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PNG Maternal and Child Health Initiative

Phase II: Mid-term Summary Report

April 2015

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SUMMARY OF MATERNAL AND CHILD HEALTH INITIATIVE PHASE II

PNG Maternal and Child Health Initiative (MCHI) Phase II	
Commencement date	January 2014
Completion date	December 2015
Counterpart partner	PNG National Department of Health
Funding body	The Australian Government Department of Foreign Affairs and Trade (DFAT)
Logistical support	Health and HIV Implementation Services Provider (HHISP)
Sub-contractor	accessUTS: Contractual arm of UTS - Responsible for employment contracts, logistics, housing for CMFs and financial issues WHO Collaborating Centre for Nursing Midwifery and Health Development at the University of Technology Sydney (WHO CC UTS) – Responsible for recruitment and employment of the staff, Tri-annual Workshop for stakeholders, mentoring of MCHI team and other capacity building activities.
Monitoring and evaluation	WHO Collaborating Centre at UTS
Additional support	Faculty of Health UTS, WHO PNG

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EXECUTIVE SUMMARY

The objective of this mid-term report is to evaluate the contribution of Phase II of the Maternal Child Health Initiative (MCHI) towards improving midwifery in PNG to ultimately address the high rate of maternal mortality, from January to December 2014.

The MCHI is a multi-stakeholder initiative led by the PNG National Department of Health (NDoH) and funded by the Australian Department of Foreign Affairs and Trade. Phase II is coordinated by the WHO Collaborating Centre for Nursing, Midwifery and Health Development at UTS (WHO CC UTS) to provide a range of services including employment and monitoring and evaluation. Currently, 10 clinical midwifery facilitators (CMFs) have been recruited and placed in the four existing midwifery schools, and one new midwifery school due to commence in the second half of 2015, to support PNG clinical midwifery educators. Two obstetricians are placed in two regional hospitals.

The day-to-day coordination, logistical and security support for the Initiative is undertaken by HHISP. WHO CC UTS undertook the role of organisation of workshops, support for ongoing regulation and process and support to midwifery educators and course coordinators recruiting MCHI staff (CMFs and obstetricians), provided mentoring, support and capacity building to the MCHI team and their counterparts, and monitoring and evaluation of the Initiative.

Through three education and capacity building workshops for Phase II in 2014, the MCHI brings together different stakeholders working to build capacity and improve maternal health outcomes in PNG, specifically national midwifery educators, obstetricians, course coordinators, clinicians and CMFs. The workshops are planned, developed and coordinated through the WHO CC UTS with support from the NDOH and other counterparts.

Monitoring and Evaluation Outcomes

The PNG MCHI Phase II continues to build on the outcomes from the first phase:

- Effective implementation of strategy, processes and personnel for delivery of the Initiative;
- Establish working relationships with NDOH and other stakeholders to ensure MCHI;
- continues to increase opportunities for key stakeholders and participating PNG clinicians to collaborate to meet goals of the Initiative;
- increased learning opportunities for midwifery educators;
- improved midwifery educators teaching capacity;
- improved clinical education experience for students;
- increased quantity and quality of midwifery graduates;
- increased technical capacity of midwifery and obstetric clinicians in participating sites;
- improved quality of the midwifery curricula;
- progress towards regulation of midwifery;
- increased opportunities for key stakeholders and participating PNG clinicians to collaborate and strengthen skills;
- ongoing supportive environment for clinical midwifery facilitators and MCHI obstetricians.

In addition, Phase II incorporates a longitudinal research study of PNG midwifery graduates.

Lessons learned

The Monitoring and Evaluation (M&E) for Phase II of the MCHI to date shows that:

1. The MCHI in Phase II has contributed to improving midwifery in PNG. Improvements have been reported in PNG midwifery educator's teaching capacity and learning opportunities, and progress has been made towards midwifery curriculum review and regulation. It is important these gains are built upon, sustained and further expanded.
2. Increased number and quality of midwifery graduates.
3. Capacity building will need to continue to be strengthened through a longer-term engagement as this provides an opportunity for MCHI staff to build more effective relationships with and commitment from their PNG counterparts,
4. There is a need to strengthen the number of midwifery educators and the ongoing development opportunities for these educators.
5. Professional development support for clinicians in regional hospitals by the MCHI obstetricians has contributed to improvements in capacity building and health outcomes.
6. Capacity building of obstetricians in the regional areas is still lacking. A small number of obstetric trainees will complete their training in late 2014 but these have not had an opportunity to have mentoring from the MCHI obstetricians based in the regional hospitals.
7. The whole of the health workforce also needs strengthening as it is not sufficient to only concentrate on midwifery. In particular, nurses and community health workers (CHWs) require access to support, educational opportunities, curriculum review and faculty development.
8. One school (St Mary's School of Nursing) is still yet to commence their midwifery program. This means that they will not have 12 months support from CMFs as Phase II will end in December 2015.
9. Strategies, short- and medium-term, and action transition plans to deal with the cessation of Phase II of the MCHI are urgently needed.

More detailed and specific *Lessons Learned* are found throughout this report.

Maternal and child health workforce needs post-2015: Recommendations for the future

The MCHI will be complete at the end of 2015. Midwifery course coordinators, CMFs and one of the obstetricians met in November 2014 to commence planning the final year. Transition and Exit Action plans have been developed and submitted to the WHO CC UTS and are being implemented by each midwifery school and the two hospitals where the obstetricians are placed, with support from NDoH and the MCHI Steering Committee.

Continuing support and commitment from NDoH is critical as the Initiative moves toward the end of Phase II. It is essential that NDoH staff are involved with exit strategy planning and transition planning for the end of Phase II as this will be critical for the future of maternal and child health post 2015.

A number of issues have been identified in the first year of Phase II that require consideration before the end of the MCHI in December 2015:

- Midwifery educators need to be employed, supported and provided with ongoing development opportunities:
    - Adequate numbers of midwifery educators (on a staff to student ratio) need to be employed to support the learning of students in school and clinical areas and this needs to be considered and planned for by midwifery schools in the future.
    - Ongoing support is required for PNG midwifery educators to engage in professional development opportunities, faculty development activities or further formal studies to increase knowledge and further up skilling including the further higher education for staff.
    - The Building Faculty Capacity Program approved by DFAT will implemented in 2015 to ensure that further educator capacity is built for midwifery, nursing and CHWs.
    - Strategies to identify high-performing new graduates as potential midwifery educators need to be implemented in order to succession plan needs to occur. These graduates may be fast-tracked into the Building Faculty Capacity that will be supported by the WHO CC UTS in 2015.
- The delayed commencement of the midwifery program at the St Mary's School of Nursing necessitates continuing support by the CMFs deployed there to assist in the development and implementation process. Another 6-12 months of CMF support into 2016 is required.
- The positive capacity building effects that the obstetricians are having with registrars and other clinicians and healthcare workers with whom they work suggests that a one year contract extension is warranted in both sites.
    - There is a new PNG obstetrician about the finish his training and therefore could go to Kundiawa. It is important though that this person receives is supported in their first year of specialist practice. The further development of fistula repair services (which have been established in Kundiawa under the MCHI). Therefore, a further 12 months of the MCHI obstetrician in Kundiawa is required.
    - The ongoing funding of an obstetrician at St Mary's Hospital is uncertain. Another 12 months of the MCHI obstetrician in Vunapope is required especially to support the midwifery education program.
- The revised PNG Midwifery Curriculum Implementation Plan requires support and additional resources to ensure that the new curriculum can be approved and ready for commencement in 2016-2017.
    - The process engaged the schools, clinicians and key stakeholders. There is now an urgent need for the nursing and CHW curricula to be reviewed (both were last reviewed 10 years ago). Ideally, these curricula could be revised together to develop a stepping stone approach from CHW certificate, to diploma and degree nursing programs, with links to post registration programs that lead to bachelor qualifications. This would enable a better career pathway for practitioners working in maternal and child health (MCH).
- The new position of Clinical Midwifery Educator (CME) situated within Port Moresby General Hospital to specifically provide clinical education to midwives and nurses in the maternity unit may

provide a model for the provision of capacity building support for other hospitals in PNG in the longer term, particularly for preceptorship capacity building of clinical staff to support NDOH Human Resources Training unit, support to students in clinical practice and provision of clinical teaching support to the educators.

- Support needs to be provided to the PNG Midwifery Society to assist with capacity building as professional associations are a critical part of improving maternal and newborn health.
- While the longitudinal study will identify where the graduates from the two years in question are placed, it does not answer the question of the location on all midwives in PNG. To date, the overall number and location of midwives is unknown and needs to be identified as part of a national census as this will facilitate workforce planning for maternal and child health.

INTRODUCTION

The Maternal and Child Health Initiative (MCHI) is a multi-stakeholder initiative, led by the PNG National Department of Health (NDoH) and supported by the WHO Collaborating Centre for Nursing, Midwifery and Health Development at the University of Technology Sydney (WHO CC UTS), accessUTS (the contracting arm of UTS) and the Health and HIV Implementation Services Provider (HHISP).

The Australian Government through its Department of Foreign Affairs and Trade (DFAT) has funded the Initiative for the last three years. Phase I was funded through AusAID from January 2012 to December 2013, and Phase II from January 2014 to December 2015 by Australian Aid under the partnership framework for improving maternal health care in Papua New Guinea (PNG): capacity building in midwifery education and practice.

Phase II of the Initiative sees the continuation of work from Phase I - incorporating lessons learned through monitoring and evaluation, while strengthening successful strategies already in place.

The main aim of the MCHI is to contribute to a decrease in maternal mortality rate in PNG in a sustainable manner through improved quality of essential maternal and newborn health care. Specific objectives of the Initiative are:

- To improve the standard of midwifery clinical teaching and practice in the four teaching sites;
- To improve the quality of obstetrical care in two regions through the provision of clinical mentoring, supervision and teaching.

The Initiative aims to contribute to the following long-term impacts:

- Decreased maternal and child mortality
- Improved maternal and child health indicators
- Increased capacity of quality and quantity (in line with other DFAT programs such as PNG scholarships) of midwives in PNG
- Increased quality of obstetric care in two districts
- Increased key stakeholder buy-in of maternal and child health issues in PNG.

The Monitoring and Evaluation Framework

The Monitoring and Evaluation (M&E) framework for the MCHI utilises an evidence-based approach incorporating multi-method data collection and analysis to monitor outcomes, evaluate program impacts and guide change or modifications where necessary to continue to steer the MCHI towards its objectives. The M&E processes aim to influence the activities of the MCHI to remain focused on the short to medium outcomes, and therefore contribute to the long term outcomes and overall goal of reducing neonatal and maternal deaths. Stakeholder involvement and engagement in both the design and implementation of the Framework has been consistent and imperative. The MCHI M&E Program Logic Model is found in Appendix 1. The WHO CC UTS is responsible for the M&E component of the MCHI.

This document summarises the findings from the monitoring of the outputs, outcomes and impact of the MCHI during the first year of Phase II (2014). It is recognised that the aims and objectives of the MCHI and its M&E framework can only be achieved in close collaboration with relevant stakeholders.

With 2015 being the second year of Phase II with uncertainty of future funding and continuation of the MCHI, this report also aims to make suggestions for the future to account for the cessation of the Initiative post December 2015.

PHASE II MONITORING AND EVALUATION

The monitoring and evaluation (M&E) component of the MCHI in Phase II has been undertaken by WHO CC UTS with support from NDoH. The philosophy guiding the monitoring and evaluation of the MCHI has been important in providing the various perspectives of multiple stakeholders. Five underlying principles inform and guide the M&E process - (1) multiple voice and sources of information, (2) collaboration, (3) ownership, (4) flexibility and (5) rigor.

An M&E Plan was developed which detailed the questions and the data sources (Appendix 2). Data was collected through a variety of methods - interviews, surveys, focus group discussions, evaluation activities and regular monitoring reports and minutes of Steering Committee meetings (Table 1 - Data collected over 2014 (12 months) for Monitoring and Evaluation purposes).

Table 1 - Data collected over 2014 (12 months) for Monitoring and Evaluation purposes

Data Sources	Number	Participants	Purpose
Interviews	23	Stakeholders included PNG Educators, Obstetricians, CMFs, Clinicians, Students, WHO and NDoH staff	To explore perceptions of the strengths and weaknesses of the MCHI from different perspectives, the lessons learned and the future possibilities to improve midwifery education and maternal health.
Focus groups	6 groups with 39 participants in total	Course coordinators, CMFs and MCHI obstetricians, Midwifery students	To explore perceptions of the strengths and weaknesses of the MCHI from different perspectives, the lessons learned and the future possibilities to improve midwifery education and maternal health (the purpose is the same as the interviews – the means of collection differed).
Monitoring Reports	18	Collected from each midwifery school (course coordinators and CMF complete these) and MCHI obstetrician every 4 months.	To collect data for ongoing monitoring including number of students, attrition, teaching and learning plans, new and ongoing issues. These are self-reports.

Data Sources	Number	Participants	Purpose
Rural Placement Reports	4	Collected from each midwifery school (CMFs completed)	To collect data on the rural placement locations, student numbers, facilities, resources, activities, challenges and outcomes.
Surveys	4	Course coordinators	To collect data from different stakeholders using a self-administered format. Questions included the strengths and weaknesses of the MCHI, the contribution of the NDoH, Australian Aid (DFAT) and WHO CC UTS
	12	CMF and MCHI obstetricians	
	30	Clinicians and other key stakeholders	
	76	Current midwifery students	To collect data on the experience of students and the skills and confidence gained from their midwifery program

Three M&E in-country field trips were undertaken to PNG in 2014. Field trips helped to maintain existing relationships with stakeholders, provide an opportunity for data collection and a forum for two-way exchange of information regarding issues associated with the ongoing capacity building in midwifery education and the progress of MCHI. The field trips comprised visits to midwifery schools, clinical site visits, which included Port Moresby General Hospital (PMGH), Goroka Base Hospital, Modilon Hospital (Madang), and with NDoH and other stakeholders.

The field trips were purposefully organised around the MCHI workshops and provided an opportunity to collect a large amount of data by way of interviewing and conducting focus group discussions with the participants. The evaluations and feedback from these workshops were also collected and analysed as an important part of the data surrounding the M&E.

Each data source was analysed separately and then broad themes were drawn across all data. The section below presents a summary of the findings based on the outcomes. At the end of each section a brief paragraph on *Lessons Learned* is presented.

Outcome 1: Effective implementation of strategy, processes and personnel for delivery of the Initiative.

Twelve (12) MCHI staff are currently deployed in various locations in PNG for Phase II of the MCHI and program implementation has progressed in line with planned timeframes. Recruitment and deployment of staff has been completed, with the 10th CMF deployed to St Mary's School of Nursing (SMSON) in August. An additional Clinical Midwifery Educator (CME) for PMGH has joined the team in January 2015. This is 100% of the MCHI Team and an increase of two team members since Phase I.

The CMFs are employed by the MCHI (accessUTS) and supported by the WHO CC UTS. They work alongside course coordinators, educators and clinicians across the midwifery school sites in PNG to strengthen the midwifery workforce and establish a better clinical experience for students. The two obstetricians have been providing clinical care and education in PNG's high-need areas in the remote Highlands, however the obstetrician based at Mendi Hospital was transferred to St Marys Hospital in Vunapope, East New Britain and commenced work there in December 2014.

Table 2: MCHI-funded staff by location and discipline – 2014

Location	Discipline and number
University of PNG (UPNG) and PMGH	2 Clinical Midwifery Facilitators
Pacific Adventist University (PAU) and PMGH	2 Clinical Midwifery Facilitators
University of Goroka (UoG) and Goroka Hospital	2 Clinical Midwifery Facilitators
Lutheran School of Nursing (LSON) and Modillon Hospital	2 Clinical Midwifery Facilitators
St Mary's School of Nursing (SMSON) and St Mary's Hospital	2 Clinical Midwifery Facilitators
Kundiawa Hospital	1 obstetrician
Mendi Hospital (Jan – Nov 2014)	1 obstetrician
St Marys Hospital (from Dec 2014)	1 obstetrician

Team Induction – Orientation

Ten staff participated in a two week induction program held in January 2014 at the WHO CC UTS, and a subsequent in-country orientation program held in various sites in PNG from two weeks to one month. Two additional CMFs joined the larger team in April (based in Goroka) and in September (based in Vunapope) did not receive in the same two week induction program but still had the in-country orientation program.

Most MCHI staff felt that the induction prior to going in-country was particularly useful as it provided a chance for them to see the larger context of the MCHI in PNG, identify key stakeholders, receive information on medical aid and assistance, and for the team to become acquainted.

Suggested improvements for the induction/orientation program for staff included:

- More information on day to day requirements when working in their roles in PNG;
- More information on midwifery curriculum – subject units, outlines, assessment;
- More PNG-specific cultural information such as retribution system, gender roles.

It was generally agreed that an induction - orientation for all team members at the beginning of their contracted work would be optimal.

Lessons learned

- Induction/orientation is critical for effective mobilisation in this context. Induction and orientation needs to take place as early as possible from commencement of contracted work and should include out-of and in-country programs.

- Induction/orientation programs should incorporate information such as daily working requirements, country-specific cultural information and relevant technical documentation.

Outcome 2: Establish working relationships with NDoH and other stakeholders

MCHI Steering Committee

The MCHI Steering Committee was established in Phase I to enable effective planning, implementation, communication and information sharing through capacity building in midwifery education and practice. The committee met six times in 2014 and has 17 members.

Table 3: MCHI Steering Committee meetings 2014

MCHI Steering Committee	Percentage of members attending
February	82%
April	77%
July	47%
October	59%
November	47%

The MCHI Steering Committee appears to be functioning well and meeting regularly with meeting attendance improved from Phase I. The meetings provide an opportunity for working relationships to develop and strengthen between MCHI staff, PNG NDOH, educators, clinicians and other counterpart stakeholders.

Examples of collaboration facilitated by the Steering Committee in 2014 include the review of the national Midwifery Curriculum, oversight of ordering and delivery of midwifery educational resources including midwifery kits and textbooks, guidance for workshop content and delivery, instigation of the Building Faculty Capacity Program proposal, instigation of the new CME position to work with and support clinicians at PMGH and the PNG Midwifery Society.

Other opportunities for collaboration

All midwifery schools and the MCHI obstetricians reported to have held meetings and/or inservice sessions with PNG clinicians from associated teaching hospitals, in addition to the regular informal mentoring that takes place in the clinical setting. Course Coordinators and hospital clinicians at two sites (Madang and Goroka) reported that regular meetings and inservice sessions held by midwifery school staff and CMFs has further strengthened relationships and dialogue between schools and hospital. Topics covered at these meetings included student performance, student assessment, and a variety of clinical practice issues.

MCHI staff and PNG educators have worked to develop collaborative relationships with various stakeholder groups to achieve Initiative goals. These collaborations with organisations which include Reproductive Health Training Unit (RHTU - a public-private partnership between the NDoH, Oilsearch

Health Foundation with funding support from the Australian Government), Marie Stopes, Susu Mamas and MSF, have led to learning opportunities for clinicians, educators and midwifery students.

Each of the MCHI workshops in Phase II has involved representatives from NDoH as participants and/or presenters, as well as an increasing number of PNG clinicians that has helped to build relationships, and provided opportunities for sharing of experiences and information, and collaboration.

Challenges

A lack of internet access in the NDoH, PNG Nursing Council and in many of the clinical sites continues to hamper effective communication.

Some CMFs and obstetricians suggested that working relationships with some areas of PNG NDoH and the Provincial Health Districts (PHDs) could be improved.

Lessons learned

- Support to attend the regular Steering Committee meetings has been effective and important in strengthening working relationships with NDoH and other stakeholders.
- The assistance of HHISP with provision of meeting venue, catering, and transport for participants to and from the meeting has helped to ensure good meeting attendance and representation by all stakeholder groups.
- The MCHI workshops and inservices are beneficial for working relationships and for potential collaborations between NDoH, other stakeholders and the MCHI team.

Outcome 3: Increased learning opportunities for midwifery educators

It is evident that the MCHI has continued to provide the PNG midwifery educators with an increasing number of learning opportunities that have enhanced their ability to deliver improved levels of midwifery education. These include:

- Attendance and active involvement in the MCHI workshops (Workshop One – 11 educators; Workshop Two – 9 educators; Workshop Three – 15 educators);
- Opportunities to collaborate with other key stakeholders during professional development activities and in the clinical setting has facilitated a broader understanding of maternal health care in PNG;
- Working closely with the CMFs which has enabled the sharing of new teaching and learning strategies and activities, and effective communication strategies;
- Attendance and involvement of some of the PNG educators at international midwifery forums and/or conferences (Australian College of Midwives Conference, Queensland 2014; Women Deliver Global Conference 2013; International Council of Midwives 30th Triennial Conference 2014) which has provided professional development opportunities for these educators to share with their colleagues.

Many learning opportunities for PNG educators were reported by course coordinators and some other stakeholders to have a positive impact on teaching capacity. One example given was educators sharing teaching strategies that they are learning and implementing, and holding inservice sessions for clinical staff.

MCHI Workshops

Three capacity building workshops have been completed for 2014 – one in Port Moresby (April), one in Goroka (July) and one in Kokopo (November) and all were reported to be beneficial by all participants including PNG midwifery educators. The workshops provided an opportunity to bring together relevant stakeholders, including midwifery educators, clinicians working in rural areas, clinical colleagues, CMFs and obstetricians and key MCHI Stakeholders from WHO PNG and NDoH. PNG Course coordinators ensure all of their staff are able to attend when possible.

Table 4: MCHI workshops in 2014 – venue, numbers attending and focus area/topics

Venue	Number attending and discipline	Focus area or topics
Port Moresby (total 29)	11 midwifery educators; 7 midwife clinicians; 4 doctors; 7 CMFs from 5 provinces.	Family planning (included training for 10 clinicians in insertion of implants)
Goroka (total 29)	9 midwifery educators; 10 midwife clinicians; 3 doctors; 7 CMFs from 6 provinces.	Clinical teaching and rural placement
Kokopo (total 36)	15 midwifery educators; 8 midwife clinicians; 3 doctors; 10 CMFs from 6 provinces	Newborn care

Evaluations from all three workshops were extremely positive with 95% or more of participants surveyed agreeing that workshop planning was good, the topics addressed the needs of educators and clinicians, teaching methods were appropriate, and the workshop provided an opportunity to share experiences, gain new knowledge and update skills. The teaching and midwifery resources received at the workshops were also reported as extremely useful and informative.

Working with MCHI staff

It is evident that PNG midwifery educators have benefited from the mentoring and support of the CMFs both in the classroom and clinical setting. The learning opportunities that result were frequently noted as

be helpful by the PNG educators. Working with CMFs was reported by most educators as a positive learning experience. All educators surveyed felt that they had appropriate transfer of knowledge and skills, received sufficient teaching and learning support and were able to share views and ideas with, and ask for support from the CMFs. This concurred with data from interviews and focus groups with educators and course coordinators.

In most midwifery schools, a CMF is attached to a PNG midwifery educator for classroom teaching, and clinical supervision. Course coordinators explained they are keen to see the CMFs and educators working together as they realise the benefits it is having for overall staff development.

In all locations, CMFs, sometimes with educators, are conducting inservice training for hospital staff. This has encouraged educators to also assist with clinical teaching for their students and other hospital clinicians in the clinical setting.

Midwifery students noted that the CMFs have helped to support learning particularly in the classroom which benefits educators and students through formal and informal learning opportunities and mentoring.

Other opportunities

Opportunities to attend national meetings and international conferences (for example Australian College of Midwives Conference, Queensland 2014; International Council of Midwives 30th Triennial Conference 2014) for some of the educators have proved beneficial in the continuing professional development for them and their colleagues through the sharing of information and experiences. There have also been opportunities for some PNG educators to study to obtain education qualifications relating to their work.

Challenges

The limited number of midwifery educator staff and their capacity to provide supervision in clinical areas has at times affected the ability of educators to utilise learning opportunities. Some educators reported that they have to work additional hours to take advantage of these learning opportunities due to their heavy workload.

Lack of preceptorship training for clinical staff also presents challenges. Some clinicians and educators expressed resistance to changes in practice due to lack of knowledge in the clinical care, lack of updates and education opportunities for midwives and doctors in clinical areas and lack of ongoing professional development opportunities for all staff.

Lessons learned

- Midwifery educators continue to be well-supported by the CMFs in Phase II to further develop their skills and knowledge in teaching and learning, in both the classroom and clinical areas.
- Mentoring and support provided by the CMFs has contributed significantly to the learning and learning opportunities for PNG educators –time is needed for relationships to be established, developed and strengthened.
- The MCHI workshops have been invaluable learning opportunities for PNG educators and clinicians as well, and feedback from stakeholders, participants and educators involved is that these continue and include as many educators and clinicians as possible in the future.
- PNG midwifery educators are being supported to undertake professional development opportunities or further formal studies to increase knowledge, skills and teaching capacity.

Outcome 4: Increased midwifery educators teaching capacity

Phase II of the Initiative has worked to continue to increase the teaching capacity of midwifery educators. This is seen through evidence including:

- reported increases by senior educators and CMFs in skill and confidence levels of the PNG educators in relation to teaching and learning in the classroom and clinical setting;
- use of new teaching, learning and assessment strategies;
- support and mentorship provided by CMFs to their PNG educational counterparts that is reported to improve the delivery of midwifery education in the teaching sites;
- self-reported increases in their level of teaching capacity by educators facilitated by opportunities and resources provided by the MCHI.

Working with MCHI Staff

Educators reported positive interactions and relationships with CMFs generally, and appreciated their assistance with aspects of their work that has improved their teaching capacity. Examples given by educators where they had directly benefited through working with the CMFs included:

- lesson planning and preparation;
- provision of information and research articles from the internet, and other books and resources to benefit their teaching practices;
- identification of evidence for the need to change some practices in the clinical setting.

New methods for teaching and learning and assessment introduced by educators with support from CMFs for students this year included new games and activities, new video material, use of scenarios and role plays, videoing of students and playback of role play activities for reflection and critique, greater use of models and simulations, moderation of exams and assessments.

The knowledge, attitude and skills of the PNG midwifery educators towards teaching and assisting students was rated as very good or higher by the majority of midwifery students (80.3%).

The majority of midwifery students surveyed reported that the CMFs had been very helpful (85%) in supporting learning in the classroom. This support was seen to benefit both educators and students, through formal and informal learning opportunities and mentoring. Through supporting learning in the classroom the teaching capacity of the educators is seen to be improving.

The resources provided through the MCHI were reported by educators to have helped their ability to do their work thereby increasing teaching capacity. Before the MCHI educators reported having very few resources which they found stressful when trying to find information and evidence to support their teaching and also to justify changes to resource expenditure.

Resources

In 2014, the 86 midwifery students received midwifery kits and a set of textbooks for their course to ensure quality education. These resources were supplied by DFAT and WHO PNG, with the content of

the kits and books identified by the local educators, and CMFs. Educators reported that these resources have assisted greatly in their work.

Challenges

It is apparent that the MCHI continues to improve the teaching capacity of PNG educators however some constraints still exist. Examples reported include:

- limited appropriate classroom facilities and space which means limited number of students can be accommodated each year (Madang and UPNG);
- less than optimal staff-student ratios due to lack of PNG educator staff which means limited clinical supervision in practice;
- limited accommodation for staff and students again limiting the numbers of students;
- challenging working relationships with CMFs and educators can impact negatively on an educator's performance and be a barrier to capacity building. Inappropriate delivery of feedback and differences on decision-making were given as examples of such relationships;
- limited time available for PNG midwifery to take advantage of learning opportunities – some educators reported working extra hours in order to improve their teaching capacity.

Lessons learned

- Support for the midwifery schools in terms of resources, professional development opportunities for its staff, in particular the further higher education for staff members, has been valuable and enabled improvements in midwifery education delivery.
- Ongoing discussions between the schools, NDoH and hospitals need to ensure that adequate numbers of midwifery educators (on a staff to student ratio) are employed to support the learning of students, in the classroom and the clinical areas.
- Identifying high-performing graduates as potential midwifery educators is working on a small scale as a strategy for succession planning.
- Timely issuing of resources such as textbooks and midwifery kits early in the teaching program is preferred so they can be utilised throughout the midwifery education program.

Outcome 5: Improved clinical education experience for students

Most midwifery students surveyed felt positively about their clinical education experience and the knowledge, skills and attitudes of their PNG educators towards teaching and supporting students in the classroom and clinical setting.

Clinical experience was seen by most students as beneficial although often the level of supervision was limited. The majority of students surveyed (86%) indicated that the supervision they received had supported their learning but many did not have clinical supervision at all times. The constant supervision by educators reportedly gives students confidence to put into practice what they have been taught. Clinicians and educators agreed on the importance of students applying what they have learning in the classroom in the clinical setting prior to graduation.

Some schools schedule clinical learning in a block so all staff are present when the students are in the clinical setting. Some educators expressed the hope some graduates will be employed at the teaching hospital so they can be confident that they will assist future students and support them.

Most midwifery students (85%) rated the quality of their learning in the clinical area as being good or very good. Feedback from students surveyed on a range of clinical skills was generally very positive, with most students feeling they could perform the majority of the skills learned independently. Educators also reported that students were taking a more woman-centred caring approach to women during labour.

The majority of midwifery students surveyed reported that the CMFs had been very helpful (69%) in supporting learning in the clinical area also which also impacts positively on the clinical education experience for students, and potentially the teaching capacity of educators and clinicians.

Students reported that generally supervisors were there for clinical shifts undertaken by students in the hospital. Most clinicians interviewed reported that students were generally supervised by CMFs and/or their educators whilst in the clinical setting which was seen as positive, however some concerns were expressed that educators may be placing too much reliance on CMFs providing student supervision at times.

Generally in all clinical settings, clinicians and educators appeared to be working together to supervise and support the student clinical learning experience. In some instances educators are helping clinicians to supervise and support students directly. Clinicians also reported that regular meetings are held between PNG educators and clinicians to discuss progress and performance of students in the clinical setting.

Length of clinical education

Most clinicians commented that student midwives would benefit from longer exposure in the labour wards and the chance to work independently so they feel confident when they graduate. Concerns were expressed about the length of clinical experience and midwifery course in general and that an extra six months clinical would be beneficial.

Students generally commented in focus groups and when surveyed that the overall midwifery course length was too short, including the clinical component.

Rural Placements

As a requirement of the PNG National Midwifery Curriculum Framework, educators have reported that these rural placement clinical experiences are valuable as they create excellent opportunities for student learning, and highlight the importance of competency in rural settings.

All schools organised and conducted rural placements with midwifery students in 2014 with placements taking place over one to two weeks in a variety of locations in the following provinces: Eastern Highlands, East Sepik, Madang, Milne Bay, Oro (Northern), Simbu (Chimbu).

Students were accompanied on placement by CMFs and/or midwifery educators. Generally rural placements were reported as successful and students met their aims and objectives. There were a number of logistical and educational challenges and planning is underway to improve the rural placement experience for students in 2015.

Rural placements were reported as positive learning experiences by students and educators, although the sites need to be assessed to ensure that provide enough clinical experiences with appropriate supervision.

Challenges

Students reported that some clinicians in the hospitals were not very helpful at times, and work practices that differed from those students had been taught could put students in a difficult position. In particular, the students were taught contemporary evidence-based practice but this was at times very different to what is practised in the clinical workplace. Difficulties were reported to arise at times in all clinical teaching settings between educators and clinicians, usually focussed on differences in clinical practice between clinicians and evidence-based practice by educators (skin to skin, episiotomy, upright position). This can cause confusion for students in the clinical setting and detract from their learning.

Almost three-quarters (73%) of students surveyed reported that their learning experience in the clinical area could have been improved with more educators and teachers available. The gap between theory and practice was also noted by 22% of students surveyed.

The main challenges reported by the schools whilst undertaking rural placement in priority order were: lack of intermittent electricity supply; lack of running water in the health centre and the student/staff accommodation; road transport and accessibility; adequate supervision of students when educators not present; lack of equipment and medication; lack of knowledge of health centre staff; funding and organisation by Australia Awards; access to appropriate accommodation, food and sanitation; lack of family planning availability and acceptability (in sub-health centres administered by Catholic Health Services).

Lessons learned

- CMFs are providing excellent clinical support and supervision for the PNG educators and clinicians, and this is seen to be having a positive effect on the clinical learning experience for midwifery students.
- CMFs continue to teach and role model ‘respectful care’ which is being adopted by students, graduates and in some cases, other clinicians.
- NDoH and the provincial health authorities are assisting midwifery schools with procuring appropriate sites and for assistance with logistics for rural placement.
- Formal and informal meetings held on a semi-regular basis between midwifery school educators and the leaders and clinicians in the clinical facilities are strengthening relationships whilst ensuring that midwifery students have adequate clinical supervision in the clinical setting.

- The inclusion of clinicians in inservice training and workshops is contributing to their professional development and enabling them to better supervise and assess students in the clinical setting.
- Supervision and support of midwifery students in the clinical areas is often less than optimal. As the number of students increases, the number of educators available to provide clinical support has not increased accordingly in many settings.

Outcome 6: Increased quality and quantity of midwifery graduates

Quantity of midwifery graduates

The number of midwifery students in the four schools has increased since the start of the MCHI, with a small decline in numbers from 2013 to 2014, reportedly associated with the decrease in funding available through Australia Awards. A fifth midwifery school at SMSON in Vunapope will further boost the increase the numbers in 2015. The majority of students are women as is usual in midwifery education globally.

Midwifery student enrolments in 2015 are planned to increase for each midwifery school with the exception of LSON which is limited to a maximum of 22 student enrolments due to classroom size. The planned increase in student numbers can be attributed to continuing scholarship funding by Australia Awards, improved facilities (UOG, PAU), improved teaching capacity of educators and identified need for improved maternal and child healthcare by PNG nurses, and health workers.

St Mary's School of Nursing will commence a 12 month midwifery program in June 2015.

Table 5: Graduates and students by 5 midwifery schools

	UPNG	UOG	PAU	LSON*	SMSoN	TOTAL
2011	16	7	13	13	NA	49
2012	21	18	20	14	NA	76
2013	22	32	27	25	NA	110
2014	17	30	18	22	NA	87
2015 planned (actual at March 2015)	40 (35)	50 (31)	36 (21)	22 (22)	30 (20-25 to start in July)	178 (TBC)

*LSON – can only take 22 due to the small size of the classroom. This is a long term constraint raised as a problem by the MCHI Steering Committee.

The attrition rate for 2014 was around 1%, which is very low and a slight decrease from Phase I.

Quality of midwifery graduates

Improved academic and clinical skills and competencies was reported by both by educators and self-reported by students. At the completion of 2014, the feedback from both midwifery educators and CMFs was very encouraging regarding the quality of midwifery graduates throughout the MCHI, in particular relating to the improved ability of students' capacity to think critically, problem solve and understand the theoretical underpinnings of good midwifery care.

Some educators had heard positive comments about their graduates in general, including good feedback about the clinical skills of the midwifery graduates, their theoretical knowledge and practice in the clinical environment.

Most educators reported that they could observe definite improvements in the quality of the midwifery graduates since the commencement of the MCHI. They noted some variation in quality of graduates from year to year but generally the quality is now seen to be good to very good.

It was generally reported that midwifery graduates find employment easily and are very employable, which may also indicate favourable quality of graduates. Preliminary evidence from the longitudinal study shows that all 180 graduates from Phase I of the MCHI are working as midwives when surveyed up to two years later. Graduates performing well in the clinical area were often identified as potential educators or targeted for professional development opportunities by educators and clinicians.

Clinicians interviewed felt that the MCHI has done well to increase the number of midwifery graduates that are working in rural health facilities however there were some concerns. Generally clinicians were happy with performance of new midwifery graduates however the lack of clinical experience and limited time students spend in the clinical area was expressed. One clinician questioned some of the referrals received from newly practising midwifery graduates, indicating that they may not be clinically experienced enough due to a lack of clinical supervision or limited time in practice.

Follow-up with graduates working in the community was strongly suggested as this could address the issue of unnecessary referrals to hospitals.

Most students surveyed reported that the facilities at their place of study (library, computers, accommodation and classrooms) met their needs (63%) and they had very positive responses regarding resources such as textbooks and midwifery kits which contributed to their midwifery education.

Many students reported that their confidence levels in their ability to perform clinical skills had improved with more time in the clinical area. Students often supported a ‘respectful care’ approach to midwifery as modelled by the CMFs.

All of students surveyed were recipients of an Australian government scholarship to study midwifery and 68% of these found the financial support from Australian Awards adequate.

Challenges

Adequate clinical supervision is necessary for quality graduates. Limited clinical education was reported to have a negative effect on quality of students although this has been improved with CMF support in clinical supervision.

Many students surveyed (58%) reported that some textbooks were outdated or in limited supply. Timely delivery of midwifery kits and other resources could also be improved.

Accommodation issues and lack of availability of computers and reliable internet access were reported by students surveyed to be ongoing issues that need addressing.

Lack of academic performance and motivation of some students was noted by some educators who suggested stricter selection criteria for students applying to study midwifery is required.

Many stakeholders, clinicians and students felt that the current length of program is too short and should be increased to at least 18 months particularly to enhance the clinical experience for students.

Lessons learned

- The increase in number of midwifery graduates and reported improvement in the quality of midwifery graduates suggested that the investment in midwifery education through the MCHI has been worthwhile.
- Improvements in infrastructure including renovated classrooms, computer and clinical labs, new student and educator accommodation, have contributed to the increased number and improved quality of midwifery graduates.
- Preliminary results from the longitudinal study tracking the employment, retention and experiences of graduates from the 2012 and 2013 midwifery programs may be of use to improve selection criteria, course content, areas of improvement for learning in the classroom and clinical settings.

Outcome 7: Increased technical capacity of clinicians in participating sites

Increased training opportunities for clinicians and other health care professionals by CMFs, PNG educators, obstetricians were widely reported. This has occurred through informal mentoring support on a daily basis, more formal inservice training sessions, and participation at MCHI workshops. The provision of these professional development training opportunities has strengthened relationships between schools, and hospitals and provincial health centres.

Learning opportunities with obstetricians

The two MCHI Obstetricians, based in the rural areas of Kundiawa (PNG Highlands) and Mendi (until November 2014) and Vunapope (East New Britain) from December 2014, have continued to build on their achievements in Phase I. They consistently report on improvements in many clinical and educational activities and outcomes, including a decrease in neonatal and maternal mortality, increased referrals to hospital and in-service education opportunities. The most significant input has been the sustained level of formal and informal clinical teaching and mentoring to their hospital staff, and also for staff in many of the outlying provincial health centres.

The MCHI obstetricians have either been involved in or instigated many initiatives including:

- Training sessions in the proper use of the partogram for fetal monitoring during labour;
- Introduction of a chemotherapy unit for cancer treatment in one of the hospitals;
- Establishment of a family planning service and regular inservice training for staff;
- Lobbying for funding in renovation activities;
- More independently practising registrars due to being up skilled.

The obstetricians have been actively involved with the MCHI workshops, leading clinical sessions and providing support and advice to other participants as required.

Both of the MCHI obstetricians expressed some satisfaction in the decreased maternal and neonatal morbidity rates in their hospitals and recognised the successes in other areas such as trainings and up skilling of their colleagues.

Learning opportunities with educators and CMFs

All schools reported that inservices are being conducted by their educators and/or CMFs with clinicians with whom they work. Topics covered in the inservice training for hospital clinicians and other health care workers included neonatal resuscitation, skin to skin (Kangaroo Mother Care) and eMOC training with RHTU. Subsequent changes in practice were also reported.

Most clinicians felt that overall there is good open dialogue between clinicians and the CMFs from the Initiative and they have a good or improved working relationship, helping with teaching and changing some ideas and practices. Obvious skills transfer from CMFs to clinicians working in the hospital was reported by clinicians and senior hospital staff, sometimes updating working practices. Through informal training and inservices, the CMFs help to consolidate the knowledge and practices of the clinicians involved.

Senior hospital staff were generally supportive of the involvement of midwives and obstetricians in the MCHI workshops and any other training available. Many clinicians felt that the MCHI has helped them in the wards and they are encouraged to practise with the obstetricians, CMFs and students and have active involvement with student evaluation.

Building effective professional relationships

MCHI CMFs and obstetricians agreed that building relationships with stakeholders and members of school and hospital staff was key to improving outcomes in health, in addition to training and up skilling.

Most schools reported that they are trying to build better relationships with the hospital and clinical staff. One school explained that is has started holding meetings/ discussion sessions with clinicians to discuss clinical teaching issues with the aim to work through a list of suggested topics, and they are hoping to address issues such as episiotomy. Eventually it is hoped this will develop into an inservice session with educators and clinicians presenting, clinicians presenting, and sharing together to have a positive impact on the capacity of clinicians involved.

Educators from schools continue to request that the number of clinicians attending the MCHI workshops be increased.

Challenges

The direct engagement of CMFs in the clinical area has been useful but sometimes differences in clinical practices are evident as they try to introduce practices not currently accepted or being practiced in PNG. Comments were made by some clinicians that these practices need to slowly change and CMFs need to

understand this. Despite this, it is difficult for CMFs to support practices that are clearly not based on evidence and may well be contributing to poor outcomes for mothers and babies.

The reported general lack of awareness about "good quality health care" is being addressed through MCHI informal and formal training with clinicians and hospital staff and improvements were noted in the level of hygiene and infection control awareness.

Lessons learned

- The MCHI obstetricians have worked hard to have a positive impact on clinical and educational activities for clinicians and outcomes, including a decrease in neonatal and maternal mortality, increased referrals to hospital and in-service education opportunities.
- Support from the MCHI has enabled educators and CMFs to have a more visible presence in clinical areas to support the clinical learning of hospital clinicians.
- Role modelling of clinical practices and attitudes (such as 'respectful care') by the CMFs has had a positive effect on work practices of clinicians and PNG educators.

Outcome 8: Improved quality of the midwifery curricula

Improvements in quality of the midwifery curricula in PNG in-line with national needs, global midwifery standards, along with advances in the process of curricula approval and processing and approvals with the PNG Nursing Council were evident during Phase II of the MCHI.

Much work has been undertaken by the five schools, with assistance from the CMFs, who now all have had their curriculum accredited by the PNG Nursing Council. The appointment of a Registrar for the Nursing Council has streamlined this process and facilitated communication between the universities and the NDoH. The CMFs have made substantial contributions in working alongside their PNG midwifery counterparts to support this activity.

The current midwifery curriculum was developed after a review of midwifery education undertaken in 2006. From this review, a draft curriculum was developed in 2007 and the Draft National Framework for Midwifery Education was finally developed in late 2008. Given this was now more than five years ago, and the evaluation of the MCHI consistently identified problems with the curriculum and length of the program, the MCHI Steering Committee initiated a review in 2014 as part of Phase II of the MCHI.

The review of the PNG Midwifery Curriculum (known as the National Framework for Midwifery Education) was funded by DFAT and supported by the MCHI through HHISP during latter half of 2014. The aim of the review was to develop a framework to ensure that midwifery educators in PNG are delivering programs that addresses the needs of PNG, to address the key educational and clinical practice requirements and the minimum length of time required to prepare a midwife and further develop and clarify the core competencies required for midwifery practice in PNG, especially considering the high proportion of rural practice required.

An Advisory Group was established and three face to face meetings held (August, September and December 2014) and a national workshop (40 participants) was held in October 2014. Further

consultation on the revised curriculum took place at the MCHI workshops in August and November. The final report and revised curriculum was delivered in December as well as an Implementation Plan for this work.

Feedback from midwifery students, educators and clinicians reiterated that the current length of the midwifery program (12-months) was too short. Ultimately, the review identified that an 18-month program was ideal. It was hoped that a longer program will allow for more time for students to practise and develop the wide range of clinical skills, academic writing, research and computer skills and allow subjects such as family planning and public health to be taught in greater depth. It is hoped that this will improve the confidence of graduates returning to work especially in the PNG context where many graduates will work in isolated settings.

Challenges

Ensuring that the revised curriculum follows the necessary approval processes in a timely manner may be difficult. Approvals are needed from NDoH, Office of Higher Education, PNG Nursing Council and the Secretary of Health.

The Implementation Plan needs resourcing to ensure that it can support this process. Planning for a transition to an 18 month curriculum also needs to commence once approval has been finalised.

Lessons learned

- The model for review of the PNG National Framework for Midwifery Education has been effective and efficient to date.
- The continuing work by the Schools of Midwifery with the NDoH and the Nursing Council to develop an implementation plan for the revised National Framework for Midwifery Education is critical for midwifery education in PNG.
- Support of the PNG Nursing Council by the WHO CC UTS and the CMFs has been effective and assisted with capacity building in this area.

Outcome 9: Progress towards regulation of midwives

Progress toward the regulation of midwives is ongoing with significant achievements in this area in 2014. All five original midwifery curricula have now been approved by the PNG Nursing Council. The CMFs assisted with this process by supporting their national colleagues in development and refining the curricula documents, and supporting them to present at the Council meeting. Five Bachelor of Midwifery programs are currently accredited with the PNG Nursing Council. This has enabled all the outstanding midwifery graduates to be registered.

Midwifery graduates from PAU, LSON, UoG have submitted documents to the PNG Nursing Council for registration. UPNG has also submitted the information for 65 graduates which were approved in September 2014. UOG still has registration of midwifery graduates from 2010 and 2011 outstanding as graduation documentation is not available from the university. A process to register these graduates is being worked on with the PNG Nursing Council. Following this back log in the registration process, 315

midwife graduates were registered with the PNG Nursing Council in 2014. This has doubled the number of registered midwives in PNG. A review of the Health Care Practitioners Registration System is continuing to focus on the number of registered midwives in PNG. However, as they were previously registered as Specialist Nurses it is taking some time to review the data of the 16,000 registrants on the system. The CMFs have supported the process of registration by assisting with the documentation required and role modelling the processes at a School level.

In 2015 it is envisaged that this progress will continue with relationships with relevant stakeholders strengthening, the establishment of a protocol for the regulation of midwifery, and development of a midwifery graduate database.

There are signs of effective collaboration between the schools, educators, NDoH and the Nursing Council through increased formal and informal meetings, and regular communication.

Challenges

The double major remains an issue as graduates from this program are still not registered as midwives. A preceptorship and assessment process has been designed by NDoH but has not been implemented at the time of writing.

Lessons learned

- The MCHI team continue to provide support to the PNG Nursing Council and assist with capacity building as required in relation to the regulation of midwives.

Outcome 10: Increased opportunities for key stakeholders to work and collaborate

MCHI Steering Committee

MCHI Steering Committee met regularly during 2014 and appears to function well with involvement from a variety of stakeholders. The meetings provide an opportunity for working relationships to develop and strengthen between PNG clinicians and other key stakeholders.

Examples of collaborations facilitated by the Steering Committee in 2014 include the review of the national Midwifery Curriculum, oversight of ordering and delivery of midwifery educational resources including midwifery kits and textbooks, guidance for workshop content and delivery, instigation of the proposed CME position to work with and support clinicians at PMGH and the PNG Midwifery Society, and the instigation of the Building Faculty Capacity Program. This latter Program builds on recommendations from the Australian Aid Nursing and CHW diagnostic audits (2012-2013).

Support from NDoH

It is generally reported that relationships among MCHI staff, educators, other stakeholders and NDoH impact on the effectiveness of the Initiative. These relationships have at times been challenged due to the complex nature of the structure of the MCHI partnership. In addition, the inherent communication problems with email, internet access and telecommunications in PNG potentially results in miscommunications and delays in response.

The ongoing support and commitment from NDoH to the MCHI, has helped to make opportunities such as inservice training and the capacity building workshops possible. There are ongoing challenges with obtaining 'invitation/request for attendance' letters that need to be signed and distributed from NDoH in time for participants to attend the workshops. Despite trying to have this done some time in advance, for a range of reasons, this has not always been possible. For time to time, scheduled participants have not been able to attend although this has been less of an issue in Phase II.

Some clinicians reported that the MCHI had strengthened relationships between the hospital and the midwifery school although more interactions are needed to stay in touch. In most sites educators also reported that the relationship between the midwifery schools and the hospitals with which they are affiliated was positive and constructive. Positive relationships were also reported to have often developed between MCHI obstetricians and clinicians working together in the regional hospitals.

The majority of stakeholders and clinicians surveyed reported that they were aware of the MCHI objectives (83%).

MCHI capacity building workshops

One of the strategies used to create opportunities for clinicians and PNG stakeholders to collaborate has been to include as many clinicians as possible in the MCHI workshops along with other stakeholders, including rural midwives and this has continued in Phase II. The rural midwives and other clinicians participating in the MCHI workshops have provided insights into the needs of remote areas. These clinicians continue to request that they and other clinician colleagues be included in the MCHI workshops and participate in training/ inservice sessions.

Inservice training

Many of the clinicians report a continued increase in up skilling or professional development opportunities in their facilities due to the presence of the CMFs and MCHI obstetricians. More collaborative communication and relationships between the educators and clinicians in the clinical setting was also reported. NDoH and provincial health districts have generally supported and promoted involvement with this inservice training.

The MCHI obstetricians report that their professional networks with the respective provincial health districts and healthcare facilities are growing. Strengthening of these relationships has resulted in the delivery of more training sessions by the obstetricians and their staff that have benefited the local community and boosted the skills in the rural health facilities.

PNG Midwifery Society

The CMFs and staff from the WHO CC UTS work closely with the President of the Midwifery Society and its members to promote the Society to increase membership. The number of active members is growing and there is commitment by NDoH through PMGH to accommodate the Midwifery Society office and small staff including the new Midwifery Educator role at PMGH.

Support for the PNG Midwifery Society is important as strengthening associations is one of the three pillars to strengthen midwifery in every country. Associations play an important role in advocacy and the provision of support for midwives and educational opportunities. Considerable support was provided to the PNG Midwifery Society in Phase I and this led to a functional membership database, annual general meetings, a newsletter and a twinning relationship with the Australian College of Midwives.

In 2014 (Phase II), the PNG Midwifery Society was unable to sustain many of these advancements. This is the reason that the CME role at PMGH has been implemented in 2015 as half of her role is to capacity build the Midwifery Society.

Other opportunities for collaboration

A variety of sessions have been run for midwifery students, including clinicians that have been supported by various stakeholder organisations and non-government organisations. These organisations include Reproductive Health Training Unit (RHTU - a public-private partnership between the NDoH, Oilsearch Health Foundation with funding support from the Australian Government); Marie Stopes PNG; Susu Mamas; and MSF.

Challenges

There has been mixed reaction from some stakeholders and clinicians about the overall levels of support from NDoH for the MCHI and other programs with which they are involved. This could reflect the lack of staff and resources in some areas of NDoH which restricts the capacity for support of activities such as training across PNG.

The PNG Midwifery Society requires ongoing support in 2015 to rebuild capacity and ability to support the profession of midwives.

Lessons learned

- The MCHI through its workshops, inservice training, mentoring activities has provided increased opportunities for stakeholders and PNG clinicians to work together and collaborate.
- The role of the WHO CC UTS as Secretariat of the MCHI Steering Committee is working in assisting with the channels of communication, coordination and ongoing collaboration.
- Provision of support to the PNG Midwifery Society by the CMFs and WHO CC UTS is helping to provide capacity building of the organisation and its members although this needs more time.
- Building and maintaining collegiate relationships with NDoH staff across all levels and directorates in the NDoH is essential for constructive collaboration with the MCHI.

Outcome 11: Ongoing supportive environment for Clinical Midwifery Facilitators and MCHI Obstetricians

Mentoring is an important activity of the MCHI that aims to provide ongoing support to the in-country team. It gives MCHI staff and PNG educators regular opportunities to liaise with the Midwifery Mentor and each other, which is vital when many are working in environments that are challenging, under-resourced and geographically isolated.

Teleconferences

From January to December 2014, 22 teleconferences were held – 15 with CMFs only, four with CMFs and national educators and three with CMFs and Obstetricians. This was 95% of the planned teleconferences for the year.

The teleconferences were reported by the CMFs as an opportunity for the midwives to share information and experiences, problem solve and obtain support from their colleagues. PNG educators are also invited to attend the teleconferences monthly. Logistical issues were discussed once a month when a representative from HHISP is present and the MCHI obstetricians were invited to attend monthly to contribute and participate.

The midwifery educators reported that joining the teleconferences was beneficial. These teleconferences were seen as an important strategy to build networking and communication between the different schools and ensure that the educators can problem-solve with each other and receive support.

The teleconferences are planned to continue in 2015 following a similar schedule with fortnightly calls with all CMFs and calls with CMFs and national educators taking place every third week unless required more frequently.

Support for MCHI Obstetricians

As Mentor, Professor Mola provided support, supervision and advice for the two MCHI obstetricians throughout the year. This was achieved through field visits and regular telephone and email communication. The Mentor visited the Obstetricians at their respective hospitals (Kundiawa and Mendi) in April 2014, and plans to visit them again in Kundiawa and Kokopo in 2015.

Both obstetricians reported that they appreciated this ongoing support and contact with a senior healthcare professional who is familiar with their professional and personal requirements.

Field Visits

The WHO CC UTS team are regularly in PNG and on all of the visits have been able to meet with CMFs and MCHI obstetricians, NDOH staff and other stakeholders, which has strengthened and consolidated and relationships. As some of these visits have been part of the monitoring and evaluation process of the MCHI, focus groups and one to one interviews have been conducted which have provided the CMFs and obstetricians with an opportunity to discuss the challenges and successes that they have experienced in their professional roles.

Other mentoring and support

One-to-one mentoring support from the WHO CC UTS is available and taken up by the CMFs. This level of support is one reason for the very low attrition and turnover rate in the MCHI (0% attrition in 2014).

CMFs also provide mentoring and support for the 17 midwifery course coordinators and educators (15 females, 2 males) on an ongoing daily basis.

The MCHI workshops that continue to be held three times a year have provided opportunities for MCHI staff to connect both professionally and socially.

The WHO CC UTS has provided the MCHI team with resources to support their capacity building work including electronic and hard copies of relevant clinical journal articles, DVDs for teaching purposes, Global Midwifery Education and Standards material, including Curriculum guidelines, WHO Reproductive Health Library resources, and curricula outline and lesson plans.

Challenges

Difficulties with teleconference attendance were occasionally reported and related to limited staff availability and IT connections which are needed for phoning into teleconferences.

Lessons learned

- The regular MCHI teleconferences are important in supporting MCHI staff working in-country.
- The WHO CC UTS continues to organise and book regular mentoring and support teleconferences between the MCHI team members, educators and other stakeholders.
- The mentors for the CMFs and obstetricians are playing an important role in supporting MCHI team members professionally and personally as required.

Outcome 12: Conduct Longitudinal Research of PNG Midwifery graduates

The MCHI longitudinal study of midwifery graduates commenced in mid-2014. Ethics approval has been granted for the study by UTS Human Research Ethics Committee (January 2014) and the PNG Medical Research Advisory Council (December 2014). A program manager was appointed in July.

The location and contact details for 174 graduates (from 2012 and 2013 cohorts) have been identified. Survey tools (for midwifery graduates and their clinical supervisors) have been developed and piloted been completed and these tools are being used to collect data. A Focus Group outline and interview questions was developed and used to conduct focus groups.

To date, data collection has been collected on more than 112 of the contactable graduates (63%). The remainder of the data collection is planned for March 2015.

Lessons learned

- Initial contact with midwifery graduates by text message and/or telephone has been the most reliable means of contacting midwifery graduates.
- Most graduate surveys have been conducted successfully by telephone using the original survey form. In some cases the graduate responses have been recorded and then transcribed to the survey form for accuracy of recording information detail.
- Good responses have been received from midwifery graduates practising in rural areas of PNG.
- The establishment of a national research team has occurred with senior counterparts from NDoH and the PNG NC indicating their commitment to the study.

- Co-investigators have been identified from PNG educators with the aim to building their capacity through professional development and research experience.
- While the longitudinal study will identify where the graduates from the two years in question are placed, it does not answer the question of the location on all midwives in PNG. To date, the overall number and location of midwives is unknown and needs to be identified as part of a national census as this will facilitate workforce planning for maternal and child health.

REVIEWING THE ONGOING MONITORING AND EVALUATION PROCESSES

Monitoring and evaluation is a major part of the PNG MCHI and provides evidence for any required changes throughout the life of the Initiative. The MCHI through the WHO CC UTS conducts its own internal M&E through regular reporting, program and workshop evaluations, focus groups and interviews with a variety of stakeholders, and surveys. Monitoring and evaluation of each objective of the MCHI is included to inform progress of the Initiative and its outcomes, and highlight revisions or changes that may be required to project and activities.

These M&E activities are on track with completed Monitoring Reports received from all sites every four months, evaluation of the Orientation and Induction Programs and three workshops completed, interviews and focus groups conducted, annual surveys distributed and collected and initial data analysis completed.

Key issues with data collection, analysis and reporting are as anticipated to date. Limited resources and support systems in the PNG health sector are addressed in part through assistance from the WHO CC UTS, and mentoring and professional support by the CMFs and Midwifery Mentor which is an integral part of the Initiative. The constraints of a complex partnership structure, cross-cultural challenges and differences encountered through this work are overcome through developing collaborative relationships - working closely with counterparts from the NDoH, PNG educators and clinicians, and other staff associated with the MCHI. Time and logistical constraints are overcome through flexible working arrangements.

ADDRESSING THE EXIT STRATEGY FOR THE MCHI

Phase II of the MCHI will end in December 2015. Midwifery course coordinators and CMFs met in November 2014 to commence planning the final year. Transition and Exit Action plans have been developed and submitted to the WHO CC UTS and are being implemented by each midwifery school with support from NDoH and the MCHI Steering Committee.

Continuing support and commitment from NDoH is critical as the Initiative moves toward the end of Phase II. It is essential that NDoH staff are involved with exit strategy planning and transition planning for the end of Phase II as this will be critical for the future of maternal and child health post 2015.

A number of issues have been identified in the first year of Phase II that need consideration before the end of the MCHI in December 2015:

- Midwifery educators need to be employed, supported and provided with ongoing development opportunities:
    - Adequate numbers of midwifery educators (on a staff to student ratio) need to be employed to support the learning of students in the school and the clinical areas and this needs to be considered and planned for by midwifery schools in the future.
    - Ongoing support is required for PNG midwifery educators to engage in professional development opportunities, faculty development activities or further formal studies to increase knowledge and further up skilling including the further higher education for staff.
    - The Building Faculty Capacity Program approved by DFAT will implemented in 2015 to ensure that further educator capacity is built for midwifery, nursing and community health workers.
    - Strategies to identify high-performing new graduates as potential midwifery educators in order to succession plan needs to occur. These graduates may be fast-tracked into the Building Faculty Capacity Program that will be supported by the MCHI in 2015.
- The delayed commencement of the midwifery program at the SMSON necessitates the need for continuing support by the CMFs deployed to assist in the development and implementation process into 2016.
- The positive capacity building effects that the obstetricians are having with registrars and other clinicians and healthcare workers with whom they work suggests that a one year contract extension is warranted in both sites.
    - There is a new PNG obstetrician about the finish his training and therefore could go to Kundiawa. It is important though that this person receives is supported in their first year of specialist practice. The further development of fistula repair services (which have been established in Kundiawa under the MCHI). Therefore, a further 12 months of the MCHI obstetrician in Kundiawa is required.
    - The ongoing funding of an obstetrician at St Mary's Hospital is uncertain. Another 12 months of the MCHI obstetrician in Vunapope is required especially to support the midwifery education program.
- The revised PNG Midwifery Curriculum Implementation Plan requires support and additional resources to ensure that the new curriculum can be approved and ready for commencement in 2016-2017.
    - The process engaged the schools, clinicians and key stakeholders. There is now an urgent need for the nursing and community health worker curriculum to be reviewed (both were last reviewed 10 years ago).
- The new position of CME situated within PMGH to specifically provide clinical education to midwives and nurses in the maternity unit may provide a model for the provision of capacity building support for other hospitals in PNG in the longer term.
- Support needs to be provided to the PNG Midwifery Society to assist with capacity building as professional associations are a critical part of improving maternal and newborn health.

CONCLUSION

The monitoring activities of Phase II of the MCHI to date show that the operation of the Initiative has strengthened in its second phase, with relationships continuing to develop between the MCHI staff and their PNG counterparts.

Reported improvements in the learning opportunities and teaching capacity of PNG educators is encouraging, as is the increasing number of midwifery graduates and their quality of practice. Evaluation to date indicates that the MCHI is making positive progress towards its various outcomes.

There is significantly more that needs to be done, particularly in relation to improving health management systems, and addressing the shortage of health workers and facilities for healthcare in PNG.

APPENDICES

Appendix 1: MCHI Phase II M&E Program Logic Model

The Program Logic is outlined with: Outputs, short- and medium-term outcomes to achieve the overall goal of the Initiative. The short term outcomes have been numbered so the corresponding Monitoring and Evaluation Plan can be tracked against them. This Initiative covers the following major target areas: gender, equity, disability, maternal, child health, governance and HR (Training). These are reported on in the quarterly reports.

MCH Initiative Phase II Goal (health impacts)

Contribute to the decrease in maternal mortality rate in PNG in a sustainable manner through improved quality of essential maternal and newborn health care.

MCH Initiative Phase II Objectives

- To improve the standard of midwifery clinical teaching and practice in the five teaching sites.
- To improve the quality of obstetrical care in two regions through the provision of clinical mentoring, supervision and teaching.

Contributing to long-term impacts

- Decreased maternal and child mortality
- Improved maternal and child health indicators
- Increased capacity of quality and quantity (in line with other AusAID programs such as PNG scholarships) of midwives in PNG
- Increased quality of obstetric care in two districts.
- Increased key stakeholder buy-in of maternal and child health issues in PNG

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Appendix 2: Data Collection Monitoring and Evaluation Plan

Multiple data collection tools are being used to collect both qualitative and quantitative data. These include:

- Interviews with key stakeholders including course coordinators and key stakeholders in both the university and clinical setting, NDoH, Department of Foreign Affairs and Trade, and key WHO PNG staff.
- Focus group discussions (FGD) with course coordinators, educators and MCHI staff (clinical midwifery facilitators and obstetricians) and current midwifery students.
- Written evaluation from the workshops (three conducted per year).
- Annual surveys (qualitative and quantitative data) distributed to
    - Finishing midwifery students
    - Course coordinators
    - MCHI obstetrician supervisors
    - MCHI clinical midwifery facilitators and obstetricians
    - Key stakeholders in universities and clinical areas
- Four monthly written Monitoring Reports submitted by each midwifery school (collects qualitative and quantitative data on student numbers, retention, teaching and learning strategies and initiatives and any challenges)
- Data from the National Health Plan - Sector Performance Annual Review (National Department of Health, 2012)
- Local clinical outcome data
- Longitudinal follow-up of midwifery graduates

Appendix 3: PNG MCHI Phase II Monitoring and Evaluation Framework

MCHI M&E Objectives	Medium-term Outcomes	Short-term activities	Outputs	M&E data collection methods
1. Monitor implementation of effective strategy, processes and personnel for delivery of Initiative (new)	MCHI CMFs and Obstetricians mobilised with effective partnerships with stakeholders developed and maintained. Ongoing effective Steering Committee with proactive engagement with stakeholders. Ongoing effective Working Group and Management Committee. Marketing resources developed, distributed and utilised by stakeholders and partners.	1.1 MCHI staff recruited. Processes established to employ MCHI staff.	• All proposed MCHI CMFs and obstetricians recruited and employed by March 2014.	Induction evaluation. Orientation evaluation. MCHI Coordination Group Meeting minutes.
		1.2 Logistics for set-up for MCHI staff mobilization conducted	• Logistical issues for staff mobilization identified and reported to accessUTS, HHISP. • All logistical issues managed and addressed in a timely manner	MCHI Coordination Group Meeting minutes.
		1.3 Induction (in Australia) of CMFs and MCHI Obstetricians conducted covering employment, insurance, and in-country arrangements	• All MCHI staff inducted and insured. accessUTS and HHISP provide induction and insurance information package and contacts database	Induction evaluation.
		1.4 In-country orientation (in PNG) coordinated by NDoH, conducted for MCHI staff.	• All MCHI staff mobilised at project site by April 2014.	Orientation evaluation.
		1.5 Liaison with HHISP regarding logistics, security arrangements, clarification of roles and responsibilities undertaken.	• MCHI Coordination Group established and meetings conducted inline with scheduled (bimonthly for first 6 months, every 3 months after 6 months). • Actions developed, delegated and completed.	MCHI Coordination Group Meeting minutes.

		1.6 Strategic Group members confirmed (NDoH, DFAT, HHISP, UTS WHOCC) plan meetings with individuals and groups as required. Note This has become the MCHI Steering Committee which is meeting every 2 months. Individual meetings occur as required on a formal or informal basis.	• Steering Committee established, meetings held every 2 months. • Minutes and attendees reported. Actions developed, delegated and completed.	MCHI Steering Committee TORs, Meeting minutes including Actions.
		1.7 UTS WHO CC MCHI Working Group established, meeting schedule set and meetings held according to schedule.	• UTS WHO CC Working Group established, meetings held 6 monthly. Minutes and attendees reported.	WHO CC MCHI Working Group meeting minutes.
		1.8 UTS MCHI Management Committee reestablished, meeting schedule set and meetings held as scheduled.	• UTS MCHI Management Committee established, meetings held every 3 months.	UTS MCHI Management Committee meeting minutes.
		1.9 Marketing resources developed including MCHI newsletter/brochure, brief and other communication activities. Knowledge of MCH issues and DFAT Initiative increased for all stakeholders.	Communication products produced: • - MCHI Phase II brochure • - MCHI photographic booklet • - Workshop briefs • - Online educational materials • - Video stories	MCHI Phase II brochure. Workshop One brief. Workshop Two brief. Workshop One evaluation. Workshop Two evaluation.
2. Monitor working relationships established with NDoH and other stakeholders to ensure MCHI continues to increase opportunities for key stakeholders and participating PNG clinicians to collaborate to meet the goals of the Initiative (8)	Effective collaborative stakeholder relationships for effective implementation of the Initiative.	2.1 Effective discussions commenced and ongoing with National Department of Health (NDoH) on formal and informal levels, in line with MCHI Steering Committee.	• Protocols of communication with NDOH defined. • Key NDOH personnel identified and communicated with.	Communication protocol with NDOH. Interviews – NDOH, stakeholders. Surveys – NDOH, stakeholders. Monitoring reports.
		2.2 Correspondence and liaison with key stakeholders in all five teaching sites and two regional hospitals.	• Key stakeholders identified in all teaching sites and briefed about the MCHI. • Contacts database developed	Interviews – NDOH, stakeholders. Surveys – NDOH, stakeholders.

		2.3 MCHI Steering Committee established, WHO CC UTS Secretariat role agreed, review TOR, set meeting schedule, meetings held.	• MCHI Steering Committee established, membership refined, TOR and attendance reviewed. • MCHI Steering Committee decisions influence workshop content, location and invited participants. • MCHI Steering Committee leads strategic planning for the Initiative.	MCHI Steering Committee TORs. MCHI Steering Committee meeting schedule. MCHI Steering Committee Meeting minutes. Stakeholder interviews

3. Monitor increased learning opportunities for PNG midwifery educators.	PNG midwifery educators and clinicians participation in informal and formal mentoring and learning opportunities.	3.1 Mentoring, supervision and teaching provided to midwifery educators by CMFs.	• Midwifery educators in five SOM provided with mentoring from CMFs
			• Bimonthly TC with CMFs to review processes of capacity building with the PNG educators and the MCHI more generally
			• Midwifery educators have opportunities for mentoring:
			  ○ MCHI workshops
			  ○ Other training (eg RHTU)
			  ○ Conference attendance
				Interviews – educators, CMFS, Obstetricians
				Surveys
				Monitoring Reports
				FGDs
				TC questionnaire reviewed

		3.2 Professional development support provided by clinical midwifery facilitators and obstetricians.	• Midwifery educators have opportunities for ongoing CPD:
			  ○ MCHI workshops
			  ○ Other training (eg RHTU)
			  ○ Conference attendance
			• Localised training provided by CMFs and O&Gs, for example:
			  ○ Family planning training
			  ○ CHW up-skilling
			  ○ Neonatal resuscitation
				Interviews – educators, CMFs, obstetricians
				Surveys
				FGDs
				Workshop evaluations
				Monitoring Reports
				interviews with stakeholders - WHO

		3.3 Resources provided to PNG educators at workshops from various sources.	• Resources supplied to PNG midwifery educators in each MCHI site. ○ Midwifery textbooks	
4. Monitor improved PNG midwifery educators teaching capacity (2)	Increased teaching capacity of PNG educators, and increased involvement in professional development activities.	4.1 MCHI SC with UTS WHO CC as Secretariat to plan, develop and prepare for workshops.	• Workshop program developed with PNG midwifery educators from each teaching site. • Number of participants at the workshops as planned • Evaluations reviewed for Steering Committee to inform future workshop content	Workshop evaluations. Workshop brief.
		4.2 Mentoring, supervision and teaching provided for PNG midwifery educators	• Monthly TC with CMFs and PNG educators to review issues related to teaching and learning and support ongoing development	Interviews – educators, CMFs, obstetricians Surveys Monitoring Reports. FGDs.
5. Monitor improved clinical education experience for students (3)	Improved clinical education experience for midwifery students.	5.1 Mentoring, supervision and teaching provided by MCHI CMFs and MCHI obstetricians for PNG clinicians in participating hospitals.	• Regular involvement by clinicians with midwifery student teaching. • Training (formal and informal) provided for PNG clinicians. • Rural placements with students undertaken • Clinicians and other stakeholders supported by CMFs and MCHI obstetricians •	Monitoring Reports. Surveys – MCHI obstetricians, clinicians, stakeholders. Interviews – clinicians, stakeholders. FGDs.
		5.2 Obstetric mentoring, supervision and teaching in two hospitals.	• Regular mentoring, supervision and teaching of PNG clinicians by obstetricians. • Regular contact between MCHI obstetricians and senior PNG obstetrician	Monitoring Reports. Surveys –MCHI obstetricians, clinicians, stakeholders. Interviews – clinicians, stakeholders. TC questionnaire review

6. Monitor increased quantity and quality of midwifery graduates (4)	Improved quality of midwifery education through new teaching techniques.
	
	Increased numbers of enrolments, midwifery students and graduates.
		6.1 Professional development support provided by clinical midwifery facilitators and obstetricians.	• Evidence of increased numbers of graduates
			  ○ Numbers of midwifery students commence
			  ○ Number of midwifery students complete
			  ○ Number of graduates registered with the Nursing Council
			• Liaison with Australian Awards to assist with scholarship planning and recruitment for the next year
			  ○ Australian Awards invited to MCHI SC to provide input.
				Monitoring Reports.
				Surveys – course coordinators, educators, CMF, obstetricians.
				Interviews – course coordinators, educators, CMFs, obstetricians.
				FGDs.

		6.2 Resources provided to PNG educators at workshops from various sources.	• Resources developed and distributed to PNG educators at each workshop.	

7. Monitor increased technical capacity of clinicians in participating sites (5)	Mentoring, supervision and teaching provided by WHO CC and CMFs for PNG midwifery educators: obstetric mentoring, supervision and teaching in 2 hospitals
	
	Improved technical capacity of obstetricians in participating sites.
		Provision of mentoring and support to clinicians by CMFs and MCHI obstetricians	• CMFs attend clinical sites to provide mentoring and support to students and staff
			• CMFs and obstetricians provide teaching session to clinicians
			• Clinicians have opportunities for ongoing professional development
			  ○ Formal courses
			  ○ Local training
			  ○ Conference attendance
				Surveys – course coordinators, educators, CMF, obstetricians.
				Interviews – course coordinators, educators, CMFs, obstetricians.

		7.2 MCHI SC with UTS WHO CC as Secretariat with key stakeholders - plan, develop and prepare for workshops.	• Workshops undertaken in line with Steering committee strategy • Increased number of educators and clinicians in attendance at workshops.	Workshop evaluations. Surveys – course coordinators, educators, CMF, obstetricians. Interviews – course coordinators, educators, CMFs, obstetricians.
		7.3 Delivery of three workshops each year including UTS WHO CC, CMFs, MCHI obstetricians, midwifery educators, key stakeholders and clinicians (2-3 days 3 times a year).	• Three workshops delivered in 2014. • Three workshops delivered in 2015.	Workshop evaluations. Surveys – course coordinators, educators, CMF, obstetricians. Interviews – course coordinators, educators, CMFs, obstetricians.
8. Monitor improved quality of the midwifery curricula (6)	Midwifery curricula reviewed and recommendations made for implementation and accreditation.	8.1 MCHI SC with UTS WHO CC as Secretariat to work alongside the PNG Nursing Council to establish protocol for review and accreditation of midwifery curricula.	• Protocol for review and accreditation of midwifery curricula developed and implemented. • Midwifery curriculum review undertaken	Interviews – stakeholders, course coordinators. Surveys – stakeholders, course coordinators. Midwifery curricula review report
		8.2 MCHI SC with UTS WHO CC as Secretariat to work alongside the Nursing Council to establish protocol for review of double major graduates to enable them to register as midwives.	• Protocol for review of double major graduates to enable them to register as midwives developed and implemented. • Midwifery programs accredited with the PNG Nursing Council	Interviews – stakeholders, course coordinators. Surveys – stakeholders, course coordinators. Accreditation of midwifery schools
9. Monitor progress towards the regulation of midwifery (7)	Progress towards regulation of midwifery.	9.1 Re-establish relationships and activate communication strategy with relevant stakeholders.	• Communication strategy developed and implemented, and relationships reestablished with relevant stakeholders.	Interviews – stakeholders, course coordinators. Surveys – stakeholders, course coordinators.
		9.2 MCHI Steering Committee with UTS WHO CC as Secretariat to work with new acting PNG Nursing Council Registrar to establish protocol for regulation of midwifery.	• Midwifery graduate database developed. • Midwifery graduates registered with the PNG Nursing Council.	Interviews – stakeholders, course coordinators. Surveys – stakeholders, course coordinators. Registration numbers

10. Monitor increased opportunities for key stakeholders and participating PNG clinicians to collaborate and strengthen skills (8)	Key stakeholders and PNG clinicians participation in professional development activities.	10.1 Work collaboratively with stakeholders MCHI Steering Committee to coordinate workshops.	• Workshops held three times each year with support and commitment from stakeholders including NDOH and MCHI Steering Committee.	Workshop evaluations. Surveys – course coordinators, educators, CMF, obstetricians. Interviews – course coordinators, educators, CMFs, obstetricians.
		10.2 Regular teleconferences and day-to-day follow up with key stakeholders, with support by UTS WHO CC UTS.	• Teleconference schedule developed and distributed to relevant parties. 80% participation.	Interviews – stakeholders, course coordinators. Surveys – stakeholders, course coordinators.
		10.3 Work with NDoH, key stakeholders and clinicians to determine professional development requirements to inform workshop content.	• Professional development requirements for clinicians identified and developed with NDOH and MCHI stakeholders.	Interviews – stakeholders, course coordinators. Surveys – stakeholders, course coordinators.
11. Ongoing supportive environment for clinical midwifery facilitators and MCHI obstetricians (9)	Provision of support to MCHI in-country staff – clinical midwifery facilitators and MCHI obstetricians.	11.1 Appoint Midwifery and Obstetrician Mentor to facilitate Induction, Orientation and for ongoing support to MCHI staff.	• Midwifery Mentor and Obstetrician Mentor employed. • Support provided to MCHI staff by Midwifery Mentor and Obstetrician Mentor through regular scheduled teleconferences and informal communication.	Surveys –CMF, obstetricians. Interviews –CMFs, obstetricians. Monitoring Reports. FGDs.
		11.2 Plan, schedule and conduct meetings and teleconferences to provide ongoing support and advice to in-country MCHI staff including face to face support.	• Teleconference schedule developed and distributed. • Teleconferences held as scheduled. • Problem solving opportunities identified in teleconferences • •	Surveys –CMF, obstetricians. Interviews –CMFs, obstetricians. Monitoring Reports. FGDs.

		11.3 Obstetrician Mentor to visit regional hospital sites at least two times per year	• Visits by Obstetric Mentor conducted at least two times per year to hospital sites (Mendi and Kundiawa in 2014).	Monitoring Reports. Surveys –obstetricians, mentor. Interviews – obstetricians, mentor. Monitoring Reports.
12. Monitor Longitudinal Research of PNG Midwifery graduates.	Results from longitudinal research on PNG Midwifery Graduates contributes to improvements in midwifery education.	12.1 Recruit Project Manager Undertake ethical approval processes, design questionnaires and develop qualitative methods including trigger questions.	• Project Manager employed. • Ethics approval obtained by UTS HREC and PNG MRAC. • Project design, methods finalized, research materials developed. ○ Number of graduates identified ○ Contact details for graduates sought and database developed ○ Questionnaires developed and pilot tested ○ Data collected using phone interviews ○ Analysis undertaken	Interviews – stakeholders, mentor. Questionnaires
		12.2 Identify the graduates locations.	• Database of graduate locations and contact details complete.	Interviews – stakeholders, mentor.
		12.3 Project Manager to contact all graduates to commence data collection.	• Data collection complete.	Interviews – stakeholders, mentor.
		12.4 Data collection and analysis – phone, email, face to face (yet to be determined but travel will be required).	• Data collection complete. •	Data collection complete.
13. Review M&E framework, activities and data collection tools, and plan		13.1 Review M&E framework.	• Revised M&E framework finalized.	M&E framework document.

and implement the revised M&E strategy.		13.2 Planning and review of tools for data collection.	• Data collection tools revised and administered.	Monitoring Reports. Surveys. Interviews.
		12.3 Collect, analyse and report on project data.	• Project data reports complete.	Monitoring Reports. Surveys. Interviews.