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SUPPLEMENT ARTICLE

Task shifting in maternal and newborn health care: Key components from policy to implementation

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ABSTRACT

Task shifting in various forms has been adopted extensively around the world in an effort to expand the reach of lifesaving services to the women, newborns, and families who need them. The emerging global literature, as well as Jhpiego's field experiences, supports the importance of addressing several key components that facilitate effective task shifting in maternal and newborn health care. These components include: (1) policy and regulatory support; (2) definition of roles, functions, and limitations; (3) determination of requisite skills and qualifications; (4) education and training; and (5) service delivery support, including management and supervision, incentives and/or remuneration, material support (e.g. commodities), and referral systems. Jhpiego's experiences with task shifting also provide illustrations of the complex interplay of these key components at work in the field. Task shifting should be considered as a part of the larger health system that needs to be designed to equitably meet the needs of mothers, newborns, children, and families.

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1. Background

The WHO has estimated that 57 countries have a critical shortage of healthcare workers, and that 2.4 million doctors, nurses, and midwives are needed to achieve the Millennium Development Goals (MDGs) [1]. The most acute shortfalls occur in Southeast Asia and Sub-Saharan Africa. Thirty-six of the 57 countries are in Sub-Saharan Africa, which contains 24% of the global burden of disease but only 3% of the global health workforce [2]. Inequalities in health workforce distribution within countries are also common; it is estimated that only 24% of physicians and 38% of nurses work in rural areas, although half of the world's population is rural [1].

Difficult working conditions, high rates of attrition, maldistribution and out-migration of staff, and the HIV/AIDS epidemic have all contributed to the inadequate supply of skilled health workers [3]. The dramatic shortage of skilled providers creates challenges to the provision of both facility- and community-based healthcare services, including services for maternal and newborn health (MNH). Task shifting has been promoted as one response to this global health worker crisis, shifting

tasks to one provider cadre and from another. Various other terms are found in the literature to communicate the task shifting concept, including "task sharing," "substitute health worker," "skills substitution," "task delegation," and "optimizing health worker roles" [4,5]. For the purposes of this paper, the authors define "task shifting" as either: (1) developing a new provider cadre, such as lay health workers (LHWs) with competencies to perform tasks normally performed by health professionals with more education and higher qualifications; or (2) expanding the scope of practice of an existing health professional cadre to accept additional tasks and functions. The intent of both types of task shifting is to bring services closer to the population and increase health system efficiencies. LHWs, also known as community health workers (CHWs), might take the form of lady health visitors, traditional birth attendants, health educators, or other paid or volunteer community members who have some health-related training but lack the broader educational preparation typical of a healthcare professional.

Task shifting builds on the assumption that less specialized health workers can take on some of the responsibilities of more specialized workers in a cost-effective manner without sacrificing quality of care [6,7]. Multiple efficiencies may arise from task shifting, given that the cadre to which tasks are shifted often require shorter training periods and lower educational qualifications, might have skills specific to their local setting (e.g. language), and are not as likely to emigrate to other countries [8]. Task shifting is not, however, an intervention that occurs

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in a vacuum; instead, it must be aligned with broader health systems strengthening activities [9].

The present paper reviews Jhpiego's experiences in the use of task shifting as a strategy for increasing the scope and breadth of its MNH programming in over a dozen countries around the world (Table 1). These experiences were chosen to illustrate both types of task shifting and to closely examine the processes and key components underlying the task-shifting approach that maximize the potential of available human resources.

2. Key components of task shifting in maternal and newborn care

There is a growing body of research and grey literature evaluating task shifting in low-resource country settings, much of which has come from the HIV/AIDS field [10,11]. The WHO has also issued recommendations for MNH task shifting based on clinical and research

evidence [12,13]. Box 1 provides some illustrations of MNH tasks that might be appropriate for various cadres of healthcare providers. Many of these recommendations are in line with five key components that Jhpiego has identified and prioritized as the basis for its task-shifting work: (1) policy and regulatory support; (2) determination of roles, functions, and limitations; (3) determination of requisite skills and qualifications; (4) education and training; and (5) service delivery support.

2.1. Policy and regulatory support

In most contexts, there are clear delineations of the roles that different health cadres can perform; these may be established by ministries of health and/or professional and licensing councils and enacted through pre-service curricula, job descriptions of and procedure manuals for health personnel, or legislative authorization. Changes in practice

Table 1
Selected examples of task shifting in Jhpiego's maternal and newborn health programs.^a

Country/location	Years	Cadre(s) "shifted to"	New/shifted skills	Cadre(s) "shifted from"/shared with
Afghanistan/20 districts in Badakshan, Bamyan, Faryab, Jawzjan, and Kabul Provinces	Pilot: 2005–2007 Expansion: 2011–2012	CHWs	Community-based distribution of misoprostol for PPH prevention	Oxytocin and ergometrine by skilled birth attendants, primarily midwives, in facilities
Afghanistan/national	Pilot: 2007–2010 Expansion: 2010–present	CHWs	Community-based postpartum FP, including injectables	Facility-based providers, particularly midwives
Bangladesh/Sylhet District	2007–present	CHWs	Postpartum FP counseling and contraceptive distribution	Facility-based health providers
Ghana/Accra metro area, Amasaman, and Kumasi	2000–2003	Nurses	Cervical cancer screening including: VIA, clinical decision-making, and cryotherapy	Physicians, including specialists (with partial role for nurses)
Guinea/national	1998–present	Nurses, midwives, and auxiliary nurses	PAC	Physicians (emergency PAC only)
India/22 states	Pilot: 2005–2006 Expansion: 2007–present	MBBS doctors (general medical doctors)	CEmONC	Obstetricians/gynecologists
Kenya/Embu District	2007–present	Midwives	Postpartum FP, including provision of postpartum intrauterine contraceptive devices, and PNC	Obstetricians/gynecologists
Malawi/National	2005–2009	Health surveillance assistants	Community-based MNH services, including: prenatal care (e.g. education on danger signs, promotion of facility delivery), PNC, and neonatal assessment	Community health nurses
Malawi/national	2005–2009	Nurse midwifery technicians	BEmONC	Registered nurse midwives
Mozambique/national	2008–present	CHWs	HIV counseling and rapid diagnostic testing	Nurses, midwives
Mozambique/national	2011–present	Maternal health nurses	Initiation and management of clients on antiretroviral therapy	Physicians
Nepal/31 districts	Pilot: 2005–2008 Expansion: 2009–present	Female community health volunteers	Community-based distribution of misoprostol for PPH prevention	Skilled birth attendants (oxytocin only)
Nigeria/Kano, Katsina, Zamfara states	2006–2012	CHEWs	Clean and safe delivery, BEmONC, and FP counseling and services	Physicians and nurse-midwives
Nigeria/Akwa Ibom state	2007–2012	Volunteer community-directed distributors	Malaria services, including prevention of malaria in pregnancy and bed net promotion	Midwives and CHEWs
Rwanda/13 districts	2010–2012	CHWs	Community-based PPH prevention and FP	Physicians and nurses in facilities
Rwanda/9 districts	2010–2012	Nurses and midwives	BEmONC, including management of breech births	Specialist physicians
South Africa/national	2007–2010	Professional nurses and midwives	Initiation and management of clients on antiretroviral therapy	Physicians
Thailand/national	2000–2003	Nurses	Cervical cancer screening including: VIA, clinical decision-making, and cryotherapy	Physicians, including specialists (with partial role for nurses)
Zambia/Southern, Eastern, and Western Provinces	2010–2011	CHWs	HIV counseling and rapid diagnostic testing	Nurses, midwives, laboratory personnel

Abbreviations: BEmONC, basic emergency obstetric and newborn care; CEmONC, comprehensive emergency obstetric and newborn care; CHEWs, community health extension workers; CHWs, community health workers; FP, family planning; MBBS, Bachelor of Medicine, Bachelor of Surgery; MNH, maternal and newborn health; PAC, postabortion care; PNC, postnatal care; PPH, postpartum hemorrhage; VIA, visual inspection with acetic acid.

^a The term "physician" includes both specialists (such as obstetricians and pediatricians) and nonspecialists (primary care, generalists or family doctors). The term "midwife" includes both direct-entry midwives and nurse-midwives, unless otherwise specified.

Box 1

Illustrative maternal and newborn care tasks that may be shifted to different cadres [12].

Lay health workers

- Malaria prevention
- Labor support
- Prevention of postpartum hemorrhage
- Neonatal resuscitation
- Management of newborn sepsis
- Initial dose of antibiotics for maternal sepsis
- All short-acting contraceptives, plus injectables
- HIV counseling and testing

Auxiliary nurse midwives

As above, plus:

- Labor and birth
- Initial antibiotic for premature rupture of membranes
- BEmONC
- Intrauterine devices

Midwives/nurses

As above, plus:

- Manual vacuum aspiration
- Prenatal corticosteroids for preterm labor
- Antiretrovirals for treatment/prevention of HIV
- Contraceptive implants
- Cesarean deliveries

Other non-physician clinicians and non-specialist physicians

As above, plus:

- CEmONC
- Tubal ligations

must be affirmed in national regulatory mechanisms such as cadre scopes of practice, licensing examinations, re-licensing requirements, and professional association or council responsibilities. Shifting tasks within or between professional cadres, or from a professional cadre to LHWs, therefore requires engagement with policymakers and regulatory bodies [13,14]. Formal revision of policy and regulatory frameworks often requires evidence regarding the effectiveness of shifting a particular task; pilot projects can provide this evidence but might involve securing informal permission or a conditional waiver. Obtaining appropriate policy and regulatory support may necessitate advocacy with national stakeholders; without such support, task shifting programs face numerous barriers (e.g. health cadres may be reluctant to take part owing to liability concerns) [5,15]. Absence of explicit policy leadership or regulatory support can severely limit the degree to which task shifting is scaled-up or sustained [11,16].

2.2. Determination of roles, functions, and limitations

A task-shifting program should be preceded by task analysis to understand the specific services contributing to healthcare delivery bottlenecks that undermine productive efficiency [17,18]. Task analysis provides information about the care actually provided by a specific cadre and often uncovers that the actual tasks performed by a cadre do not match the official job description, regulatory statutes, or pre-service education curriculum. Task analysis can guide evaluation and revision of the cadre's scope of practice, the content of its pre-service and in-service curricula, and regulatory and deployment decisions. Task analysis must also consider the responsibilities that a cadre already carries out and whether additional services will overburden that cadre. Sometimes a second cadre might be engaged to make task shifting feasible. For example, when busy nurses take on the task of prescribing

antiretrovirals (ARVs) for HIV, another group, such as LHWs, might take on the counseling and testing previously done by nurses. The results of task analysis should guide decisions regarding both the cadres "shifted to" and "shifted from." It is particularly important to ensure that the cadre taking on new services has a clear understanding of the limitations of its expanded role. Responsible task shifting requires clear boundaries and processes for referral to higher-level cadres, as needed [19], to maintain positive and productive working relationships among all cadres affected by the shift. While research suggests that "shifted from" providers generally have positive attitudes toward task shifting [20,21], task shifting without clearly defined roles and processes can undermine teamwork and result in lasting tension between health worker cadres, in part due to "professional protectionism" [17,19,20]. Clear roles and responsibilities serve not only to distinguish cadres but also to harmonize them within the broader health system. Such harmonization prevents health services from becoming too fragmented and difficult for users to negotiate [20].

2.3. Determination of requisite skills and qualifications

Even if cadres to whom tasks are being shifted are already extant and widely deployed, their position requirements and, in turn, recruitment strategies, must be adapted to their new skills and qualifications [9, 10,19,20]. For example, literacy might not have been an important requirement for CHWs when their role was limited to the promotion of healthy behaviors and health service utilization, given that numerous pictorial tools and job aids exist for such work. However, if task shifting programs intend to involve CHWs in service provision and recordkeeping, then literacy and numeracy might become important requirements [9]. Clarifying such skill requirements is crucial to avoid a mismatch between expected roles and available human resource capacity [19].

2.4. Education and training

Appropriate learning resources and skills building are required for cadres to whom tasks are being shifted. Successful task-shifting efforts have involved competency-based education and training for "shifted to" health workers and include certification processes and clear performance standards when possible [10,14,22,23]. The involvement of professional associations and educational and training institutions in the development and use of teaching materials might also be important [24]. Many task-shifting programs begin with in-service education if they are changing the roles of existing cadres [7]; however, sustained and scaled-up task shifting requires the revision of pre-service education to reach new providers [15,25]. Education can ensure the crucial harmonization of task shifting with the broader health system by providing a recognized platform for coordination among the "shifted to" cadres and their supervisors and clinical counterparts, ensuring mutual understanding of roles and responsibilities and consistent guidelines for practice. This coordination is particularly important if services are being shifted to non-clinical cadres and if clinicians are involved in supervisory and quality assurance roles.

2.5. Service delivery support

While the preceding four components address key actions that are necessary for successful task shifting, an enabling environment comprised of the following service delivery support elements encourages "shifted to" cadres and their supervisors to provide services most effectively.

2.5.1. Management and supervision

Maintaining the quality of services provided by lesser-educated cadres is a primary challenge in task shifting. Virtually all task-shifting reviews and evaluations single out the importance of supportive

supervision—a concept that includes performance assessment, remedial education, mentoring, and motivation [7,10,18,20,26]. Such supervision must be resourced with financial, logistical, and educational support for supervisors. Additionally, task shifting should be embedded in a comprehensive quality assurance framework including regular, standardized assessment [20]. Supportive supervision can help prevent the sense of isolation and frustration that has been implicated in high attrition rates, particularly among CHWs [27].

2.5.2. Incentives and/or remuneration

Task shifting frequently requires existing health workers to take on more work, which can add burdens particularly to volunteer cadres. Thus, it is essential to devise appropriate incentive packages and recognition systems to reward cadres taking on new tasks to reduce their attrition [7]. While some reviews have recommended financial incentives [27], other research on CHWs has suggested that effective incentives include social prestige, support for income-generating activities, and recognition from the community and health system, and that in-kind incentives can contribute to motivation and retention [28–30].

2.5.3. Material support such as commodities, supplies, and job aids

Cadres implementing newly shifted tasks require the same material support as the original cadre. However, because task shifting might require workers to practice new competencies or take services outside the health facility context, it is important to ensure that “shifted to” cadres have the material tools to maintain their skills and fulfill their new roles. Logistics systems are especially important to maintain a consistent and quality assured supply of drugs, equipment, supplies, and commodities, as are up-to-date and simple job aids and service protocols, ideally tested for comprehensibility and ease of use [9,31,32].

2.5.4. Referral systems

Task shifting often results in service provision outside the facilities where the services have been customarily performed, e.g. into peripheral health facilities and the community. This dislocation increases the importance of functioning referral systems to ensure that women and newborns can be referred for further care, whether for needs that already exist upon presentation but are not performed by the shifted cadre, or for complications or adverse effects that might arise during service provision [10,19]. For example, cadres newly capacitated as skilled birth attendants (SBAs) need to be able to refer women for comprehensive emergency obstetric care and newborn care (CEmONC), which includes cesarean delivery. The absence of such referral mechanisms can heighten the risks of a fragmented health service delivery system.

3. Case studies: Applications of key components to Jhpiego's field programs

Global experience in task shifting is extensive. Jhpiego's task-shifting experience began with the transition of intrauterine device services from physicians to nurses and midwives in Morocco and Egypt in 1983. In the last fifteen years, Jhpiego has continued to implement task-shifting efforts in its programs to increase access to and improve the coverage of services to women and newborns. Table 1 summarizes Jhpiego's more recent programmatic experiences with task shifting, most of which were implemented in partnership with governments and other agencies. The following case studies provide more detail about four of these experiences that best highlight the role of the key components described above.

3.1. Nigeria: Increasing access to basic emergency obstetric and newborn care

As in many countries in Africa, Nigeria faces high maternal and newborn mortality rates, in large part due to the lack of access to SBAs who

Box 2

Defining emergency obstetric and newborn care: Basic and comprehensive [33].

BEmONC:

- Administration of parenteral antibiotics
- Administration of parenteral anticonvulsants
- Administration of parenteral uterotonics
- Removal of retained products (manual vacuum aspiration)
- Assisted vaginal delivery
- Manual removal of the placenta
- Resuscitation of the newborn

CEmONC:

All above functions, plus:

- Blood transfusion
- Cesarean delivery

can provide basic emergency obstetric and newborn care (BEmONC) (Box 2) [33]. The 2003 Demographic and Health Survey showed that in the North-West Zone of Nigeria, where Jhpiego was working at the time, there was only a 12.3% rate of SBA-attended births [34]. Most primary healthcare centers did not have a doctor or midwife and were staffed with Community Health Extension Workers (CHEWs). As a result, although Jhpiego was working to increase CEmONC capacity among midwives and physicians, rural primary healthcare centers still lacked even BEmONC. In 2006, in collaboration with the Federal Ministry of Health (FMOH) and Save the Children, Jhpiego began to equip CHEWs with the competencies and support needed to provide quality BEmONC—previously provided by physicians, nurses, and midwives based in hospitals.

First, the FMOH agreed to modify the training package for CHEWs to prepare them as SBAs, including the skills needed to provide BEmONC. Next, the partners sought subnational government support to prepare the health system to accept these new services. Magnesium sulfate, delivery kits, and other supplies and equipment had to be procured, and some maternity units required renovation. For the CHEWs who were already in practice, in-service training courses were established with pre-service preceptors and nursing faculty. Post-training supervision and a performance improvement system were also initiated to support CHEWs in their new tasks.

The training of CHEWs deployed to primary healthcare centers led to increased utilization of prenatal and delivery services. For example, in

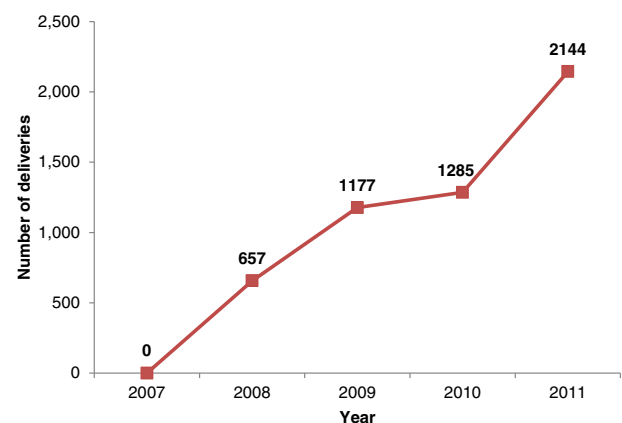


Fig. 1. Nigeria case study. Number of deliveries conducted by community health extension workers (CHEWs).

Kano, Katsina, and Zamfara States, the Jhpiego-led program trained CHEWs working in 23 primary healthcare centers. The total number of women receiving SBA services from these CHEWs increased several-fold between 2007–2008 and 2009–2010 (Fig. 1).

The main challenges were the systemic problems often found in rural healthcare settings. There was an irregular supply of medications and consumable supplies, infrastructural deficiencies (power outages, lack of potable water, poor communication), and frequent transfers of trained staff out of their service stations to other departments or facilities where they could not practice their newly acquired skills. Policy and regulatory support continued long after the tasks had been shifted to better formalize the BEmONC function of CHEWs and ensure sustainability into the future.

3.2. India: Reaching rural areas with CEmONC services

In India, 69% of the population lives in rural areas with limited availability of providers who can deliver BEmONC and CEmONC [35]. In 2006, the Government of India identified this shortfall as an important factor in the urban/rural disparity in maternal mortality (267 versus 619 maternal deaths per 100 000 births, respectively) [36]. Until 2004, only obstetric and gynecologic (ob/gyn) specialist physicians were trained and widely authorized to perform cesarean deliveries and several other emergency obstetric skills. In addition, half of ob/gyn specialists in India work in the private sector, leaving a wide gap in public sector human resources, especially at the primary healthcare level. Although more than 25 000 Bachelor of Medicine, Bachelor of Surgery (MBBS) physicians, who function as general medical doctors, are employed in rural areas, India continues to face a severe shortage of ob/gyn physicians who can provide BEmONC or CEmONC in those areas.

In 2006, the Government of India and the Federation of Obstetric and Gynaecological Societies of India (FOGSI), with technical assistance from Jhpiego, implemented a pilot program to capacitate MBBS physicians to provide CEmONC. This pilot was implemented in three medical schools and their corresponding 12 district hospital practicum sites in Gujarat and Rajasthan States. The pilot included the development and establishment of competency-based educational courses for CEmONC in three medical schools, with a minimum of 16 graduates per year per site. Graduates from these courses were deployed to 21 first referral units to provide CEmONC services. High-level and sustained advocacy throughout the pilot resulted in widespread acceptance of the competency-based approach by the Government of India, professional associations, and medical school stakeholders.

An independent evaluation in Gujarat State revealed a substantial increase in access to CEmONC in four first referral units (from 0%–57% to 94%–100%) after a period of only five months [37]. Another independent study of 10 referral units to which graduates were posted found that CEmONC provision increased from two facilities to all 10 [36]. Following the pilot's success, the Government of India funded the scale-up of this approach to additional states through program management partners. Among the results of this scale-up were the development of 34 sites for MBBS training and 235 district practicum sites; the capacitation of 333 district hospital teachers/tutors; and the capacitation of 1221 MBBS physicians across a total of 22 states for round-the-clock CEmONC services (Personal communication, Bhardwaj A, AVNI Foundation, Delhi, India, April 28, 2013).

Task shifting of complex CEmONC skills from specialists who have traditionally provided these services to general practitioners raised understandable questions and concerns about safety and quality. FOGSI, in particular, was concerned that it might be held accountable if a graduate of the CEmONC program was found incompetent or caused harm during service provision. In response, Jhpiego assisted FOGSI in implementing the Standards-Based Management and Recognition (SBM-R; Jhpiego, Baltimore, MD, USA) methodology as the basis for quality assurance and improvement, as well as for rewarding compliance with standards

through recognition mechanisms [38]. Certification of teaching sites by FOGSI became mandatory to ensure sustained educational quality. An expansive discussion of SBM-R is offered in another paper in this supplement [38].

3.3. Nepal: Expanding uterotonic coverage to prevent postpartum hemorrhage in the community

Uterotonics (e.g. oxytocin and misoprostol) can prevent postpartum hemorrhage (PPH) and are customarily administered after delivery by a skilled birth attendant [39]. In 2006 in Nepal, less than 20% of births were attended by an SBA, and hemorrhage remained the leading cause of maternal mortality [40]. From 2005 to 2009, under the leadership of its Family Health Division, the Nepal Family Health Program, and the Banke District Public Health Office, the Government of Nepal piloted community-based distribution of misoprostol for PPH prevention in Banke District, targeting home deliveries without SBAs. This intervention shifted uterotonic provision from facility-based providers to female community health volunteers (FCHVs)—an existing cadre that is deployed across Nepal's 75 districts. Jhpiego provided technical assistance to design, monitor, and evaluate the intervention, including the adaptation of educational materials and methods.

National and district level support and ownership of this project helped ensure necessary authorization and funding for the project. Intervention components included: building support among stakeholders; obtaining necessary government approvals; conducting baseline assessments; establishing monitoring systems; orienting district/health facility staff; and training and supervision of FCHVs. FCHVs identified pregnant women, provided prenatal health education, dispensed misoprostol tablets late in pregnancy, and made early postnatal home visits [41]. FCHVs reached nearly 19 000 women in the pilot area. An endline survey found that 73% of women received misoprostol from an FCHV during their pregnancy and that overall uterotonic coverage increased from 10.7% at baseline to 74.2% at endline (OR 25.0; 95% CI, 15.6–40.1) [42]. The largest gains were among the poor, illiterate, and those living in remote areas. The survey also indicated that FCHVs were positive about their expanded roles and that FCHV distribution of misoprostol was not associated with significant adverse events or incorrect use [42]. The maternal mortality ratio among misoprostol users in the pilot area was 72/100 000, significantly lower than among non-users (304/100 000) and across the nation (281/100 000) [42].

A program review indicated that the pilot's success was due to several interacting factors: high level of commitment and ownership by the Banke District Public Health Office; community-level advocacy and education; good teamwork and coordination between governmental and nongovernmental partners; well-trained, carefully supervised and supported FCHVs; and establishment of effective supply chains for commodities [41]. In 2010, the Nepal Family Health Program II replicated this model in four mountainous districts with the most limited access to SBAs. By 2011, the program was expanded to 21 districts through government funding and partnership with international organizations. By 2013, the program had been expanded to 31 districts.

3.4. Southern Africa: Task shifting for HIV care

Three quarters of mortality in Sub-Saharan Africa is attributed to communicable, maternal, neonatal, and nutritional causes [43]. HIV is the leading cause of life years lost, and HIV prevalence among adults 15 – 49 years of age is 5% [43,44]. The United Nations Declaration of Commitment on HIV/AIDS [45], coupled with the ongoing crisis in human resources for health, necessitated a new approach to service delivery when widespread scale-up of ARVs and prevention of mother-to-child transmission (PMTCT). Since 2005, Jhpiego has contributed to expanding access to essential HIV services across Sub-Saharan Africa, including PMTCT. Two distinct examples of HIV task shifting include provision of ARVs by nurses and midwives and HIV

testing and counseling by LHWs. In Zambia and Mozambique, LHWs were capacitated to competently test and counsel pregnant women and their families for HIV using rapid diagnostic testing, i.e. performing a finger prick and interpreting results. In Mozambique, Jhpiego first led a demonstration project with the government and other partners in one site in 2006 to convince policymakers of the soundness of the approach; Jhpiego was then asked to assist the government to formalize the approach and roll it out nationally. As of 2013, more than one million Mozambicans have been tested and counseled in their communities through these programs.

For ARVs, task shifting progressed with less intentionality as the dominant, physician-driven approach to HIV treatment in district and tertiary hospitals became untenable owing to the large numbers in need of services driven in part by changing international guidelines that expanded ARV eligibility criteria. Across Southern Africa, nurses and midwives were already managing common opportunistic infections and following up women receiving ARVs; widespread adoption of ARVs during pregnancy for all HIV-positive pregnant women in 2012–2013 only increased this demand for services. As a result, several countries in the region had little choice than to accept and formalize the role of nurses and midwives in initiating and managing clients on ARVs, whether for PMTCT or as treatment for the health of the mother. Jhpiego supported this expanded scope for nurses and midwives in ARV provision by contributing to the development and implementation of competency-based pre- and in-service education in Mozambique and South Africa that enhanced competencies for clinical assessment and management of common and serious opportunistic infections and introduced competencies for initiation and management of clients on ARVs, including the management of adverse effects, as a comprehensive package to ensure high-quality HIV care and treatment service delivery.

Challenges to expanding HIV testing and counseling services through the engagement of LHWs have included retention of volunteers in service, inadequate remuneration, and government hesitation to include the cadre of LHWs as an official position in the public health system. HIV treatment with ARVs by nurses and midwives has been hindered by legislation that has been unsupportive of the cadres' prescribing ability and that has failed to address overall inadequate levels of human resources. Additionally, some providers have resisted, such as pharmacists not wanting to fill nurse prescriptions or nurses themselves not wanting to take on extra responsibilities.

4. Discussion

The four case studies detailed above illustrate the importance of each of the five key components of task shifting. Sometimes these components occur in a sequential manner; other times, they occur simultaneously and continuously. Careful identification of the missing task or service—and often the geographic area most affected by its absence—provided a rationale for the shift, while a thorough understanding of the essential skills needed to perform the task or service justified the cadre(s) to which the task was “shifted to.” Effective, competency-based in-service or pre-service education was foundational to build the requisite capacity. Health system inputs, such as strengthening logistic systems to ensure sufficient supplies and the implementation of supportive supervision systems promoted the ability of the “shifted to” cadres as they assumed responsibility for performance of their newly acquired skills.

The critical role of policy and regulatory support cannot be overstated. In each case, the formulation of new policies with substantial government involvement led to formal authorization for the shifted cadres and created the mechanisms for ensuring the quality of education and training for the tasks shifted. With these policies in place, quality assurance mechanisms and monitoring and evaluation have been able to assess the strategic value of the task-shifting intervention over time.

5. Conclusion

Expanding access to lifesaving MNH services requires innovative methods to ensure that sufficient human resources are in place to meet the needs of women and newborns. Task shifting is one way to address the human resource crisis, but its sustainable implementation requires a complex interplay of different components: a sound policy and regulatory foundation, attention to qualifications and responsibilities, education and training, and service delivery support. Moreover, task shifting is only one element of larger health system forces that need to be structured equitably to meet the needs of all mothers, newborns, children, and families.

Conflict of interest

The authors have no conflicts of interest.

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