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High Impact Practices—Task sharing for hypertensive disorders in pregnancy: Improving early detection and management of hypertensive disorders in pregnancy

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HIGH IMPACT PRACTICES

Task Sharing for hypertensive disorders in pregnancy: Improving early detection and management of hypertensive disorders in pregnancy

WHAT IS THE HIGH-IMPACT PRACTICE IN MATERNAL HEALTH?

Task share key interventions to increase the number of health care workers with the skills to identify high risk women and prevent, detect, and manage women with hypertensive disorders in pregnancy and the postnatal period.

BACKGROUND

Maternal mortality disproportionately affects women in low- and middle-income countries (LMICs); global efforts to prevent such deaths—such as the Sustainable Development Goals and Strategies Toward Ending Preventable Maternal Mortality—have brought improvement where possible, but focus is needed on more complex issues with systemic challenges and solutions. Hypertensive Disorders in Pregnancy (HDPs), affect 10% of women globally and are major contributors to maternal and newborn mortality, morbidity, and disability (Duley, 2009; Say et al., 2014). While the exact cause of eclampsia is unknown, we know how to prevent and manage it. Providing essential services for women at lower levels of the health system is necessary to improve survival rates and quality of life for women who experience HDPs (including eclampsia) and their newborns.

Task sharing essential health services with lower-level cadres can help address insufficient human resources and is recommended for strengthening and expanding the health workforce to increase access to health services. Specific reorganization and decentralization is recommended by the World Health Organization (WHO) because lower-level cadres such as auxiliary nurses, community health extension workers (CHEWs) and midwives can provide—with targeted mentoring and supervision—detection and management of maternal complications including HDPs. However, quality assurance measures such as training and mentorship are required to maintain quality of care while

KEY POINTS

- Optimizing available human resources through task sharing can be an effective strategy to increase access to health services.
- Task sharing key services for the prevention, detection and management of hypertensive disorders in pregnancy can help prevent maternal and newborn morbidity and mortality.

increasing access to appropriate services [1–4], informal, unmonitored task-shifting or sharing can negatively impact the quality of care provided [5].

Women with the least access to the health services are most often poor and living in rural areas; particularly in regions of the Global South with inadequate human resources for health [6]. Barriers to accessing maternal health services include the three delays: deciding to seek care, reaching the health facility, and receiving adequate and appropriate care [7]. This HIP brief aims to improve the latter two delays and bring life-saving services closer to the women who need them. Implementing strategic task sharing programs can potentially reduce the barriers that women face when health services are needed. Task sharing can increase the number of staff—including staff at primary health centers—who are able to provide services for HDPs, which ostensibly reduces the delay in reaching a facility that can handle such cases. Further, with more providers trained and capable of providing appropriate care, the delay to receiving care is also reduced.

Task sharing is a promising strategy to improve access to health services by increasing the number of qualified providers of any particular service [8]. Task sharing has been used for HIV/AIDS [9,10], family planning [11], tuberculosis [12], and other health areas including the management of HDPs [13].

Task shifting and task sharing are often thought to bring cost savings and/or improved efficiency to the health system. A systematic review of the literature found that most cost savings and efficiency gains were found for HIV/AIDS and tuberculosis, perhaps due to the ongoing care and heavy burden of these diseases in LMICs [14]. Little is known about the cost and efficiency implications for task sharing related to HDPs.

Task sharing for HDPs is one of several *promising* “high-impact practices in maternal health” (HIPs) identified by a technical advisory group of international experts in HDPs, convened by the Ending Eclampsia project. A promising practice has limited evidence, with more information needed to fully document implementation experience and impact. The advisory group recommends these interventions be promoted widely, provided that they are implemented within the context of research and are carefully evaluated in terms of both impact and process. For more information about other HIPs, see <https://www.popcouncil.org/research/ending-eclampsia1>.

WHY IS THE PRACTICE IMPORTANT?

Benefits of task sharing, specific to HDPs, exist at different levels of the health system. Task sharing prevention, detection and management with different health cadres has the potential to prevent HDP progression, and reduce associated mortality.

Bringing services closer to women to improve and increase detection, and management of HDP cases

Insufficient quantity and quality of antenatal care (ANC) and postnatal care (PNC) contacts with health professionals means that women, especially those who may be identified as high risk for HDPs, are not accessing the necessary routine services that could allow for prompt detection and management of HDPs. Putting women at the center of interventions means recognizing the real-world needs and challenges that women face; task sharing enables more providers, closer to women to provide important HDP detection and treatment services that can ultimately save lives.

The WHO recommends a minimum of eight contacts with the health system during pregnancy [15]; in reality, women may attend one or more ANC contact (often in the third trimester) but attending four or more contacts, let alone eight contacts, is less common [16]. Furthermore, routine components of ANC including blood pressure measurement, urine test, information on possible maternal complications, case follow up, etc. that should

Task Shifting: refers to a process of delegation or rational distribution of tasks among health workforce teams. Specific tasks are moved, where appropriate, from highly qualified health workers to health workers with shorter training and fewer qualifications to make more efficient use of the available human resources for health.

Task Sharing: refers to an expansion of the levels of health providers who can appropriately deliver health services. The term is used to emphasize the common performance of the entire clinical task, or key components of it, among teams of different cadres of health workers. Tasks are not taken away from one cadre and given to another, but rather additional cadres are given the capacity to take on identified tasks.

They both reflect the same intention – to include cadres who do not normally have competencies for specific tasks to deliver them and to thereby increase levels of health care access. Both emphasize the need for training and continued educational support of all cadres of health workers in order for them to undertake the tasks they are to perform.

Source: Task Sharing to Improve Access to Family Planning/Contraception (WHO 2017)

be completed at each contact are not always done [16]. For PNC, women and babies should receive an initial checkup within 24 hours after birth and at least three additional contacts in the six weeks following birth [17]. In LMICs, PNC coverage is consistently low compared to ANC coverage [18,19].

The most common barriers preventing women from accessing services have been well-documented. Many of these obstacles relate to one’s ability to physically access health care; cost for transport, distance to facilities, and poor road conditions all influence women’s ability and willingness to seek essential services during and following pregnancy [20–22]. Task sharing—whether from hospital providers to primary healthcare providers or from facility-based providers to community-based providers—brings essential services nearer to the community, reducing barriers, and increasing women’s access to care.

Broadly, the global evidence indicates that lower level providers are often competent enough to conduct specific tasks that are normally reserved for higher-level providers. Depending on the level of expertise needed



for a particular skill or service, tasks can be shared with lower-level cadres including community health workers (CHWs), primary health care providers (CHEWs, auxiliary nurses, etc.). One study found that it was feasible and acceptable for the lowest-level CHW cadre in Benin to administer Subcutaneous Depot Medroxyprogesterone Acetate (DMPA-SC) thereby increasing community access to family planning [23]. The evidence in support of task sharing family planning spans a variety of modern methods as well as types of health cadres [11,24–26]. Other evidence suggests that task sharing blood pressure measurement and management to lower cadres like nurses, pharmacists, and CHWs is effective [27].

Some early evidence has also emerged specifically related to task sharing for prevention, detection and management of hypertensive disorders in pregnancy [1,28–31].

Bringing routine screening services and acute treatment closer to women, promotes early detection and improved

management of HDPs, including close monitoring of blood for any new onset or worsening condition allowing for more prompt medical intervention, or referral when needed.

Optimizing the health workforce that exists to increase access to life-saving HDP services

In LMICs, multiple factors can impede women from accessing the recommended health services during and following pregnancy. One such contributing factor is an insufficient or inadequately trained workforce. Human resource shortages are known to contribute to provider workload which impacts the care they are able to provide; sharing tasks across multiple cadres can help overcome staffing shortages by increasing the number of available providers who can conduct certain tasks and allow more-specialized providers to focus on more complicated cases; however changes in workload can potentially overburden staff [32,33].

Routine monitoring of blood pressure early in pregnancy (first trimester) and early identification of high-risk women and women with low calcium intake can promote improved management of high-risk pregnancies with low-dose aspirin or calcium supplementation respectively; reducing the risk of developing pre-eclampsia [34]. Detecting and controlling hypertension in pregnancy can reduce the number of cases that progress to severe pre-eclampsia/eclampsia.

HOW TO DO IT: TIPS FROM IMPLEMENTATION EXPERIENCE

Consider the context

- **Assess and clarify the existing policies that govern provision of health services.** When considering implementing a task sharing strategy for HDP, it is necessary to understand the governing policies (international, national, sub-national, institutional) related to administration of drugs and provision of care. Nigeria, for example, has the “Standing Order,” a national document that guides what health services can be provided by each cadre [33]. Such legal restrictions may be a challenge in proposing task sharing of services.
- **Understand the baseline knowledge and skills of each cadre.** Different cadres in different contexts have varying levels of training, for example: 2-3 years training for CHEWs in Nigeria, 18 months training for female welfare visitors (FWVs) and three years for Sub-Assistant Community Medical Officer (SACMO) in Bangladesh, 15 months for lady health workers in Pakistan, and three years for midwives, or “sages-femmes” in Senegal. In some contexts, there is variation of experience and training within a particular cadre, as is the case for health extension workers (HEWs) in Ethiopia. Furthermore, providers with the same designation are likely to have different levels of education, medical training, and scope of practice from one context to the next [35]. It’s important to focus on the competency, training, and scope of work rather than the name of the cadre in different contexts when deciding what global recommendations to implement.







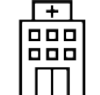







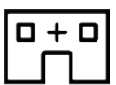















Identify task or tasks to be shared and by whom




When considering task sharing, it is critical to first consider the context, the international guidelines, and available evidence [36]. In addition, prior to implementing a task sharing approach, clear job descriptions that incorporate

the new task into the health providers expected roles and responsibilities should be developed.

- **CHWs can provide essential screening and counseling services to women.** These lower cadres can be trained to effectively take medical history and measure vital signs (e.g. blood pressure measurement)[13]. With innovations like the CRADLE blood pressure machine, CHWs can measure women’s blood pressure [2], educate them about danger signs in pregnancy, and refer women to a health center, if needed. Using the CRADLE device, blood pressure measurement is simple to perform and understand; the red, yellow, green color indicator clearly translates systolic and diastolic blood pressures into actions. CHWs can be effective at identifying high-risk women or women with hypertension, and can monitor blood pressure levels in women diagnosed with HDP at the community level, thus increasing their exposure to monitoring services and prompt referral should their condition worsen.
- **Sharing management of HDP with primary health care providers.** PHC providers (e.g. CHEWs, community midwives, SACMOs, and others) are already taking vital signs and examining women during pregnancy; often these providers are able to identify hypertension in pregnancy and must refer women to a physician for treatment. Task sharing for these groups of providers can include treatment (or initial treatment, depending on the context) of hypertension in pregnancy using oral antihypertensive drugs to control high blood pressure.
- **PHC providers can initiate immediate management of severe pre-eclampsia/eclampsia with a modified loading dose of magnesium sulphate ($MgSO_4$).** When a woman arrives at a PHC center with severe pre-eclampsia, it is critical that she receive $MgSO_4$ as quickly as possible to stop the progression of her condition and/or control and prevent seizures associated with eclampsia. Normally, the loading dose of $MgSO_4$ requires intravenous (IV) and intramuscular (IM) injections, which PHC providers are often not trained, skilled, or permitted to perform. Studies show that an IM injection alone can safely and effectively be administered by these providers [28,37].
- **Prophylactic treatment using aspirin and/or calcium** can help to reduce the risk of developing pre-eclampsia in women who are high risk. Women who

FIGURE 1. Tasks related to prevention, detection and management of HDPs and recommendations for task sharing

	Counsel on danger signs in pregnancy 	Provide aspirin prophylaxis 	Provide calcium prophylaxis Ca	Measure blood pressure 	Administer oral antihypertensive drugs 	Administer IM Loading dose MgSO4 	Administer IV MgSO4 
HOSPITAL  (ex. OB/GYNs, doctors)							
PRIMARY FACILITY  (ex. CHEWs, nurses, midwives etc.)							
COMMUNITY  (ex. CHWs, HEWs)							

 Current Tasks
  Recommended for Task Sharing
  Not Recommended for Task Sharing

are at increased risk of developing pre-eclampsia (e.g. those with history of hypertension) could benefit from low-dose aspirin prophylaxis [38]. Calcium prophylaxis can reduce this risk among women with low calcium intake [34].

Improve self-efficacy of providers for new(er) skills related to pre-eclampsia/eclampsia (PE/E) detection and management

- **Transfer knowledge and provide support to improve provider competency and capacity.** When asking someone to add a new task to their current role and responsibilities, training is required to ensure that the person has the knowledge and skills necessary to correctly and safely carry out that task, understand the risks, and follow up appropriately. Low dose, high frequency trainings and simulations drawing on updated curricula should be used to improve their confidence as well as the technical expertise of providers [39,40]. Regardless of the new task, proper training, follow-up training, supervision, and mentorship is required for quality service provision.

HEALTH SYSTEM NEEDS FOR TASK SHARING HDP CARE WORKS BEST IN AN ENABLING ENVIRONMENT THAT INCLUDES:

- Favorable national policy around human resources for health and standardized clinical protocols for distinct cadres
- Stakeholder engagement (including professional associations) throughout developing standards, training curricula, scaling, and institutionalizing
- Initial and ongoing training for providers and their supervisors to promote and maintain newly acquired knowledge, skills and confidence
- Supportive supervision to reinforce technical knowledge, skills and confidence
- Funding (to support maternal health and purchase supplies/medicines for PE/E prevention, detection and management)
- Supply chain for essential equipment and drugs related to PE/E (MgSO₄, antihypertensives, BP machines, dipsticks, stethoscopes etc.)

- Established, functional referral and counter referral system to ensure prompt and appropriate care based on seriousness and urgency
- Infrastructure to provide health services
- Official and appropriate remuneration for broadening the scope of practice for cadres concerned

FACTORS THAT INHIBIT SUCCESS:

- Commodity stock-outs preventing necessary interventions
- Lacking oversight and supportive supervision to ensure quality of care maintained for all cadres
- Failure to appropriately compensate and motivate providers to take on additional tasks
- Unsustainable workloads of providers
- Staff turnover and shortages
- Sharing/shifting specific services to cadres that are too low to safely perform them
- Ineffective referral systems leading to lag time in follow up care

PRIORITIES FOR FUTURE RESEARCH:

- Testing innovative approaches for vital sign measurements in low resource settings
- Strengthened evidence base on which provider cadres are able to effectively carry out specific skills related to HDPs
- Rigorous implementation research to determine best practices (e.g. lowest effective dose for MgSO₄) to inform task-sharing guidelines and policies
- Cost effectiveness of task sharing aspects of prevention, detection, and management of HDPs to lower levels
- Strategies to effectively scale up successful task-sharing initiatives

TOOLS AND RESOURCES

- Ending Eclampsia PHC Model Commentary
- Helping Mothers Survive: Pre-eclampsia & Eclampsia
- The Microlife CRADLE VSA

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