Birth across the Borders: A development study to explore maternal policy and practice in Thailand and Myanmar

Global Challenges Research Fund

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Final Report

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Introduction

Maternal mortality remains a significant challenge in global health. Despite a decline of 44% in the global maternal mortality ratio from 385 deaths in 1990 to 216 deaths in 2015 this is less than half the annual rate required to meet the Millennium Development targets for 2015 (World Health Organisation 2015). Globally, low income and conflict affected countries remain at high risk of maternal mortality. South East Asia has a number of countries which have had significant ethnic conflict including Myanmar, which is in the early stages of recovery from ethnic conflict. Thailand, as a DAC list upper middle income country, has made significant progress in the development of its healthcare infrastructure, provision and medical curriculum development, resulting in a significant drop in maternal mortality. The aim of this study was to examine key areas of research, policy and practice to gain further understanding of the contextual challenges and progress of maternal mortality in South East Asia with a focus on Thailand and Myanmar. The work was conducted in three phases including:

1) Rapid appraisal of the literature to identify contextual causes of maternal mortality within conflict areas of Asia
2) A review and analysis of policies and practices in Thailand which affect maternal mortality
3) Identification of key stakeholders and development of partnerships between Ulster University, UK; Chiang Mai University, Thailand and research and training organisations in Myanmar

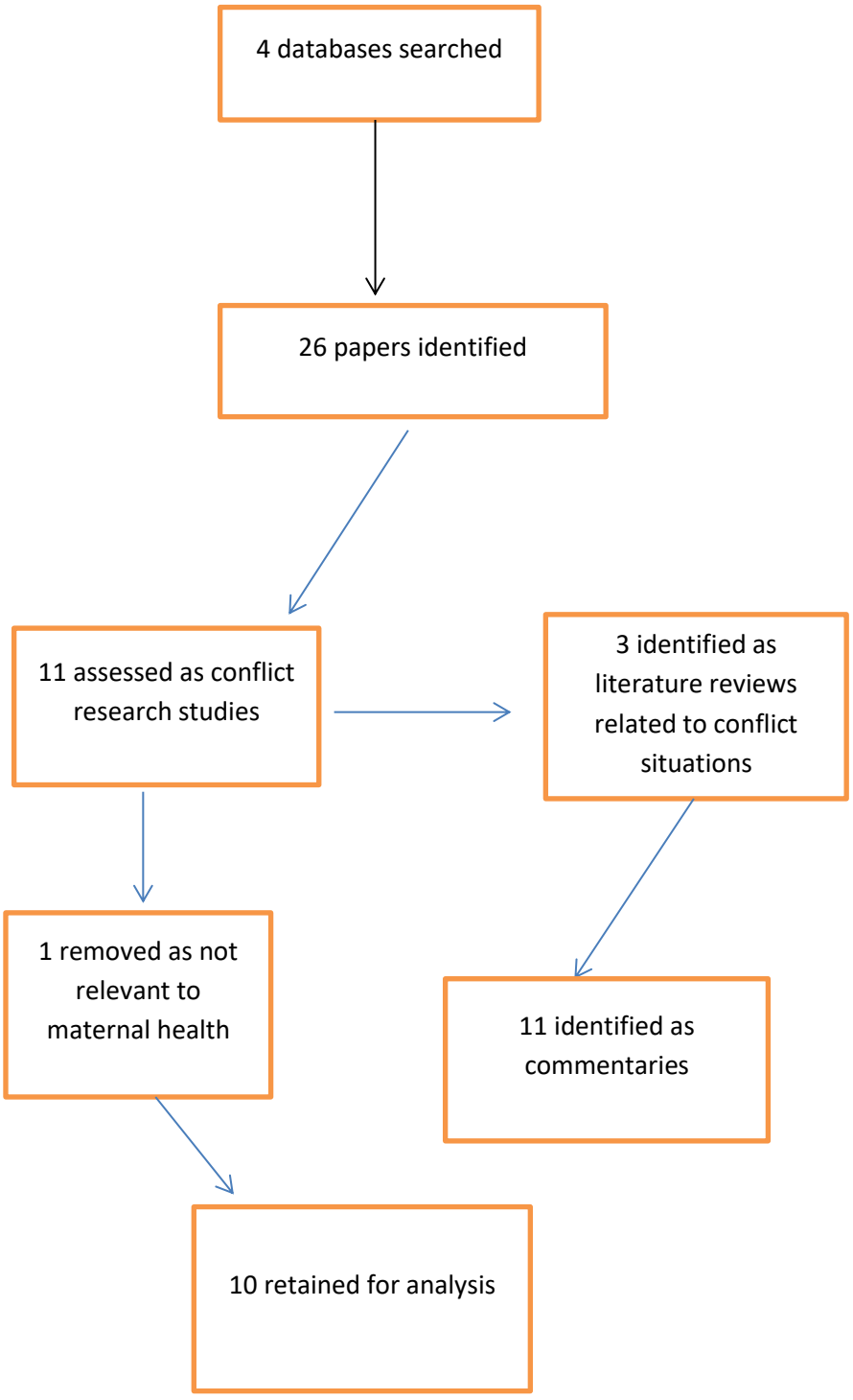
Rapid Appraisal of Literature on Maternal Mortality in Conflict Areas

Aim: To identify challenges and contextual causes of maternal mortality in conflict areas.

Methods: A researcher was contracted to complete a rapid appraisal of the literature related to maternal mortality and healthcare. Using a systematic search process, 4 databases were searched. Twenty six papers were identified of which ten were selected for assessment (See Figure 1). These included two observational studies, six cross sectional surveys with inclusion of population data, one cross sectional questionnaire and one ethnographic study. **Results:** A STROBE quality assessment tool was completed on all relevant articles with results ranging from high to poor quality. Emerging themes from the data included damage and neglect to health care services and infrastructure, reduced access to services and skilled care due to fear and conflict, distrust of authorities, increased polarisation and differential delivery of maternal healthcare between ethnic groups. Several of the studies highlighted an increased risk of poor maternal healthcare services and increased risk of maternal mortality due to trauma and disruption of every area of life as a consequence of war. A further theme was the impact to healthcare services due to the socio-economic, political and cultural dynamics of conflict which resulted in poor maternal health outcomes. **Conclusion:** The literature review showed a significantly higher risk of poor maternal health in low income countries experiencing or recovering from ethnic conflict. This in turn may lead to higher rates of maternal mortality.

Figure 1: Rapid Appraisal Maternal Mortality and Conflict Results

The focus of this rapid appraisal was on the literature available related to maternal health, maternal mortality and conflict. Studies published after 2000 were considered relevant due to the implementation of the Millennium Development Goals and Sustainable Development Goals.



Review of Thai Maternal Health Policies

Aim: To review Thai progress in maternal healthcare and identify transferable policies and practices to address the current maternal mortality rates in Myanmar. **Methods**: A UK researcher and two Thai researchers completed a review and analysis of global and local Thai policies and practices in maternal health care. Global and local Thai maternal mortality rates were obtained and analysed. International and maternal health policies were identified for transferable and relevant components. **Results:** International policies including the Safe Motherhood policy, Baby Friendly Initiative are part of the National Social and Economic Development Plans. National Key Performance Indicators related to maternal healthcare are implemented in Government and University hospitals through hospital policies and are monitored by the Ministry of Health. The introduction of the Universal Healthcare Service increased access to healthcare to all sections of the communities but challenges remain for marginalised ethnic groups in the North and South of the country as well as teenage mothers. To address this the Government implemented a policy focus on these identified marginalised groups to improve services. District and sub-districts of care are available but challenges to provide effective care exist for qualified staff in more remote areas of Thailand. Maternal health referrals are accessible from primary health care practitioners through to regional Government and University hospitals. Data related to maternal health and mortality is collected by the Ministry of Public Health through the government health system and household surveys. However, this does not include data from the private hospitals or individual clinics which exist outside the government system. **Conclusion:** The analysis of maternal policy and practices showed that Thailand has an effective healthcare system offering care to all sections of the community through the '30 baht' Universal Health Service.

Birth across the Borders Action Research Workshop

Aim: Action research workshop to identify current needs and form strategic partnerships.

Results: Through the GCRF funding a workshop was held to build international partnerships and capacity. Twelve participants from the Faculties of Nursing and Medicine, Chiang Mai University, University of Nursing, Yangon and Midwifery Schools in Myanmar, and the Faculty of Life and Health Sciences, Ulster University, attended a one-day workshop in Chiang Mai to discuss the risks and challenges related to maternal healthcare in Thailand and Myanmar. Challenges identified by the participants across both sides of the borders include staffing issues, a lack of and neglect of healthcare infrastructure, particularly in the remote areas of both countries; poor literacy and health knowledge in remote communities, cultural health beliefs and practices which increase the risk of poor maternal health outcomes and a lack of on-going professional support and post- registration competency skills. While there are deficits in care for marginalised groups in Thailand there is a significant governmental investment in the healthcare system. However, the healthcare infrastructure remains critically under-resourced in Myanmar, particularly in remote areas, with one midwife providing care for 8 – 10 villages (40 – 50,000 people). Following an action research approach it was agreed that the most urgent need was for a post competency programme for midwives and an education programme to address the cultural beliefs and practices.

Future Plans

This development study offered valuable insight into the progress and expertise that is available regionally in South East Asia, particularly in Thailand. Through the review of Thai policies and practices a clearer understanding of the establishment of universal care and targeted policies implemented by the Thai government. Following this study preparation for a cross border policy group will be implemented.

Following the workshop international partnerships have been established with Faculty of Health and Life Sciences, Ulster University; Faculty of Nursing, Chiang Mai University, the University of Nursing, Yangon and the Midwifery Schools in Nay Pyi Taw and Tuangoo, Myanmar. Approval will now be sought from the Ministry of Health, Myanmar for permission to work with the organisations prior to formal agreements being formed. A Memorandum of Understanding is being drafted and submitted between Chiang Mai University and Ulster University. Further partnerships will be sought in Humanities and Anthropology as the project progresses to understand the cultural implications related to ethnicity in a culturally diverse country.

The literature review highlighted a significant risk of polarisation of maternal healthcare between ethnic groups in conflict areas. Myanmar is in the early stages of implementation of a Universal healthcare system (2015 – 2030) for the Burman population but agreements in the current peace process state that ethnic groups in remote areas, i.e. Karen, Shan, Mon, Kachin, are responsible for their own healthcare systems. This increases the potential risk of differential access and standards of care to marginalised groups. While the maternal healthcare and staffing needs within Myanmar are critical there was recognition through this development project that in order to implement long term, sustainable changes for all the ethnic groups more reliable and evidence based baseline research was required. Following recommendations made by Professor Winters at a Global Challenges Research Fund workshop further funding will now be sought to establish baseline research specific to Myanmar. Two research proposals are in development which will be submitted in September and November to achieve this outcome.

Following the knowledge gained by this study an Ulster researcher based at Chiang Mai University has established contact and agreement with two non-governmental organisations in Karen State, Myanmar to collect maternal and infant morbidity data in two regions of Karen state, Myanmar with a population of 1,500 people living in very remote villages. These organisations are approved to work in both Karen State, Thailand and Myanmar. An application is currently in process to the Karen Department of Health and Welfare and regional Karen military groups for permission to implement the data collection. Submission for ethical approval for these projects will be sought from Chiang Mai University as well as ethical recommendations from Ulster University. The aim of this project is to establish the current status of child and maternal health indicators in a remote area of Karen state as well as gain an understanding of the lived experiences of Karen women's experiences of birth and access to care. Following this study an application will be made to the MRC/AHRC for larger project funding to complete a nationwide study including four of the largest ethnic groups.

Reference

World Health Organisation, UNICEF, UNFPA, World Bank Group and the United Nations Population Division (2015) Trends in Maternal Mortality: 1990 to 2015. Geneva: World Health Organisation.

Appendix

Rapid Appraisal Conflict Studies

Summary Tables

Total Studies	**10**
Observational Studies	2
Cross sectional questionnaire	1
Cross sectional surveys inc population data	6
Ethnographic	1

Study Title	**Study Design**	**Summary**	**Weaknesses**
Safe Motherhood in the context of Nepal. Bhattari 2008	Observational study with interviews and national statistics included. Aim expressed.	Nepal recognised as a low income country with high rate of maternal mortality, shortage of healthcare staff, poverty, illiteracy and political conflict. Results suggested upgrading and opening of new maternal facilities, integration of midwives into health services, education on women's needs during pregnancy and increased awareness of maternal services. Clear recommendations at end.	Unclear sampling strategy. Focus on results but limited information of analysis process, data checking or quality assurance.
Public Health and Health Services Development in post Conflict Communities: A case study of a safe motherhood project in East Timor Marlowe et al 2009	Observational study with focus on historical context and community settings. Included a mapping exercise to all primary healthcare facilities to examine facilities, equipment, staff and qualifications. Semi-structured interviews included data on use of facility including numbers of patients seen, births assisted monthly and perceived barriers to	Key findings included inadequate human resource capacity and infrastructure, language barriers, distrust of authority, community dynamics, service provision focus, need for co-ordinated development assistance,	Limited information on numbers of participants, study design or data collection process. No information on ethical approval process, data analysis, academic models or structure.

	use. A group discussion included topics such as birthing practices, cultural norms and perceptions of local hospitals.		
Antenatal care utilisation in a conflict-affected district of Northern Sri Lanka. Sivaganesh & Senarath 2009	Cross sectional study. Data collected from 392 women at 36 week gestation using interviewer administered questionnaire.	Results showed 55% had experienced conflict, 68% registered for ANC by public health midwife. 31% registered before 12 weeks. 38% visited at home, 38% had first clinic visit before 12 weeks and 90% had at least 4 clinic visits. AN access and use significantly lower in those affected by conflict, in active conflict areas, lower education and not included in decision making.	Good contextual information. Clear description of design. Justification of sample size. Ethical approval obtained and recorded. Clear description of data collection process, information gathered and analysis process. Results clear and well structured. Limitations recognised and included.
A Study of Refugee Maternal Mortality in 10 countries, 2008 – 2010 Hynes et al 2010	Maternal Death Review Reports used to analyse maternal deaths occurring between 2008 – 2010.	Countries included Kenya, Bangladesh, Nepal and other African countries. 144 women reported to have died between dates. 108 successfully investigated and represented 25 refugee camps and 12 nationalities. Mean age was 27 and on average women had 5 pervious pregnancies. In final pregnancy had 3 antenatal visits. 82% of deaths occurred after delivery or abortion and 46% occurred with 24 hours. 69% happened within 7 days of delivery. Most reported deaths occurred at a health facility within the camp or referral centres.	Good definition of Maternal Mortality, reporting system and analysis process. Some qualitative data collected to clarify circumstances when required. However, focus primarily on Africa and Kenya.

Targeted Doctors, missing patients: Obstetric health services and sectarian conflict in northern Pakistan. Varley 2010	Ethnographic study of obstetric services and patient access during Shia-Sunni hostilities in Pakistan.	14 months of ethnographic fieldwork in Gilgit town. Part of larger study which involved multi-sited participant observation, interviews, policy and clinical records analysis. Included 50 Sunni women, 30 Sunni, Shia biomedical service providers. High emphasis on consequences of conflict on maternal health and access to services. Acknowledged conflict related service deprivation and enactment, use of sectarian identity in clinical settings leading to differential treatment and patient perceived adverse health outcomes.	Clear description of data collection. Less on sampling technique but ethics acknowledged and addressed. Excellent description of findings and role of researcher within the context (married to a local sunni man).
Maternal health care amid political unrest: the effect of armed conflict on antenatal care utilisation in Nepal. Price and Bohara 2012.	Quantitative study using household survey data and sub national conflict data. Good explanation of variables and statistical methods. Analysis methods included count regression techniques and sub national data.	Data obtained from two sources: Nepal demographic and Health Survey and Informal Sector Service Centre. Recognition of multiple factors influencing use of maternal health services. Also issues of access, demand and supply including travel risks vs need of service. Displacement issues also identified as risk to lack of access.	
The Effects of Disaster on Women's Reproductive Health in Developing Countries. Swatzyna & Pillai 2013.	Data gathered from 128 countries. Quantitative study focused on population data. Structural equation analysis used. Definitions of	Clear definition of disasters used to include storms, floods, earthquakes, hurricanes and droughts as well as political conflict.	Unclear abstract. Focus on reproductive health less clear than other impacts of disaster.

	units/variables of analysis clearly stated. Clear reporting of results. Limitations acknowledged and discussed. Good application to academic models of conflict and disaster.	Consequences of conflict include poor birth outcomes, disruption of social networks, and lack of a voice in recovery.	
Symptoms Associated with Pregnancy Complications along the Thai-Burma Border: The role of conflict violence and intimate Partner Violence Falb et al 2014.	Results taken from cross sectional survey of Reproductive Health Assessment Toolkit for Conflict-Affected Women designed by Division of Reproductive Health at the Centers for Disease Control. Random sample partnered women aged between 15 – 49 years of age living in 3 refugee camps who had live birth in previous 2 years. Variables included intimate partner violence, conflict violence, self-reported pregnancy complications and demographic co-variates. Types of violence included physically hurt, threatened with a weapon, shot or stabbed, detainment against own will, subject to improper sexual comments, forced to remove clothing, unwanted advances including touch or kissing, and forced sexual intercourse with threat of harm. Lifetime emotional, physical or sexual IPV also assessed.	Results suggested that any form of lifetime violence victimization was associated with 3.0 increase in odds of symptoms. Conflict violence was strongly associated with heightened risk of self-reported symptoms associated with women in refugee camps on Thai-Burma border. Recommendations included consideration of long term impact of conflict violence on maternal health to better meet needs of refugee women. Average age was 27 years and 75% were Karen. Approximately 1 in 5 reported spontaneous or induced abortion or still birth among previous pregnancies and 1 in 6 (15.4%)reported a form of violence through their lifetime. 30% reported conflict violence.	Good explanations of variables. Combined focus of conflict and PIV within study but clear explanation of both offered. Limited sample size and statistical power identified in study. Potential of under-reporting due to stigma of victimization. Self-reporting may be susceptible to bias. Unable to make causal inferences or account for all unmeasured confounding due to cross sectional design. No mention of ethical process.
Factors Associated with non-utilisation of Health service for childbirth in Timor-Leste: evidence	2 stage national survey using validated questionnaires to gain information from 26	Long history of armed conflict in Timor Leste with most of infrastructure	Clear statement of aim. Retrospective study so risk of recall bias,. No

from 2009 – 2010 Demographic and Health Survey. Khanal eta l 2014.	clusters in 13 districts. Aim was to identify factors influencing non-use of health facilities for childbirth. Good explanation of variables and demographics based on literature review and included birth order, ANC services and attendance and pregnancy complications. Ethical process included and good explanation of analysis process.	destroyed. Now in early stages on recovery. Results suggested 74% delivered last child at home. Lack of education, low household wealth, rural residence all associated with non-attendance and birth at health facilities. Working mothers with high parity also poor attenders for antenatal care. In total only one quarter of Timorese women delivered at a health facility. Future interventions should target those groups identified through improvement of facilities.	other limitations highlighted.
Utilisation of maternal health care services in post conflict Nepal Bhandari et al 2015.	Based on secondary analysis of Nepal Demographic and Health Survey data 2006 and 2011. Sample was women who had given birth to at least one child in past 5 years preceding the survey. Included comparison of health care facilities and services between 2006 – 2011. Variables included minimum of 1 AN visit, delivery by skilled birth attendant and minimum of one postnatal visit. Skilled birth attendant included auxiliary nurse midwives, nurses and medical Drs.	In 2011 85% of sample attended ANC at least once during pregnancy. Skilled health workers for delivery attended 36% and 46% of sample were seen once postnatally. Nearly 60% received ANC in 1st trimester. While use of health services continued to grow during and post conflict there was an increase following the peace agreement. Unclear conclusion if armed conflict had negative impact on healthcare services. Some studies showed that the armed conflict destroyed much of the infrastructure, displaced and killed many health workers while other studies	Good explanation of system, history and current situation included. Data collected from nationally but affected by access to remote areas. Purely quantitative study focused on healthcare services but more mixed methods studies are required.

		suggested that in Maoist areas the Peoples Government monitored health care services closely which led to better health performances in these regions.	