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Task shifting in maternal and child health care: An evidence brief for Uganda

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The Problem: There is a shortage and maldistribution of medically trained health professionals to deliver cost-effective maternal and child health (MCH) services. Hence, cost-effective MCH services are not available to over half the population of Uganda and progress toward the Millennium Development Goals for MCH is slow. Optimizing the roles of less specialized health workers ("task shifting") is one strategy to address the shortage and maldistribution of more specialized health professionals.
Policy Options: (i) Lay health workers (community health workers) may reduce morbidity and mortality in children under five and neonates; and training for traditional birth attendants may improve perinatal outcomes and appropriate referrals. (ii) Nursing assistants in facilities might increase the time available from nurses, midwives, and doctors to provide care that requires more training. (iii) Nurses and midwives to deliver cost-effective MCH interventions in areas where there is a shortage of doctors. (iv) Drug dispensers to promote and deliver cost-effective MCH interventions and improve the quality of the services they provide. The costs and cost-effectiveness of all four options are uncertain. Given the limitations of the currently available evidence, rigorous evaluation and monitoring of resource use and activities is warranted for all four options.
Implementation Strategies: A clear policy on optimizing health worker roles. Community mobilization and reduction of out-of-pocket costs to improve mothers' knowledge and care-seeking behaviors, continuing education, and incentives to ensure health workers are competent and motivated, and community referral and transport schemes for MCH care are needed.

Keywords: Task shifting, Task sharing, Optimizing roles, Role expansion, Role extension, Maternal and child health care, Uganda

This is a summary of an evidence brief for policy that addresses the need for improving maternal and child health in Uganda through optimizing the roles of health workers. The methods used to prepare this policy brief are described at these references (3;7;8;23;24;34–36). This evidence brief assesses a health systems problem, potential policy options to address the problem, and strategies for implementing those options. This report brings together global research evidence (from systematic reviews) and local evidence to inform deliberations about optimizing the use of different cadre of health

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workers to deliver cost-effective MCH programs and services. The purpose of this report was to inform deliberations among policy makers and stakeholders, and specifically as a background document to be discussed at meetings (policy dialogues) of those engaged in developing policies for task shifting or likely to be affected by these policies.

THE PROBLEM

There is a shortage of human resources for health, particularly specialized health workers, in sub-Saharan Africa, including Uganda. Expanding the roles of less specialized health workers or "task shifting"—a process of delegation whereby tasks are moved, where appropriate, to less specialized health workers—is one way of addressing this problem (39). The objective of this evidence brief is to summarize the best available evidence describing the problem of Uganda's health workforce shortage for maternal and child health (MCH) care and potential options for addressing this problem, using task shifting as one category of potential options to strengthen and expand the health workforce.

We have chosen to use the term "optimizing health worker roles" to clarify that the focus is primarily on optimizing the roles of less specialized health workers to deliver MCH interventions that are currently not accessible for the majority of the population and are not being provided by more specialized health workers. An underlying principle is that care should be provided at the lowest effective level; that is, by the least specialized health worker that can provide appropriate (cost-effective) care. We have, therefore, focused on optimizing the use of primary healthcare providers other than doctors.

Size of the Problem

Uganda is making slow progress toward meeting the Millennium Development Goals for maternal and child health. The maternal mortality ratio is still high at 440 per 100,000 live births. The under-five and infant mortality rates are 140 and 82 per 1,000 live births, respectively (38). Lack of access to effective health care is a major cause of unnecessarily high maternal and child mortality. For example, only 42 percent of mothers deliver with a skilled provider, only 29 percent of under-five children with fever receive anti-malarials on the same or next day, and only 36 percent of children receive basic vaccinations by 1 year of age (37).

In 2002, Uganda had a total of 2,919 medical doctors with 71 percent working in the central urban region which is inhabited by only 27 percent of the total population. Similarly, 64 percent of the nations' total of 20,186 nurses and midwives are working in the central urban region. Forty-seven percent of the approved positions in the public sector are vacant (28).

Uganda is recognized as one of the countries implementing task shifting at an informal level as a pragmatic response to the health workforce shortage. This has occurred, for example, for the provision of antiretroviral therapy for HIV/AIDS, integrated management for childhood illnesses, obstetrical care (with traditional birth attendants), and in establishing village health teams (15;31). However, much of the task shifting that has occurred has been without a clear policy, planning, or monitoring and evaluation. As a consequence, some of this task shifting is in conflict with current health professional regulations and licensure. Furthermore, the lack of an explicit policy limits the extent to which task shifting can be implemented and coordinated effectively, efficiently, and equitably.

Factors Underlying the Problem

Effective task shifting requires appropriate MCH care seeking by mothers and children, effective training and incentives for health workers to provide those services, adequate supplies and equipment, increased supervision of less specialized health workers by health professionals, changes in referral processes, and the resources to pay for these supports.

The way human resources are planned, trained, placed, and managed affect the quality, character and costs of healthcare provision. However, current information systems for monitoring human resources for health are paper-based and inadequate. Computerisation of the health management information systems (HMIS) in Uganda has been slow due to financial and technical limitations (18).

Health workers lack incentives to expand their roles. Community health workers are not paid and reimbursement systems of other health workers do not provide incentives for appropriate delivery of cost-effective interventions. Nonfinancial incentives are also inadequate. Ugandan health workers are dissatisfied with their jobs, especially their compensation (11). This draws health workers away from government facilities that are already understaffed (29).

There is a support supervision system and a quality assurance unit in the Ministry of Health that is responsible for supervision. However, the system is not functioning adequately. Because resources are limited, only more accessible health facilities tend to receive supervision visits, and only a few times per year. Furthermore, a top-down, control-oriented approach mostly focuses on collecting data without addressing local staff's information and performance needs.

The task shifting that has occurred has been without a clear policy, planning, or monitoring and evaluation. Moreover, some of this task shifting may be in conflict with current health professional regulations and licensure with some health workers believing that problems that arise can backfire on the concerned health worker who does not have legal protection for additional tasks (5). Professional protectionism is also an issue. Many professionals are reluctant to cede tasks to others for fear of being replaced. For example, some

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doctors are reluctant to have clinical officers perform any type of surgery (25).

There are varied views on task shifting. Those in favor of task shifting see it as a potential solution to Uganda's dual problem of lack of skilled personnel and high demand for services. Those opposed to task shifting see it as a quick fix and an approach that could dilute the quality of care and compromise the health system in the long-term. Donor and international agencies widely support task shifting, although the World Health Organization is now opposed to training traditional birth attendants.

POLICY OPTIONS

Options for optimizing the use of health workers to improve the delivery of cost-effective MCH services include optimizing the use of (i) lay health workers; (ii) nursing assistants; (iii) nurses, midwives, and clinical officers; and (iv) drug dispensers. These four options are complementary, with the primary aim of ensuring the optimal use of non-medically trained primary healthcare workers to ensure universal delivery of cost-effective MCH services.

These four options are described below, including the advantages, disadvantages, and acceptability of each option. The costs and cost-effectiveness of all four options is uncertain.

Policy Option 1: Optimize the Role of Lay Health Workers

Lay (nonprofessional) health workers include community health workers (CHWs) and traditional birth attendants (TBAs). Examples of cost-effective MCH services that they could deliver (26;32) include: (i) Promotion of appropriate care seeking and breastfeeding; (ii) Provision of contraceptives, cord care, and clean delivery kits, iron folate supplementation during pregnancy, balanced protein–energy supplements during pregnancy, antiretroviral, vitamin A supplementation in children, preventive zinc supplementation for children, insecticide-treated bednets, intermittent preventive treatment for malaria; (iii) Improved diarrhea management (zinc and oral rehydration therapy); (iv) Community detection and management of pneumonia with short-course amoxicillin; (v) Improved case management of malaria including artemisinin-based combination therapies (ACTs); and (vi) Recognition, triage, and treatment of severe acute malnutrition in affected children in community settings.

Advantages. CHWs and TBAs can potentially deliver most MCH interventions for which there is evidence of cost-effectiveness in primary care. Expanding the use of CHWs may reduce morbidity and mortality in children under five and neonates. Training for TBAs may improve perinatal outcomes and appropriate referrals.

Disadvantages. Ensuring the quality of care delivered by CHWs and TBAs would require increased training, supplies, and equipment; increased supervision by health professionals; changes in referral processes; and incentives.

Acceptability. Some policy makers and advisors in the Ministry of Health and WHO are skeptical about providing training to TBAs. Some health professionals are skeptical about expanding the use of CHWs and TBAs.

Policy Option 2: Optimize the Role of Nursing Assistants

Various terms may be used to describe nursing assistants, including nursing auxiliaries, nurse extenders and healthcare assistants. Nursing assistants may have various degrees of training, but they have less training than registered or qualified nurses. MCH services that they could deliver (2;4;13) include: (i) Promotion of breastfeeding; (ii) Provision of contraceptives, iron folate supplementation during pregnancy, balanced protein–energy supplements during pregnancy, antiretrovirals, vitamin A supplementation in children, preventive zinc supplementation for children, insecticide-treated bednets, intermittent preventive treatment for malaria; and (iii) Improved diarrhea management (zinc and oral rehydration therapy).

Advantages. Expanding the use of nursing assistants in facilities might increase the time available from nurses, midwives, and doctors to provide care that requires more training.

Disadvantages. The impacts of expanding the use of nursing assistants on the quality of care are uncertain. Ensuring the quality of care delivered by nursing assistants would require increased training, increased supervision by health professionals and incentives.

Acceptability. The Ministry of Health has recently decided to phase out nursing assistants. Nurses, midwives, and clinical officers may be reluctant to take responsibility for supervising nursing assistants and to cede tasks.

Policy Option 3: Optimize the Role of Nurses, Midwives, and Clinical Officers

Nurses, midwives, and clinical officers are trained health professionals. MCH services that they could deliver (12;14;22) include: (i) Promotion of breastfeeding; (ii) Provision of contraceptives, iron folate supplementation during pregnancy, balanced protein–energy supplements during pregnancy, antiretrovirals, vitamin A supplementation in children, preventive zinc supplementation for children, insecticide-treated bednets, intermittent preventive treatment for malaria; (iii) Interventions for prevention of post-partum hemorrhage and use of oxytocic agents; (iv) Basic newborn resuscitation with self inflatable bag and mask; (v) Community detection and management of pneumonia with short course amoxicillin; (vi) Improved case management of malaria including artemisinin-based combination therapies (ACTs); and (vii)

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Recognition, triage and treatment of severe acute malnutrition in affected children in community settings.

Advantages. Expanding the use of nurses, midwives, and clinical officers to deliver cost-effective MCH interventions in areas where there is a shortage of doctors would probably improve MCH outcomes and reduce inequities.

Disadvantages. Expanding their use would require strategies to ensure that they can be recruited and retained in underserved communities. Ensuring the quality of care delivered by nurses, midwives, and clinical officers would require increased training, supplies and equipment, supervision doctors, changes in referral processes, and incentives.

Acceptability. Some nurses, midwives and clinical officers are concerned about taking on additional responsibilities. Doctors may be reluctant to take responsibility for supervising nurses, midwives and clinical officers and to cede tasks.

Policy Option 4: Optimize the Role of Drug Dispensers

The term *drug dispensers* is used here purely descriptively to collectively refer to trained pharmacists, formally trained dispensers, clinicians dispensing drugs, and untrained retailers in drug shops and other outlets. MCH interventions that they could deliver (33) include: (i) Promotion of appropriate care seeking; (ii) Provision of contraceptives, cord care and clean delivery kits, iron folate supplementation during pregnancy, balanced protein–energy supplements during pregnancy, antiretrovirals, vitamin A supplementation in children, preventive zinc supplementation for children, insecticide-treated bednets, intermittent preventive treatment for malaria; and (iii) Improved diarrhea management (zinc and oral rehydration therapy).

Advantages. Expanding the use of drug dispensers to promote and deliver cost-effective MCH interventions and improving the quality of the services they provide could potentially improve health outcomes and reduce inequities, but the impacts of doing this are uncertain.

Disadvantages. Ensuring the quality of services delivered by drug dispensers would require increased training, supplies, and incentives.

Acceptability. A review by Goodman (9) found popular use of medicine sellers in sub-Saharan Africa. Informal drug outlets are the first point of call for a majority of caregivers in childhood illness.

IMPLEMENTATION CONSIDERATIONS

Optimizing the roles of health workers is just one solution to improving the delivery of maternal and child health care and addressing other health system challenges. Implementing changes in the roles of health workers requires other changes. It is also an opportunity to address other health system problems. Implementation strategies can capitalise on enablers of optimising health workers' roles as well as addressing barriers to doing so.

Enablers for optimizing health workers' roles to deliver effective maternal and child health care in Uganda include: (i) There is widespread support for improving MCH care. (ii) Demand for care is unmet, and there is a shortage and uneven distribution of health professionals. (iii) Health facilities are widely available and the hierarchical organization of the health system provides a structure for delegating tasks to less specialized health workers, referring patients who need more specialized care, and providing supportive supervision. (iv) Mothers feel more comfortable with health workers with less training, and people in rural areas prefer free public health services that are close to home. (v) There is international support for task shifting. (vi) Successful task shifting is already occurring in Uganda and internationally. Key barriers to implementing the policy options and implementation strategies to address these are summarized in Table 1. Additional information can be accessed from Supplementary Tables 1 and 2, which is available at www.journals.cambridge.org/thc2011010.

THE NATIONAL POLICY DIALOGUES

This evidence brief was discussed as a background document at two policy dialogue meetings in Kampala. Participation at these meetings included: members of parliament, policy makers, health managers, researchers, civil society, professional organizations, the media, and development partners. The purpose of these dialogues was to conduct a structured discussion of the policy brief on task shifting. These deliberations among health policy makers and other stakeholders can potentially contribute to evidence-informed health policies by adding value to the evidence brief through clarification of the problem and solutions and developing a shared understanding of the problem and possible solutions.

Many participants came to the deliberations with strong prior opinions; both supporting and opposing the options described in the policy brief. The evidence brief and dialogues had little if any observable impacts on these opinions. Moderation of the proceedings was also a challenge. One lesson learned here was that a strong, neutral moderator with a clear understanding of the process is crucial to achieving the objectives of a policy dialogue.

Despite these challenges, participants in the meetings evaluated the evidence brief and dialogues positively. Next steps coming out of the dialogues include presenting the policy brief to the senior management at the Ministry of Health at one of their regular meetings, further dissemination of the evidence brief, and engagement of interested participants in future activities in Uganda aimed at improving the use of research evidence in health systems decisions.

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Table 1. Implementation Considerations

Barriers to implementation	Strategies for implementation
Mothers' knowledge and care seeking behavior Mothers have limited knowledge of effective MCH interventions and may not recognize symptoms and signs and seek care from appropriate health workers when needed Mothers have mixed attitudes—they want health professionals with more training, but feel more comfortable with health workers with less training (1;17;19).	**Outreach by CHWs and drug dispensers** CHWs and drug dispensers could be used to teach mothers and promote appropriate use of health services (15) **Community mobilization** Community mobilization could include active community participation, contextualization of information in the local customs and culture, involvement of a broad range of key stakeholders, home visitation, and peer counseling (25) **Mass media campaigns** Mass media information on health-related issues could induce changes in health services utilisation, both through planned campaigns and unplanned coverage (10) **Patient education materials** A wide range of patient education materials could be used to inform mothers in combination with other strategies (40) **Reduction or elimination of out-of-pocket costs** • User fees could be reduced or removed completely for some or all women and children and for some or all types of MCH care • Other ways of reducing or eliminating out of pocket costs include voucher schemes, community-based health insurance schemes, community loans for emergency transport and care, and conditional cash transfers (payments conditional on utilisation of services such as immunisations or prenatal care) (20;21;40)
Health workers' knowledge and competency Health workers lack necessary knowledge and competency to expand their roles (27)	**Educational meetings, outreach visits, audit, and feedback** Educational meetings (training workshops), educational outreach (a personal visit by a trained person to health workers in their own settings) and audit and feedback (a summary of performance over a specified period of time given in a written or verbal format) could be used alone or in combination with each other and other interventions to improve health worker practice (6;16;30)

SUPPLEMENTARY MATERIAL

Supplementary Table 1
Supplementary Table 2
www.journals.cambridge.org/thc2011010

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CONFLICT OF INTEREST

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