HEALTH SYSTEM STRENGTHENING IN PNG: PAST, PRESENT AND FUTURE CHALLENGES

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INTRODUCTION
Health systems in many countries, including PNG, need to be undertaken at national and local levels to improve maternal and newborn services. The components of health system strengthening are largely invisible and undertaken at multiple levels. Recently, a framework has been developed to describe the health strengthening strategies undertaken by countries. In The Lancet Series on Midwifery, this framework was applied in four countries showing that health system strengthening efforts were successful in increasing the size of services and women’s uptake of facility-based birth. The aim of this paper was to analyse the health system strengthening approaches that have been applied in PNG over the past 10 years using this framework to determine which efforts had been successful and to highlight the areas where additional strengthening is required. A secondary aim was to determine the utility of the framework in undertaking a health system strengthening analysis at an individual country level.

METHODS
The framework was used as a means to describe and analyse the events that had occurred in the past decade to address improving maternal and newborn health. The primary areas that were considered included:
- Aid sensitive to Maternal and Newborn Health (MNH)
- Steering and resource mobilisation
- Access and uptake
- Effective coverage

The initial analysis occurred when most of the authors were present at a regional workshop that was convened in Bangkok, Thailand to explore the midwifery workforce in light of data from the State of the World’s Midwifery Report, 2014. During this workshop, a brainstorming exercise took place to identify the main events that had occurred in each country including PNG.

FINDINGS
Figure 1 provides a summary of the framework and the health strengthening efforts that had been applied in PNG over the past decade.

Commitment of political leadership
The PNG government has been committed to improving maternal and child health. A number of reports over the past 5 years have highlighted the problems and proposed solutions including the Ministerial Taskforce on Maternal Health in PNG (2009); and the PNG Child Health Policy & Plan 2009-2020. These two reports particularly give a clear indication of the commitment of political leadership in PNG to understand the importance, magnitude and necessary actions to improve the reproductive, maternal and child health status in PNG. However, the 2013 Sector Performance Annual Review 2008-2012, which is a snapshot of 29 health indicators of provinces over the past five years, show that very little has changed overall.

Decentralisation (in 1995) has meant that many public services, including health services, are now financed and delivered by provincial and local level governments.

Since decentralisation, there have often been challenges regarding the roles and responsibilities of government departments, and a lack of funding to fulfill responsibilities and deliver services. Despite some improvements, in 2013, a report showed that in 2010 there remain issues with allocation and accessibility of funding to rural health services in PNG. The same report estimated that two-thirds of provinces spent little or nothing on the distribution of drugs and medical supplies to rural facilities, and little funding was allocated for emergency patient transfers. This prompted the NDoH, assisted byAusAID, in 2011-12, to begin a ‘push out’ program of securing and distributing drug and medical kits to rural facilities which essentially re-centralized the supply to these rural areas.
PNG government policy on health

The PNG government has a long term plan to strengthen PNG’s health infrastructure which in many cases is limited and has policies designed to address the high mortality rates for mothers and newborns. The National Health Plan 2011-2020 is the latest in a series of reports that mapped a number of improvements in service delivery and governance that align themselves to Millennium Development Goals (1, 4, 5, 6 and 7) and introduced a Health Vision 2050 for PNG. These included the rehabilitation of Aid Posts, health centres and hospitals, establishment of community Health Posts and expansion in strategic locations. This report’s key health targets include reducing the MMR from 733 per 100,000 to below 100, and reducing under five mortality rates from 75 per 100,000 to below 20 by 2050. The report stated that universal health coverage, especially for the rural majority and the urban poor was a priority, and values of access equity, gender and people-centeredness were included. In addition, from next year PNG will work towards Maternal and Child Health (MCH) targets in the Sustainable Development Goals.

Aid sensitive to MNH

The Australian government has played a major role in overseas aid to PNG since independence in 1974. As part of the commitment to PNG, AusAID (the Australian government’s aid agency at the time) developed a Sub National Strategy (SNS) in 2004 which aimed to improve service delivery to the people of PNG through the strengthening of sub-national levels of government. This was achieved through capacity building of agency coordination and monitoring, advisory support and grants directed to building administrative ability. The key sectors that the SNS continues to support are education, health and HIV.

Steering and resource mobilisation

Recognition as a priority

In 2007/08, the PNG government recognised that maternal health was at a crisis point and established the Maternal Health Taskforce as previously described. The reports that assisted with resource mobilisation included the Ministerial Taskforce on Maternal Health in PNG 2009; the PNG National Department of Health National Health Plan 2010-2015; and the PNG Child Health Policy & Plan 2009-2020. This recognition and the subsequent policies have meant an emphasis on the health workforce for MCH and the health system. However, turning the high rates of MMR and addressing a crisis in the health workforce and essential infrastructure is hard to turn around quickly.

Strategic information and intelligence

One of the key constraints for assessing and planning health care in PNG is the lack of accurate data. This includes both workforce and health outcome data. For example, there are widely differing maternal mortality ratios (Mola & Kirby, 2013), and an unclear number of trained and untrained health workers in the country. There are also unknown factors on the quality and productivity of these health workers.

The NDOH monitors the performance of its health system using a national computerised health information system, however the country is now heavily decentralised which makes health data...
has been due, in part, to scholarships for midwifery students and a midwifery education capacity building program both funded by the Australian Government through Overseas Aid mechanisms.

These initiatives are important but will not quadruple the country’s numbers of midwives even in the medium-term. Table 1 shows the approximate numbers of registered midwives in PNG from 2009-2014.

The profile of midwives in PNG needs to be raised considerably. There is a lack of visibility of midwives in governmental reports, and no reported plan to raise midwifery capacity in PNG Human Resource and workforce reports since 2013. This needs urgently addressing.

The State of the World’s Midwifery Reports (2011 and 2014) drew attention to the shortage of the midwifery workforce in PNG, especially midwives. There are problems with deployment, remuneration and retention which has been recognised as a global problem. The 2011 report identified that PNG needed to quadruple its midwifery workforce to meet needs.

Since 2010, significant efforts have been put in place to increase the number and skill of midwives in PNG. There is a new one-year Bachelor of Midwifery curriculum for nurses, an increase in midwifery schools (currently 5 schools) and an increased midwifery intake. This has been due, in part, to scholarships for midwifery students and a midwifery education capacity building program both funded by the Australian Government through Overseas Aid mechanisms.

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### Community health workers: supply, deployment, remuneration, retention

Two-year trained community health workers (CHW) make up 50% of the health workforce and predominately cater for the 85% of the population who live in rural and remote areas of PNG. They are therefore a critical component of the RMNCH workforce. Indeed even in rural health facilities where there are a mix of registered nurses, CHWs and occasionally a midwife, it is usually the CHWs who provide most of the maternity care.

While CHWs provide most of the maternity care at health facilities in rural areas, their 2 year pre-service training program has only a very small part of its curriculum on reproductive health issues including pregnancy care and family planning. For this reason a program to upskill groups of CHWs who are predominantly working in maternity care in rural health facilities has been set up. This 6 month residential inservice program has now trained a total of about 100 CHWs in four provinces in advanced maternity care and midwifery skills including emergency obstetric and newborn care.

### Village health workers

There are many unregulated village health workers (VHW) in PNG. Little is known about these health workers, especially on their scope of practise and competence or about their outcomes of care. Often overseen by NGOs, the aim of the VHWs is to provide basic care to people in remote communities, and advocate to women that they should attend facilities for antenatal and supervised birth. They have no national standardised training, however some are trained on how to care for women during pregnancy and birth, some distribute family planning supplies, and some VHWs simply provide treatment for a range of common illnesses to their communities. They have no medical supplies or training to call upon when faced with medical/obstetric emergencies.

Upskilling VHWs may be beneficial, but there is little evidence showing the effectiveness of VHWs on health outcomes, especially maternal and child health outcomes, in low income settings.

### Removal of barriers to access

There are many factors involved in why women do not access skilled care in PNG. Firstly there is a lack of staff that are adequately trained in midwifery skills and Emergency Obstetric care (EmOC), and secondly, there are barriers of access for women, sometimes due to having no transport, but more often related to the lack of road infrastructure where they live. Other important factors include the cost of services, lack of education, poor health seeking behaviour, and disrespectful care experiences. The PNG Health System Capacity Development Program: Design and Implementation Framework highlighted wider issues such as lack of adequate housing for staff, too few health workers to meet demand, and an ageing workforce. In addition, there is a lack of role delineation, supervision and training, and out of stock medical supplies.

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**Table 1. Midwives registered by the PNG Nursing Council 2009-2014**

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*These figures represent the number of midwives that registered with the PNG nursing council in a particular year. The midwives may have completed their midwifery course in previous years.

# A proportion of midwives who registered in 2009 will have now retired from the workforce, hence the total of 765 represents numbers of midwives practising and non-practising/retired.

Reports of disrespect and abuse of women in health centres and hospitals are widespread. Women are often cared for by their female relatives and village birth attendants and feel that home was a normal birthplace. The presence of relatives during labour and birth is not allowed in many hospitals in PNG, and its implementation has had opposition from local hospital midwives, doctors and managers. Women often feel uncomfortable about seeing a male health worker when they go to a health facility to give birth but it is usually unsafe for a female health worker to be alone in a rural health facility. These cultural and other barriers continue to reduce access of care for women.

Effective coverage
Woman centred respectful care
Woman centred respectful care is recognised as an essential element to encourage access and coverage of care. In recognition of this, PNG has made a number of important steps towards improving the provision of respectful care. These include:

- Respectful care within midwifery education and the national curriculum
- The PNG Reproductive Health Training Unit who undertake EMoC and Essential EoC include respectful care as an important element of providing quality care
- The Community Health Worker Up-skilling Program have a strong focus on the provision of respectful care to encourage women to access services.

Effective and safe interventions and skills
A number of initiatives are in place to ensure the effective provision of interventions to improve SRMNCH services and outcomes. These include:

A national Midwifery Curriculum framework is in place that educates graduates to fulfil the full scope of the practice of midwives including family planning services. A review of the current curriculum occurred in 2014 and a longer (18 month) course may be implemented in 2016-7. The PNG Reproductive Health Training Unit and EoC up-skilling programs are being conducted in rural provinces to update front-line staff in skills and attitudes.

Hospital backup and simple/easy referral
Referral systems remain a challenge in PNG for a range of reasons including difficulty with telecommunications, transport networks and a lack of staff. The importance of coordination of care and effective referral systems between peripheral units and hospitals has been recognised in the National Health Plan 2011-2020 (2010) report.

Outcomes
More equitable maternal and newborn outcomes
Despite the activities and initiatives, improving the equity of maternal and newborn health outcomes, especially better rural and urban communities, remains a challenge in PNG. The underlying issues of lack of gender equity for women, lack of access to transport, shortages of health workers in rural areas and the poor condition of many rural health facilities mean that equitable maternal and newborn outcomes need a long term strategy. As urbanisation occurs in PNG similar to many low to middle income countries, the urban poor will continue to experience inequitable health outcomes. On the outskirts of major cities in PNG are now significant numbers of people living in what is known as ‘settlements’. The quality of housing, access to clean water and health services and safety concerns, especially for women, mean that the outcomes in these urban areas may be poorer than their rural counterparts.

Addressing maternal and newborn outcomes
Papua New Guinea has struggled to provide universal access to quality services over many years. This has led to declining health indicators, in particular for women and children. The Millennium Development goals (MDG) 4 and 5 (reduce child mortality by two-thirds and improve maternal health by 2015) have not been met in PNG. Similarly, target indicators 5A (reduce the maternal mortality ratio by three quarters) and 5B (achieve universal access to reproductive health) has also been unmet. Much work has to be done to improve maternal and newborn outcomes and multiple factors need to be involved in achieving this aim. This includes raising women’s education levels, access and uptake of family planning services, and gender equity issues, to name a few.

Papua New Guinea has marked gender inequality and gender-based violence is common. This has a strong bearing on the wellbeing of mothers and infants. In order to progress PNG society and improve community health, it is vital that measures be taken to redress gender equity issues. Historically, little attention has been given to this issue in PNG and elsewhere. Even after humanitarian crises, CARE found that only 5% aid from donor countries was spent on specific interventions to promote gender equality. Alarmingly, in the State of the World’s Mothers report, out of 178 countries, PNG is 164th in the mothers’ index rankings. This index ranks a combined number of issues such as maternal health, children’s well-being, and women’s educational, economic and political status.

Clearly, efforts at all levels need to occur to enable women and girls to participate in decision-making, and reforms need to be undertaken to better protect, assist and empower women in PNG. Of vital importance is a higher level of government commitment to addressing equitable maternal and newborn outcomes. One of the strategies to achieve this would be encouraging a higher profile and visibility of midwifery in PNG.

Conclusion
This analysis has shown that the health system strengthening framework as part of The Lancet Series on Midwifery can be useful to better understand the aspects of the health system that contribute to improving maternal and newborn outcomes. Our paper is however limited by a lack of available data, not only on the maternal and newborn outcomes but also on the health workforce, current number and quality of health facilities and on the quantity of investments made, both by government and overseas aid on maternal health. Many documents and reports are also not publicly available again limiting our ability to conduct a detailed analysis and assessment of impact. Nonetheless, a narrative analysis such as this is a useful approach to understanding the successes and challenges of the past and highlighting the focussed attention that needs to be made into the future.

Further Information
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