Global Experience of Mid-level Health Workers for Delivery of Health related Millennium Development Goals

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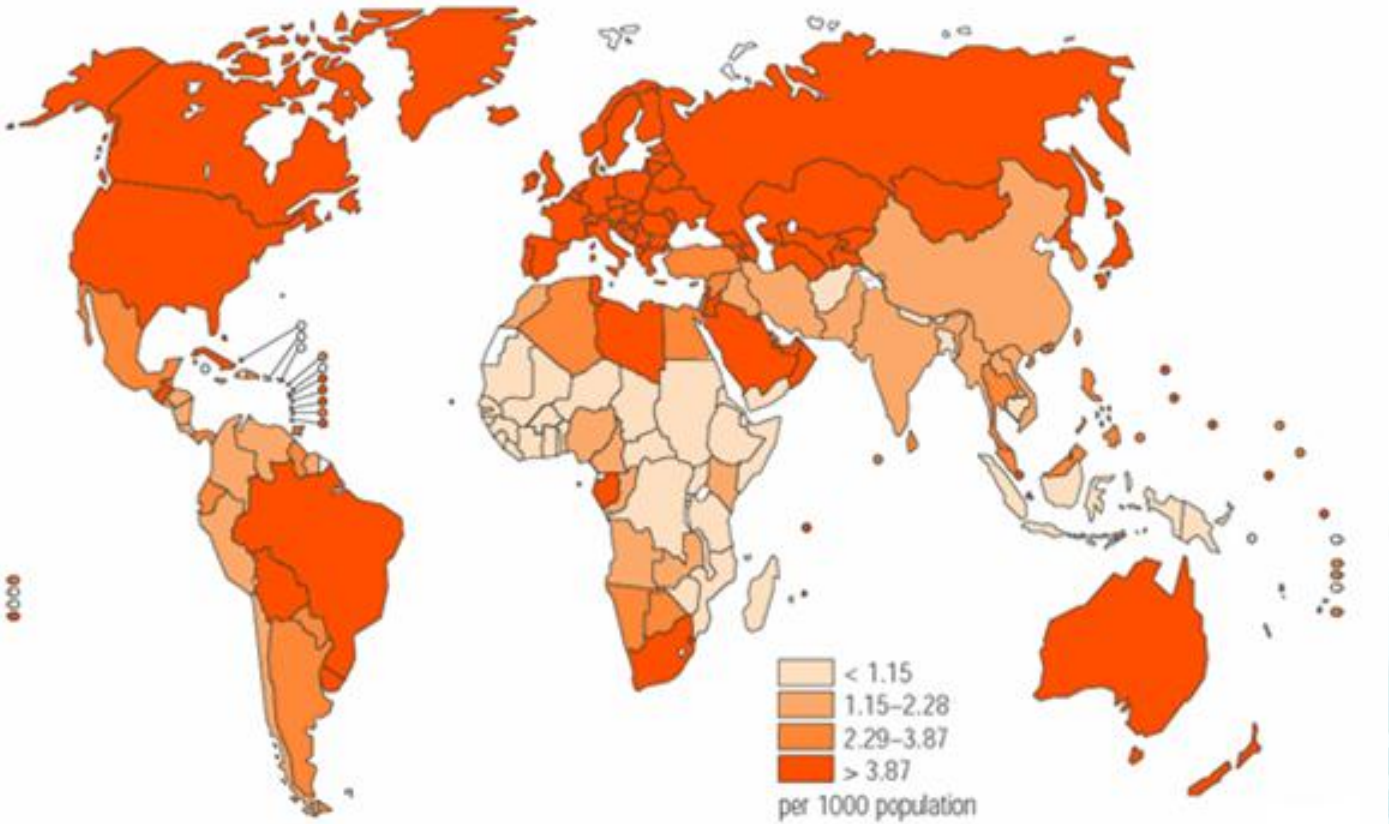
On Behalf of the Global Health Workforce Alliance

Global distribution of health workers

WHO estimates the global health worker shortfall to be over 4.2 million



Source: WHO. The world health report 2006

Background

- Shortage of health workers is a hindrance in achieving the MDGs.
- This recognition parallels the awareness that a range of community, outreach and facility health workers can play a major role in community mobilization.
- While there is some debate about the definition of midlevel health workers, they are generally defined as those who have received less (short) training than doctors but who perform aspects of doctors' tasks.

Definitions
Mid-level health workers

‘Health cadres who have been trained for shorter periods and required lower entry educational qualifications, to whom are delegated functions and tasks normally performed by more established health professionals with higher qualifications’

Delanyo Dovlo, 2004

GHWA and MLHWs

- 2010: online discussion facilitated by the Global Health Workforce Alliance

- 2011-2012: a systematic review on MLHW and 8 country case studies commissioned

Select key messages

- Increase in MLHWs should be among the policy options considered by countries facing shortage
- MLHWs should have “international” recognition and be integral part of health systems, rather than “substitutes”
- Countries to ensure a positive practice environment, including, supervision and provide opportunities for career development
- Ensure effective M&E throughout the policy and implementation process for the scale up of MLHW
- Regulatory and professional bodies should be established to govern and speak on behalf of MLHWs, including on issues of remuneration, scopes of practice and the relationship with other professions.

Global Experience of Mid-level Health Workers for Delivery of Health related Millennium Development Goals: A Systematic Review and Country Case Studies

by

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Mid-level health workers as defined in the new study

- Health care providers who are not 'medical doctors' or physicians but who deliver clinical care in communities, primary care facilities and hospitals.
- Authorized and regulated to work autonomously, to diagnose, manage and treat illness, disease and impairments, and engage in preventive and promotive care at primary and secondary health care levels.
- They have a formal certificate and accreditation through their countries' licensing bodies.

Objectives

Systematic Review

Assessment of the evidence base of the impact and effectiveness of global experience of MLHWs in delivering care related to maternal and child health, HIV/AIDS, and nutrition MDGs. Special focus on:

- Typology of MLHWs
- Training practices
- Supervisory practices
- Standards for evaluation and certification
- Deployment patterns
- In-service training

Country Case Studies

Undertook 8 country case studies to evaluate the typology, impact, and performance assessment of the practices of MLHWs

- El Salvador
- Peru
- Mozambique
- Tanzania
- Zambia
- Indonesia
- Bangladesh
- Pakistan

Global Systematic Review

Methods

Criteria for considering studies for systematic review:

- **Types of participants**

MLHWs are health care providers who are not 'medical doctors' or physicians but who deliver clinical care in communities, primary care facilities and hospitals. They may be authorized and regulated to work autonomously, diagnose, manage and treat illness, disease and impairments, as well as to engage in preventive and promotive care at primary and secondary health care levels.

Methods

Studies were included if:

- MLHWs undertook activities for achieving health (e.g, maternal and child health, infectious diseases such as HIV/AIDS, malaria, TB) and nutrition MDGs.
- MLHWs undertook activities for mental health and non-communicable diseases/conditions.

Studies were excluded if:

- MLHWs were specialized in health administration and/or are only involved in performing administrative tasks.
- MLHWs provided rehabilitative services.
- MLHWs provided dentistry services.

Methods

Types of recipients

There were no restrictions on the types of patients or recipients.

Types of studies

- Experimental designs and evaluations of MLHWs in various settings.
- This review performed an assessment of the global evidence on the effect of MLHWs in delivering health care to the population.

The following three comparisons were included:

- one type of MLHW *versus* another type of MLHW
- MLHW *versus* doctors or lay health workers (LHWs)
- MLHW + doctors or LHW *versus* doctors or LHW

Methods

Literature search, information sources, and abstraction

- All available electronic references libraries of indexed medical journals and analytical reviews
- Electronic reference libraries of non-indexed medical Journals
- Non-indexed journals not available in electronic libraries
- Pertinent books, monographs, and theses
- Project documents and reports
- Correspondence with authors of relevant papers

Methods – Country Case Studies

8 Case studies

-Latin America (El Salvador, Peru)

-Africa (Mozambique, Tanzania, Zambia)

-Asia (Indonesia, Bangladesh and Pakistan)

countries were selected on the basis of existing MLHWs programs; having regulatory framework that allows task shifting; having past or current implementation experience at scale; having identifiable focal points at MoH/WHO regional/national offices.

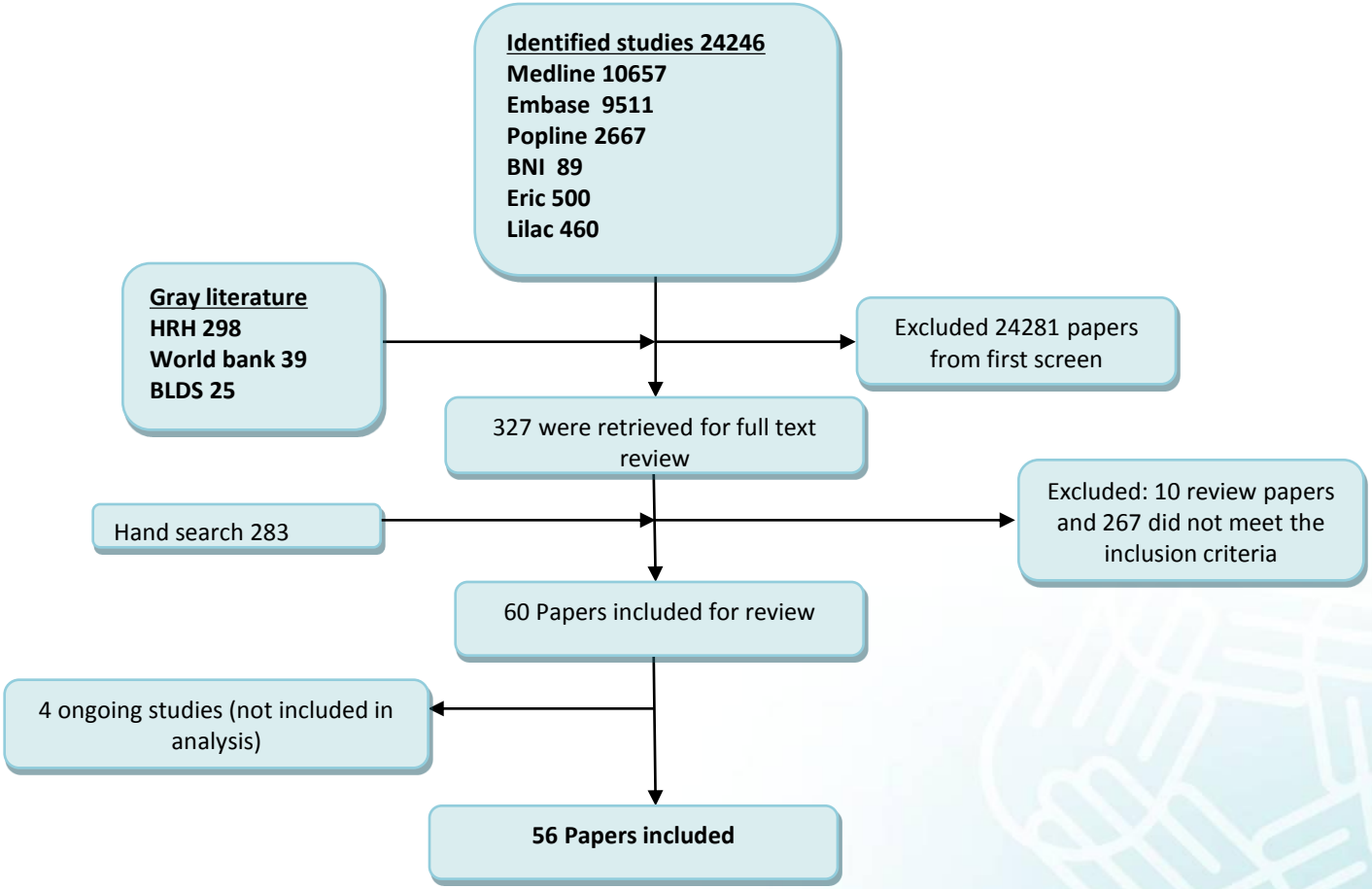
Methods – Country Case Studies

In this process authors congregated information related to:

- Program description (duration, scope, target population and overall budget)
- Linkages to specific MDG targets and indicators
- Role of MLHWs in the program with specific responsibilities
- Educational levels and training requirements for MLHWs
- Supervision, mentoring and evaluation experience
- Linkages of MLHW programs to overall health system
- Salary and remuneration levels
- Career pathways for MLHWs
- Any in-country evaluations done on MLHW

Global Systematic Review

Flow diagram



Results

Midwives *versus* GP or GP with midwives

Outcomes	RR (95 % CI)	No. of studies	Heterogeneity
Caesarean births	0.92 (0.81 to 1.05)	6	I^2 32% and Chi^2 p 0.19
Postpartum Hemorrhage	1.03 (0.82 to 1.29)	4	I^2 0% and Chi^2 p 0.84
Overall fetal or neonatal deaths	0.95 (0.69 to 1.30)	5	I^2 0% and Chi^2 p 0.84
Preterm births	0.87 (0.73 to 1.04)	5	I^2 0% and Chi^2 p 0.58
Admission to neonatal intensive care	1.03(0.77 to 1.38)	6	I^2 58% and Chi^2 p 0.04
Use of intrapartum regional analgesia	0.88 (0.81 to 0.96	6	I^2 0% and Chi^2 p 0.49
Episiotomies	0.83 (0.77 to 0.90)	6	I^2 42% and Chi^2 p 0.12
Complete abortion	1.01 (0.99 to 1.04)	1	I^2 0% and Chi^2 p 0.84

Results

Nurses *versus* doctors

Outcomes	RR (95 % CI)	No. of studies	Heterogeneity
Repeat consultation	0.90 (0.35 to 2.32)	3	I^2 93% and Chi^2 p <0.001
better physical function	1.06 (0.97 to 1.15)	4	I^2 78% and Chi^2 p 0.0004
attendance to follow-up visit	1.26 (0.95 to 1.67)	3	I^2 84% and Chi^2 p 0.002
attendance at emergency after receiving care	1.02 (0.87 to 1.14)	2	I^2 0% and Chi^2 p 0.91
satisfaction with the care	0.20 (0.14 to 0.26)	4	I^2 90% and Chi^2 p <0.001

Results

Clinical officers

- Most of the studies were from Africa
- Studies were low in methodological quality
- Since comparison arms were different, they could not be pooled

Country Case Studies

Country Case Studies

Country	Type of mid level health workers	
Bangladesh	Nurses	Midwives
Pakistan	Nurses Lady health visitors	Midwives Community midwives
Indonesia	Nurses	Midwives
El Salvador	Nurses	Nurse technicians
Peru	Nurses	Midwives
Tanzania	Clinical officers	Assistant medical officer
Mozambique	Nurses/midwives	Technicos de medicina
Zambia	Clinical officers	

Conclusions

- Review lends support to task-shifting strategy (non-statistically significant differences across most outcome measures)
- Sometimes better outcomes in some aspects of maternal health, NCD management
- Little information on training contents, duration, management systems
- Integrated HRH response required, not only task-shifting

Recommendations

- Training, licensing, certification and recertification, responsibilities assignment, supportive supervision, quality of care assessment, monitoring and evaluation - key policy actions that should be designed on the basis of good available evidence, and implemented at scale.
- Specific challenges regarding nursing workforce include the need to set up explicit entry requirements to nursing schools, improvement of training content and quality, as well as licensing and accreditation requirements.
- Pre-service and in-service training, supervisory practices and standards for licensing and certification to be adapted to the country epidemiological transition.
- Regulation of responsibilities should be developed and enforced, while at the same time stimulating well planned task-shifting and task-sharing efforts.

Recommendations continued…

- Coherent attraction and retention strategy should be planned and implemented.
- Formal and independent evaluation efforts should be promoted. Such an approach will also be instrumental in understanding not only if an intervention works, but also how, for whom and under what circumstances.
- Comparative cost-effectiveness of public, private and mixed interventions focused on MLHW and particularly on nurses are needed.
- The HRH information system is not well established in majority of reviewed countries for these MLHW programs.

Limitations

The review identified a number of limitations

- Most of the reviewed studies neglected to document a complete description of MLHWs deployed
- Studies related to the role of MLHWs in HIV/AIDS prevention and care, mental health and food security and nutrition were scarce.
- Few evaluation studies/reports were at scale and none had followed an *a priori* experimental design or impact assessment process.

Knowledge gaps requiring further study

- Paucity of experimental designs in primary setups
- Majority of the non-physician clinician and clinical officer studies from Africa failed to employ experimental deign.
- Dearth of information on the cost-effectiveness of MLHW programs.
- Studies are needed to assess whether the MLHW programs promote equity and access.
- Specific studies on the potential role of MLHWs in HIV/AIDS prevention and care, as there is very limited empirical information on this.
- Further research on how MLHWs particularly community midwives, non-physician clinicans, clinical officers and surgical technician are linked to the wider health and the impacts of the cadre on the health system.
- Further systematic reviews are also required on factors affecting the sustainability of MLHWs interventions when scaled up; and the cost-effectiveness of MLHWs interventions for different health issues.