



Australian Government
Australian Research Council

EI
2018
ENGAGEMENT
AND IMPACT



Engagement and Impact 2018

University of Technology Sydney

UTS11-PHS (HLS) - Impact

Overview

Title

(Title of the impact study)

Transforming the health care workforce in PNG for maternal and child health

Unit of Assessment

11 - Medical and Health Sciences

Additional FoR codes

(Identify up to two additional two-digit FoRs that relate to the overall content of the impact study.)

Socio-Economic Objective (SEO) Codes

(Choose from the list of two-digit SEO codes that are relevant to the impact study.)

92 - Health

Australian and New Zealand Standard Industrial Classification (ANZSIC) Codes

(Choose from the list of two-digit ANZSIC codes that are relevant to the impact study.)

85 - Medical and Other Health Care Services

Keywords

(List up to 10 keywords related to the impact described in Part A.)

1. Health Workforce Planning and Development

2. Health Systems

3. Nursing and Midwifery Leadership

4. Nursing and Midwifery Workforce Development

5. Maternal Care

6. Child Health

7. Vulnerable populations

8. Low income countries

9. Pacific Islands

10. Health Development

Sensitivities

Commercially sensitive

No

Culturally sensitive

No

Sensitivities description

(Please describe any sensitivities in relation to the impact study that need to be considered, including any particular instructions for ARC staff or assessors, or for the impact study to be made publicly available after EI 2018.)

Aboriginal and Torres Strait Islander research flag

(Is this impact study associated with Aboriginal and Torres Strait Islander content?)

NOTE - institutions may identify impact studies where the impact, associated research and/or approach to impact relates to Aboriginal and Torres Strait Islander peoples, nations, communities, language, place, culture and knowledges and/or is undertaken with Aboriginal and Torres Strait Islander peoples, nations, and/or communities.)

No

Science and Research Priorities

(Does this impact study fall within one or more of the Science and Research Priorities?)

Yes

Science and Research Priority	Practical Research Challenge
Health	Better models of health care and services that improve outcomes, reduce disparities for disadvantaged and vulnerable groups, increase efficiency and provide greater value for a given expenditure.

Impact

Summary of the impact

(Briefly describe the specific impact in simple, clear English. This will enable the general community to understand the impact of the research.)

UTS addressed a complex humanitarian crisis in maternal and child health within PNG. Our work led to improvements in the nation's health system, policy and regulation. Societal benefits occurred via job creation, and improved health workforce capacity and capabilities, including:

- Registered midwifery workforce increased from 207 to 721
- New midwifery school established
- New midwifery curriculum ratified by PNG Department of Health
- Accreditation process introduced for all midwifery schools
- Quality of care significantly improved, with midwives managing complications, sepsis and providing woman-centred care
- Obstetric care provided in two regions, including first fistula outpost providing surgical training, with 29 successful surgeries.

Beneficiaries

(List up to 10 beneficiaries related to the impact study)

PNG health workforce: obstetricians, nurses, midwives and community health workers.

PNG health educators.

PNG communities: mothers, babies and families.

PNG government: National Department of Health

Australian Government: Department of Foreign Affairs and Trade (DFAT), previously AusAID

Countries in which the impact occurred

(Search the list of countries and add as many as relate to the location of the impact)

Papua New Guinea

Australia

Details of the impact

(Provide a narrative that clearly outlines the research impact. The narrative should explain the relationship between the associated research and the impact. It should also identify the contribution the research has made beyond academia, including:

- *who or what has benefitted from the results of the research (this should identify relevant research end-users, or beneficiaries from industry, the community, government, wider public etc.)*
- *the nature or type of impact and how the research made a social, economic, cultural, and/or environmental impact*

- the extent of the impact (with specific references to appropriate evidence, such as cost-benefit-analysis, quantity of those affected, reported benefits etc.)
- the dates and time period in which the impact occurred.

NOTE - the narrative must describe only impact that has occurred within the reference period, and must not make aspirational claims.)

Papua New Guinea (PNG) has some of the poorest health outcomes in the Asia-Pacific region. In 2011, the UNFPA State of the World's Midwifery report identified PNG as having one of the highest maternal death rates in the world (129 times higher than Australia) and a critical shortage of capacity and expertise in its maternal and child health workforce. Further analysis by UTS researchers in 2011-2013 identified that in countries like PNG, maternal and child health could be significantly improved by increasing the capacity and capability of the healthcare workforce; notably, maternal deaths could be reduced by 75% if the number of midwives was increased by 25% [ref 1].

In 2012, the Maternal Child Health Initiative (MCHI) for PNG was initiated. This multi-stakeholder project was led by the PNG National Department of Health and funded by the Australian Government (AusAID) and the World Health Organisation (WHO), under the directorship of UTS Professor of Child and Maternal Health, Caroline Homer. The intervention and research evaluation were coordinated by the UTS WHO Collaborating Centre (WHO CC) for Nursing, Midwifery and Health Development.

From 2012-2016, the MCHI systematically improved PNG's capabilities for training midwives. The number of midwifery schools was expanded from four to five, and 11 international clinical midwifery facilitators were placed in the schools to mentor PNG educators and deliver the education programs. The UTS team also mentored the PNG educators and supported them with teaching resources, developed specifically for PNG conditions. Further, UTS research on pedagogy and capacity building in health systems was applied to build the program in PNG, leading to a PNG governmental review of the National Framework for Midwifery Education. A standard midwifery curriculum was then introduced, with all midwifery schools undergoing accreditation. The UTS team subsequently evaluated the impact of the MCHI on the teaching capability of PNG's midwifery educators and found that the quality of clinical education had improved, for example through a stronger focus on evidence-based clinical skills [ref 3].

These improvements led to a dramatic increase in the number (and enthusiasm) of midwives. By late 2016, the MCHI had educated and registered 400 midwifery graduates, more than doubling the country's midwifery workforce. The majority of graduates were placed in rural and remote areas where 80% of the PNG population live and which had been poorly serviced for maternal and child health care. In addition, two international obstetricians were placed in two regional hospitals that previously had no access to obstetric care, providing, for example, specialist fistula care and surgery for women with complications arising from female genital mutilation. Spurred on by their achievements under the MCHI, and with the researchers' support, a core group of midwives re-established the PNG Midwifery Society. In 2015 the society held its first national conference in a decade, attracting more than 300 midwives from all over the country.

Better training improved the safety and quality of care delivered. Obstetricians reported that "there is now a qualified midwife in every health centre who is able to manage complications that arise", and that attention to woman-centred care had radically altered how women were treated, cared for and spoken to during labour [ref 2]. Dr Geoff Clark, then DFAT Director of Health Programs in PNG, acknowledged: "Addressing the unconscionably high maternal mortality rate in PNG is critical to the country's development. Increasing the quantity and quality of midwives is key to achieving this. The project led through the UTS WHO CC was key to developing midwifery education and capacity in PNG." An outreach education program was also implemented and supported via increased clinical mentoring. This empowered midwives to work more closely with local communities, increasing their awareness of the importance of antenatal care, supervised births and family planning.

By increasing the capacity and enhancing the skills of the healthcare workforce, the MCHI ultimately improved health outcomes. But given the paucity of official quantitative data on health in PNG, the evidence remains anecdotal. For example: clinicians in the hospitals reported that since the outreach education program was implemented, they had seen a reduction in sepsis cases and complications resulting from unsafe village family planning processes [ref 1]; and at the 2015 Midwifery Society conference, midwives voiced their experiences such as "since I did my training, no woman in my health centre has died in childbirth, whereas previously this was a common occurrence" [ref 1].

The project's impact was recognised by both the Australian and PNG governments. PNG National Department of Health Nursing Council Registrar, Dr Nina Joseph said: "You and your team have carried out an integrated approach across governance, regulation, education and association for health. I have witnessed first-hand

improvements and the impact of this work. For example, there is a stronger midwifery society, a new midwifery curriculum, and a new midwifery school and an increase of midwives from 205 to 712... In regulation many changes have occurred with the support [of the UTS team], for instance, we improved quality of the educational institutes through an accreditation system, improved registration allowing us to know the nursing and midwifery workforce of PNG."

The Chief Nursing and Midwifery Officer of Australia, Debra Thoms stated: "I am fully aware of the extensive work that the UTS WHO CC carries out in the region and in particular PNG. This has made real change to the situation in PNG... The work you have carried out in strengthening governance, regulation and education not only strengthens the PNG health workforce and health systems, but has an impact on health security for the region and Australia."

Associated research

(Briefly describe the research that led to the impact presented for the UoA. The research must meet the definition of research in Section 1.9 of the EI 2018 Submission Guidelines. The description should include details of:

- what was researched
- when the research occurred
- who conducted the research and what is the association with the institution)

The UTS Distinguished Professor of Midwifery, Caroline Homer, published research in The Lancet [ref 1] on the health and societal benefits of increasing midwifery workforce capacity in low to middle-income countries.

Research on the MCHI was coordinated via the UTS team from the WHO CC and directed by the UTS Professor of Midwifery in collaboration with WHO, the PNG Department of Health and the School of Medicine and Health Sciences, University of PNG.

The research was conducted across two phases:

Phase I ran from January 2012 to December 2013, and was funded by AusAID (\$10 million). It consisted of an in-depth, mixed method assessment of the critical state of PNG's maternal health care system, as well as of early initiatives of the MCHI. This involved qualitative and survey methods encompassing; semi-structured interviews (43), focus groups (12 groups), workshops, evaluation surveys (180), and documentary evidence from steering committee meetings, stakeholder forums (8), professional development activities in clinical settings and site reports (29).

Phase II ran from January 2014 to December 2015 and was funded by the Department of Foreign Affairs and Trade (\$12 million). This was a longitudinal evaluation of subsequent MCHI program initiatives. It utilised action research methodologies to identify outcomes, evaluate program impacts, and steer the MCHI towards its objective of improving midwifery capacity and practice in PNG.

FoR of associated research

(Up to three two-digit FoRs that best describe the associated research)

11 - Medical and Health Sciences

References (up to 10 references, 350 characters per reference)

(This section should include a list of up to 10 of the most relevant research outputs associated with the impact)

1.UNFPA (2011) The State of the World's Midwifery: Delivering Health Saving Lives. UNFPA, New York.

2.Homer C, Friberg A, Dias M, ten Hoop-Bender P, Sandall J, Speciale A, Bartlett L, The projected effect of scaling up midwifery. (2014) The Lancet, Volume 384, Issue 9948, 20–26 September 2014, Pages 1146-1157 DOI: 10.1016/S0140-6736(14)60790-X

3. Dawson A, Kililo M, Geita L, Mola G, Brodie P, Rumsey M, Copeland F, Neill A, Homer C. (2016). Midwifery capacity building in Papua New Guinea: Key achievements and ways forward. *Women and Birth* 29 pp180-188. DOI: 10.1016/j.wombi.2015.10.007

4. A., Brodie, P., Copeland, F., Rumsey, M., & Homer, C. (2015). Collaborative approaches towards building midwifery capacity in low income countries: A review of experiences. DOI: 10.1016/j.midw.2013.05.009

5. Moores, A., Puawe, P., Buasi, N., West, F., Samor, M. K., Joseph, N., Homer, C. S. (2016). Education, employment and practice: Midwifery graduates in Papua New Guinea. *Midwifery*, 41, 22-29. DOI: 10.1016/j.midw.2016.07.006

6. Rhodes, D., & Rumsey, M. (2016). An Innovative Approach to Supporting Health Service Delivery in the Pacific Appears to be Ticking Health Policy and Development Boxes. *Health Syst Policy Res*, 3, 1

7. Rumsey, M., Roroi, M., & Polaiap, A. (2012). Papua New Guinea Capacity Nursing School Diagnostic Audit: Final Report. Sydney, Australia: World Health Organization – Western Pacific Region and the University of Technology Sydney

8. National Department of Health PNG (2015) Nursing Council Annual Report 2015.

9. Thiessen, J., Rumsey, M., & Homer, C. (2016). Reproductive Health Training Unit Monitoring and Evaluation Final Report UTS: WHO Collaborating Centre.

10. Neill, A., & Rumsey, M. (2015). PNG Maternal and Child Health Initiative Phase II: Final Report. Sydney, Australia: World Health Organization Western Pacific Region, DFAT & PNG National Department of Health.

Additional impact indicator information

Additional impact indicator information

(Provide information about any indicators not captured above that are relevant to the impact study, for example return on investment, jobs created, improvements in quality of life years (QALYs). Additional indicators should be quantitative in nature and include:

- name of indicator (100 characters)*
- data for indicator (200 characters)*
- brief description of indicator and how it is calculated (300 characters.)*

Name

Maternal Mortality Estimation: WHO, UNICEF, UNFPA, World Bank, UN Pop. Division Inter-Agency Group

Indicator Data

In 2010 maternal mortality (MMR) in PNG was 238 Per 100 000 live births, in 2015 it was 215. During this time the number of live births also increased from 207 to 215 (thousands).

Indicator Description

Only estimations of maternal mortality in PNG are available, and many births remain unregistered. Live birth data are from World Population Prospects: the 2015 Revision. Population Division, Department of Economic and Social Affairs, UN Secretariat; 2015. MMR is calculated for women 15-49 years.