

***“INNOVATIVE COMMUNITY INTERVENTIONS
(ICIs) TO IMPROVE STRATEGIES FOR
IMPLEMENTATION OF MATERNAL AND
NEONATAL HEALTH SERVICES IN FRAGILE
STATES” 2011-2012***

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Outline

- Background
- Objectives
- Methodology
- Review findings
- Overcoming Challenges

Background

- Conflict-affected and fragile states have the highest burdens of maternal and neonatal morbidity and mortality in the world.
- Although fragile states constitute 20% of the world's population, they contain a third of the world's poor people living on less than US\$1/day, a third of the world's maternal deaths and nearly half of all under-five deaths (World Bank, 2007; WHO, 2005).

Background

- The social and economic impact of maternal deaths places further pressure on fragile states, where 54% of people live in poverty, compared to 22% for low-income countries generally (World Bank, 2010).
- Many are 'off-track' to achieving the globally set Millennium Development Goals (MDGs), yet in many parts of such fragile states, innovations and achievements are occurring

Review Objectives

- To identify the community-based maternal and neonatal health interventions in fragile states
- To define the innovations in terms of products, processes, position and paradigm
- To identify the barriers and enablers for the particular intervention

DFID Classification of Fragile States by Category (DFID, 2005)

- **Collapsed state** Somalia, Haiti
- **Conflict** Chad, Nepal
- **Post-conflict or Political Settlement** Afghanistan; Burundi, DRC, Liberia, Sierra Leone, Sudan, Timor Leste, Eritrea, Solomon Islands, Guinea-Bissau
- **Unable/unwilling (recalcitrant)** Zimbabwe, Burma, Uzbekistan, Angola
- **Gradual reform (with occasional setbacks)** Cameroon, Ethiopia, Kenya, Nigeria, Yemen, Cambodia, Tajikistan, Georgia, PNG, Lao PDR, Indonesia, The Gambia, Dominica, Comoros Islands, Sao Tome and Principe, Azerbaijan
- **Arrested development, decline** Cote d'Ivoire, Guyana, Niger, Kiribati, Vanuatu, Tonga, Djibouti, Guinea, Togo, Mali, Congo

Innovation

Innovation in service delivery and organization is a novel set of behaviours, routines, and ways of working that are directed at improving health outcomes, administrative efficiency, cost effectiveness, or users' experience and that are implemented by planned and coordinated actions" (Greenhalgh, et al., 2004).

We used innovation within the community to focus community based interventions in maternal and neonatal health.

Framework: Product, Process, Position, and Paradigm innovation

- Defining MNH interventions in fragile states in terms of Product, Process, Position, and Paradigm innovation (<http://www.humanitarianinnovation.org/innovations#1>)
- 'Product innovation' – changes in the things (products/services) which an organization offers (e.g. tools, guidelines)
- 'Process innovation' – changes in the ways in which products and services are created or delivered (e.g. community mobilisation)

Methodology

- 'Position innovation' – changes in the context (situation, background) in which the products/services are framed and communicated (partnership with local stakeholders)
- 'Paradigm innovation' – changes in the underlying mental models which shape what the organisation does (increasing emphasis on local ownership e.g. community ownership and leadership of responses to crises as an alternative to internationally dominated responses)

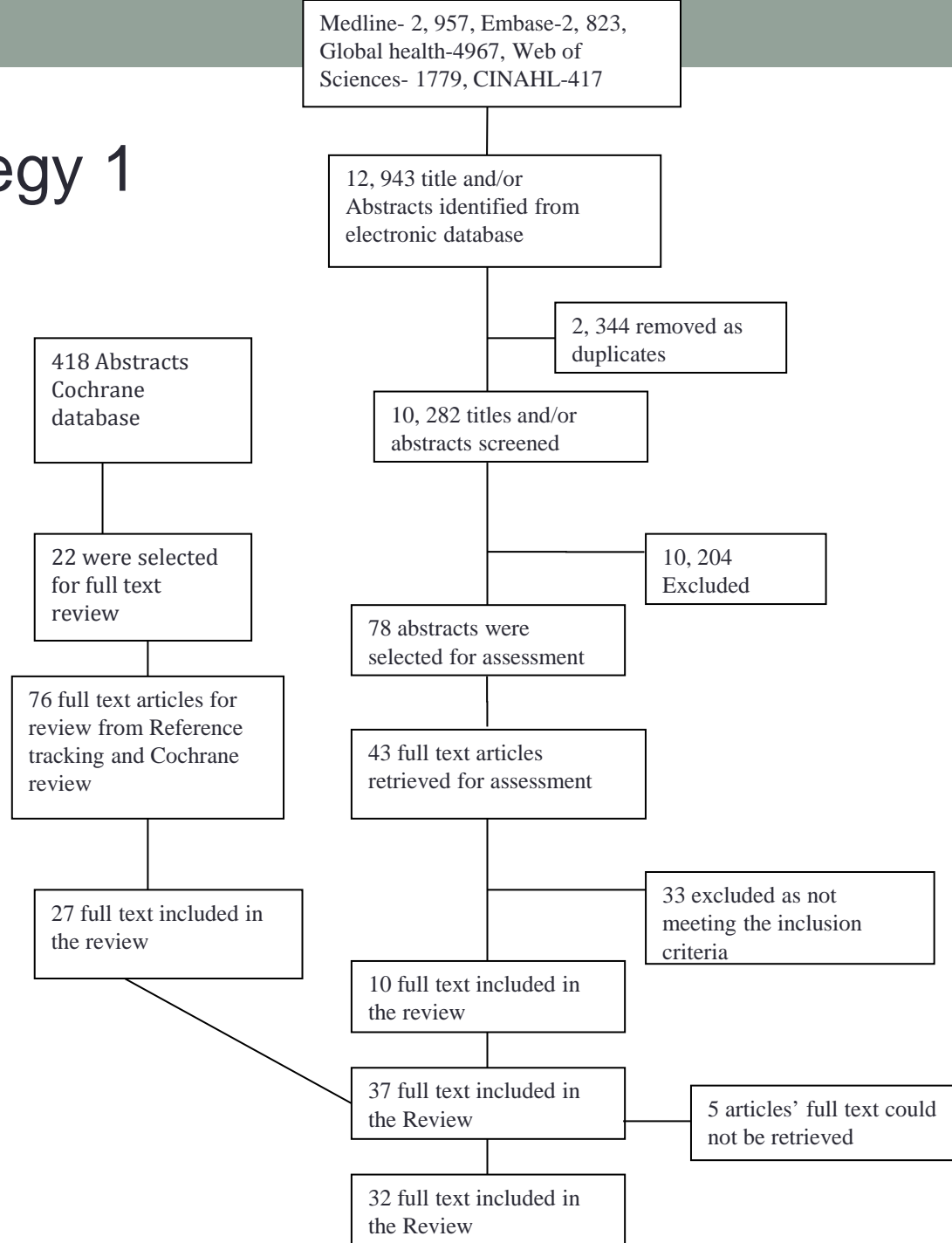
Methodology

Search Strategy

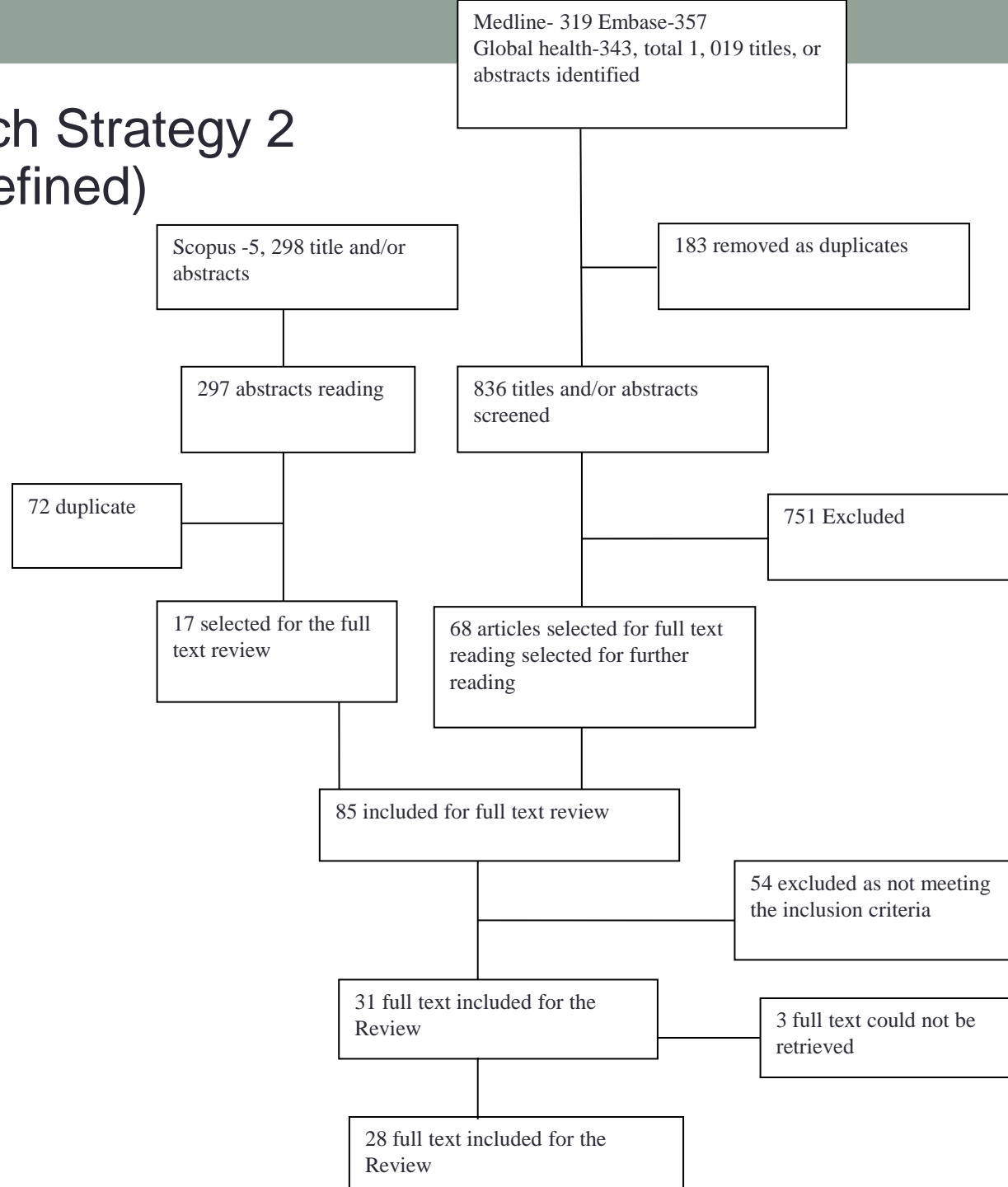
- We searched in major databases, including Medline, Embase, CINAHL (Cumulative index for nursing and allied health library), Web of Sciences, Scopus and Google Scholar.
- Formal search techniques, index terms or key words in electronic databases, as well as “snowball” methods (pursuing references cited in other references), were used
- Searching with proposed search strategy and redefined search strategy!!!

I still need to merge these search findings

Search Strategy 1



Search Strategy 2 (Redefined)



Methodology

Study Selection and Quality appraisal

- All types of community based interventional studies assessing the impact of interventions for maternal and neonatal health in fragile states (classified by DFID, 2007) were eligible for inclusion.
- Critical appraisal checklist was used for Quality appraisal of studies. Framework available from Solutions for Public Health <http://www.sph.nhs.uk/search?SearchableText=critical+appraisal&x=0&y=0> <http://www.cebm.net/index.aspx?o=1913>).
- Survey Monkey Software was used to store the retrieved information

Methodology

Study period March 2011 to the end of April 2012

Inclusion criteria

- Studies of innovations aimed to improve MNH in districts/local communities of fragile states.
- Studies describing innovation processes within outreach clinics/districts/communities of fragile states aimed at improving MNH outcomes.
- Studies related to the effectiveness of various interventions for MNH or studies demonstrating improved MNH outcomes.

Methodology

Exclusion Criteria

- Studies conducted in developed countries
- Child health (not including Neonatal health or the studies conducted in child more than one month old)
- Studies merely providing recommendations without actual assessment of interventions
- Publication prior to 1990
- Language of publication not English

Methodology

Narrative synthesis method was used to document important innovations in the communities of fragile states

Review Findings

- Total 60 (32+28) studies were included in this Review.
- Several community interventions have been implemented and evaluated in Asia, Africa, Oceania, particularly in Nepal.
- Studies were found from the countries such as Nepal, Nigeria, Ethiopia, Indonesia, Sierra Leone, Mali, Papua New Guinea (PNG), Sudan, Afghanistan, Angola, Burma, Liberia, Haiti, and Congo.
- Forms of innovation were documented in terms of **P**roduct, **P**rocess, **P**osition, and **P**aradigm (4Ps).

Review Findings

Products e.g.

Integrated Management of Childhood Illness (IMCI) and the provision of guidelines for the prevention of illness in children including neonates.

Home Based Life Saving Skills (HBLSS) guidelines were used to educate community people to prevent postpartum hemorrhage

Review Findings

Process e.g.

Training community health workers

- Majority of studies focused to training of front line health workers such as use of Community Health Workers (CHWs), Traditional birth attendants (TBAs), Female community health volunteers, village health volunteers can reduce neonatal mortality
- Common strategy used were community mobilization for the establishment of community funds and transportation helps to prevent maternal mortality
- Training mother's groups to create awareness in the community and early identification of danger signs in mothers and neonates were found to be effective.

Review Findings

Process e.g.

Community financing

- Community-managed loan and transport system can be established in the community helping to reduce the delay in accessing the obstetrical emergencies
- Fund increases women's self-efficacy and autonomy in health care decision-making

Review Findings

Position e.g.

- Having health care providers in community health centers, who are accessible to the community people and are well trained in the community management of neonatal illness helps to improve health care utilization
- having adequate infrastructure like birthing homes and referral to deliver the services as an important requirement for the successful delivery of Maternal and neonatal health interventions

Review Findings

Paradigm e.g.

- Greater involvement of local stakeholders, community action and participation in decision making
- Community involvement in recognition and treatment of ARI as shown by identifying danger signs by mother and seeking treatment from FCHVs.
- Community treatment of Acute Respiratory infections, and Diarrhoea to prevent neonatal deaths

Demand side Interventions

Community participation and mobilization

- Information on availability of quality health services
- Involvement of community leaders, opinion leaders, community members, mothers, women of reproductive age and under five children
- Involvement and motivation to various kinds of CHWs
- Behaviour change activities e.g. communication campaign, culturally significant program
- Training mothers group
- Organisation of community transports, vehicles

Decreasing financial barriers (distance cost, service cost, opportunity cost)

- Fund generation, community managed emergency loan fund (including transportation)
- Fee exemption for delivery care
- Vouchers, equity funds, financial incentives for seeking care
- Community Health Insurance
- Establishment and management of insurance scheme
- Arrangement of vehicles for emergency transportation

Supply side interventions

Decreasing geographical barriers

- Birthing homes or birthing centers
- Outreach visits for remote villages
- Making transport available (including ambulances)
- Delegation of tasks to health workers including CHWs and TBAs
- Motivating CHWs
- Collaboration with TBAs
- Training community health workers
- Establishment of mobile camps

Decreasing health service barriers

- Developing tools and guidelines
- Improving attitude of health service providers
- Upgrading facilities
- Timely referral
- Monetary incentives for staff
- Decreasing cost of services
- Increasing accessibility of emergency services

**Reduced maternal and neonatal
mortality and morbidity**

Challenges

Designing the Review

- Initially planned for realist review methodology (We conceptualized ICIs as “complex interventions” subject to individual and contextual factors that might influence the outcomes of an intervention).
- Realist review methodology is described as being particularly well suited to examining how complex interventions work (Pawson, Greenhalgh, Harvey, & Kieran, 2005).
- The realist approach take account of the context in which the implementations have been used, as “context” is critical in determining the success and appropriateness of an intervention.

Overcoming the Challenges

Review method

- We decided to avoid the realist review despite the fact that we had retrieved information for the review
- It was impracticable to analyze the range of heterogeneous mechanism on how the intervention works on diverse settings for different types of interventions (due to the given time and resource constraints).

Overcoming the Challenges

Redefining the inclusion criteria

- study question was broad and it was necessary to clearly define which aspects of the studies to include in the review (interventions were focused to studies during pregnancy, delivery and post partum)
- Studies held in clinical settings were avoided, however, studies assessing the community health workers' effectiveness in the clinical setting were included as this is relevant to our Review.

Overcoming the Challenges

- Assessing the different kind of literatures
- Using various study types together caused difficulty to assess the study qualities for the principal investigator (e.g. Cross sectional, before-after, case control, RCT and cluster RCT, reports)

Challenges

- Access to database was not possible after certain time (I accessed the online database using my Australian University journal which was given for my extended project work, otherwise it would not have been possible to access all these data sets)
- Access to full text was not possible for some articles (costly to retrieve)
- Ethical approval (this study has been approved by Nepal Health Research Council)
- Access to internet (sometime up to 18 hours of power cut, internet was too slow)
- Access to networks of others advice
- Capacity of reviewer to execute reviews (it was challenging for the main reviewer to conduct review without advanced training)

Limitation

- **Electronic literature search** was held twice (Principal investigator could not seek assistance with the librarian immediately after start of the Review)
- Because of the volume of retrieved articles and other cross-references, the author could not search Grey Literatures in all categories as mentioned earlier in the proposal (Publication bias)
- Language (Only English Language literature were used)
- Only published articles were used

Conclusion

- Various innovative community interventions (especially use of front line health workers to spread the awareness message, community financing) are feasible and useful, and many of them have potential to improve MNH in resource poor settings like fragile states.
- Having limited experience in the field, it was very challenging for me to conduct this review, but, now, I have understanding of how the question should be framed to get an appropriate answer and of course there is no shortcuts!!!

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Thank you!!