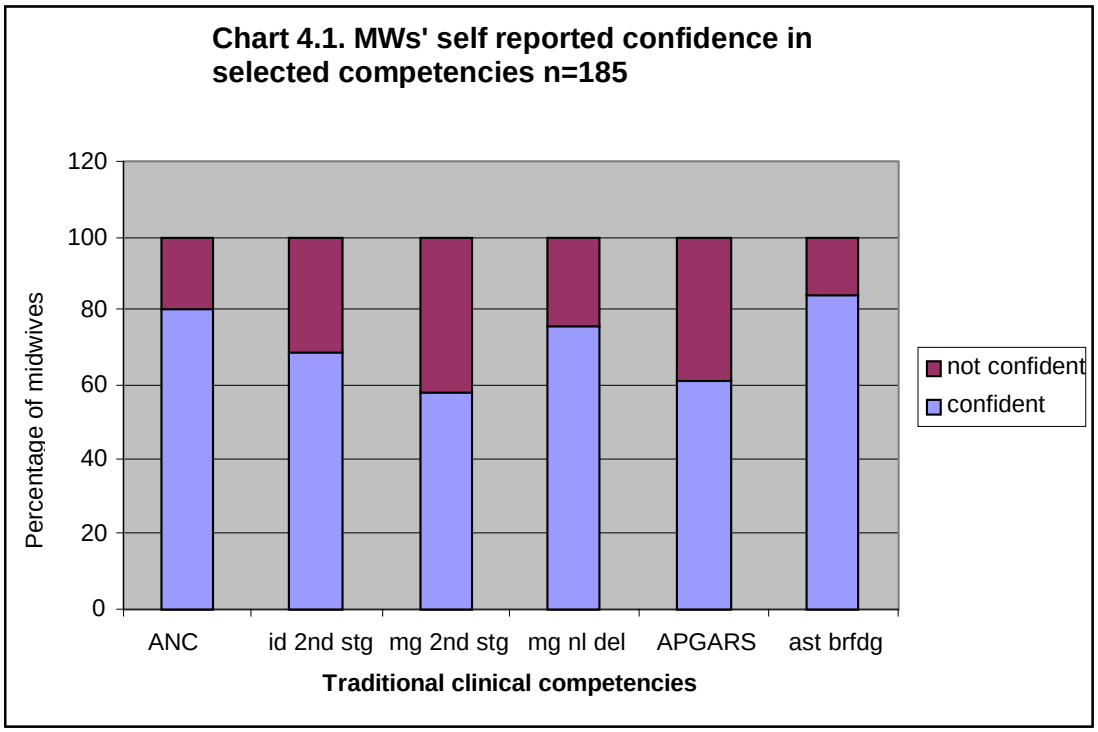
While each midwife was asked to self assess her competence on 27 midwifery competencies, 14 competencies, divided into 2 sets are presented for purpose of comparison. The first set covered what are often referred to as “traditional competencies”, these are clinical competencies that have been included worldwide in midwifery education programmes for decades. The second set may be called “new competencies”, these are the competencies that have been identified as essential to

directly reduce maternal and infant mortality and morbidity. See Table 4.2 for comparison between the two sets of competencies. These so-called "new competencies", only received emphasis in midwifery pre-service education and in-service training in some countries within the last decade or two and, have only recently been introduced in Cambodia.

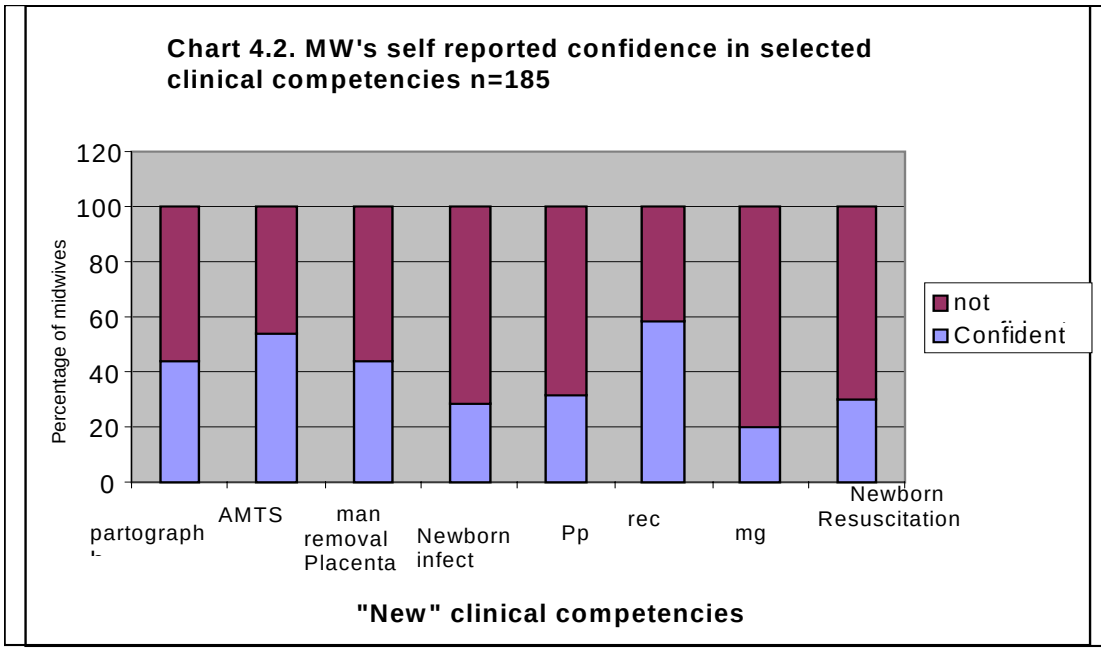
Table 4.2. Midwifery competencies included in self-assessment questionnaire (tool 1)

Traditional Competencies	New Competencies
• Taking an antenatal history (ANC) • Identifying second stage (id 2nd stg) • Managing second stage (mg 2nd) • Managing a normal birth (mg nl) • Assessing Apgar scores (APGAR) • Assisting with immediate breastfeeding (Asst BF)	• Completing a partograph • Performing active management of third stage (AMTS) • Manually removing a placenta (man remov) • Diagnosing and treating a newborn infection (nb infect) • Diagnosing and treating postpartum sepsis (Pp sepsis) • Recognizing eclampsia (rec ecl) • Managing eclampsia (mg ecl) • Resuscitating a newborn (nb resusc)

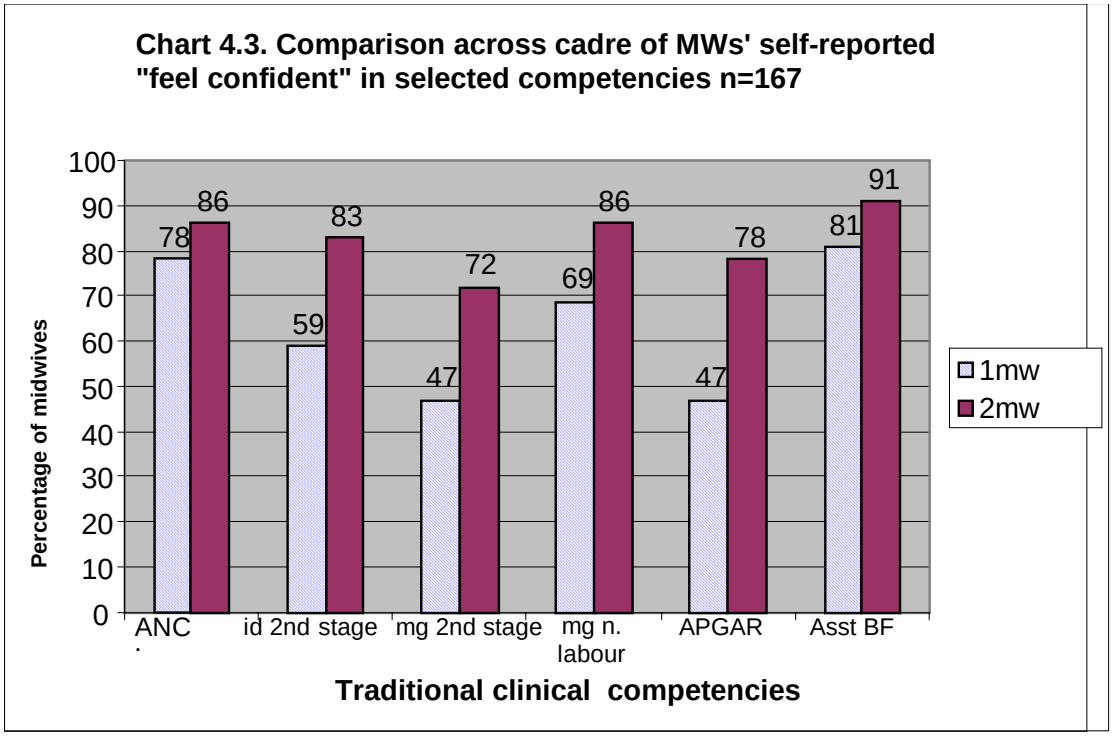
Over 50 percent of all midwives assessed reported that they "felt confident" to perform all traditional competencies (Chart 4.1). However just over 40 percent did not feel confident in conducting a normal birth, and 40 percent reported that they did not feel confident to assess the newborn at birth (complete the APGAR score).



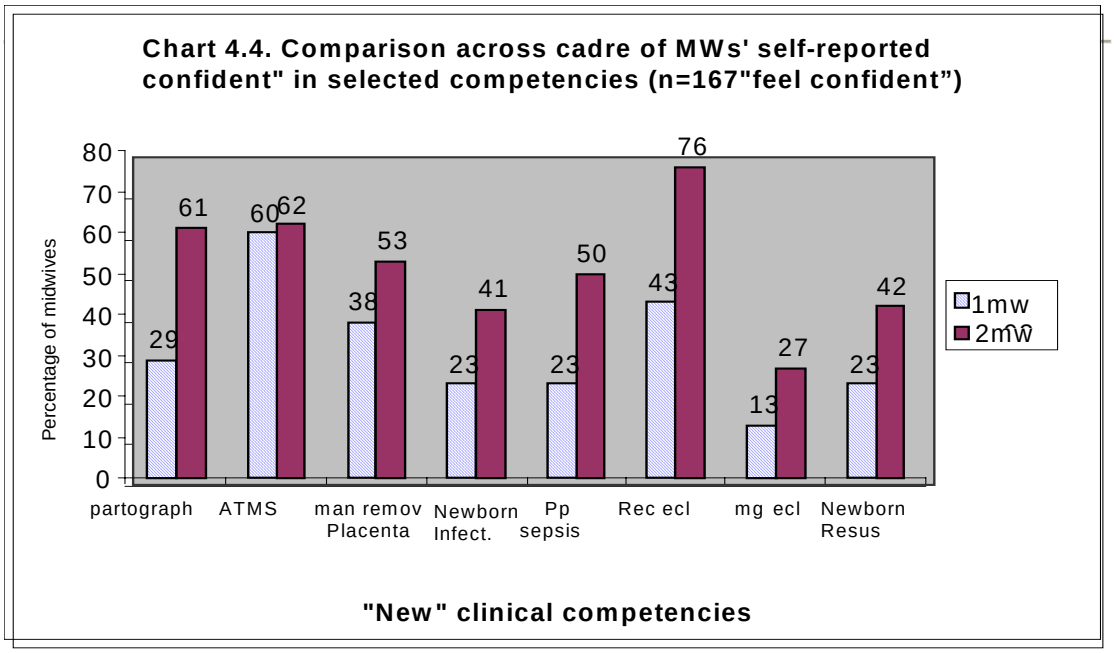
Midwives reported less confidence in the "new competencies". Less than 50 percent of midwives reported feeling confident in their ability to complete a partograph, manually remove a placenta, diagnose and manage infection in the newborn, diagnose and manage postpartum sepsis, manage eclampsia, or resuscitate a newborn. (Chart 4.2).



While primary midwives assessed themselves lower than secondary midwives in all the 27 competencies, in several competencies, notably taking an antenatal history (ANC) and assisting with immediate breastfeeding (Asst BF), their self-assessments were similar. (Chart 4.3)



The least variation between cadres was noted in active management of third stage (AMTS), which is new competency in Cambodia that has been introduced within the last 10 years. 60 percent of primary midwives and 62 percent of secondary midwives reported "feel confident" in their ability to perform Active management of the third stage (AMTS) (chart 4.4). The largest variation between cadres was reported in ability to complete a partograph with more (61%) of secondary midwives reporting "feel confident" compared to only 29 percent of primary midwives.

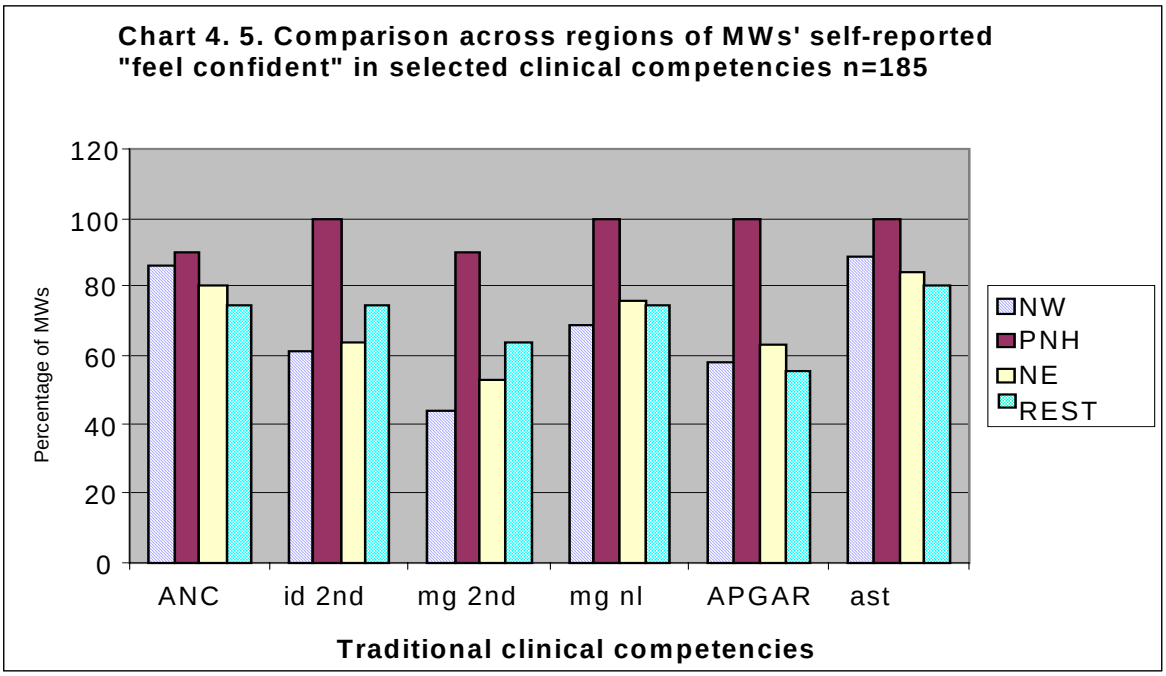


Since the ODs we randomly selected included some sites with specific histories and challenges in the Northeast and Northwest, we compared results of tool 1 by regions of the country. The North-East (OD Kratie and OD Rattanakkiri), former Khmer Rouge ODs in the North-West (OD Preah Net Preah, OD Sampov Loun), and Phnom Penh were separated out from the other ODs in the sample (i.e. from Kampong Thom, Kampong Speu, Siem Reap and Prey Veng.)

When disaggregated by regions, the data shows that midwives in Phnom Penh[17] reported a higher confidence in their skills to all other regions. All of midwives (100%) assessed in Phnom Penh were confident in their ability to identify signs of second stage, manage a normal birth, assess Apgar score and assist with immediate breastfeeding. Midwives in other regions were less confident, but 60 to 80 percent reported confidence in their ability to identify onset of second stage, manage a normal birth and assist with breastfeeding.

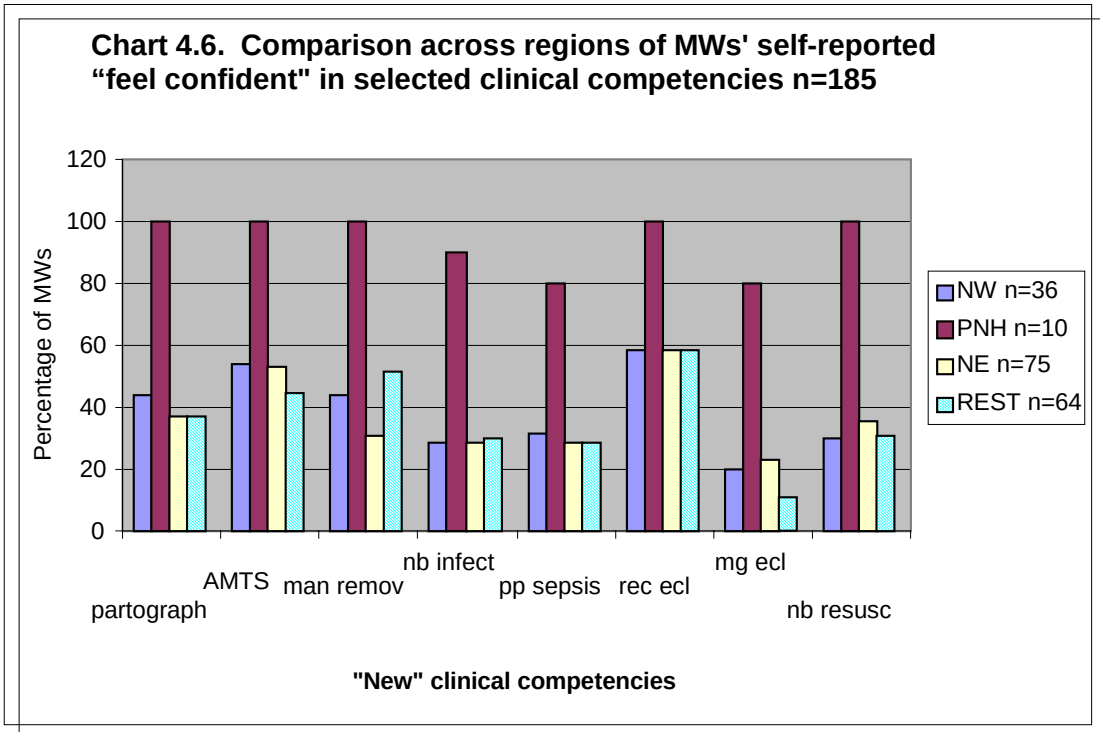
57 to 61 percent of midwives outside Phnom Penh reported confidence in their ability to assess Apgar scores. 85 percent of midwives in Phnom Penh reported feeling confident in their ability to manage second stage, while considerably less (42 to 62%) of midwives outside of Phnom Penh reported "feeling confident" (Chart 4.5).

[17]Unlike, in ODs, midwives in Phnom Penh were not randomly selected for this assessment. LSS trainers from the Red Cross Health Center and midwives from Phnom Penh Municipal Referral Hospital were assessed, as were midwives from 2 private clinics.

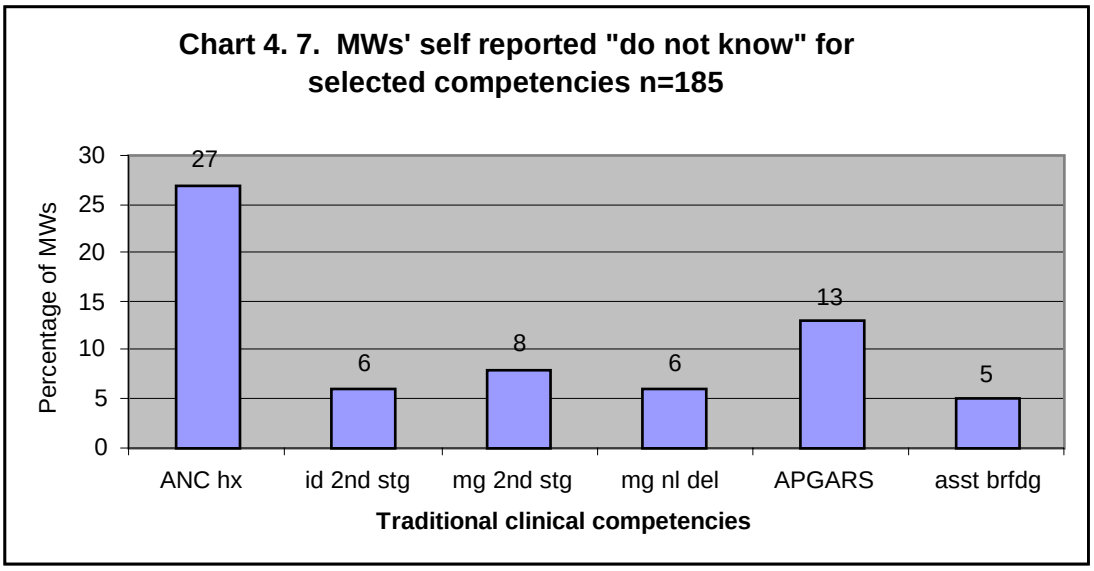


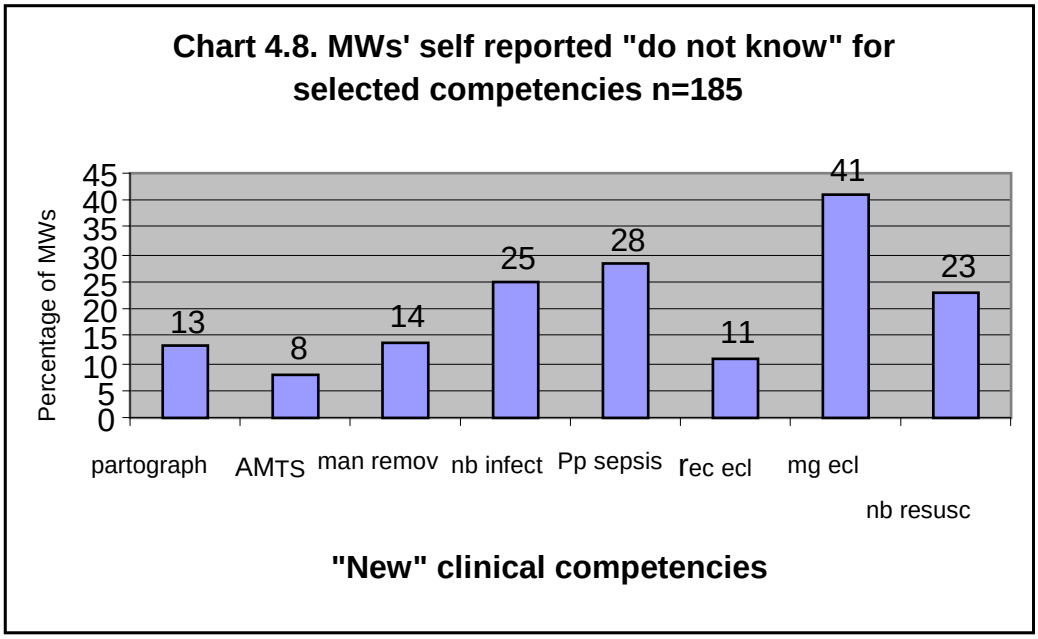
Caution is urged at drawing too much from these comparisons, as the sample is small. However, when comparing data on the so called “new competencies”, i.e. those that directly relate to reduction of mortality and morbidity, the differences between midwives in Phnom Penh and midwives the rest of the ODs is pronounced. While the majority (80% - 100%) of midwives in the capital reported “feeling confident” inmost of the “new competencies”, less of the midwives outside Phnom Penh (60%), reported confidence in these competencies. In terms of the competencies of diagnosis and management of newborn infection and postpartum sepsis, management of eclampsia and newborn resuscitation, less than 40 percent of all midwives reported feeling confident (Chart 4.6). While there was some variation between regions, this was not marked.

One reason why midwives in Phnom Penh may have scored higher than in the provinces was that 2 of the sites where midwives were assessed in the capital are used for training in Life Saving Skills (LSS), only Battambong in North-West (NW), was a site for LSS training in the Provinces. However as noted, there was almost no differences in numbers feeling confident in North-West and the other regional provinces.



The last answer option on the self-assessment questionnaire was "I don't know this skill." Unsurprisingly, for most of the "traditional" midwifery competencies, less than 10 percent chose this option. However, for assessing Apgar scores and performing an antenatal history, 13 percent and 27 percent respectively said they did not know how to perform these skills (Chart 4.7). More midwives reported not knowing the newer competencies with over 20 percent stating they did not know how to diagnose and treat a newborn infection, postpartum sepsis, eclampsia or perform newborn resuscitation. (Chart 4.8). Again this is unsurprising since these "new competencies " have just begun to be introduced in Cambodia and, as yet, not all midwives trained prior to introducing these have been trained in these "new competencies"





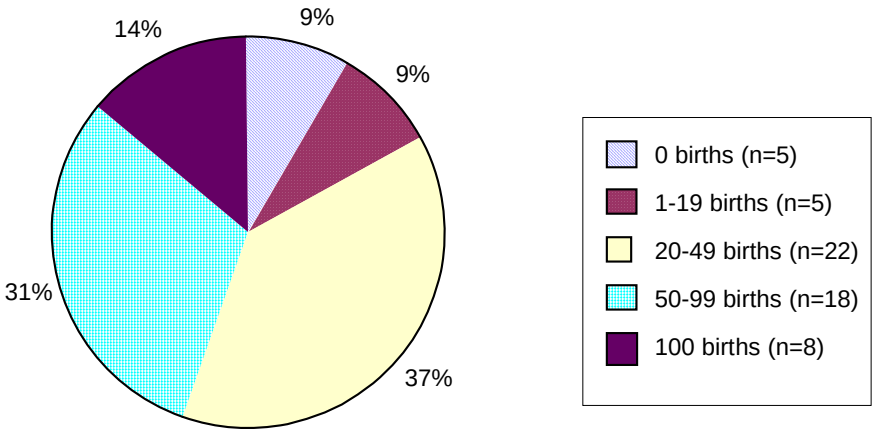
❖ KNOWLEDGE AND CLINICAL SKILLS N=58

26 primary midwives and 32 secondary midwives were formally assessed using Tools 2 and 4. The average age and years of experience were similar in the two groups, which is slightly younger than maybe anticipated given the age profile of the total workforce. Secondary midwives reported attending more births (Chart 4.9), which is not surprising since many of them work at hospitals where the numbers of births are higher than in health centres where primary midwives work. Primary midwives, many of whom had less formal education and midwifery education, reported attending more days of in-service training. See Table 4.3 for demographic profile of midwives.

Table 4.3. Demographic description of sub-sample

Total n=58	**PMW n=26**	**SMW n=32**
Average age	39.2	39.3
Average Years experience since qualification	14.5 (range 1-25)	16.1 (range 2-26)
Average Years of education before midwifery	6.2	8.8
Average Reported # births attended (last 12 months)	35.2 (range 5-60)	66.2 (range 0-220)
Average Reported days of in-service training	37.2	31.9
Site of current practice	1@health post 25@ health centre	4 @ private clinic 11@ referral hospital 17@ health centre

Chart 4.9. Reported births by individual midwives in last 12 months



❖ CASE STUDY RESULTS

- **Prolonged labour:** Just over half (57%) of midwives assessed correctly determined cervical dilatation (using a model) within -/+ 1 cm. 41 percent could correctly plot findings on the partograph. Many midwives stated that they had attended in-service training courses on the partograph but hadn't used them since the training and had forgotten. In the case study a woman's cervix was assessed to be 7 centimeters with no change in dilatation 4 hours later. Almost all (90%) of midwives correctly recognized that this was abnormal progress and knew they needed to transfer the woman or consult with a physician.
- **Antepartum bleeding:** 78 percent of midwives in the sub-sample knew to take vital signs if a woman who was 4 months pregnant came to them reporting vaginal bleeding and passing tissue. Many, however, had to be prompted to include pulse as well as blood pressure in their assessment. 60 percent of midwives would further assess the woman before transferring the woman or consulting with a physician. 69 percent recognized shock. Almost all (90%) stated that appropriate management included starting an IV and consulting with a physician or transferring to a referral hospital.
- **Antenatal care:** Midwives were handed the official antenatal card which was filled out with information about a woman who came for her third visit with weight recorded as 50 kg, 50 kg, and 52 kg and a blood pressure of 138/88 on the third antenatal visit in third trimester (previous blood pressures in the range of 90-100/60-70). Midwives were asked to review the card and identify any problems. Only one third (33%) of the midwives recognized the woman had poor weight gain. Slightly more, but less than half, of the midwives recognized the blood pressure as warranting further investigation. Many midwives mentioned the findings on the record of fetal heart rate in the 120s, or breech position in early

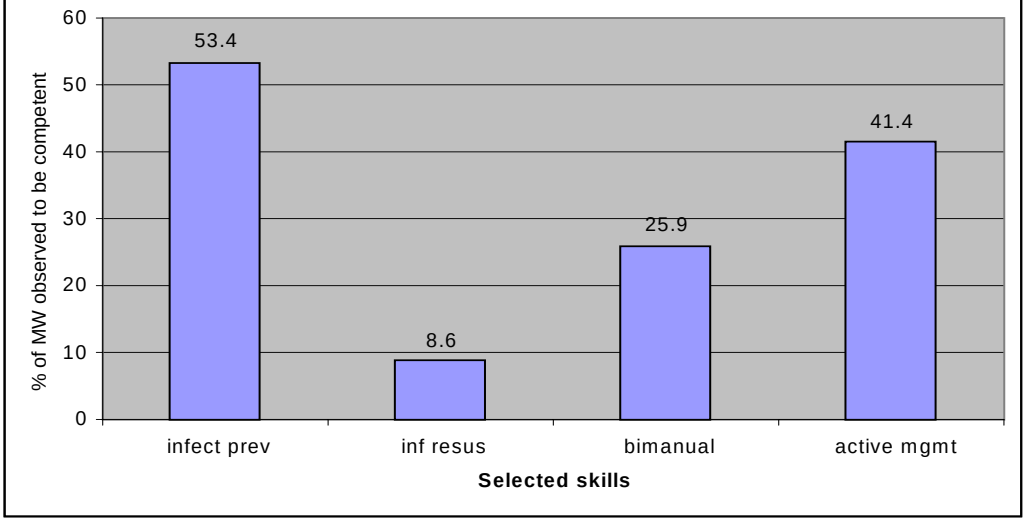
third trimester, as problems. Once the assessors gave more information and the diagnosis of pregnancy-induced hypertension/pre-eclampsia was made, the majority of midwives knew what was the appropriate management/ action they should take.

- **Birth spacing:** The case was a postpartum woman stated she didn't want any more children, but had heard frightening things about birth spacing methods. The response of the majority of midwives (87%), was to immediately give her information about all the methods, rather than seek more information about what the woman had heard or explore any of the woman's concerns. Only a few (17%) of the midwives asked the woman what she had heard or what it was she was afraid. Over 60 percent of midwives assessed knew which methods are appropriate for a woman who was exclusively breastfeeding at 2 months postpartum. The same number knew how to counsel the woman once she had selected injectables as a method of birth spacing.

❖ OBSERVED COMPETENCY - RESULTS

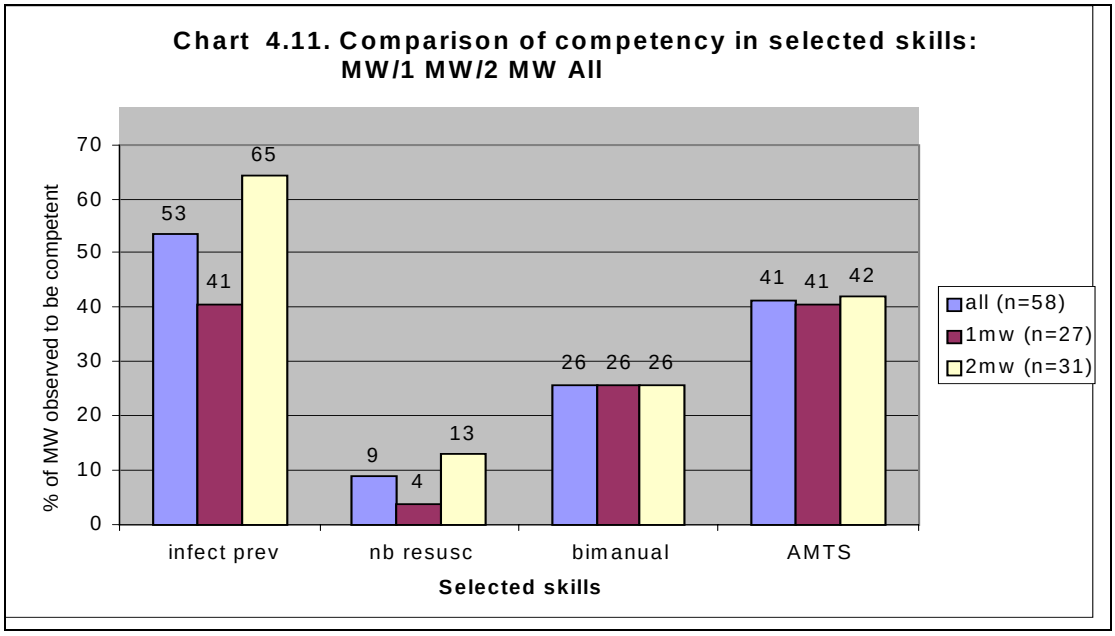
Over 50 percent of the sub-sample was able to correctly describe step-by-step the process for dealing with dirty delivery instruments following regionally accepted evidence-based steps for infection prevention. 41.4 percent of the sample was able to correctly demonstrate, using a model, steps of active management of third stage. 25.8 percent of midwives assessed were able to demonstrate how to perform internal bimanual compression, while only 9 percent were able to correctly demonstrate, on a model, how to resuscitate a newborn with cyanosis (was blue), had no muscle tone and had a heart rate of only 100 beat per minute (bpm). (Chart 4.10).

Chart 4.10. Competency in selected skills of all midwives n=58



Surprisingly, observed competencies differed little between primary and secondary midwives for active management of third stage and bimanual compression. While there was slight difference between the two cadres in their ability to resuscitate an infant, the largest difference was in their ability to follow accepted infection prevention practices. Whilst almost 65 percent of secondary midwives were competent, only 40 percent of primary midwives were competent in the steps of

decontamination, cleaning and high level disinfection/sterilization using regional and nationally agreed protocols. (Chart 4.11).



Finally, during the data collection the team took every opportunity to visit midwives and observe their practice in the real situation, sometimes making unscheduled stops at facilities.

The observations of clinical practices confirm many of the results of the formal testing. Of concern to the team were the observations made of many midwives seen to be carrying out clinical procedures, or making assessments as a matter of routine. There appeared to be a systemic lack of concern for women's feelings or that of their family, as well as an apparent lack of critical thinking, or a problem- solving approach to care.

The critical incident outlined in Box 1 below is just one example of such observations. While no attempt is being made to blame the midwives, or criticism of the procedures, they do point to serious challenges to be faced when revising the training of midwives, and highlight the need to improve interpersonal skills. It is hoped that the current national efforts on Behaviour change will address the issues of poor provider behaviour, but it is vital these are included in pre-service programmes.

Box 1: Observations of a normal birth

During assessments in the ODs the team were able to observe one birth attended by a primary midwife assisted by a second primary midwife in a rural health center. The observations made underscore some of the issues in overall competency of midwives .

A multiparous woman in labour had a completely dilated cervix by the time the team arrived. While the midwife wore gloves during her vaginal examinations of the mother, she touched unclean things in the room between examinations. The labouring woman was not allowed to have more than one family member present with her in the room used for the birth, although the room was large enough to accommodate 3 or 4. Throughout the second stage of labour the woman remained flat on her back on a bed (know to be harmful). Fetal heart tones or maternal vital signs were not assessed during the 30-40 minutes that the team were in the room before the birth. The family member present fanned the woman, wet her face with water, massaged her stomach and pushed on the fundus. The midwife rarely spoke with the woman or her family member and rarely had eye contact with the woman or touched the woman during second stage or actual birth to give reassurance.

The baby was born with the umbilical cord loosely around the neck. The midwife wanted to cut and clamp the cord immediately although it appeared loose enough to slip over the head. Once born the midwife held the baby upside down, slapped the baby's buttocks and hit the feet. The baby did not cry until she performed these actions. She then placed the baby on a clean sarong on an adjacent table and covered the body, but not the baby's head. She did not assess the baby after birth, or appear to realize that the baby had some degree of cyanosis.

The midwife did massaged the uterus after she noted clots coming from the vagina, but did not at that time try to deliver the placenta, as expected had she been following evidence-based standards and protocols.

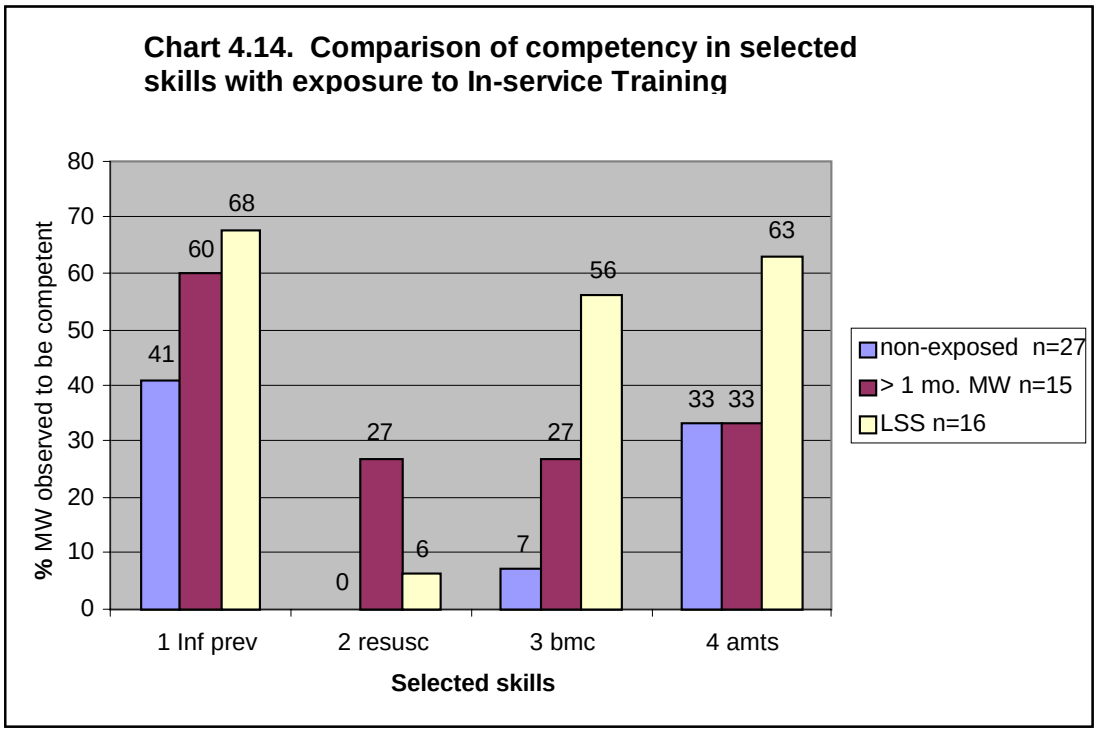
Throughout the time the team were observing the family members peeked in the door to check on the woman. The midwife did not acknowledge any of the woman's family or offer any reassurance to them that all was well. Although this was her third birth, it was the first time she'd given birth in a health facility.

❖ EFFECT OF IN-SERVICE TRAINING

Because infection prevention, infant resuscitation, bimanual compression and active management of third stage have been introduced within the last decade in Cambodia, we looked at the effect of in-service training on assessed competency in these 4 skills.

While midwives reported attending many in-service trainings held at provincial and district sites, it was difficult to know exactly what was included in these. We were able to look at midwives learning AMTS outside of longer trainings (LSS or one month update courses). These were held for 1 to 5 days at the NMCHC, as well as provincial health departments and at ODs themselves. Of the 7 midwives who said they'd attended a course specifically geared toward AMTS, 4 of the 7 (57%) were observed to be competent in the steps. It appears that there is wide variation in the content of the continuing education courses held in peripheral sites, and it was difficult to assess their effect. Numbers were too small to look at the effect of any of the other competencies in these short in-service courses.

For this reason we compared competencies of midwives who attended in-service courses with standardized curricula, the Life Saving Skills (LSS) trainings and/or greater than 1 month midwifery update courses at TSMC, RTCs or NMCHC. Findings are presented in Chart 14. The greatest increases in competency in infection prevention, active management of third stage and bimanual compression appeared to occur in midwives attending LSS, while the greatest improvement in competency in newborn resuscitation appeared to occur in midwives attending other $\geq$ 1 month midwifery update courses at NMCHC or regional training schools. With one exception (AMTS at >1 month courses), exposure to either of these continuing education courses was associated with an increase of between 21 to 49 percent in observed competency in the clinical skill. Current competency levels of those assessed, however, are below 70 percent in all clinical skills.



V. CONCLUSIONS: FUNCTIONAL ASSESSMENT OF MIDWIVES COMPETENCIES

Findings presented in this chapter have many limitations due to the short time frame given for conducting this assessment. Nevertheless, it is interesting to note that across three clinical skills, there was consistency when comparing; the observed levels of competency/non competency, with self-assessed confidence/non-confidence and level of knowledge. (See table 4.4)

Table 4.4. Comparison of observed (tool 2 & 4) and self-reported competencies (tool 1) in selected clinical skills

	Clinical Skill		
	Partograph	**Infant resuscitation**	**Active management of 3rd stage**
MWs' self-assessed "not confident" to perform skill (n=185)	56%	70%	46%
MWs' self-assessed "do not know" skill (n=185)	13%	23%	8%
Sum of "not confident" + "do not know"	69%	93%	54%
Observed lack of competence in skill (n=58)	59%	91.4%	58.6%

This consistence in competency, is most striking when the midwives' self-reporting of "do not feel confident" and "do not know" are compared with the teams' assessment of "not competent" after observation.

For infant resuscitation and AMTS, this difference is very small. However, with other skills, although the small numbers involved means it was not possible to compute statistical significance, the comparisons do appear striking.

Whilst acknowledging the limitations in these findings, they do appear to suggest that the self-assessed levels of confidence and knowledge are similar to observed assessments of competence. In addition, that PMWs appear to be as competent as SMW in terms of traditional competencies, but less so in terms of the "new competencies". Given that it is the "new competencies" have a direct impact on reductions of maternal and newborn death and morbidity, and that many HCs are operating with one a PMW (as shown in chapter 3), this finding is of concern.

Further, the findings suggest that every effort should be made to increase the levels of competence and confidence of all midwives, but particularly the PMWs working in HCs, where births are taking place. Greater attention needs to be given to supportive supervision by technically skilled supervisors. A system should be established whereby all midwives, in particular those working where there is no medical doctor, should have their competence assessed locally and action taken to address areas of weakness. This should be an urgent priority.

Finally, the large number of days of in-serve train undertaken by all midwives does not appear to have a significant impact on the overall level of competence of midwives, although the longer trainings (4 weeks or more duration) do appear to be associated with a higher level of competence. Given these findings a review of all ins-service trainings should be considered to make them more effective and to ensure that short trainings build and support one another.

VI. MOTIVATION OF MIDWIVES

In an attempt to incorporate aspects of what motivational factors are currently operating in midwives working in the public sector and, in order to consider potential incentives to increase retention, all midwives seen in the sub-sample were also asked the following questions:

- Why did you become a midwife?
- Where would you like to be working 1 year from now?
- Where would you like to be working 5 years from now?
- What factors are important in keeping you working/would make you want to continue working in your current posting?

Most midwives' responses indicated recognition that pregnancy can be dangerous and a desire to help women through a potentially dangerous period in their lives. Many mentioned a desire to help lower maternal and infant mortality. Others mentioned a desire to care for and serve people including their family, their village/community, poor people and people in remote, underserved areas.

Many midwives from health centres cited a lack of professional care in their village as being a primary motivator. In addition, the desire to have a means of earning a living, advice, and encouragement from family was frequently mentioned as motivators.

Interestingly over half of the sub-sample said they did not want to change from their current site of work in either 1 or 5 years. Almost twice the number of primary than secondary midwives desired no change.

Those who did not want to change mentioned the fact that they lived near their family, or that they were nearing retirement as the primary factor in their desire to continue where they were working.

Those desiring a change cited the following factors influencing their wish to move.

- retirement,
- to be closer to their family (including parents, children and/or spouse),
- work for an NGO,
- work in a village without a midwife

Of those desiring a change (apart from retirement), increased salary, opportunity for clinical upgrading, adequate equipment and opportunity to work with more experienced clinicians would make them want to continue in their current posting.

Chapter 5: Education and Training

I. OVERVIEW

Although there are a number of potential levers that can be used to ensure equitable access to quality midwifery care, often referred to as push–pull factors, central to these is the ability of the health system to produce and retain sufficient numbers of midwives. The review therefore looked at the current capacity in each of the Regional Training Centres (RTCs) and the Technical School for Medical Care (TSMC). The aim of this part of the review was to assess the capacity within the country to produce an adequate and sustained supply of midwives with the ability to offer quality midwifery care, (this included the necessary skills for saving the lives of mothers and babies).

In addition to looking at pre-service programmes, it was also essential to consider the current in-service training efforts, given that the Functional Assessment raised concerns about the potential of In-service training (with the exceptions of courses over 1 month) to increase competency. However, at the time of conducting this review, JICA were in the final stages of completing a detailed internal evaluation of training courses at NMCHC[18]. RACHA had also just completed a detailed external evaluation of the Life Saving Skills training they offered at Battambong RTC/RH and in Phnom Penh at Red Cross Maternity[19]. As both agencies were willing to share and discuss their findings with the team and, given the limited time available for this comprehensive review, it was decided that the focus would be mainly on capacities of institutions to train new midwives.

Unless pre-service training is adequate, the logistics of meeting skills shortfalls through in-service training, especially as numbers of students in training has dramatically increased in the last year, may pose serious challenges in future years. Moreover, the cost associated with meeting such increased demands may be prohibitive and finally may jeopardise existing successes of Cambodia's efforts to meeting it's own targets for health and development.

As noted earlier in this report, the production of midwives has been given a significant boost in 2006 with the approval for implementing a 1-year direct-entry programme as Primary Nurse-Midwife for grade 10 and above high school graduates. The new programme is based on the one developed for the North-East.

Whilst the decision to introduce a direct-entry programme to rapidly increase the production of midwives is to be applauded, a review of the content and structure of curriculum shows that there are major problems with this. Not least is that it will not produce health practitioners with the capacity to provide quality midwifery care that will impact on maternal and newborn mortality and morbidity reductions.

[18] Maclean G. Kwast B. Final Report Evaluation of Basic LifeSaving Skills Programme (LSS) Cambodia. RACHA, Nov 2005

[19] NMCHC/JICA Evaluation of training course at National Maternal Child Health Center. DRAFT Report – Not for General Distribution. July 2006

Further, current data used to project estimate numbers of midwives year on year, up to 2010, suggests that even with the increase in numbers due to the 1-year Primary Nurse-Midwife (direct-entry) programme this will not lead to an increase IN TOTAL STOCK of midwives. When an attrition rate of 10% (standard rate and one deemed reasonable, especially given the age profile of the current midwives across the country) is applied the total numbers decreases year on year. (See table 3.5 chapter 3).

Given the inability to achieve rapid increase in numbers of midwives produced, other initiatives need to be taken to get more midwives into the system, including i) attracting more midwives back into public service, ii) ensure better and more equitable deployment, iii) re-deploy, where possible, the many midwives that are currently not functioning as midwives, but first ensure their skills are adequate..

In addition, given the results of the functional assessment there is also need to re-consider how best to provide the necessary in-service trainings and supportive supervision to scale up the capacity of the current midwifery workforce.

In considering the capacity of a country to produce quality graduates, there is need to consider if the various curricular in use are fit-for-purpose; in short, do they produce health workers that can fulfil what is expected of them in the context in which they will work. It is clear, given that most midwives work in HCs and, that there is often only 1 midwifery provider working on duty at a time, that all midwives must possess what is referred to in chapter 4 as “traditional” and “new” competencies.

To assess the capacity of the current education and training system, there is need to consider; the structure and content of the curriculum – if the content is adequate, are teaching, learning and assessment methodologies appropriate for developing the competencies required. It addition, do teachers have the requisite capacity to teach the curriculum; are the resources and teaching and learning materials adequate; what is the quality of the clinical teaching – hands on practice and, what is the quality of the teaching and learning environment.

Tools used to carry out the Assessment of Education and Training Capacity

- A standard simplified grid was developed to assess the various curricular (see Table 5.1)
- A simplified Education Audit Tools was developed adapted from one used in other counties in the region previously, namely in Bangladesh, Myanmar and Indonesia. The original tool has been used in countries outside of the region. It was initially developed with assistance and inputs from other education experts and from ICM.
- Assessment of recent graduated midwives (midwives that graduated since 2000) was undertaken as part of the Functional assessment although the findings are reported here.
- A number of face-to-face focused interviews with key stakeholders were undertaken to elicit more qualitative data. Interviews were conducted in English, where this was not possible, the national consultant provided translation. Detailed narrative notes were kept of all interviews.

II. PRE-SERVICE CURRICULUM

As of January 2006, there are only two types of pre-service programmes in use in Cambodia to produce midwives:

- 1-year programme for those already trained as a nurse, leading to qualification that allows them to practice as a secondary midwife (course sometimes called 3+1, or post basic-nursing, or erroneously, the 4-year course, – it is however not a 4 year midwifery course).
- 1-year combined nursing and midwifery programme – Primary Nurse-midwife curriculum. Criteria for entry is 10th grade school leavers. Graduates from this programme are allowed to practice as a primary midwife.

Each programme has it's own curriculum document, set of outline lesson plans and students log-book. Each curriculum also has an implementation guideline. All documents were sighted and available in English and Khmer, with the exception of the curriculum for the 1-year Post basic-nursing midwifery curriculum (3+1), which was only available in Khmer. Both curricula were recently reviewed and updated (in early 2006) and have been approved by MoH (HRD).

A desk review of the current curricula in use for both of these programmes was undertaken. For the 1-year Post basic-nursing midwifery curriculum the national consultant and some midwife teachers in RTCs had to provide translations. However, a copy of the teaching schedule for this programme was available in English and was very useful for discussing specific issues on structure and content with the midwife teachers in order to gain a better understanding on this curriculum.

The desk review was supplemented by semi-structured interviews with chief of Midwifery Units in two (2) RTC and in TSMC, to gather more information.

The review compared the two curricular with international and regional standards for midwifery education. (See Box 5.2 and for findings Table 5.1).

Box 5.2: Standard for Pre-service Midwifery Curriculum

The international standard for pre-service midwifery curricula[20] recognised by all countries in the region where there are currently examples of good midwifery practice include;

- A minimum of 18 months midwifery content
- Theory and practice should be integrated
- Ratio of theory to practice, 40% theory to 60% practice
- Teaching content and practices, should be based, as far as practicable, on up to date, sound scientific evidence, relevant for the country of practice
- Students required to undertake, a minimum of 20 births, many do much more, an average of 40 is recognized by experts in the field as best
- Clinical, hands-on experience supervised by a midwife who is already expert and competent in midwifery, who can act as a mentor
- The optimal Teacher: Student Ratio (TSR) for clinical courses such as midwifery is 1:10 (1 specialist midwife teacher to 10 midwifery students)
- All teachers should be experts in their field and have undertaken advanced studies in the specialised subject they will teach *(for midwife teachers this is midwifery, but is acknowledged that other experts will contribute to midwifery programmes)*
- Teaching and learning should be based on modern theories of adult learning
- The curriculum model used for the development of the curriculum should be "competency-based", or at least one that is designed to develop competency, which includes critical thinking and problem solving

[20] WHO ICM Strengthening Midwifery Toolkit; in press

- The curricula should confirm to professional ethical codes, including international code of ethics for midwives[21], and have a significant public health basis (for ease of reference the Midwives Code of Ethics is available in Annex 5)
- Finally, successful completion of the course should lead to the legal right to practice midwifery as an autonomous practitioner[‡].

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Table 5.1 Comparisons between two types of pre-service curricula for midwives in Cambodia and International Standard

Criteria	International Standard	1-year Post basic-nursing (3+1)	1-year Primary Nurse-Midwife
Length of programme	18 months minimum, (average of 72 weeks at 35 hrs/week, excl.vacation)	1,370 hrs (at 35 hrs/ week =39 weeks)	Midwifery content incl. IMCI = 435 hrs (at 35 hrs /week= 12.5 weeks)
Ratio Theory : Practice	40% : 60%	54% : 46%	44% : 56%
Curriculum model	Competency-based, up-to-date evidence underpinning practice, with foundation in Public Health	Theory and practice not integrated. References used out of date. Includes, some Public Health	Theory and practice not integrated. References used out of date. Has little Public Health
Minimum no. births	20 (ideal 40 +)	16-20	Document calls for **only 6** (1st admission only just commenced outside NW, and only just commencing midwifery component at time of the review, so it is hard to say what average number births will be)
Clinical experience	Hands on practice in real setting supervised by clinical experts prepared for their role as mentor	Hands on mainly in term 3. Preparation of clinical mentors not yet in place	Hands on in term 3 only. Preparation of clinical mentors not yet in place
Competencies	Must include all essential Core competencies of a midwife[22]	Some modern/ "new competencies" missing	Some modern competencies missing and time for development of competencies is insufficient, especially for "new competencies"
Midwifery Model	Partnership with women, follows International Code of Ethics for Midwives	Lack of inputs and emphasis on women's rights, choice and interpersonal skills	Lack of inputs and emphasis on women's rights, choice and interpersonal skills

[21] ICM, International Code of Ethics for Midwives. Intentional Confederation of Midwives (ICM). The Netherlands. 1999. Accessed on ICM web site @ www.interntionalmidwives.org

[‡] Autonomous practice, is defined as - where the practitioner is responsible for all their own actions, the decisions they make and care provided.

[22] ICM, Core Competencies of a Midwife. International Confederation of Midwives (ICM). The Netherlands. 1999. Accessed on ICM web site @ www.interntionalmidwives.org

As can be seen from Table 5.1 neither curriculum meets international or regional standards, although the 1-year Post basic-nursing (3+1) comes the closest to the standard outlined in Box 5.2

The 1-year Primary Nurse-midwife curriculum

The 1-year Primary Nurse-midwife curriculum has many problems; the main one being there is insufficient midwifery content. Many essential competencies are not covered or if they are only done so in brief. Taken overall, the curriculum appears to be a basic elementary nursing course with some midwifery added. On discussing the curriculum with midwife teachers in the RTCs, it appears that there was a lack of widespread consultation on the content and structure of the curriculum. Neither it would appear was the professional association for midwives, midwifery experts at the NMCHC, or the Chief Nurse-Midwife in the MoH consulted for their views and inputs. On reviewing the membership of the Curriculum Review Committee, it would appear there was insufficient inputs from midwifery education specialists, and no inputs from clinical midwifery specialists or programme managers.

Whilst the membership of the committee that oversees and approves the curriculum is of concern, especially the lack of midwifery expertise and leadership, the composition of this committee is within the current operating guidelines of the Human Resource Department within the MoH. Given the need to prioritise action to reduce maternal mortality and, for this, the need to ensure all midwifery graduates have the essential competencies for a midwife, MoH would be well advised to review their operating guidelines for Curriculum Development and Reviews. There is need to ensure that adequate professional and technical inputs are available and included on all future reviews of midwifery curricula, as is the norm in many other counties. Education experts now agree that triangulating inputs from education, clinical service and programme managers and, increasingly, with inputs from users/representatives from user groups where these exist, will lead to better, more realistic and effective curriculum.

In conclusion, there is urgent need to modify the Primary Nurse-midwife curriculum. In particular, there is need to increase the amount of midwifery hours and content and increase the time for clinical hands-on experience. This could easily be achieved by reducing the number of hours for unnecessary nursing procedures, much of which, even if were considered useful, are excessive. Further, midwifery content (both theory and practice) should be spread throughout the full duration of the programme and not confined only to term 3. This would also avoid overloading clinical areas in Term 3 due to the overlap with the 1-year Post basic-nursing (3+1) midwifery students. Given the low case-loads in many of the clinical facilities, having a more flexible allocation, one where smaller groups of students can rotate through clinical areas, ideally more than once (so they can follow the principles of adult learning and have opportunity for repeated reflective practice) would be highly beneficial. It would be beneficial for both types of midwifery students and, most likely to women who may well find the presence of large groups of students unnerving.

Even with the above changes, it is doubtful that graduates from this programme will have the requisite competencies needed to function adequately as a midwife in HCs, without direct supervision of a secondary midwife, or physician with midwifery competencies. A career plan needs to be devised for PMWs that will allow them to

progress and develop the full competencies of a midwife and be able to upgrade to secondary midwife. Alternatively, MoH can review their plans for utilizing these graduates and consider if they wish to limit posting of these graduates as auxiliary staff in RHs. This later alternative is unlikely to be realistic or acceptable to MoH given the urgent need for more midwives to fill vacant posts in HCs. It is also unlikely to be acceptable to the graduates, many of whom are highly motivated women who have a desire to be a midwife.

The 1-year Post basic-nursing (3+1) midwifery curriculum

The 1-year Post basic-nursing (3+1) midwifery curriculum could also benefit from some modifications. At the very least, there should be a more detailed and thorough evaluation of this programme in the near future, ideally within the next 12 months. In particular, it will be important to evaluate clinical competencies of these graduates and consider, if the clinical allocation could not be more integrated throughout the duration of the course and, if experience of normal births could be included much earlier in the programme than it is at present.

Finally, as with the 1-year Primary Nurse-midwife programme, more focus is required on the skills that will save lives, especially care of newborns, newborn resuscitation and on interpersonal skills development – to foster a more woman-friendly approach to service delivery.

- **Midwife Teachers and the Student: Teacher Ratio**

In terms of having an adequate supply of midwife teachers, all training schools appear to have almost sufficient numbers of teachers based on teacher to students ratio, with exception of Stung Treng and possibly Kampong Cham (see Table 5.2). The usual standard for teacher to students on clinical programmes such as midwifery, where there is need of high level of clinical supervision and teaching in small groups, using demonstrations, simulations, practice on models (manikins) and for group work, case-studies, student-led seminars and other interactive teaching and learning strategies is, approximately 1teacher for 8 to 10 students.

Table 5.2 Estimated Teacher to Students Ratio in Midwifery Training Institutions in Cambodia, August 2006

Institution	Ratio Midwife teachers to midwife students	Ratio Midwife teacher to all students, including the 4 months midwifery update
Battambang	1:7	1;15
Kampot	1:10	1:13
Kampong Cham	1:14	1:16
Strung Treng	1:18	1:24
TSMC	1:4	1:5 – 1:6

A true picture of teacher adequacy (in terms of numbers) is difficult to ascertain without a detailed task/job analysis, as many midwife teachers appear to carry out multiple roles and have additional tasks to those of teaching and supervising student

midwives, or others on midwifery short trainings. For example, in Kampong Cham one of the midwife teachers was also working as cashier in the cashier's office of the RTC. In another RTC 1 teacher was responsible for the library. Given the small number of teachers nationally, 27 teachers and 3 clinical instructors working in RTCs, there is also almost always one teacher away from the site on training programme, attending meetings, or on other related activities, or away on sick or other leave.

RTCs are also responsible for midwifery modules of MPA (Minimum Package of Activities) training. This requires one teacher to be away in a HCs for a week at a time. The number of MPA courses is dictated by demands from PHD/ODs, and not under the control of RTC. In addition, many RTCs were approved to conduct the 4-month midwifery CPA training, but are not able to forward plan too much, as these too are decided depending on availability of funding and if PHDs/ODs wish to support this.

On discussion with teachers in the RTCs and in TSMC, the working day appears structured. In almost all training institutions, including TSMC, students often go to the clinical areas in the morning and then attend class 2pm to 4:30pm or 5pm in the afternoon, five days per week.

It is unclear if all teachers are present in clinical sites supervising students in the morning sessions. It is also not clear how Term 3 (October to December/January) is structured, as according to the curriculum documents almost all students on the 3+1 programme and for many weeks the students on the Primary Nurse-midwife programme appear to be on clinical rotation. In addition, the structure of the Primary Nurse-midwife programme does not see these students attending classes by midwife teachers until mid-point of the course.

The majority of the 27 teachers (n=21) currently in post in government training centres completed a questionnaire to obtain their biodata (see Table 5.3) , and most were interviewed to assess their level of knowledge and competency as a midwife teacher, as well as what motivates them to be and to stay in teaching. As the International University (IU) had only just commenced their 1-year Post basic-nursing midwifery programme, following the national curriculum, due to lack of time they were not included in this review. IU has recently announced their intent to commence a 4-year direct entry BSc Midwifery programme and is developing a new curriculum for this.

Table 5.3 Profile of Midwife Teachers completing questionnaire, as of August 2006 (n=21)

	Battambong.	**Kampot**	**Kampong Cham***	**Stung Treng**	**TSMC**
Age, Median (Range)	37 yrs (32-56)	45 yrs (32-52)	N/A	51yrs (34-53)	45 yrs (36-56)
Years in Post** Median (Range)	11.5 yrs (2-15 yrs)	7 yrs (3-11 yrs)	N/A	10.5 yrs (3-18 yrs)	13 yrs (2-20 yrs)

No. with HPE	3	1	1	1	1
No. with LSS	2	1	2	1	0

* As this was pilot area not all data fields are complete

** As midwife teacher

In terms of standard for Midwife Teachers

Standard: Teachers should be skilled midwives and adequately prepared for their role.

The review found that

- Only 50 percent of midwife teachers seen had clinical "experience" after graduating as a midwife. Given that many of these have worked in the RTC for many years, it is unlikely they can be considered "skilled midwives". Kampot RTC appeared to be the only RTC where most (5 out of 7) of the current teachers had at least 2 years clinical experience as a midwife after graduation and before becoming a teacher. This was partially because three (3) of the staff are part-time teachers from the RH. Stung Treng, because of the shortage of midwife teachers, are using staff working in a clinical facility as part-time teachers and or clinical instructors, they are more likely to be able to meet the criteria of a skilled midwife.
- No midwife teacher seen appears to have undertaken any *advanced midwifery study*
- One third (7 of 21) of the midwife teachers appear to have undertaken adequate education preparation (by way of attending the long HPE course), although 12 out of the 21 had undertaken the short Training of Trainers (ToT) based at TSMC.
- Only one third (7 of 20) midwife teachers seen had received LSS training
- The median age of all midwife teachers seen was 45 years, the youngest being 32 years of age, the eldest 56 years of age.

Of the teachers interviewed, most said they enjoyed teaching, although a few (3) said they would prefer to be in the clinical area and one was actively trying to move back to clinical work. 3 of the current teachers were hoping to retire very soon.

Very few of the midwife teachers were currently engaged in private practice. Some said they used to have a private practice, but had to give it up in the last few years, because the rules in the training institutions had become strict and it was no longer possible be absent during working hours, so it was no longer possible to take on private practice. When asked if they thought midwife teachers should be able to undertake private practice, a majority, over 50percent, said they thought it would be good, if the rules would permit this.

When questioned about in-service trainings, many midwife teachers had done some short training, but, a small number 7, had undertaken none, despite having been qualified for some time. Many of the teachers complained that when in-service was taking place, they were not often invited to take part. A number felt aggrieved at this, as they felt they should be invited to attend, so that the new knowledge can be incorporated into their teaching. One teacher complained that there was a lack of opportunities to share new knowledge gained if colleagues did attend short courses or in-service training. There is no requirement to give feedback on trainings attended to other teachers in the unit.

When asked what three (3) things would make their job (as midwife teacher) easier, 100 percent said - to have more teaching resources, more books and more materials in local language. None said they needed more manikins, even though the assessment showed, that with few exceptions, there was a grave lack of working models and manikins.

When asked what three things they enjoyed about their post, most left this blank, a few wrote they liked helping women, or they wanted to stop suffering of woman, or reduce maternal deaths. None said that they enjoyed being with students and helping them to learn. When questioned later it appeared that the teachers did not really understand what was being asked and so were unable to respond.

III. ASSESSMENT OF MIDWIFERY TRAINING INSTITUTIONS

A simplified "walk through" Education Audit was used in all training institutions including TSMC, that were actively engaged in pre-service midwifery programmes, with the exception of IU, as explained earlier.

The results revealed that the most common challenge facing most of the Regional Training institutions was the lack of adequate midwifery specific teaching and learning materials – especially up to date midwifery Teacher and Learning resources.

- 1 of the 4 RTCs had only 3 Midwifery textbooks in their library, no copies of WHO IMPACT or WHO Midwifery Modules were seen – even though they are available in Khmer and had been distributed to all RTCs by the national Programme for RH.
- Most RTCs had insufficient or inadequate models/manikins. In particular, the manikins for practicing births are inadequate; dolls do not go through phantom properly. Equipment to practice Resuscitation of Newborn is not adequate and equipment for Life Saving Skills is not sufficient.
- 1 of the 4 RTCs had no "proper" (functioning) clinical skills/practice room.

Only TSMC and Kampot RTC had a reasonable supply of midwifery textbooks in the library. It should be noted however, that TSMC has in the past, and continues to receive assistance from JICA and, there has recently been a major programme of refurbishment there. Kampong Cham RTC building is also relatively new, but it appears there has been little investment in midwifery teaching and learning resources. This RTC also lacked a functioning midwifery skills laboratory.

Given the low caseload of many clinical facilities, demonstrations and return-demonstrations using manikins can be helpful in developing some basic skills in students, although they are no substitute for actual hands-on experience in the real situation. To be most useful however, the skills laboratory should try to emulate the real situation as much as possible. Of concern was the finding that almost all the dolls (newborn manikins) seen that are used to demonstrate birth are not appropriate for the task, and need to be replaced. The manikin does not pass through the pelvic model (Phantom) easily, even with lubrication. Therefore, as seen during observation of a clinical session, students have to ask their colleague to apply what would be fundal pressure, and they must pull the head out. This teaches them bad practices that they may apply when they are in the clinical area.

- **Student Accommodation**

The review showed that accommodation for students is barely adequate. There were insufficient rooms for students, in particular there were no rooms for preparing food, many students had to prepare food in the room. All training institutions, including TSMC did however say they always prioritise rooms for students midwives if needed.

- **General Environment**

3 of 5 RTCs (including TSMC) were relatively new-builds. However, despite this, running water was a major problem in all except TSMC. Bathrooms in most RTCs were inadequate.

- **Education Processes**

The review found that although students and teachers seemed to have good rapport – the educational processes were not very student-centred, did not support problem-based learning, critical thinking and decision making.

None had adequate QI mechanism – none had formal mechanism for monitoring progress of students that included clinical staff.

- **Clinical Practice**

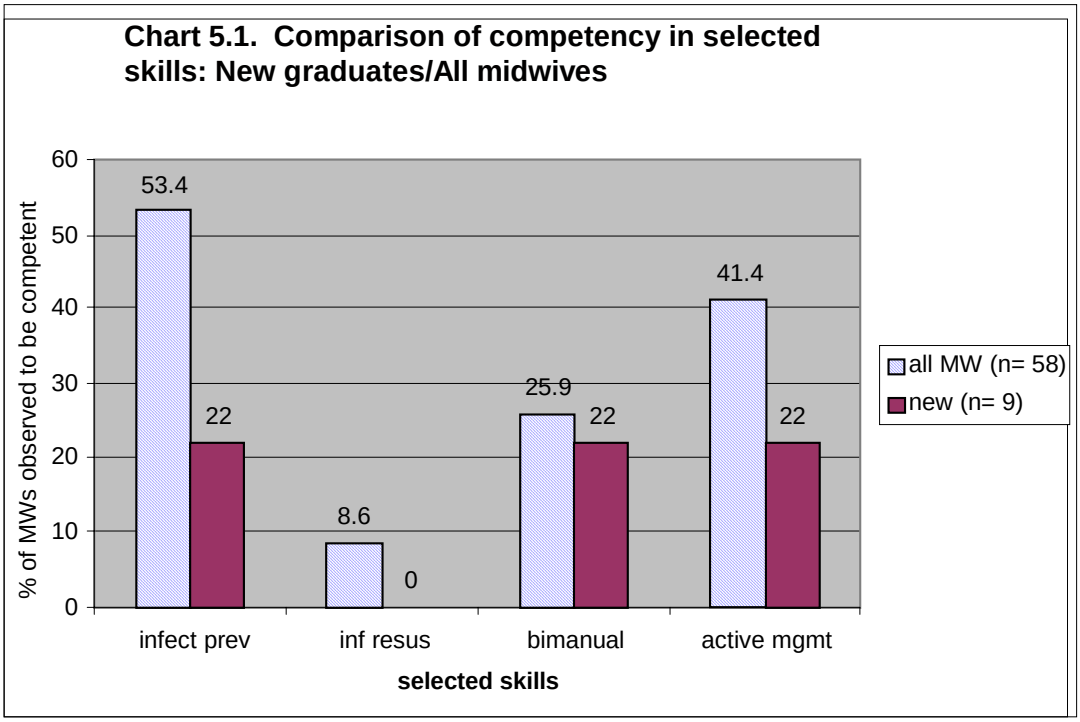
Most RTCs had inadequate clinical sites, both in terms of number of sites and quality of sites for clinical practice. Many clinical areas were reportedly reluctant to have students undertaking hands-on clinical practice. (A numbers of teachers and students said clinical facilities would often only permit students make observations). Only 2 RTCs appeared to use Clinical experts in RTC on a part-time/session basis.

No RTC had a formal mechanism for preparing clinical sites for students prior to placement or for involving clinical staff in the assessments of students' progress.

RTCs generally felt that clinical facilities were not interested in students and clinical facilities frequently reported that teachers from RTCs did not come to work with their students. They said they only saw teachers if there was a problem.

III. COMPETENCIES IN NEW GRADUATES

During the course of the study, we met nine (9) new graduates. One of the three secondary midwives graduated in 2000; the remaining two secondary midwives and six primary midwives all graduated between 2003 and 2005. One graduated from the post-basic (3+1) course, 3 from the Primary Nurse Midwife course in the North-East and 5 others attended the nursing plus 4 months, or 3, 4 and 7 year upgrading courses. 7 worked in health centres and 2 in referral hospitals. Their competency in the four clinical areas was markedly below that of all other midwives we assessed. (See chart 5.1)



Again, the numbers of newly graduated midwives is so small, as it was not possible to identify location of new graduates, as training institutes do not keep data on follow-up on first employment after graduating, (as is kept in many institutions in other countries). Consequently, it is not possible to drawn too many conclusions from these data. However, that the overall competency is uniformly well below other midwives assessed, questions must be asked concerning if current graduates are exiting from programmes with the full compliment of essential core competencies.

Assessment of student midwives competencies

The current system of assessing students at the end of the course appears to be inherently weak. It is not clear that there are sufficient clinically competent midwives involved in the final assessment. Equally, it appears that obstetricians or physicians with specialist midwifery and obstetric skills are not as a matter of routine involved in final assessment of competency. Given the level of clinical competency in the country and the lack of clinical expertise in many of the current midwife teachers in the Training institutions this would seem a serious weakness in the present system.

Finally, although it was not possible to observe a final assessment, from information given by both HRD and by midwives teachers in the training intuitions, it is not clear that the final midwifery examination is competency-based. In other words, it is not clear that it actually assesses the student competence to perform in the real situation, neither does it cover all the essential areas that are critical for midwives, including interpersonal skills, and for saving lives of mothers and babies. Rather it appears to be knowledge and task orientated.

It has long been recognized that programmes that prepare clinical practitioners need to assess the student's capacity to perform in the clinical area. Efforts should therefore be taken as a matter of urgency to strengthen the final assessment to ensure that all graduates exit with the necessary core competencies.

One way to achieve this that has been used successful in a number of countries in the early stages of development of their midwifery cadre, similar to the current situation in Cambodia, is to have a small, but select, well-prepared, clinically competent group of national midwifery assessors who are independent of the institutions where the training takes place. The final assessment would be conducted by these national midwifery assessors. Further suggests for how this could operate is given in chapter 7.

IV. IN-SERVICE TRAINING

As noted in chapter 4, the last few years have seen a large number of in-service trainings offered. Many of these only short 1, 2 or 3-days courses, most of which should contribute to increasing midwives knowledge and skills. For example, the 1-day course on breastfeeding or the 2-day short course offered by RACHA on newborn resuscitation. It was noted however that most of these short trainings appear to be offered on an ad-hoc, occasional basis. It is not clear to the team, but it is also possible, that the majority of these short trainings are linked to a project or special funding and, although they may be useful and or even required; the selection of participants may not have been made on a priority or needs basis.

Further, it is also clear from comments from midwife teachers, that many of these short courses are not run in collaboration with RTCs and rarely are RTC staffs invited to attend. The lack of proper co-ordination and, being organized piecemeal, does not offer opportunities for using short courses as building blocks for improving the capacity and skills of midwives.

Reportedly, a number of short courses are held in one of the large hospitals, either in Phnom Penh or in one of the Provinces. Most midwives appeared satisfied with the venues and content of the training.

As mentioned, the longer duration courses, the 6 week CPA course offered to all midwives working at referral hospital and, the LSS course offered by RACHA, have recently been evaluated, CPA being an internal evaluation carried out with assistance from JICA[23], and LLS by external evaluators[24].

On reviewing both curricula, it appears both courses offer very similar content, but are of different duration. Apparently, there has been a deliberate decision to harmonise the content of these two training programmes, so that there could be more

[23] NMCHC, Sept 2006
[24] Maclean, 2005

widespread and faster upgrading of midwives skills, in what is referred to as - the "new midwifery competencies."

LLS is an intensive 2 week programme that is strongly focused, as the title suggests, on essential life saving skills. The course is offered in Battambang RTC and RH and, in Phnom Penh at the Red Cross Maternity Clinic. Trainees are followed-up in their place of work every three months and given additional, one-on-one feedback and support.

The CPA programme on the other hand, is offered as three modules each of 2 weeks duration. Content includes essential life saving skills, but also include revision of general midwifery and care of the newborn. CPA is currently offered only at NMCHC.

❖ *Lifesaving Skills Programme (LSS)*

From the final report and, after discussion with staff of RACHA, it would appear that the external evaluation was very detailed. A number of shortcomings in the curriculum were highlighted; of particular note was the lack of no preparation of master trainers for the LSS course. This, as the evaluators point out, has serious consequences for maintenance of quality. Also of note, was the lack of content on newborn resuscitation, however this had been noted earlier and was a reason why RACHA supported a 2-day training just on newborn resuscitation. The intention is that these two days will be incorporated into a revised LSS course. RACHA have already requested the assistance of American College of Nurse-Midwives (ACNM), the originators of the LLS course, to do this.

Finally, also of note because of the consistency running through the review of all education and trainings in midwifery in Cambodia, is the lack of clarity on standards that can be and should be used to monitor and improve quality of care, as well as monitor compliance with and effectiveness of protocols. The external evaluation of the LSS programme recommend that clarification on these issues is required and the Midwifery Review Team would concur with this.

❖ *The 6 weeks CPA midwifery course, short referral hospital midwifery course and the HC midwifery course at NMCHC*

The final evaluation of these programmes is still not available. Anecdotally however it is felt by JICA, that much progress has taken place in terms of updating the skills of trainers for these programmes, as evidenced by the wider use of more modern teaching and learning methods.

To date nine (9) cohorts of midwives have been trained on the CPA Referral Hospital course, with 18 to 20 per course. As of August 2006 173 midwives have completed the course.

The midwifery course for HCs has trained 343 midwives over the 18 courses that have run since 1997. It was not possible to review the curriculum for the HC midwifery course, as, unlike the CPA for Referral Hospital course, the curriculum is only available in Khmer. From the details that it as been possible to ascertain, it appears this course is more of a general midwifery refresher course. Staffs in the

Training Unit of NMCHC see this course as more in keeping with midwifery "top-up".

This being the case, and given the difficulties that NMCHC have for follow-up of these trainees due to lack of finances, it would seem appropriate to question the viability of continuing with this course at NMCHC. Rather, consideration should be given to other options for refreshing and or topping-up the skills of midwives working in HCs, possibly using a on-the-job assessment of their skills by clinically competent supervisor with hands on experience, tailored to fill identified gaps being undertaken at the nearby RH. MNCHC could then be responsible for training the supervisors, which, due to the lesser numbers, would be more feasible.

- *4 month midwifery course for Primary nurses working at a HC where there is no midwife posted*

The 4-month midwifery course for Primary nurses working at a HC where there is no midwife, is offered at RTCs and TSMC on an occasional and ad-hoc basis. Most intakes are of 12 and only take place once a year, if at all. It was not possible to review the curriculum of this course, however, as it utilizes the same teachers, facilities and learning resources as for Pre-service midwifery, this was not considered a major problem.

As the number of HCs with no midwife reduces, so will the necessity for this programme. However, MoH may wish to consider using this course as a route for primary nurses who wish career advancement to be able to train as a primary midwife, then later as a secondary midwife, as the duration of 4 months is currently longer than the midwifery component of the 1-year Primary Nurse-midwife programme. Therefore, it may be assumed that by the end of their programme, these practitioners will have skills on a par with Primary Nurse-midwives.

On speaking with one group of students following this programme, they appeared highly motivated, and almost all desired to become midwives. For this reason it may well be worth investing further in this course. Consideration could be given to marketing the course to all primary nurses, the course to be offered during times in RTC when there is least activity. Before a final decision is made on whether to close this course or invest further as above, it would be worth conducting a small study, comparing skills and competence level between nurses who have done the 4 months midwifery, and the Primary Nurse-midwife graduates, just to ascertain that their skills are indeed equal.

In summary, in relation to in-service trainings, it would appear that there is great need for better coordination of these programmes, especially the very short courses.

There is need to consider the viability and need for further 4 month courses for primary nurses.

RTCs wherever possible, should be involved in all in-service trainings, as it allows opportunity for teachers to be updated and appraised of new knowledge, new skills and advances in health technologies.

Also, similar to the need for pre-service midwifery, there is great need for a total Quality Assurance and Improve mechanism that supports, not just monitoring of these

trainings, but follow up of all trainings and improvements, based on trainee feedback and on measurable impact.

Finally, imperative for all the above and, for better design of training, is the need for more clarity about national standards of midwifery.

Chapter 6: Retention, Incentives and Attractiveness of Midwifery as a Profession

I. ATTRACTING AND RETAINING MIDWIVES INTO PUBLIC SECTOR SERVICE

The true figures for attrition out of the profession was not possible to estimate, as currently there is no live Register of Practicing Midwives. Additionally MoH has yet to integrate all data on midwives. MoH data mainly consists of the numbers trained in recent years and numbers on Government payroll. Consequently, the Review Team was unable to confirm if there was indeed a high attrition rate, although many said there was. Data on total numbers of midwives, included those working in NGO sector, is needed for rational workforce planning. In addition, as the assessment of students shows, almost 50 percent in TSMC were hoping for employment outside of the public sector, although most expressed a desire to work within the NGO sector and not in private practice.

It is clear that the MoH currently absorbs a large proportion of the total estimated numbers of trained midwives in the country. However, it is also known that many midwives do work in the Private sector and NGO sector. It was also not possible to know how many leave public service to take up a position in the private and NGO sectors. In order to be in better position to make rational decisions about future workforce planning it would be useful for someone to undertake a collection of data that shows the numbers of midwives working in the NGO sector and if they are employed undertaking midwifery tasks.

One reason why nurses may choose to leave public service and/ or not wish to stay to undertake another year of training to become a midwife, was the difficulties with taking the Civil Servant entrance examination, obligatory for all students who wish to take up a post with MoH. Indeed the team did hear about problems with midwives being able to take the Civil Service entrance test. 1 midwife seen by the team was unable to take the entry into Civil Service for four (4) years. Consequently, this individual had to work in the private sector as a nurse.

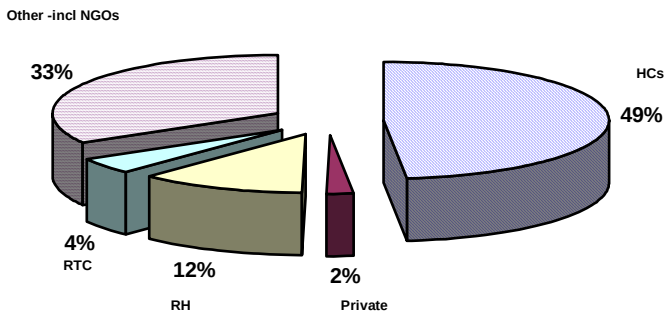
It is not clear to the team what the main problem was for this individual being unable to sit the Civil Service entry exam for so long, but it appeared that sometimes this entrance examination is just not held, or dates are changed without prior widespread notice. The team did note that MoH had taken steps to streamline and revise the recruitment process, primarily to ensure that areas where there were no, or few midwives, and the hard to post areas, were given priority. However the team also noted the report of the review to evaluate the effectiveness of the revised process, carried out in 2005, the first time this new process was to come into effect[25]. From

[25] Hussain, 2005

this review and the subsequent follow up study[26] funded by WHO Cambodia, it would appear that the process of recruitment is still problematic.

To try to gain information about willingness to take up a post in the public sector and what incentives would keep them working as a midwife, 164 of the current 196 students of midwifery were surveyed regarding their attitudes, preferred place of work after they have completing their studies and what factors would help to keep them in the profession. (See chart 6.1)

Chart 6.1 Prefered Place of Work on Completion of Pre-service Midwifery (all students n=167)



In terms of preferred place of work after qualifying, students were asked to say where they wanted to work, choices being HC, Hospital, Private Clinic, RTC or other (where they were asked to give more information of where).

Most student midwives, both Primary Nurse-midwife and Post basic-nursing (3+1) students, expressed a desire to work in a Health Centre, with the exception of students from TSMC, where 48 percent of the students in TSMC chose other, stating NGOs as a preferred choice of work, mainly because they offered better salaries and working conditions. More Post basic-nursing (3+1) than Primary Nurse-midwife students wished to work in Referral Hospital and a few wished to work in RTC, with 1 wishing to work in the Private sector.

II. INCENTIVES

In relation to, what factors would help keep midwives in their current post, this question was incorporated into the functional assessment and into the student midwives survey.

For students, respondents were asked to score in rank order a series of well recognized in incentives (see Annex 6 for scores of student midwives). Lower scores

[26] Plummer, 2006

indicate that more students ranked this item highest (i.e. was of most importance to them).

❖ *What would keep student midwives in the profession?*

As seen in Table 6.2, whilst most students ranked highly earning a decent living, it was only rank-scored highest by secondary midwives. Primary Nurse-midwives ranked the opportunity to continue in study as the highest factor that would keep them in the profession.

Both prestige and recognition by MoH were scored highly by both Primary Nurse-midwife and Post basic-nursing (3+1) student midwives, with students from TSMC scoring recognition by MoH as the number 1 factor that would keep them in the profession.

Table 6.2 Rank Order of factors that would keep student midwives in the profession include

For Primary Nurse-midwife students	Post basic-nursing (3+1) student	4-month midwifery students
1.Continuing Studies 2.Recognition by MoH 3.Prestige 4.Appreciation by client 5.Decent Living 6.Living accommodation 7.Getting a Degree 8.Being able to study abroad	2.Decent living 3.Prestige 4.Continuing Studies 5.Recognition by MoH 6.Living accommodation 7.Getting a Degree 8.Being able to study abroad 9.Appreciation by client	1. Prestige 2. Recognition by MoH 3. Appreciation by client 4. Continuing Studies 5. Living accommodation 6. Decent living 7. Getting a Degree Being able to study abroad

❖ *What would keep midwives already in practice?*

The results from the interview during the Functional Assessment of midwives already qualified, showed that living close to their family was highly important to a significant number of midwives. Over 50 percent of the midwives said they wished to remain in their current post in 1 year and in five years.

Reasons given for moving from their current post included retirement and moving closer to their family. The need to be close to their family is not surprising given that midwifery is exclusively practiced by females. Although efforts are being made to address gender inequality in the country, the heaviest burden for family responsibility of small children still falls mainly on women.

Over 50 percent of respondents said that they didn't want to change from their current site of work in either 1 year or 5 yrs. (Almost 2 times the number of Primary Midwives to Secondary Midwives desired no change).

Responses for why current Midwives wanted to become a midwife include

- Recognition that pregnancy can be dangerous; desire to help pregnant women; desire to lower maternal and infant mortality
- Desire to serve/care for people (their family, their village, poor people, people in remote areas)
- Lack of professional care in their village
- Desire to earn a living
- Family encouragement/advice

The most frequently mentioned factors that would keep already qualified midwives in their post included

a) More salary;
b) Opportunity for upgrading;
c) Opportunity for learning new knowledge and skills;
d) Adequate equipment, and
e) Opportunity to work with more experienced midwives.

❖ *Incentives to work harder and be more productive*

As discussed earlier, given the problems with producing more midwives and increasing the total number of midwives, efforts will be required to entice midwives to increase their current workload. Given the responses from midwives and student midwives, to what will keep them in the profession, it is unlikely that using financial incentives will be of much success.

Midwives, like all paid employees in Cambodia, need to earn more money and, it is vital that they, like others in the public sector have a decent living salary. Using financial incentives as a reward for doing more work, (paid either direct to the midwife or the service centre), has not been shown to be useful in the field of midwifery.

Midwifery, as most midwives will testify is wonderfully rewarding. The satisfaction that arises after assisting a woman through childbirth and seeing a healthy mother, nursing her health baby, can be indescribable. However, at the same time it is extremely exhausting, more so when labour is prolonged and or painful. Many studies are now demonstrating the emotional impact of midwifery work on midwives[27].[28] As the responses from the midwives during this review show, although too small to be considered representative, it is more likely that rewards for work well done and rewards that will act as incentives to increasing the daily work-load, should seek to address the factors highest on their list that will keep them in the profession. For most midwives, incentives are needed that will help them do their job. The need to pay a decent salary, rather than reward piecemeal, is crucial. A decent salary signals respect that the work and the worker are valued, and more, that the worker is viewed as an essential part of the healthcare team.

Prestige, being able to feel good and proud about the work done, is a common attribute for many healthcare professionals, including midwives. Midwives are more likely to be more attracted to incentives that allow them to work easier, to give better

[27] Sandall, 1997
[28] Hunter, 2001

and more effective care and that allows them to juggle the competing demands of home and work and strengthen their inner beliefs about the value attached to their work.

Experts in the field of provider performance recognise that motivation is deeply connected to good performance, with the opposite also holding true, lack of motivation leads to poor performance. Reviewing the factors that midwives cite during this Review as most important to them, it can be seen that most, if not all are closely related to internal factors about professionalism, the ability to progress, to continue to study or learn from others and to give good care.

Another factor that should be taken into consideration and may explain why financial incentives for more work, may not be sensible, is the potential such schemes have for creating barriers between professional groups. In countries that have tried payment for number of births for example, many tragic and devastating occurrences have taken place. In Brazil, physicians through the High Court have challenged the midwives right to practice. As the law now stands, in many parts of the country only they, physicians, can legally assist women at birth. This has left many women without professional care, because they cannot get to or cannot afford physician care, or leaves midwives having to go against the law and practice with no legal backing. The issue only arose once the Federal government announced a payment for birth policy.

In other cases, there has been a rise in bad practices, as the attending provider seeks to expedite the birth in undue haste, before it is time for their shift to end. Unlike many other areas of practice, the time of onset of labour cannot be predicted and, without medication, much of which can be dangerous to the mother and her unborn child, cannot be hastened.

One of the most important interventions that can save the life of a mother and her baby is to be able to recognize the early warning signs that a complication may well arise and then to make arrangement without hesitations, including offering treatments where needed, to transfer the woman to the RH. Introducing payments for births may well hinder the referral time, as debates (including internal debates) ensue at the HC, to consider whether the referral is essential, as it may mean loss of earnings.

One final factor to take into consideration is, that currently the relationship between physician and midwives and midwives and nurses in Cambodia appears healthy and one of mutual respect. This respect comes from valuing each other's area of professional practice. It is not based on potential for earning more or less money. Great care should be taken to preserve this relationship, and it would be unwise to embark on any intervention that at some point in the future may create a barrier between these professional groups.

III. CONCLUSIONS ON RETENTION AND INCENTIVES

The review found that both students and currently employed midwives have a positive approach to their chosen profession.

When asked why they became a midwife almost all mentioned their desire to help reduce pain and suffering around childbirth, many mentioned a desire to help poor women.

Almost all midwives currently employed said they wanted to continue to work as a midwife, with 50 percent indicating that they wish to stay in their current post.

The findings from this review appear to show that there is no great problem with retention, other than the high numbers of midwives approaching retirement age in the next five years. However, of note is the high number of student midwives graduating from TSMC (almost 50%), who expressed a desire to work outside of Public service.

In terms of incentives, it is clear that there is need to address remuneration of midwives, as is the case for all Pubic employees. The State Secretariat for Civil Service indicated that steps had already begun to place midwives on a higher pay band. The initiative has highest level of support having been instigated from within the Prime Minister's Office, and was a direct outcome of the High-Level Midwifery Forum held in December 2005.

However, financial incentives are not the only and may not be the most important incentives that would help to keep midwives in post. The majority of students on the Primary Nurse-midwife programme placed the opportunity for continued study as most important. This may well be linked to the desire for career progression, which in turn may be linked to opportunities to increase their personal earning power. However, due to time limitations it was not possible to explore their choices of ranking in any depth.

After opportunity for continued study, students, both on the Primary Nurse-midwife and the Post basic-nursing midwifery programme, scored highly both prestige and recognition by MoH. It would appear that both of these factors are important to all midwives, and may well be linked.

In terms of midwives willingness to work in rural areas it appears that deployment may well continue to be a problem, more so as families begin to migrate to urban area, (as midwives expressed a strong desire to live close to their families).

Because living close to families was mentioned as important by a very large number of midwives and student midwives, the current MoH policy aimed at targeting recruitment to filling current shortfall seems to be most sensible.

The current weaknesses in MOH database, coupled with the lack of a live register of total numbers of midwives in practice in all areas, makes workforce planning problematic. However, it is hoped that the soon to be approved Midwifery Council will offer the possibility of Registration of all midwives in country and periodic re-registration/ licence to practice. Once these are in place it will be easier to see what the true level of attrition from the profession is, and if midwives are leaving midwifery, or just changing the place where they practice. As an interim measure working with the Cambodian Midwives Association to persuade all midwives to register as a member of CMA, may offer opportunities for profiling the current total midwifery workforce.

Although attention is being given to recruiting from under-served areas, the data from Stung Treng RTC shows that the highest proportion of current students were from Kratie. On discussion with staff at the RTC, it appears that recruitment is based on those with highest scores. Given that highest scores are to be expected from Kratie, it is possible that such a policy will lead to continuing problems of coverage in Health Centres across Ratanakkiri and other areas outside Kratie. The possibility of having some sort of quota from under-served areas may allow students from these areas to enter midwifery training, even though they may have lower scores than those from

Kratie. Given the issues of the North-East and the problems of follow up and student placements, the current shortfall of five (out of 7) established posts for midwifery Tutor, is of concern and should be addressed urgently.

IV. ATTRACTIVENESS OF THE PROFESSION

During the High-Level Midwifery Forum held in December 2005, a number of references were made to the decrease in popularity to train as a midwife. It appears that in 2004/5 there was a problem recruiting an adequate number of students onto midwifery programmes. RTC Directors report that for 2006, numbers of students enrolled onto all midwifery programmes has dramatically increased. They were unable to explain why there had been an increase in numbers, but suggested the publicity from the High-level Forum and the promise of better pay and incentives may have contributed to this.

In terms of numbers of applicants onto the Direct-entry (Primary Nurse-midwife programme) RTC Directors said they had a large number of applicants and no problem in selecting students who met the MoH entry criteria.

Ministry of Education, Youth and Sport (MoEY&S) confirmed that there was an increase in the numbers exiting from secondary schools with 12 Grade pass. MoEY&S expect the numbers to increase year on year. They also said they would be willing to work with MoH to hold special careers drive to attract more high school pupils to consider Midwifery as a career option. The MoEY&S have just created a Careers Advice department. This department could be asked to work with MoH on such an initiative. Additionally they have also expressed their willingness to help identify possible bridging programmes for those potential recruits who do not have the current entry grades, whereby students can undertake a short tailor made, possibly part –time course that would lead to equivalency to the current entry criteria.

Finally, the MoEY&S were willing to discuss with MOH possibility of promoting attended births in their schools health programme, this would be an informal way of both encouraging future parents to seek professional care, but also give higher profile to the work of a midwife.

In terms of self-perception, without exception midwives showed a high regard for their chosen profession. Reasons given for both becoming a midwife and staying in the profession were mainly to do with assisting women and helping to save lives. Midwives clearly valued the support from the government and especially from MoH. It will be important to ensure that their aspirations, in as much as these are possible are addressed. Studies from elsewhere show that management/senior official's failure to recognize and respond to these factors (aspirations) may well lead to a demoralised and poor performing workforce.

❖ *The Professional Ethos*

Interviews with senior officers from Cambodia Midwives Associations (CMA) show that the profession does have a strong base and good national networks. Midwives across the country are prepared to pay the small contribution to be members of CMA, however the work of CMA however has been limited in recent years due to sickness and recent death of the Executive Office. CMA is in the process of refocusing their management structure.

Although CMA is a member of The International Confederation of Midwives (ICM), however links with ICM needs to be re-established. This is currently hampered by lack of a central office (as the previous office had been in the home of the recently deceased CEO). With the lack of office space is also a lack of access to Internet, email etc.

CMA would like to re-establish and strengthen links with ICM. Further, although they recognise the need for their own capacity building as a professional association to represent Midwifery issues and midwives in Cambodia, there is a high level of commitment to increase collaboration with MoH and all Stakeholders so that they (CMA) can become more effective and instrumental in leading the development of Midwifery as a Profession in Cambodia.

V. COMMUNITY PERCEPTIONS OF MIDWIVES

Contrary to popular perceptions, the Review Team found no evidence that there was dwindling or decreasing support or regard for midwifery. Indeed the Review Team found there was a high level of regard and respect for midwives. Many community members when informed that there was a national shortfall in numbers of midwives, expressed concern.

To gauge the support, knowledge and attitudes of the community it was decided to hold informal Focus Group Discussions. It was also initially hoped to survey senior school pupils in grade 9 and above, to identify their level of knowledge and general perceptions of what midwives do. The pupil survey had to be abandoned, as schools were closed during the data collection period.

A total of 9 FGDs were held during the mission's field trips in the provinces from July 18th to August 4th 2006. 47 people participated (16 men and 31 women - in 8 ODs.)

Participants were asked to discuss six guiding questions as follows:

1. Do you know any of the following words: a) Midwife, b) Trained midwife, c) TBA, c) Primary Midwife, and d) Secondary Midwife?
2. What does a midwife do?
3. Do you think the job of midwife is good? If yes, why? If no, say why not?
4. If you have a daughter or sister, would you want her to become a midwife? If yes, why? If no, say why not?
5. If your daughter(s) or sister(s) want to study midwifery, would you agree to let them do so? If yes, why? If no, why not?
6. How long do you think should a midwife train?

VI. CONCLUSION ON COMMUNITY PERCEPTIONS OF MIDWIFERY AS AN ATRACTIVE PROFESSION

It was clear from the responses that members of the focus group did know what a professional midwife was and, what midwives do. In the main, most members of focus groups were very happy to support a close member of their family train as a midwife.

When asked how long they thought a midwife should train, the prevailing view was, that midwives should be trained for a long time, 2 years or more, as it was important work.

Members also recognised the larger public health role that midwives can play, in terms of education about health, staying healthy and to offer care and advice if sickness arises.

It transpired during the discussions with the groups however, most of the focus groups members were not aware that there was currently a shortage of midwives in the country. Some felt that communities should be informed of such shortages, so they can try to encourage a member of the community to train as a midwife as they felt it was important for the country to have sufficient midwives. For more details on the responses given by FDG respondents, see Annex 7.

Chapter 7: Overall Conclusions, Recommendations & Options

I. OVERALL CONCLUSIONS

Preamble

The time available to complete such an extensive and complex piece of work has inevitably taken a toll on the breadth and depth of work that was possible. The limited time frame has meant that compromises have had to be made on just what aspects can be dealt with in depth and what needs further action and research.

It became clear very early in the life of the Review that there were many and sometimes competing priorities that different actors felt were crucial, although surprisingly there were fewer than may have been expected. It was also clear that there were some very urgent and very specific issues that needed to be addressed, such as the competence of the current workforce to deliver the known interventions that will save the lives of mothers and newborns and what are minimal requirements to train a midwife so that she can at least function adequately.

Equally, other issues, although important, in the end will need to be addressed within the broader health systems strengthening framework. For example, whist the Review Team can offer an "informed" opinion, based on what we heard regarding possible recruitment and incentive packages, redeployment packages etc., it is likely that decisions, when the time comes for these to be made, will not, nor should not, be taken in isolation. Such decisions will therefore inevitably be part of a much wider and political debate. Given this, less emphasis has been given to this area than some may wish, or would have been possible given more time.

II. PRIORITIES AREAS ARISING FROM THE REVIEW

❖ *A Need for a small change of emphasis and strategic direction at central level*

Overall, it is clear from analysis of data collected during the Comprehensive Review of Midwifery, that although there remains significant challenges to be overcome to recruit, produce, deploy equitably and manage fairly a cadre of professional Midwives, a lot has been done already, especially in recent years. In particular, MoH are to be congratulated for their efforts to increase access to and utilization of Midwives.

Efforts to date appear to be having a positive impact. However, the results of this Comprehensive Midwifery Review do indicate that, to be able to move onto the next phase there is need for a change of focus. With this change it will then be possible to strengthen midwifery capacity in Cambodia to meet future needs and, to be able to place midwifery in Cambodia on equally footing with other countries in the region.

More importantly, a change of emphasis that looks more towards quality of services, will be essential to be in a position to achieve the desired reductions in maternal and newborn mortality and morbidity.

- *Need to ensure that midwifery practitioners have minimum competencies, including those that will save lives*

One of the most crucial actions that requires urgent attention and rapid, but careful implementation, is the need to modify the current 1-year Primary Nurse-midwife curriculum. It is imperative that modifications are made to ensure students have the best possible opportunity of developing some of basic and essential midwifery competencies. The modifications must address the need for more midwifery content; adequate time and appropriate content, including use of modern educational approaches and include within the course some of the essential normal skills that have got lost in the last revision, including active management of the third stage; care in normal birth; care of the newborn at birth. In addition, more time and content is required to help students develop the essential midwifery competencies for recognizing and effectively responding to complications, including, as a minimum, the use of partographs; identification of a baby in need of resuscitation and the steps needed to resuscitate the newborn. The aim of the Primary Nurse-midwife should be to develop within the student a solid foundation and core competencies that can be built on in successive years through a systematic career progression.

In addition, there is also need to establish a national, independent and externally verifiable examination process. The process must have clear and verifiable criteria, rules, procedures and trained expert midwifery specialists as assessors. All students, would be graduates, from both public and private institutions must have their competency assessed and be able to successfully demonstrate that they have achieved the minimum competence required of a midwife in Cambodia. The purpose for this national assessment is to certify that each new graduate has gained the requisite professional competencies and therefore earned the legal right to practice midwifery in Cambodia.

Once the assessment has been completed successfully, the graduate will have the right to apply for registration with the Midwifery Council (once established), and, be entitled to apply for membership with the professional association, the Cambodia Midwives Association (CMA). Until the graduate has had their competencies assessed and verified, they should not be permitted to complete graduation, or be given their Diploma, or be permitted to enter into the Civil Service.

- *Need to ensure practitioners maintain their competency, including periodically refresh, and update their knowledge and skills*

In addition to strengthening pre-service training and developing a national standard for entry into the profession, data shows there is a need for continuing, but improving In-service trainings.

Future In-service trainings should be organized in a more co-ordinated way, that will not only allow capacity building, but will also aid career progression. Further, as the data reflects, training alone does not guarantee competence. Not only is it essential to make all training (including pre-service training) competency-based, but there is a

need for better and coordinated follow-up of trainees in their own workplace. To do this, there is a need for improved technical supervision of midwifery practice. Ideally, competent midwives working in the ODs and/or PHDs, with assistance from and links to the Referral Hospital, will do this supervision of practice.

These "supervisors of midwifery practice", as they could be called, will not necessarily require the creating of new posts, rather could be achieved by renaming or redefining certain existing posts as, including the role and responsibilities of a "District Supervisor of Midwives. These supervisors will have been updated and have received specialist training as a supervisor of midwives, but where feasible, will carry out their duties integral with their current responsibilities. Where needed, it is both possible and feasible, to recruit some of the most able midwives who will be retiring, or who have recently retired, to assist with this function whilst it is embedding into the system.

- *Need to ensure adequate information and monitoring systems are in place that will allow for rational decision-making for midwifery workforce planning and human resource development*

Rational decision-making requires reliable and valid data. Presently, the MoH does not have a central focus for pooling all data related to midwifery, in order to make an accurate assessment of the status of the national midwifery workforce (HR stock).

A number of options present themselves. First, the Comprehensive Midwifery Review has already amassed data in a central easy to manage datasheet-using Excel. The workbook, which shows the location of all midwives by posting (i.e. Primary midwife or secondary midwife) at HC, RH, OD and PHD level, with the exception of Phnom Penh Municipal Referral Hospital and the national hospitals, is available in electronic format on CD. It could be used as the basis for creating a central file on all midwives. The Review Team were unable to collect data on midwives in the NGO sector and in the private sector outside Phnom Penh. Using existing networks from the NGO network and using CMA's network, the location of midwives not in public service could be gathered and added to the workbook.

Someone would need to have central control of this database and be willing to keep it up to date and produce regular reports for monitoring purposes. Given the fact that the database would contain the whereabouts of midwives outside the public sector, but does not contain any sensitive data, only name and location, it may make more sense for this to be held by CMA. Unfortunately, CMA no longer has an office or computer and would therefore not be in a position to access or update the data. Another alternative is to strengthen the capacity, broaden the remit of the Bureau of Nursing and Midwifery, and have the database located in there.

- *Need to ensure adequate capacity to produce the required numbers of midwives to meet the country needs*

The data shows there is need to increase the overall production of midwives to meet the incremental increase in numbers of midwives needed year on year. Without this, it is unlikely, that Cambodia will be able to meet its own targets for increasing the coverage of births by skilled personnel in line with the Cambodia Millennium Development Goals and the National Strategic Development Plan 2006-2010.

However key to future efforts that will allow Cambodia to build on the achievements to date, is the need to strengthen capacity of Training Centres, including TSMC to produce quality midwives with the requisite competencies to meet current and future demands. This will require attention to increasing the adequacy of quality midwifery specific teaching and learning materials and, employing modern principles of adult learning that foster creativity, problem solving and ethical decision-making. To achieve this, it is clear that significant efforts will be required to increase the capacities of Midwifery Teachers to deliver these quality education and training programmes.

In the short term there is an urgent need for some of the current midwife teachers, who have no or limited clinical experience, or have not been in clinical practice for a long time, to be given time to strengthen their clinical skills. This could for example be either by participating in LLS or CPA training, or could be through tailor made supervised placements in a RH where they will work alongside an expert clinician for a period of time, or some other equally suitable mechanism. In the long term there is need for a career pathway that will develop strong expert practitioners that are highly motivated and have the appropriate preparation, including the necessary academic background to deliver quality midwifery education and training programmes and contribute to the overall leadership and development of the profession.

The simplified "walk-through" audit of training centres shows there is also urgent need for more and better teaching materials in Khmer. In addition, there is a need for more and better quality working models (current models and manikins are inadequate and many of the fetal manikins do not pass through the phantom manikins used to demonstrate and practice birth positions). Finally, investments are needed in all training centres, including TSMC for the development of modern specialised skills laboratories.

To support the above, there is urgent need to develop and implement a quality assurance and improvements mechanism for midwifery education and training. Such a system should be centrally developed, but must be flexible and owned by the local institutions. It should also link training centres and clinical sites together, in a collaborative arrangement that is mutually supportive.

- *Need for strong professional leadership and partnerships, especially with women's groups and organizations representing the voices of women*

It is clear from the focus groups discussions that there are many in the community who support midwifery and have positive views about midwives. It is essential that as the profession develops, that it does not lose this connection with the women they serve. For this reason, and to add voice to the legitimate demands of midwives for assistance to develop and forward the profession, there is need for strong collaborations and partnerships at local, provincial and national level, with women and groups that represent women.

It is also clear from the findings that to achieve the above and to ensure the profession remains grounded in the purpose for which it exist – to serve woman and babies and through them the wider community, there is need to create a strong cohesive team of midwifery leaders. In the short-term, this will require assistance from partners to help CMA reinvigorate itself after its recent problems and the death of the CEO. Opportunities are required whereby the national and provincial midwifery leaders can

come together for strategic planning. However there is also need for the members as a whole to re-energize themselves. This can happen using a national seminar and or workshop, or some other large-scale national event. If this involved local woman and communities as well then the agenda for fostering partnerships can be taken forward at the same time.

In the longer term, for sustainability and eventually a degree of self-sufficiency, there is need of a national focal point from which professional leadership and research can be nurtured.

III. RECOMMENDATIONS FOR PRIORITY ACTIONS

Area 1. Coverage and Competencies

A. To increase coverage of health facilities staffed by adequate numbers of competent midwives

1. A. annex which, maps out phased increases of numbers of student midwife, as well as options for career pathways that allow advancement for all midwives, including the options for primary midwives to undertake further training to become a secondary midwife, should be developed and added to the current HR development plan.

Ensure the document sets the priorities and strategic directions needed to increase numbers of midwives produced each year to be able to increase coverage of births (short and medium-term action,) as well as increase quality.

B. To strengthen competencies and quality of midwifery services (including current and future midwives),

1. Urgently modify the content and structure of Primary Nurse-midwife programme (short-term action)
2. Address current skills deficit, specifically the need to increase support to Primary Midwives, to include;
    a) Address the need for ongoing support and supervision of all midwives.
    b) Introduction of a probationary period for new graduates of Primary Nurse-midwife programme (Short to Medium-term).
    c) Strengthen and promote a professional midwifery ethic and midwifery identity. For example, scale up the rollout of national midwifery uniform to help create midwife identity. Also, establish Midwifery Council as soon as possible and implement a mandatory registration and licensing mechanism that is based on externally validated assessment of competence and includes the need for periodic re-licensing
3. Increase community support for and dialogue with all midwives
    a) Increase opportunities for dialogue between the community and midwives at all levels

b) Encourage local midwife and community innovations and partnership

c) Establish a mechanism for rewarding innovative partnership and action between midwives and women that involve the local community.

Area 2. Pre-Service Education and In-service Training

To strengthen pre-service education and make in-service more efficient and effective there is need to

1. As a matter of urgency, introduce a national independent and externally verifiable national examination to assess competencies of all student midwives graduating for programmes.
2. Develop and implement a national plan of action for strengthening the capacities of all midwifery-training institutions; to include introducing quality improvement systems to ensure that Training Centres, including TSMC are able to delivery quality midwifery programmes.
3. Increase collaboration between training centres and clinical sites.
4. Use of more clinical facilities for training. In particular use of clinical facilities with high numbers of cases, especially births.
5. Improve the availability of quality teaching and learning resources. (Re-equipping institutions with the necessary Teaching & Learning Resources will require short-term action. Overall improvements, including better collaboration with clinical facilities, working with new facilities preparing clinical sites and clinical instructors and mentors, will require medium to long-term action)
6. Increase capacities of teachers and ensure career pathways and adequate preparation for future teachers (requires both short-term and long-term action). As an interim measure, there is need to immediately address the clinical skills of midwife teachers and increase the number of part-time clinical instructions used in RTCs, drawing from competent midwives in current practice at RHs.

Area 3. Recruitment, retention, deployment, especially to rural area and including use of incentives

To increase recruitment and retention and for equitable deployment of Midwives to rural areas, including use of incentives

1. Current plans and agreements for upgrading midwives onto high pay-band should be implemented as quickly as possible
2. Consider lessons leant from the education sector for creating of special hardship postings, which carry with them incentive packages.
3. Incentives for teachers to follow-up students in clinical areas should include travel allowances
4. An incentive package, which could be a mixture of small one-off payments and for support for updating training, could be considered to encourage midwives working in non-midwifery areas agree to being re-deployed to a midwife post

5. Future recruitment of midwives should follow national guidelines and prioritise areas of need.
6. Provincial Health Departments should report annually to MoH on numbers of new midwifery recruits, leavers and numbers of those with midwifery qualification working in non-midwifery areas.
7. Exit interviews should be established for all who leave service and results collated centrally
8. Quota systems can be established for training places for hard to post/ under-served areas, it may be possible to use incentive schemes for supporting students from these areas
9. Establish community support groups for local midwives in rural areas. This will particularly help midwives not from the area, to feel a sense of connection with the community and may result in better retention of staff.

Area 4. Attractiveness of Midwifery as a profession

For maintaining and strengthening midwifery as a attractive profession

1. Strengthen midwifery leadership and midwives contribution to policy-making, by investments in and support for CMA. This to include as an immediate measure, assistance to support the establishment of a central head office. (The office could be shared with the Midwifery Council, but the separate roles and functions of each should be maintained). (Requires short, medium and long-term action)
2. Assist CMA to create partnership between CMA and leading woman's groups and associations, for mutual support and synergies.
3. Assist CMA to re-establish links with ICM
4. Develop and implement a plan of action for creating a national focal point for midwifery.

Finally, it is strongly recommend that all the above should be planed as a cohesive whole and not taken piecemeal, with health partners contributing to this national plan in a coordinated way.

For this reason and, because it is envisaged the above will require a sustained and phased plan of action, central monitoring and accountability, it is further recommended that MoH, as a matter of urgency, appoint a **High-Level Midwifery Taskforce.** The first task of this High-Level Midwifery Taskforce would be to consider all the above issues and decide on strategic actions to move to the next phase of developing midwifery in Cambodia.

The High-Level Midwifery Taskforce will develop a national strategy, as well as oversee and monitor the implementation of a national Operational Plan for Increasing Equitable Access to Quality Midwifery Care. The Chair of this Taskforce should minimally be at the level of Secretary of State. Secretariat could be provided by National Reproductive Health Programme, providing additional support was available.

For proposed membership of this Taskforce, see Annex 8

IV. OPTIONS FOR WAYS FORWARD

The options below are presented as possible solutions and ways forward for discussion in country and are not presented in any priority order. None of the options presented are mutually exclusive, in some areas, a mixture of actions may well be the best.

- **Options to improve coverage**

  The current HR work plan needs to be revised to ensure increase in total stock year on year to be able to increase coverage to meet the Cambodia Millennium Development Goals and the National Strategic Development Plan 2006-2010. Specifically there is need to;

  1. Increasing numbers in training year-on-year for next few years (this has both teacher and resource implications). This could be achieved by
     a. Establishing 2 intakes a year, rather than one, this is feasible for TSMC, but in RTC's may be more difficult.
     b. Establish a part-time option for mature students, this would also help address the current shortages of midwives in 25 to 35 age-range, which has resulted due to the six year gap in production of midwives
     c. Establishing a Direct-Entry, Pre-service BSc in Midwifery at the University
     d. This has already commenced. Consideration could be given to increase scale-up, possibly by adding a part-time option for mature students. The option could be tailored specifically to women having completed their childbearing and want to return to a professional career, or to women who wish a career change. One major consideration will be time needed to establish the programme and to find teachers, but could lead to general improvements in midwifery capacity within the country.
     e. Develop a bridging programme to allow career progression for PMW to become Secondary Midwives. This will allow national standards for coverage in terms of staffing of health facilities and create a more flexible and responsive midwifery workforce, as the current numbers of PMW will increase significantly in proportion of numbers of secondary midwives.
  2. Reconsider future of Primary Nurses-midwife programme and need for Primary Midwife. In the fullness of time PMW may be discontinued and there would be only one single midwifery qualification, Registered Midwife. (Although there could as occurs in many countries, two ways for producing midwives, for example
     a. Direct entry, where the entrants would be from High school or mature students with no nursing background. The course would be longer than the current PMW and include Public Health and some relevant nursing content, but shorter than the current 4 years needed to complete the 3+1 course.

b. Post-nursing, a 1-year or 1 year with 6 months internship course for those who are qualified nurses.

Both cohorts would exit with the same competencies and have the same qualification (Diploma in Midwifery) that would lead to the right to register with the Midwifery Council and as a *Registered Midwife*. Graduates from both types of course could equally be posted in HC or Referral Hospital according to national need and graduates preference.

- **Options to improve competencies and quality of midwifery services**

It is most likely that a mixture of the below will be needed

1. Establishing a common curriculum and one standard for In-service programme that addresses the identified skills gap and provision of women-friendly services. All In-service trainings should be delivered through or with assistance from RTCs (in capital TSMC).
2. Developing a specialist module/short course for adding to all In-service training courses on quality care and client-friendly/women-centred care.
3. Establishing a national centre of excellence for midwifery, a Midwifery College (as a virtual reality College – see above).
4. Creating a specialist post of "District Supervisor of Midwives" at ODs (Midwives already exist at OD so it would be converting one – or in large ODs more than 1 of the posts to a District Supervisor of Midwives). This supervisor will not only keep a list of midwives working in her OD area (MoH staff, Private and NGO), but would undertake periodic audits of practice in all facilities, including approval of Private Midwifery Practice. Technical assistance would be required to develop specialist supervisor of midwives model (*Bangladesh have just established such a short-course with help of UNFPA and WHO and with technical assistance from UK. A system of District-wide Supervisor of Midwives have been shown to be crucial in improving and maintaining the quality of Midwifery practice and have been operational in the UK since the early 1900s. This was prior to the creation of a fully functioning national health service. Similar systems have been used in a number of other countries).*
5. Address skills shortfall of and increase support to Primary Midwives by;
    a) Make modifications to the Primary Nurse-midwife curriculum, as an immediate stop-gap. Then to re-structure the curriculum to ensure essential midwifery subjects and essential competencies are prioritised and to integrate better theory and practice, as well as allow more time for hands-on clinical practice opportunities.
    b) Immediately establish a *technical midwifery committee* to review the Primary Nurse-midwife curriculum and propose modifications that will redress the current deficiencies. This committee should include, midwives from each RTC, TSMC, and clinical midwives from NMCHC, Representatives from PHDs and Referral hospitals, a specialist OBGYN, National Programme for RH, specialist Paediatrician, representatives from HRD and from the Bureau of Nursing and Midwifery.

c) As an interim measure, the TOR for this committee should also include, evaluation of all midwifery the curriculum and further modification, as deemed necessary, to ensure the curriculum is `**Fit-For-Purpose**[29]`. The TOR for this would be pending the establishment of the `Midwifery Council`, to whom the responsibility for `*approving*` all Midwifery curricular and changes to curricular etc. should be transferred, in order to protect entry into the profession, as well as protection of the public from inadequately prepared practitioners. HRD would remain responsible for the monitoring of standards and for compliance with the national standards approved by the Midwifery Council.

d) Consideration should be given to establishing the concept of "Probationary" status for Primary Midwives (PMWs) for a period of 1 year to 18 months following graduation from their pre-service programme. During the "Probationary" period, PMWs would maintain links with the RTC and be expected to undertake periodic periods of study (maybe 1 week every 3 months), complete a set number of cases, including births and, attend a defined period of clinical hands-on experience in the Referral Hospital attached to their HC. Once they have completed the Probationary Period they could apply for accreditation by The Midwifery Council to be registered as a `*State Certified Midwife'*. They could also apply for membership with *CMA, which could be the interim body for registering midwives pending the Midwifery Council becoming operational.* In addition, this Probationary Period could carry credits towards undertaking any future course for continuing study/ advancement/career progression. This has added advantage, as it also would meet the need expressed by PMW students for continuing studies, but also allow entry into the workforce.

During the 'Probationary period, the PMWs would also be required to attend a number of OPD sessions to increase their capability for identification and treatment of adult and child illnesses, so that they can identify, treat and refer cases identified whilst offering ANC, Postnatal care or while they are attending births in the home.

- **Options to Strengthen Training capacities**

1. Develop in-house, or tailor made/individual modules that allow current teachers with limited clinical experience and skills to increase clinical capacities
2. Select suitable candidates to undertake specialist Midwife Teacher Training **out-of-country training (**e.g. Malaysia or Thailand).
3. Developing a national "centre of midwifery excellence" with potential for developing and delivering modules/ programmes for Continuing Professional Development (CPD) for midwives. Priority should be given to developing options for specialist and advanced midwifery studies that can be used for preparation of midwifery teachers.

[29] Sherratt, 1999

Such a centre in time would also be able to undertake midwifery research, providing adequate assistance from similar centres outside the country was available. Such a centre could be based on a *Professional College* model, as found operating for both medical, nursing and midwifery professions in many other countries, for example New Zealand, USA and the UK, to name but a few, or a Professional Society, such as the Professional Society for Public Health operating in Thailand and elsewhere.

The Centre could be based at TSMC with links to NMCHC and the National University, as a semi-autonomous body. Equally, it could be an "arm of", or part of, the Cambodian Midwives Associations (CMA).

To make such a centre operational would require sustained technical assistance, including from an international organization such as the International Confederation of Midwives (ICM), who could coordinate different technical inputs from many different countries. This would permit a variety of inputs from many places/countries, taking the best from each and so allow the development of a Cambodian Model of Midwifery.

4. Develop a specialised in-country **Midwife Teacher Diploma,** mandatory for all future teachers. This could be on a full-time or part-time basis. Suitable Midwife teachers from the current workforce could be prioritised for the first cohort.
5. Developing a specialist **in-country post-graduate Midwifery Degree** using mixed approach, distance–learning and part-time basis, (on a credit accumulation basis), to be mandatory for all midwife teachers, but open to others wishing and able to progress to leadership positions. (Thailand have good Midwifery education programmes and are establishing a Master level programme, they would have teachers and materials that could be used to support a post-graduate degree and maybe offer distance learning modules).

- **Options for Increasing Retention and Equitable Deployment to Rural Areas**

  No specific options are included here, as many options have been included under recommendations. It is recognized that this is likely to remain a challenge for many years. Different and multiple strategies and incentives will be needed. However, it is likely that some of the innovations and interventions used for the other areas may well have a positive impact in this area as well.

- **Options for increasing midwifery leadership and partnerships**

  1. Creating a high-level post within MoH to take the lead on all Midwifery matters and be central point of contact and technical support and oversight for all departments within MoH. This option would be difficult to implement not least because this would cut across a number of existing departments, in particular the Bureau of Nursing and Midwifery, although this only operates for Hospital services. Also, it may be difficult to ask one person to provide technical support to all departments. An alterative might be to take the Bureau of Nursing and Midwifery out of hospital services Department, up-grade the Bureau to Department status, and expand its remit.

2. Another and possibly less contentious and more sustainable option, would be to strengthen the capacities of the Cambodian Midwives Association (CMA), to operate as a fully functioning NGO, with an office base and with technical support to be able to provide its members with a full professional service, including an accredited professional development programme. CMA could assist with some in-service programmes, specially training of accredited supervisor of Midwives and for Advanced Midwifery Practice Modules and be commissioned to undertake small midwifery specific research to inform future plans and actions to strengthen midwifery, as such would be operating as a professional college (as mentioned above). CMA would also assist with and have representation on the soon to be constituted Midwifery Council, they could help establish a Professional Code of Ethics and Code of Practice for Midwives. CMA could help with the transition to Midwifery Council and State Registration, by certifying all current midwives and keeping a live register of Midwives based on annual payment of membership fee. Such fees would be of necessity have to be very small therefore support would be needed to help establish systems and to support at least one full-time staff and secretarial assistance.

Annexes

10. TOR For Comprehensive Review of Midwifery in Cambodia
11. Interviews and Visits with Stakeholders
12. Illuminative Plan of Action For Strengthening Midwifery Capacity in Cambodia 2007- 2010
13. ICM Core Competencies
14. ICM Code of Ethics For Midwives
15. Reponses Student Midwives – Incentives
16. Responses FGD: Community Perceptions of Midwives
17. Proposed membership of High-Level Midwifery Task-Force
18. Documents and Bibliography

Annex 1

Terms of Reference For Comprehensive Review of Midwifery in Cambodia

These Terms of Reference specify the scope of work for a comprehensive review of midwifery issues in Cambodia comprising: current coverage and competencies, pre-service and in-service training, recruitment and career path, deployment and retention of midwives in rural and remote areas, and attractiveness of midwifery as a profession. The reviewers are expected to analyze the current situation and provide clear conclusions and recommendations for consideration during the Health Sector Mid-Term Review. While the primary focus of the review is on the Cambodia situation, reviewers are expected to provide comparisons and develop conclusions and recommendations based on regional and international best practices.

a) Current Coverage and Competencies:

- Review existing midwife coverage[30] particularly for rural and remote locations and identify current and future gaps in relation to coverage plan and needs. Based on overall findings, make recommendations for how to address considering both public and private sector options.
- Assess technical competency of existing midwives and new graduates (post basic course, one year course and private course), and identify gaps and make recommendations for improvement. (Competencies to be compared to the skills required to deliver RH elements of MPA and CPA service packages.)

b) Pre-Service and In-Service Training:

- Review and develop recommendations regarding pre-service training programmes. This will include review of curriculum, actual competency levels, entry requirements and annual graduate levels versus projected needs.
- Review and develop recommendations regarding existing in-service training programmes and potential for upgrading existing midwifery skills. This will include review of curriculum, actual competency levels, etc.
- Review existing capacity of the regional and private training centres (facilities, trainers, methodology, materials, etc.) to undertake pre and in-service midwifery training and make recommendations for how to improve and potentially expand capacity

c) Recruitment, Deployment and retention in rural and remote areas:

- Review and develop recommendations regarding current midwifery recruitment[31] and deployment processes vs. expected annual recruitment figures;
- Review and make recommendations regarding civil service and non-civil service (public, private) deployment and retention options
    a) Review of civil service conditions to include potential for increasing civil service level of midwives to be equivalent with staff in other sectors, and additional civil service allowances for remote placement and difficult/higher risk work conditions.
- Review and make recommendations regarding role of supervision, financial and non-financial incentives, etc.

[30] Key sources of information include Administrative and Health Facilities Mapping 2004, and MoH/PHD personnel and human resources data bases. Info on current location and coverage of private sector midwives will need to be collected.

[31] The recent study by WHO titled: Evaluation of the Ministry of Health's 2005 Recruitment Process and Related Factor Affecting the Number of Midwives Employed in Cambodia, should be used as a key reference

d) Attractiveness of Midwifery as a Profession

- Review and develop recommendations regarding attractiveness of midwifery as a profession, career paths, perceived constraints and motivational factors to working in rural and remote areas[32]

III. Outputs and Scope of Work

The main output under this consultancy is a comprehensive report with clear conclusions and recommendations highlighting the above key elements. This report will be a key contribution to the mid-term review process, and as such will be used by both the Ministry of Health and health sector stakeholders and partners. The review team will be expected to prepare and make a presentation of the draft report and key findings to the Technical Working Group Health, or other parties as agreed, and then finalize the report based on stakeholder comments.

This work will involve close consultation and collaboration with The Human Resource Development Department (HRD); The Personnel Department; National Maternal and Child Health Centre (NMCHC), The National Reproductive Health Programme (NRHP); Department of Budget and Finance (DBF); Regional Training Centres (RTC), the midwifery association, field based midwives, and other key stakeholders and partners including donors and NGOs. The work will also require involvement of other relevant ministries and institutions such as the Ministry of Economics and Finance (MEF); the Ministry of Education, Youth, and Sport (MoEYS); the Secretariat of State of Public Functions; and the Council for Administrative Reform (CAR) of the Office of the Council of Minister (OCM).

Key Outputs:

- Agreed workplan
- Draft Report
- Presentation to TWG-H
- Final Report (based on stakeholder comments)

Reporting Arrangements:

The team leader will formally report to H.E. Prof. Eng Huot and the TWG-H Secretariat. However, on a day to day basis, the review team will work closely with the Human Resource Department, the Personnel Department and the National Reproductive Health Programme. As the review will largely be financed by UNFPA, the review team will be formally contracted by UNFPA on behalf of the MoH and the TWG-H.

[32] Key source of data will be the Obstacles to Delivery by Trained Providers Study

INTERVIEWS AND VISITS TO FACILITIES Annex 2

Stakeholders Interviewed

In addition to interviews with key Department in the MoH, including HRD, Personnel, Planning, HSSP, Bureau of Nursing and Midwifery Hospital Services Department, the Review team held detailed interviews with HE Bun Sok, and others at the Ministry of Education, Youth and Sport, HE Pech Bunthin and staff at State Secretariat for Civil Service, Director of the Department of Remuneration and Redeployment Policy CAR, HE Prof Ly Po, Permanent Vice Chair NAA and President of Medical Council and his colleague.

The team also visited and interviewed key staff at the National Maternal and Child Health Centre and the National Reproductive Health Programme.

A number of key `Health Partners' were also interviewed, including World Health Organization (WR Dr Michael O`Leary and Dr Severin von Xylander), DFID (Elizabeth Smith), USAID (Dr Hen Sokun Charya), UNFPA (Ms Bettina Maas UNFPA Representative, Ms Alice Levisay Deputy Representative, Dr Sokun Programme Manager RH and Ms Sochea Sam NP Associate RH), JICA (Dr Hiromi Obara MCH technical advisor and Ms Ieng Nary), Cambodia Midwives Association (Ms Ou Sareun, President) and Ms Theary Chan Executive Director RACHA and staff for information on LSS. (RACHA kindly agreed to provide some of the models for the Functional Assessment).

Assessments made and Facilities Visited

Director and Midwifery teachers at all Regional Training Centres and the Technical School for Medical Care (TSMC) kindly agreed to participate in the review and made themselves, their intuitions and their students available to the team.

In addition, a number of Health Centres and Referral Hospitals were also visited in the following Operational Districts

1. Oudong, Kampong Speu
2. Preah Sdach, Preg Veng
3. Battambang and Sampov Luon, Battambang
4. Preah Net Preah, Banteay Meanchey
5. Stong, Kampong Thom
6. Psar, Kampong Chhnang
7. Angkor Chey, Kampot
8. Angkor Chum,Siem Riep
9. Rattanakiri
10. Kratie

In Phnom Penh 3 maternal and newborn health facilities (Red Cross, Phnom Phen Municipal Referral Hospital) and 2 Private Maternity Clinics, participated in the review.

Annex 3

Illuminative Timescale for Implementing Possible Strategic Actions to Increase Midwifery Capacity in Cambodia (example only)

Action	2007	2008	2009	2010
1. Increase coverage by competent Midwife	· Commence Probationary period for Primary Nurse-midwifery graduates. · High-level meeting with ODs with HC without Midwives to develop special action plan, possibly to include special support /scholarship for women who willing to train as midwife in hard to post Districts. · Revise Workforce plan to ensure adequate numbers of midwives produced · Establish mechanism with Civil Service Secretariat to streamline recruitment into Civil Service – one test for entry into pre-service midwifery programme and Civil Service · Establish registration of midwives in clinical practice, with CMA as interim measure, pending setting up of Midwifery Council · Commence exit interview/survey with all midwifery leavers	Introduce, as pilot, a part-time programme midwifery training for mature students Commence implementation of Revised HR plan for Midwifery Evaluation of Post-nursing programme and revision of curriculum by technical committee as required Increase annual intake of students in TSMC to 2 per year Commence Registration and issuing of licensing of Private Midwifery Practice Establish mechanism for tracking new Midwifery graduates Establish post for District Supervisor of Midwives and develop training module by NMCH, CMA and HRD in collaboration with and inputs from other relevant depts in MoH, and selected PHD and ODS	Evaluate Primary Nurse-Midwife programme (including impact) and revise curriculum as required Establishment of Live Register of Midwives using Supervisor of Midwives in ODs Evaluation of first batch of Supervisor of Midwives training and revise training module as required	Review and revise Workforce Plan for Midwifery Evaluate pilot part –time option for midwifery training (including impact on coverage) Review workforce planning for midwifery and revise plan accordingling

Action	2007	2008	2009	2010
	· Conduct survey to establish numbers of midwives working in NGO and Private sector outside Phnom Penh and revise estimated of number of midwives	National Training of Supervisors of Midwives commence by NMCH		
	·	Develop guidelines for Private Midwifery Practice and Midwifery-led birthing centres and criteria for awarding licence to practice private midwifery, establish midwifery-led birthing centre, including monitoring and reporting mechanisms.		
2. Increasing Midwifery Education & Training capacities	· Modification of PNM curriculum by technical Midwifery committee	Implement strategic plan for long-term strengthening of Midwife teachers	Develop curriculum for post-graduate programme for midwifery studies with assistance of foreign institution	Post-graduate programme for Midwifery implemented
	· Develop criteria for Probationary period of practice for Primary Nurse-midwifery graduates.	1 cohort of midwife teachers overseas for post-graduate studies.		
	· Develop a strategic medium-long term strategic plan for strengthening competencies of current midwife teachers of future Midwife teachers.	Conduct detailed Education Audit in 2 TCs and develop action plan	Conduct detailed Education Audit in remaining TCs and develop action plan	
	· As short term stop gap - implement 1 ToT for Master Midwife Teachers, including use of clinical skills Lab.	Conduct small study on use of clinical skills laboratories for increasing skills in student midwives		
	· Establish Core standards for midwifery education institutions, including resources.	Conduct detailed Education Audit in 2 TCs and develop action plan		

Action	2007	2008	2009	2010
	· Re-equip all RTC with core T & L materials, including models/manikins, in accordance with national standards. · Develop specialist T&L materials on local language – including translation, printing and widespread dissemination of quality midwifery textbook. · Establish a specialist clinical skills laboratory in each RTC in accordance with national standards · Establish national independent, externally verifiable assessment of final midwifery examination for graduates on all midwifery programmes Increase practical training by clinical midwives/doctors through contract arrangement with hospitals · Institute external examination for students as interim step · Establish QAI-T system, to include In-service training. · Establish Education Audit System for Midwifery Training Institution and MoU between TC and Clinical facilities. · Carry out pilot of Education Audit			

Action	2007	2008	2009	2010
	and QAI-T system in 1RTC (Revise as required)			
3. Improve deployment and retention of competent Midwives to hard to reach and rural areas	Establish mechanism for re-deployment of midwifery staff working in non-midwifery area Establish and career pathways for midwives that includes options for continuing study and career progression Ensure widespread dissemination of carer pathways Establish incentives package for re-deployment of midwives especially those in on midwifery areas	Establish policy and guideline on periodic renewal or registration / re-licensing that includes mandatory renewal of registration tied to proof of professional updating and completion of set criteria for cases to be attended - for phased implementation over 3 years	New guidelines for renewal of registration comes into effect. First phase of renewals granted	Second phase of renewals of registration
4. Increase Attractive of the Profession	Establish High-level Task-Force to (2006) to signal political commitment to addressing Midwifery issues. Develop Plan for College of Midwifery Develop Professional Code of Practice and Code of Ethics in line with Intentional Code of Ethics for Midwives Develop and implement plan with MEY&S for special careers advice and drive to promote midwifery within all secondary schools across the country	Establish College of Midwifery for Professional Develop (national Centre of Excellence) High Profile launch Midwifery Council Establish a transparent high level national award for midwives Identify and support team of midwives to attend ICM Triennial Congress Glasgow UK	Report of High-Level Task Force	

Action	2007	2008	2009	2010
	Conduct a wide-spread publicity campaign to promote midwifery as a career - to run in parallel to a Pubic Information campaign about role of midwives, midwifery profession and need for more midwives. CMA to develop training Module for District Supervisors of Midwives in collaboration with HRD Ensure all midwives have new national Uniform			

Annex 4

COMPETENCY BENCHMARKS USED ICM ESSENTIAL CORE COMPETENCIES OF A MIDWIFE, adapted of use in Cambodia context

ICM competencies have six (6) main competency domains

1. General
2. Pre-pregnancy and Family Planning (Birth-spacing)
3. Prenatal/Pregnancy Care
4. Intrapartum (care in labour and during childbirth up to 1 hour after birth)
5. Postpartum
6. Care of Newborn and young child

All together made up of 214 competency statements

COMPETENCY STATEMENT
Broad statement heading each section and the basic knowledge skills and behaviors required by the midwife for safe practice

Answers the question “what does a midwife do”? Are Evidence based, created using a rigorous Delphi technique.

The Functional Assessment conducted as part of the Midwifery Review of Cambodia 2006 used the below list of competencies, as representative of the essential core competencies required of any midwife (primary of secondary) working in Cambodia.

SELF-ASSESSMENT of MIDWIFER COMPETENCIES

ការវាយតំលៃលើខ្លួនឯង (1)

OD: ODKS ACKP PSPV SKBT PNPBM ACSR SKT MW1 MW2 Date:
Site of practice: HC RH clinical area (if other than maternity):

ជំនាញបច្ចេកទេស **Clinical skill**	ជំនាញនេះ មានបញ្ចូលនៅក្នុងកម្មវិធីសិក្សារបស់ខ្ញុំ។ ខ្ញុំមានទំនុកចិត្តលើខ្លួនឯងចំពោះការអនុវត្តជំនាញនេះ នៅចុងបញ្ចប់នៃកម្មវិធី។ **This skill was included in my pre-service educational program, and I felt confident to perform this skill at the end of my program**.	ជំនាញនេះមានដាក់បញ្ចូលនៅក្នុងកម្មវិធីសិក្សាមុនពេលចូលធ្វើការរបស់ខ្ញុំ។ ខ្ញុំគ្មានទំនុកនឹងប្រើប្រាស់ជំនាញនេះនៅក្នុងបញ្ចប់នៃកម្មវិធីនេះទេ. **This skill was included in my pre-service educational program, and I did not feel confident to perform this skill at the end of my program**.	ខ្ញុំបានរៀនជំនាញនេះក្រោយកម្មវិធីសិក្សា របស់ខ្ញុំ (ការបណ្តុះ-បណ្តាលនៅកន្លែង ធ្វើការ ឬការបណ្តុះ បណ្តាលបន្ត) ហើយខ្ញុំ មានទំនុកចិត្តក្នុងការអនុវត្តជំនាញនេះ។ **I learned this skill after my pre-service program (via on the job training or in-service training) and I feel confident to perform the skill**.	ខ្ញុំបានរៀនជំនាញនេះក្រោយកម្មវិធីសិក្សារបស់ខ្ញុំ (ការបណ្តុះបណ្តាលនៅកន្លែងធ្វើការ ឬ ការបណ្តុះបណ្តាលបន្ត) ប៉ុន្តែ ខ្ញុំគ្មានទំនុកចិត្តលើខ្លួនឯង ក្នុងការអនុវត្តជំនាញនេះទេ។ **I have learned this skill after my pre-service program (via on the job training or in-service training), and I do not feel confident to perform this skill.**	ខ្ញុំមិនចេះជំនាញនេះទេ. **I don't know this skill**.
សាកសួរពីប្រវត្តិពិនិត្យផ្ទៃពោះ **1. Taking an antenatal history**					
គណនាថ្ងៃខែឆ្នាំសំរាល **2. Calculating EDC**					
វាស់កំពស់ស្បូន **3. Measurement of uterine size**					
ការស្វាបរកទម្រង់ទារក **4. Determination of fetal position by abdominal examination**					

ប្រើក្រាហ្វិកតាមដានការសំរាល ធម្មតា

5. Use parthograph to follow normal progress of labor

ការកំណត់ដំណាក់កាលទីពីរនៃការ ឈឺពោះសំរាល

6. Identify the second stage of labor

ការគ្រប់គ្រងដំណាក់កាលទីពីរនៃ ការឈឺពោះសំរាល

7. Manage second stage of labor

ការគ្រប់គ្រងការសំរាលធម្មតា

8. Manage a normal delivery*

ការគ្រប់គ្រងតាមធម្មតានៃ ដំណាក់កាលទីបីនៃការសំរាលកូន

9. Natural management of 3rd stage

ការគ្រប់គ្រងសកម្មដំណាក់កាល ទីបីនៃការសំរាលកូន

10. Active management of 3rd stage

ការពិនិត្យមើលសុក និងស្រោម ទឹកភ្លោះ

11. Inspection of placenta and membranes

ការបារយកសុកចេញដោយដៃ

12. Perform manual removal of placenta

ការកាត់ទ្វារមាស

13. Perform episiotomy*

ការដេរទ្វារមាស

14. Suture perineum*

ការវាយតំលៃលើពិន្ទុអាប់ហ្គា

15. Assess Apgar scores

ការជួយម្តាយក្នុងការបំបៅដោះកូន ភ្លាមៗក្រោយសំរាល

16. Assist in immediate breastfeeding

ការថែទាំភ្នែកទារកទើបកើត

17. Perform newborn eye care

ការពិនិត្យការកន្ត្រាក់ស្បូន ភ្លាមៗ ក្រោយសំរាល

18. Recognize uterus is well contracted immediately

postpartum
ការពិនិត្យទារកទើបនឹងកើត
19. Examine newborn
ការធ្វើរោគវិនិច្ឆ័យបានត្រឹមត្រូវ ការធ្លាក់ឈាមក្រោយពេលសំរាល
20. Correctly diagnose postpartum hemorrhage
ការគ្រប់គ្រងការធ្លាក់ឈាម ក្រោយពេលសំរាល
21. Manage postpartum hemorrhage
ការសំគាល់ការចម្លងរោគលើទារក ទើបនឹងកើត និងការផ្តល់ការថែទាំ
ភ្លាមៗក្រោយពេលសំរាល យោង តាមគោលការណ៍ណែនាំ ថ្នាក់ជាតិ
22. Diagnose infection in the newborn and give appropriate immediate care for newborn as per national protocols
ការសំគាល់ការក្លាយរោគក្នុងឈាម លើស្ត្រី ក្រោយពេលសំរាល និង
ផ្តល់ការថែទាំភ្លាមៗ យោងតាម គោលការណ៍ណែនាំថ្នាក់ជាតិ
23. Diagnose sepsis in postpartum women and give immediate care according to national protocols
ការសំគាល់ស្ត្រីដែលមានការ ប្រកាច់ដោយក្រឡាភ្លើង
24. Recognize women with eclamptic fits*
ការគ្រប់គ្រងការប្រកាច់ដោយ ក្រឡាភ្លើង រួមទាំងការផ្តល់ថ្នាំ ម៉ាញ៉េស្យូម
ស៊ុលហ្វាត
25. Manage eclamptic fits including giving magnesium sulfate*

Annex 5

ICM CODE OF ETHICS FOR MIDWIVES

Preamble
*The aim of the International Confederation of Midwives (ICM) is to improve the standard of care provided to women, babies and families throughout the world through the development, education, and appropriate utilization of the professional midwife. In keeping with its aim of women's health and focus on the midwife, the ICM sets forth the following code to guide the education, practice and research of the midwife. This code acknowledges women as persons, seeks justice for all people and equity in access to health care, and is based on mutual relationships of respect, trust, and the dignity of all members of society***.**

The Code

I. Midwifery Relationships

A. Midwives respect a woman's informed right of choice and promote the woman's acceptance of responsibility for the outcomes of her choices.
B. Midwives work with women, supporting their right to participate actively in decisions about their care, and empowering women to speak for themselves on issues affecting the health of women and their families in their culture/society.
C. Midwives, together with women, work with policy and funding agencies to define women's needs for health services and to ensure that resources are fairly allocated considering priorities and availability.
D. Midwives support and sustain each other in their professional roles, and actively nurture their own and others' sense of self-worth.
E. Midwives work with other health professionals, consulting and referring as necessary when the woman's need for care exceeds the competencies of the midwife.
F. Midwives recognize the human interdependence within their field of practice and actively seek to resolve inherent conflicts.

II. Practice of Midwifery

A. Midwives provide care for women and childbearing families with respect for cultural diversity while also working to eliminate harmful practices within those same cultures.
B. Midwives encourage realistic expectations of childbirth by women within their own society, with the minimum expectation that no women should be harmed by conception or childbearing.
C. Midwives use their professional knowledge to ensure safe birthing practices in all environments and cultures.
D. Midwives respond to the psychological, physical, emotional and spiritual needs of women seeking health care, whatever their circumstances.
E. Midwives act as effective role models in health promotion for women throughout their life cycle, for families and for other health professionals.
F. Midwives actively seek personal, intellectual and professional growth throughout their midwifery career, integrating this growth into their practice.

III. The Professional Responsibilities of Midwives

1. Midwives hold in confidence client information in order to protect the right to privacy, and use judgment in sharing this information.
2. Midwives are responsible for their decisions and actions, and are accountable for the related outcomes in their care of women.
3. Midwives may refuse to participate in activities for which they hold deep moral opposition; however, the emphasis on individual conscience should not deprive women of essential health services.
4. Midwives participate in the development and implementation of health policies that promote the health of all women and childbearing families.

IV. Advancement of Midwifery Knowledge and Practice

1. Midwives ensure that the advancement of midwifery knowledge is based on activities that protect the rights of women as persons.
2. Midwives develop and share midwifery knowledge through a variety of processes, such as peer review and research.
3. Midwives participate in the formal education of midwifery students and midwives.

Annex 6

RESPONSES TO FACTORS THAT WOULD KEEP STUDENT MIDWIVES IN THE PROFESSION

FACTORS TO KEEP STUDENT MIDWIVES IN THE PROFESSION - Mean Score for Each Cohort (RANKING Order). Total number of respondents = 164

Decent living	Prestige	Living Accom	Cont study	Degree	Study abroad	Appreciated By Clients	Recognition By MoH	Other	Institution & Type of Student
4.98 (6)	4.12 (3)	4.98 (6)	3.02 (1)	4.86 (5)	6.46 (8)	4.60 (4)	3.33 (2)	0	PMW[1] Battambang (n=55)
4.53 (5)	3.59 (2)	4.82 (6)	2.35 (1)	3.76 (3)	7.12 (8)	6.06 (7)	3.88 (4)	8.60 (9)	PMW Strung Treng (n=17)
2.20 (1)	3.00 (2)	3.20 (3)	4.90 (5)	5.50 (6)	7.20 (8)	6.00 (7)	4.00 (4)	0	Sec[2] MW Battambang (n=10)
2.52 (1)	4.11(4)	4.78 (5)	3.52 (2)	5.19 (6)	5.85 (7)	6.30 (8)	3.78 (3)	0	Sec MW Kampot (n=27)
4.18 (5)	3.42 (2)	5.42 (6)	4.15 (4)	4.06 (3)	5.91 (7)	6.30 (8)	3.39 (1)	7.96 (9)	Sec MW TSMC (n=33)
3.67 (2)	1.58 (1)	4.42 (5)	4.33 (4)	5.42 (7)	8.00 (8)	3.75 (3)	5.00 (6)	0	Kampot 4 month (n=12)
4.80 (5)	3.00 (2)	5.60 (6)	4.00 (4)	6.40 (7)	7.70 (8)	3.60 (3)	2.20 (1)	7.90 (9)	TSMC 4 months (n=10)

[1] PMW: Primary Nurse-midwife Course

[2] Sec MW: Secondary Midwife Course [Post basic-nursing midwifery course (3+1)]

Annex 7

SUMMARRY OF RESPONCES FROM FOCUS GROUP DISCUSSION

Q1. *Most of the participants knew the term Midwife or Trained midwife and TBA.*
- They called Trained midwife as "Chbmob Peit" (medical/hospital midwife).
- Some mentioned the number of TBAs decreased from day to day and that TBAs were invited to attend training in order to improve their work.
- None of them knew what a Primary Midwife or a Secondary Midwife is.

Q2. *Asked to comment on what they thought midwives did* (*What is the job of a midwife?)*
- Participants from Oudong, Sampov Loun and Snuol knew more about what a midwife does than participants form other ODs.
- Most said they provide ANC, convincing women to come to the HC or RH, doing health education and promotion through VHSGs and mass media, referring women to district hospital midwives when they have difficult births, giving injections, and treating people.

Q3. *When asked to say I they thought midwifery was a "good" job*
- All participants said "yes" because they midwives help save people's lives during childbirth.
- Participants stated that the job of a midwife is good only when they do their work carefully and attentively and, is bad when they work or behave badly.
- Participants from Angkor Chum felt that that TBAs tended to care for and look after pregnant women more than a midwife does, particularly when they are in labour.

Q4. *Asked to say if they have a daughter or sister, would they want her to become a midwife?*
- The majority of participants interviewed said "yes", because they would help women deliver babies, save people's lives, and help treat others in the family when they get sick.
- However one of the participants from Kampot said "no" because being a midwife is a risky job as it would expose her to HIV infection. However some offered their explanations that midwives have their means to protect themselves, such as wearing gloves.
- Another participant said she was too poor to support her daughter to study midwifery.

Q5. *Asked if their daughter(s) or sister(s) wanted to study midwifery, would they agree to let them do so?*
- All participants said "yes". They said they would not object to their daughters or sisters' wishes to study midwifery.
- Some of the participants asked for support for their daughters/sisters' education.
- A young woman from Prey Veng said she wanted to become a midwife but she had never heard of midwifery education.

Q6. *In response to the question if your daughter(s) or sister(s) want to study midwifery, would you agree to let them?*

Participants from Angkor Chum and Sampov Loun said they had never heard, through TV or radio, of any need for more midwives. They said however they would be happy to ask their daughters or sisters to enrol on a midwifery course.

One of the FGD members from Sampov Loun argued that officials in charge of recruiting midwives practised nepotism, by selecting only their relatives.
- Participants from Sampov Loun reported that a woman in one of the villages in their district had died of PPH when she was assisted by a TBA. They cited a lack of trained midwives contributed to the incident.
- Some participants (from the Border areas) said some of the people in their community preferred going to Thailand for health services, as it is much better in terms of both infrastructure and patient care.
- They said medical staff in Thai hospitals were hospitable and attentive to patients and that health cost in Thailand was the same as or even sometime lower.

Q6. *Asked to say how long they think a midwife should train?*

Many of the participants didn't seem to have ideas on how long midwife should train, but when they were given various options such as 3 months, 6 months, 1 year, 2 years, and more than 2 years, the majority of them supported a long period of training, over 2 years.

- They said the longer the better, as it would give students opportunity to master their skills.
- One of the participants from Oudong said 3 months for PMs, 6 for SMs and 3 years for *Oudom* (tertiary) level.
- Two (2) participants from Prey Veng said 3 months were enough to get a quick knowledge of midwifery and that 6 months were good for gaining more knowledge and skills.

Annex 8

Proposed Membership of the High-Level Midwifery Taskforce

The Midwifery Task-force members should include midwives from clinical and education practice (Regional Representation –i.e. from RTCs and PHDs, as well as TSMC, National maternity referral hospital and one other maternity facility), Chief Nursing and Midwifery Officer MoH, Representation from Cambodia Midwives Association and from Midwifery Council (if they is constituted soon), NMCHC, A senior OBGYN specialist, Senior Newborn specialist, HRD MoH and representation from National MCH Sub-Group and from the National Reproductive Health programme.

The National Reproductive Health programme could, with additional support, be the secretariat of this Task-Force. The Chair of this national High-Level Midwifery Task-Force should be a high-level MoH official at the level of Secretary of State, in order to be able to approve the plan but also to issue orders for implementation.

The Task-force could co-opt additional members from both within and outside the MoH on an Ad-hoc basis as required for specific issues.

Annex 9

Documents Used in the Midwifery Review

General Policy Documents

1. MoH. Safe Motherhood Assessment and Management Protocols in Referral Hospital. Ministry of Health, August 2000

2. MoH Health Sector Strategies Plan 2003 – 2007. Framework for Monitoring and Evaluation. Ministry of Health, August 2002

3. MoH. Second National Health Workforce Development Plan 2006 – 2015

V.I. Ministry of Health, February 2006

4. **MoH National Polices and Strategies for Human Resources for Health 2006-2010. Human Resources Development Department, April 2006**

5. MoH Guidelines for Development and Operational Districts. Department Planning and Health Information, December 1997

6. NIS First Revision Population Projections from Cambodia 1998 – 2020. National Institute for Statistics, Ministry of Planning, Centre for Population Studies, Royal University, Phnom Penh, June 2004

7. **MoH Medium Term Expenditure Framework, First edition. 2007- 2007, volume 2. Ministry of Health, August 2002**

8. MoH Framework for Annual Operational Plans, first edition, volume 4. Ministry of Health, August 2002

9. MoH Health Work force Development Plan 1996 – 2005. HRD Office. Ministry of Health, May 1997

10. MoH Action Plan 2004 – 07 for Implementation of the RGCs Rectangular Strategy in 3rd Legislature of National Assembly. Department of Planning and Health Information. Ministry of Health, October 2004

11. K.O.C. Royal Decree on Establishment of Midwifery Council of Cambodia, undated (unverified English Translation Aug 2006)

Midwifery Training Documents

12. MoH Post basic-nursing Midwifery Curriculum. Human Resources Development Department, Ministry of Health, January 2006 (Khmer only)

13. MoH Clinical Skills Logbook, Primary Nurse-Midwife, for North-western Region. Human Resources Development Department, Ministry of Health, November 2003

14. MoH Post basic-nursing Midwifery Curriculum. Department of Human Resources, Ministry of Health, November 2002

15. MoH Clinical Skills Logbook for Post basic-nursing Midwifery students. Human Resources Development Department, Ministry of Health, November 2002

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21. MoH/UNFPA/ Obstacles to deliveries by Trained Health Providers to Cambodian Rural Women. UNFPA, Phnom Penh, February 2006

22. Hussain J. Evaluation of the Ministry of Health's 2005 Recruitment Process and Related Factors Affecting the Number of Midwives Employed in Cambodia, Ministry of Health, Phnom Penh, 21 July 2005

23. Plummer S. Evaluation of Final Allocation of Midwives in the Ministry of Health Recruitment Process 2005, for WHO, Phnom Penh, March 2006

24. Center for Advanced Study; Baseline Survey on Client Satisfaction in Kampot and Kampong Thom Provincial Referral Hospitals. GTZ, Phnom Penh, May 2006

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Sherratt DR. "Why Women Need Midwives For Safe Motherhood". In Bere M, Sundari Ravindran T (Eds) *Safe Motherhood Initiatives: Critical Issues.* Reproductive Health Matters/Blackwell Science, London 1999