POLICY BRIEF

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www.chp.ac.za | 011 717 3420 | **Further information:** Please contact Associate Professor Matthew Chersich at matthew.chersich@wits.ac.za

Source:
This policy brief reports on the results of the systematic mapping of maternal health research in LMICs between 2000 and 2012. It was compiled from a report produced for the **Multilateral Association for Studying health inequalities and enhancing north-south and south-south COperaTion (MASCOT)** entitled "*Report on Systematic Review of Health System, Health Promotion and Clinical Interventions for Improving Maternal Health in Low- and Middle-Income Countries*." The full report is available at http://www.mascotfp7.eu/mascot-resources/mascot-tools/

Authors:
Matthew Chersich, Duane Blaauw, Francisco Becerra, Ashar Dhana, Mari Dumbaugh, Josephine Kavanagh, Elinor Kern, Langelihle Mlotshwa, Siphiwe Thwala, Emily Vargas, Loveday Penn-Kekana.

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Mapping maternal health research in low-middle income (LMIC) countries

A systematic review reveals inequitable research attention between maternal mortality research need and studies done

Introduction

Although maternal mortality rates are declining globally, only 13 countries are likely to achieve the targets of Millennium Development Goal 5 by 2015.[1] Inequities in maternal health persist, both within and between higher and lower income countries.[2] Poor and rural women continue die of maternal related causes at far greater rates than their richer, urban-dwelling counterparts.

Leading direct causes of maternal death in Low- and Middle Income Countries (LMICs) are hypertensive disorders, haemorrhage, sepsis, and unsafe abortion. Important indirect causes include infection with HIV and malaria.[3]

Strategies for promoting safe motherhood are well documented[4], yet weaknesses in the evidence may limit the applicability of these strategies to low-middle income countries (LMIC). Much of the evidence to date focuses on clinical interventions to reduce mortality, with fewer studies on the reach, accessibility and acceptability of interventions related to health systems, health promotion and the social determinants of health.[5] The evidence was largely gathered from retrospective and descriptive studies[6], while major causes of maternal mortality such as haemorrhage and unsafe abortion are under-represented.[7]

The main purpose of this study was to assess the extent and distribution of research activities undertaken in LMICs on the key causes of maternal deaths and on health systems' interventions to improve maternal health. The review assessed maternal health inequities in LMICs by examining whether the distribution of maternal health research corresponds to the burden of disease in LMICs.

Key findings:

- There is a marked disjuncture between the burden of maternal deaths in a country compared to the number of studies done.
- South Africa has a high number of studies, but these are mainly on HIV. Jamaica, Thailand and Brazil have high numbers of studies in relation to maternal deaths. Niger, Angola, the Democratic Republic of Congo and Sierra Leone have very high numbers of maternal deaths, yet little maternal health research is being done.
- Fewer than 10% of studies address vulnerable groups.
- The number of studies on maternal health has increased over time.
- A person from a high income country was first author for half of the studies done in LMIC (914/1853; 49.3%).

Policy implications:

- This research highlights existing gaps in systematic review evidence in maternal health and the available research data that can be used in reviews to fill these gaps.
- The map will be a searchable resource open to any user, research group, funder or policy-maker to assist in identifying the most policy-relevant topics for reducing health inequalities in maternal health in LMICs.
- The map contributed to informing the World Health Organization's guidelines on health promotion for maternal health.

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Research Methods

The review included:

- Original studies and systematic reviews on maternal health interventions, including pregnancy, childbirth, postpartum, adolescents and abortion
- All study designs (except descriptive studies documenting prevalence and needs assessments) provided they reported an outcome of an intervention
- All maternal health literature on studies in LMICs between 2000 and 2012
- Clinical conditions included were haemorrhage, hypertension, HIV infection, sexually transmitted diseases, and malaria, as the leading cases of maternal mortality globally
- Clinical interventions, health system interventions, health promotion and community-based interventions for maternal health
- Research articles in English, French, Japanese, Portuguese and Spanish

Findings

The database search yielded 45 959 articles. This was reduced to 33 888 once duplicates were removed. After screening for abstract and title, 4472 were marked for full text review, an inclusion rate of 13.2%. Of these, full texts of 300 articles could not be found and of the 4059 full texts reviewed, a further 1540 (36.9%) were excluded.

Key reasons for exclusion included that the study was not on maternal health, or did not describe an intervention or outcome, or had single clinical interventions other than the tracer conditions.

In total, 2489 studies were included. Of these 1540 were on the clinical tracer conditions; 1146 were on health systems; 382 were community-based, while 546 were on health promotion.

Interventions targeted women in childbirth, during or after pregnancy, as well as the involvement of men in maternal health. Interventions included those provided to individuals or groups of women (in childbirth, during or after pregnancy); to staff providing services to these women; to the facilities where these women receive services; or to the community where these women live, including men in these communities.

The number of studies on maternal health has increased progressively over time. In 2000 there were fewer than 900 studies; by 2011, it doubled to just over 1800.

Descriptive studies outweighed other research designs by some margin. Intervention studies on health systems, community, health promotion or the tracer conditions were the smallest group of studies. However, studies on health systems, promotion and community rose over time, contributing just over 60% of all studies from 2008 onwards.

Limitations

While the review team was situated across a dozen countries and four continents, it did not have global coverage which may have biased the studies included in the review. The quality of the studies was not assessed. Most of the search engines used were biomedical which may not index all studies on socio-ecological or environmental interventions, such as improving water for better maternal health.

Conclusion

The report revealed a marked disjuncture between the need and number of studies done on maternal mortality. The distribution of studies was concerning, with some regions having half the focus on equity as other regions. Overall, fewer than 10% of studies address vulnerable groups.