Improving Access to Maternal and Reproductive Health Services in Underserved West African Communities: Evidence-Based Strategies for Health Systems Strengthening

ABSTRACT

Aim: To examine the improvement of access to maternal and reproductive health services in underserved West African Communities with consideration to evidence-based strategies for health systems strengthening.

Problem Statement: Minimizing child and maternal mortality is an essential goal of the Millennium declaration and a main concern for policy makers in in underserved West African Communities. One of the vital barriers to lowering maternal mortality is the low use of maternal health services made available by the public health system via it supply side lifestyles.

Significance of Study: The health and well-being of women and their families in underserved West African communities is paramount. While consideration is given to actions and strategies to advance maternal health, it is highly imperative to address health issues across the life course.

Methodology: Previous literatures, journals, books, research write-ups and other related materials on the internet regarding to how access to maternal and reproductive health services can be improved were consulted.

Discussion: This literature review was able to identify various health issues regarding maternal morbidity and mortality that should be addressed starting with adolescents and young girls and spreading through age of childbearing and beyond. Different stakeholders identified who should positively contribute in solving the problems include states, tribes, and local communities; women and families; health systems, hospitals, and birthing facilities; healthcare professionals, health systems, hospitals, and birthing facilities; employers; payors; researchers; and innovators. It was recommended that everyone should contribute via the creation of enabling environments which support the women well-being and health, encouraging healthy pregnancies, avoiding risk factors development, and ensuring access to high-quality healthcare before, during, and after pregnancy. It was also noticed that the circumstances under which women are born, work, live, grow and age significantly affect their health risks, health status and outcomes. These social determinants also contribute to ethnic and racial differences in maternal health outcomes that are tenacious and are vital to address if progress on reducing maternal morbidity and mortality and improving maternal health can be achieved in underserved West African communities.

Conclusion: In conclusion, it is imperative to assist pregnant women while embarking onto the motherhood journey in order to harmonise the different maternal health procedures, and

linking pregnant women with younger generations.

Keywords: Health Systems Strengthening, Evidence-Based Strategies, Maternal and Reproductive Health Services, Underserved West African Communities, Pregnancy-related situations

1. INTRODUCTION

The reduction of child and maternal mortality in underserved West African communities is a main concern for policy makers and an essential goal of the Millennium declaration. In every year, more than five hundred thousand of women die due to child birth and pregnancy complications while more than 10 million women suffer infection, injury or disease due to pregnancy. Nonetheless, 98 per cent of a total of 514 000 maternal deaths occurred in developing countries (mostly West African communities) as stated by UNFPA update on maternal mortality estimates. In most of the developed countries, It is unusual for maternal mortality rates to be more than 10 per 100 000 live births [1]. However, it is usual to notice maternal mortality rates more than 500 per 100 000 live births in some developing countries. Additionally, maternal services are vital in the prevention of morbidity and deaths among the newborns [2].

The death of a woman during pregnancy or within 42 days of pregnancy termination is referred to as “maternal death”. This is regardless of pregnancy site and duration, from any cause related to or worsened by the pregnancy management but not from incidental or accidental causes. Maternal death is an excellent signal of health services utilization which indicates the extent of pregnancy-related situations, near-miss happenings, other potentially demoralizing consequences after birth, and the long-term social, psychological and economic significances. There has been noticeable progress and positive transformations in maternal health in some underserved West African communities [2]. However, in the last three decades, many operations have failed to increase maternal health. This is mainly due to neglected health systems. A case of Safe Motherhood Initiative which was launched in 1987 in Kenya by international agencies signified inability to generate a broad-based improvement in public health area due to the failure to translate recommendations into local practice [3].

Numerous studies have been presented and have been recognized maternity health services access as a key indicator for lowering maternal mortality in some underserved West African communities. Numerous individuals (the poor inclusive) are not utilising the services which are provided for free by the government at the point of use. Instead of this, citizens prefer to select private sector considering demand and supply factors [4]. Numerous studies revealed private sector is a vital health care source in many underserved West African communities. Both the poor and rich alike patronize private health care for different services like institutional deliveries, antenatal care, hospitalization and ambulatory care. With reference to this and giving preference for private providers, private providers must be involved in adopting any strategy that will improve having easy access to reproductive and child health services in developing countries where government health care is of poor quality and inadequate [5].

Inadequate knowledge regarding the importance of seeking medical attention during labour and pregnancy is usually believed to adversely influence decision making processes and health behaviour. The choice of looking for healthcare is implanted and entangled with social and cultural practices especially for women in isolated rural villages [6]. Women’s affordability, employment and education are the most commonly recognized factors

influencing antenatal care uptake. A meta-synthesis of standard studies recognized essential key issues behind women not using antenatal services in low- and middle-income countries. These include community belief systems that place pregnancy as physiologically healthy and socially risky that constraints the initial access to maternal healthcare. Uptake is also affected by physical limitations and other financial constraints surrounding patient transfer in situations of extreme poverty [7].

Many of the maternal deaths happen at homes in majority of the rural areas among less-privileged communities and during the peripartum period which ranges between the last three months of the pregnancy and the first week after the end of the pregnancy. A peak in maternal mortality happens during the intrapartum period around the first day post-partum and childbirth [8]. On this, there is availability of sufficient data to inform global action However, most fragile and the poorest countries possess the poorest data to measure and monitor maternal health. Knowledge of the context is needed to design a health system which addresses the local situation. The deficiency of openly available data and restricted published literature constrain contextually based interventions in order to increase maternal health in many underserved West African communities. Figure 1 is the diagrammatic summary of the social determinants of maternal health before, during and after pregnancy grouped into four categories: structural determinants, maternal circumstances, maternal health system and maternal health outcomes [9].

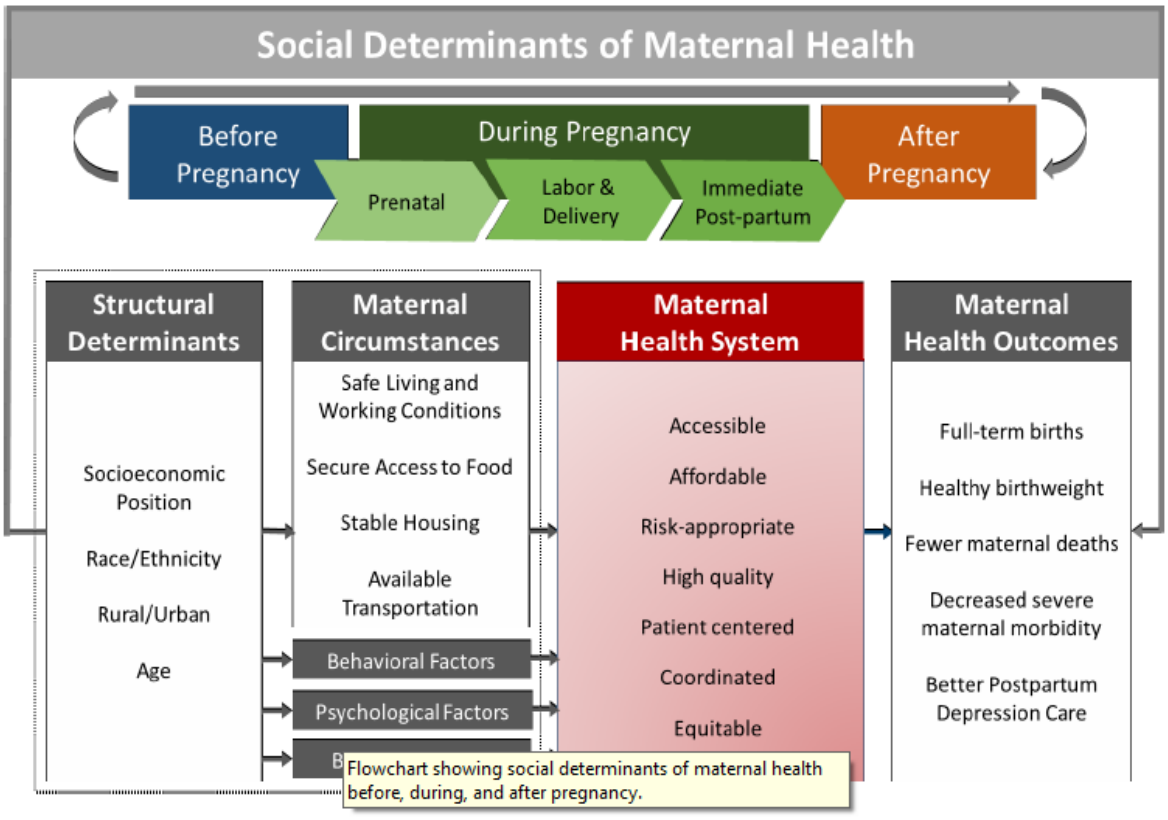

Figure 1: Diagrammatic summary of the social determinants of maternal health before, during and after pregnancy

The major reasons behind maternal deaths within the health system resulted from remoteness; insufficient experienced birth attendants and interruption in referral for emergency obstetric care; poor or delay interventions implementation at the facility level; and vertical care delivery in which single elements of care are executed without connecting with the broad care. Maternal health services are determined by the multifaceted interdependent functioning of the whole health system [10]. The connections between inputs, process and outputs depend on confounding factors and numerous influences, and each country's context is a function of many factors that affect the outputs of maternal health and the service performance. The difficulty in accessing quality maternal health services, the intermittent demand nature and broad range of powerful stakeholders having various priorities and agendas give room for the health system to be tremendously complex. Additionally, international donors may affect the situations of a country's health programmes to satisfy their own agenda [11].

Many approaches have been recommended to decrease maternal mortality including referral systems involving comprehensive and basic emergency obstetric care, antenatal care, contraception and postnatal care. Recent study has shown the evidence indicating the successful role and significant of family planning as a preventative approach in lowering maternal mortality. Antenatal care involving provision of Misoprostol for avoidance of postpartum haemorrhage at home births has proved to be cost effective interventions in minimizing maternal deaths [12]. However, it is now obvious that high coverage of crucial interventions in healthcare facilities does not essentially minimize maternal mortality mostly as a result of under-utilized services. Universal health access is not attainable except women are cared for in their own communities. Additionally, strengthening of women's capabilities and capacity is needed in order to take ownership of the resolutions about their care at the required time without relying on others in making decisions for them. Thus a vibrant focus in achieving universal maternal healthcare access is to overcome demand side barriers [13].

Presently, RCH services in numerous underserved West African communities are tax financed and delivered by the public health system via supply-side financing methods. This technique is collectively 'free' for all and the funding is for inputs with reference to recurrent and capital costs. As governments are directly engaged in health services provision by employing many competent staff supported with buildings and equipment, this causes a massive financial investment providing small flexibility to move resources [10]. Substantial allocative deficiencies result as a huge percentage of health budgets move in line with the payment of salaries with small left for equipment maintenance and drugs. There is usually no competition, limited option to the consumer, and services are frequently of poor human quality when governments run monopolistic health care provision. Additionally, there is small incentive for the government to improve staff performance or to be responsive to their patients as the staff salaries are paid at month end irrespective of the delivered outputs [9].

Finally, there are clear inequalities in terms of health services utilisation and access as well as health outputs through socio-economic groups as supply side financing is bad in targeting [7]. Therefore the task is to discover innovative ways via which government subsidies could be excellently targeted towards those who do not have the capacity to pay, and to increase service efficiency and equity, provide the option of providers and increase care quality and responsiveness. Any financing reform in underserved West African communities should handle the shortcomings of the current universal, supply-driven free-for-all and tax based financing model [6]. These results are feasible if the approach promotes competition and its able to involve the private sector with reference to government thinking and the patients preferences. This review examines the attached risks to maternal health in underserved

West African communities and looks into evidence-based strategies for health systems strengthening [14].

2. RISKS TO MATERNAL HEALTH IN UNDERSERVED WEST AFRICAN COMMUNITIES

Numerous health situations that persist before pregnancy may lead to complications during pregnancy. These situations can possibly cause death or other hostile outcomes for the baby or mother. Unhealthy weight, diabetes, high blood pressure, diabetes and infectious diseases calls for special treatment during pregnancy [15]. Other related risk factors such as mental health conditions, substance use disorders and intimate partner violence can also contribute to the negative outcomes. Some women are more possibly to have these situations than others. For instance, records have shown higher pre-pregnancy obesity and overweight rates in Pacific Islander or Native Hawaiian and black women than non-Hispanic white women. In comparison to white women, diagnosis of diabetes before pregnancy is expected in Pacific Islander or Native Hawaiian women. In underserved West African communities, black women whose ages range between 20 and 44 years possess higher hypertension prevalence more than twice that of other ethnic and racial groups. Reproductive-aged women having disabilities like difficulty in vision, mobility, cognition, hearing, independent living and self-care are possibly at high risks to healthy pregnancies in comparison to women with no disabilities. Various identified risks to maternal health in underserved West African communities include hypertension, diabetes, unhealthy weight, infectious diseases, substance use and substance use disorders and mental health [12].

- **HIGH BLOOD PRESSURE (HYPERTENSION)**

About 13 percent of women between the age of 18 and 39 years had prolonged hypertension. Over time, chronic hypertension had been on increase amidst pregnant women resulting from increase in obesity rates and increased maternal age. Women having hypertension are placed at higher risk for pregnancy difficulties such as kidney failure, placental abruption (premature placenta separation from the uterus linked with abnormal bleeding), cesarean delivery and superimposed preeclampsia. Infant complications can also occur including fetal growth restriction and premature birth [10]. It is now recommended by National guidelines that in order for pregnant women to achieve optimal control of their hypertension, individuals are expected to self-monitor their blood pressure outside the clinical setting and work intimately with their healthcare teams. Preeclampsia and gestational hypertension (high blood pressure occurring first after 20 weeks of pregnancy) are hypertensive disorders occurring basically during pregnancy. Women with these situations are at higher risk of future cardiovascular disease [13].

- **DIABETES**

A disease which occurs when the blood glucose (blood sugar) is too high is called diabetes. About 3% of women whose age is between 20 and 44 years were diagnosed with diabetes in 2011-2016 from which the diabetes of more than half was not under control. Diabetes can lead to serious complications over time such as stroke and heart disease, as well as damage to kidneys, eyes and nerves. Women having diabetes before pregnancy are at higher risk for pregnancy complications such as miscarriage or stillbirth, cesarean section, birth defects, preeclampsia, macrosomia and preterm birth. Gestational diabetes is a kind which occurs during pregnancy. In United States, about 7 percent of women who gave birth in 2018 had gestational diabetes [14]. Women having gestational diabetes are also at improved risk of difficulties during pregnancy and delivery including cesarean section, fetal macrosomia, preeclampsia, prematurity and shoulder dystocia.

- **UNHEALTHY WEIGHT**

A screening tool used in defining weight categories is the body mass index (BMI) and is based on a person's weight and height. The different weight groups are: normal weight (18.5-24.9 kg/m^2), underweight (<18.5 kg/m^2), obese (≥ 30 kg/m^2) and overweight (25- 29.9 kg/m^2). Many West African communities are presently undergoing a decades-long obesity epidemic which can be linked with numerous diseases and other health situations such as type 2 diabetes, heart disease, stroke, high blood pressure, mental illness and sleep apnea. Prevalence of obesity has been on the increase in the last two decades in some West African communities especially for women and adolescent girls [15].

- **INFECTIOUS DISEASES**

There can be pregnancy complications in cases where infectious diseases prevail. This places a woman and her infant at risk for hostile events. These can include viral infections (such as rubella, influenza, human immunodeficiency virus or HIV, viral hepatitis) as well as bacterial infections (such as urinary tract infections, tuberculosis, gonorrhea, listeriosis, chlamydia, syphilis and other sexually transmitted infections). Prenatal care includes testing and screening for numerous infectious diseases. Routine immunizations are essential in the protection against infectious diseases [16]. COVID-19 is an evolving viral disease that has obstructed millions of individuals across the globe. Recent evidence reveals that among the reproductive-aged women between 15 and 44 years having COVID-19, pregnant women are most possible be hospitalized and get admitted into an intensive care unit for mechanical ventilation when compared with non-pregnant women. Information is still evolving regarding COVID-19 impact on infant and maternal health outcomes [13].

- **SUBSTANCE USE AND SUBSTANCE USE DISORDERS**

About 12 percent of pregnant women were reported to be using tobacco products in the previous month With reference to the 2018 National Survey on Drug Use and Health. Nonetheless, approximately 10 percent of pregnant women during the same time were reported using alcohol and about 5 percent were reported to be engaged in drug use which includes opioids, marijuana, cocaine and others [17]. These are harmful substances to a mother and her infant. Different complications resulting from substance use during pregnancy may include miscarriage, ectopic pregnancy or stillbirth while other complications which may injure the baby include fetal alcohol spectrum disorders, premature birth, birth defects, Sudden Infant Death Syndrome (SIDS), neonatal abstinence syndrome (group of symptoms affecting babies exposed to drugs, commonly opioids while in the uterus), or low birth weight. Substance use disorders occurrence exists when the repeated use of alcohol and/or drugs leads to significant impairment including disability, health problems, and inability to meet major responsibilities at school, work and home. Substance use disorders are usually underdiagnosed amidst women which occurred irrespective of socio-demographic attributes causing high costs for families, individuals, and society. Between 1999 and 2014, national rates of opioid use disorder at delivery greater than quadrupled increasing from 1.5 to 6.5 per 1,000 delivery hospitalizations [18].

- **MENTAL HEALTH**

Mental health situations are also general difficulties during pregnancy and in the postpartum period. It may influence poor maternal outcomes. It has been stated that MMRCs between 2008 and 2017 revealed that about 10 percent of pregnancy related deaths resulted from mental health situations. These situations act as principal factors in injury or death as a result of overdose or suicide. Mental health situations in the postpartum period such as postpartum depression, are linked with decreased breastfeeding initiation, poorer maternal and infant bonding' and delayed infant development [8].

3. EVIDENCE-BASED STRATEGIES FOR HEALTH SYSTEMS STRENGTHENING IN UNDERSERVED WEST AFRICAN COMMUNITIES

There is need for critical and comprehensive approach towards addressing the unacceptable high rates of severe maternal morbidity and mortality having known the importance of maternal health to our communities, families and nation at large. A sole attention on the perinatal time would disregard upstream health factors linked with protracted conditions as well as other social and environmental factors contributing to poor outcomes. The framework in tackling these problems has been laid via the provision of recommendations for preventive measures that encourage maxima women's health. The approaches and actions presented are based on these recommendations together with consensus recommendations and statements from other organizations. Specific actions that can be adopted in addressing the conditions and risk factors alongside other factors that may impact maternal health are outlined and stated further [11]. The opportunity for action exists in underserved West African communities across the spectrum of women and families; tribes, states and local communities; healthcare systems, hospitals and birthing facilities; healthcare professionals; payors; employers; innovators, and researchers. Organizations, individuals and communities should pick and take actions as applicable to their respective needs. The various strategies include women and families; states, tribes and local communities; healthcare professionals; health systems, hospitals, and birthing facilities; employers [5].

- **STATES, TRIBES AND LOCAL COMMUNITIES**

Supportive environments for women's health and tailored towards local challenges and needs can be created by states, tribes and local communities. The infrastructure needed can be created to involve in healthier lifestyles and to guarantee access to good quality medical care [19]. There is need to provide national goals by healthy people to engage in disease prevention efforts and guide health promotion. It is also imperative to state the significance of physical and social environments creation that advance good health for all in underserved West African communities. Usually referred to as health social determinants, the situations into which people live, born, play, work, age and worship can powerfully affect their general health. Examples of social determinants include public safety, resources availability to meet daily needs (e.g., healthy food options), access to educational opportunities and crime exposure. Physical determinants examples include built and natural environments (e.g. sidewalks, green space, bike lanes), and community and housing design, and physical hazards exposure. Case studies have revealed that improvement of health outcomes is feasible where there is a coordinated and concerted effort relating both communities and healthcare systems where their patients live [13].

States, tribes, and local communities can: (1) make provision for breastfeeding support at the community and individual levels via the establishment of policies to encourage women's abilities to breastfeed, attain their breastfeeding goals once they return to their worksites and communities, and thus attain total health advantages of breastfeeding for their babies and

themselves, (2) create physical and social environments that encourage good health; improve factors that influence wellness and health including clean water and air, safe communities, access to affordable healthy food, public transportation, stable housing, parks and sidewalks; and other social health determinants, and (3) Strengthen perinatal regionalization and quality improvement initiatives by considering adoption of a classification system for maternal care that guarantees infants and women receive risk-appropriate care in all the region using national-level resources [19].

- **WOMEN AND FAMILIES**

Women can play a vital role in achieving, promoting and maintaining their wellbeing and health, usually with the assistance from partners, fathers and other family members. Preventive wellness and health consultations can provide women with risk factor assessment, screenings, counseling, immunizations, assistance for family planning and education to propagate optimal health. Women can monitor their general health, involve in healthy activities, and address situations they may have such as obesity, diabetes and hypertension. Numerous resources in the form of mobile applications, books, guides and social media provide information regarding what is expected before, during and after pregnancy alongside information on preventive care, medications, essential health behaviors and potential risks. Prenatal appointments give opportunity for healthcare professionals to monitor pregnancy, execute prenatal screening tests, deliberate questions and concerns that women may have, including delivery plans and feeding of infant, and provision of recommendations to encourage a healthy pregnancy [15].

It is imperative for women and families to focus on (1) promoting men's positive participation as fathers and partners which include engaging men in decision-making to assist the woman's health in a way that it facilitates and promotes women's options and their independence in decision-making, (2) utilizing resources that give information regarding occurrence of changes with a healthy pregnancy and how to identify the warning indications for complications which may likely need quick medical attention, (3) improving the general health which involves engaging in healthy practices and behaviors via participation in steady physical activity, getting sufficient sleep, eating healthy and receiving ongoing preventive care that involves dental care and immunizations, (4) attending prenatal, primary care, postpartum and any suggested specialty care consultations and give health information, including pregnancy complications and history, to their health care providers during all medical care consultations, even after delivery period, and (5) asking questions and talking to healthcare professionals regarding health concerns including any symptoms being experienced, previous health complications, or concerns regarding potentially sensitive case such as substance use [20].

- **HEALTHCARE PROFESSIONALS**

Factors contributing to women's general health and work to recognize and tackle potential pregnancy risks should be understood by full range of healthcare teams and professionals. Every medical interaction or appointment with health care professionals is an opportunity to ascertain that care standards and women full needs are being met. Healthcare professionals can ascertain that the care provided is culturally appropriate and scientifically-sound to the individual and their corresponding community given the massive diversity in economy, geography, ethnic and racial make-up across underserved West African communities [8]. Providers may be inhibited from getting a full understanding of a patient's medical risks and condition via divided care across healthcare settings. There exist many opportunities across

providers to progress communication including via mobile applications adoption, care coordination and enhanced interoperability of electronic health records. Even healthcare professionals who do not often care for pregnant women play active role in minimizing maternal mortality and morbidity [16]. Coordinating and engaging care amidst various set of healthcare professionals such as dentists, emergency department providers, social workers, primary care providers, cardiologists, psychologists and endocrinologists can be tasking, but strengthens the ability to address, identify and prevent injury [7].

- **HEALTH SYSTEMS, HOSPITALS AND BIRTHING FACILITIES**

Health systems should make provision for comprehensive care for the complete range of women's health before, during, and after pregnancy. Hospitals should provide the massive majority of delivery services within these systems. About 98% of all live births happened in hospital settings in 2018. Numerous underserved West African communities have lost their hospital-based obstetric services over the past two decades. Women are more probable to have out-of-hospital births in these areas and to deliver in hospitals in the absence of obstetric units when compared with those living in rural counties that retained hospital-based obstetric services [14]. Additionally, access to maternal care in the postpartum and prenatal period in underserved or rural areas may be limited. This can be addressed by health and hospital systems via techniques such as telemedicine and linking facilities that do not provide well-organized childbirth services with those that do, and enhancing quick consultation and safe transportation to the suitable level of maternal care. The designation of levels of care helps in ensuring that women receive care at facilities that are best equipped in addressing their needs [21].

- **PAYORS**

Health insurance coverage is a vital factor influencing health care utilization and access. Payors – including the Children's Health Insurance Program, state-based Medicaid and private health insurers -- can play a vital role in addressing maternal health via assisting in ensuring access to and affordability of high quality preconception, prenatal, postpartum care and delivery [10]. Access to and reimbursement for comprehensive care Women's Preventive Services Initiative, preventive services recommended and Bright Futures Guidelines for Health Supervision of Children, Infants and Adolescents can guarantee children and women receive recommended services. These services may include mental health support, substance use treatment and screening, breastfeeding support; preventive screening (e.g., weight status, cancer, blood pressure, infectious diseases, diabetes, sexually transmitted infections) and vaccinations, and screening for family violence and intimate partner [17].

Assuring a broad range of healthcare professionals are engaged in a health plan's network may widen women's access to complete services that address the whole spectrum of care. Programs coverage such as those that can fund conveyance to appointments, or technology, such as applications that ease chronic situation management and appropriate and convenient communication, can lower barriers to care. Generally, while there are numerous procedures that payors can consider for assisting to advance maternal health, more research is required to evaluate the influence of these actions on maternal health outcomes [22].

- **EMPLOYERS**

Employers play vital role in the establishment of expectations and norms around the support of working mothers such as workplace policies and paid family leave. The postpartum period

is a critical period for women to bond with their new infant(s), gain strength after birth and firmly create breastfeeding practices. Prioritization of parental leave has been placed on high consideration by lawmakers in some developed nations [23-24]. Family and Medical Leave Act (FMLA) was signed into law in 1993 to make provision for certain employees up to 12 weeks of unpaid leave including after the birth or adoption of a child. This is applicable to public agencies (local, state, or federal government agencies), private-sector employers with 50 or more employees; and private and public elementary and secondary schools. More than half of the workforce is being covered by FMLA. However, some authorized women may not be able to take this unpaid leave for financial reasons. Act signed into law in 2019 provides Federal civilian employees with up to 12 weeks of paid parental leave to enable them care for a new child whether through adoption, birth, or foster care which began in October 2020 [25]. Figure 2 shows the conceptual framework for approaches to tackle demand-side barriers to maternal healthcare access and their shortcomings. The procedure involves movement from financial incentives to enhancing patient transfer for onward movement into community involvement.

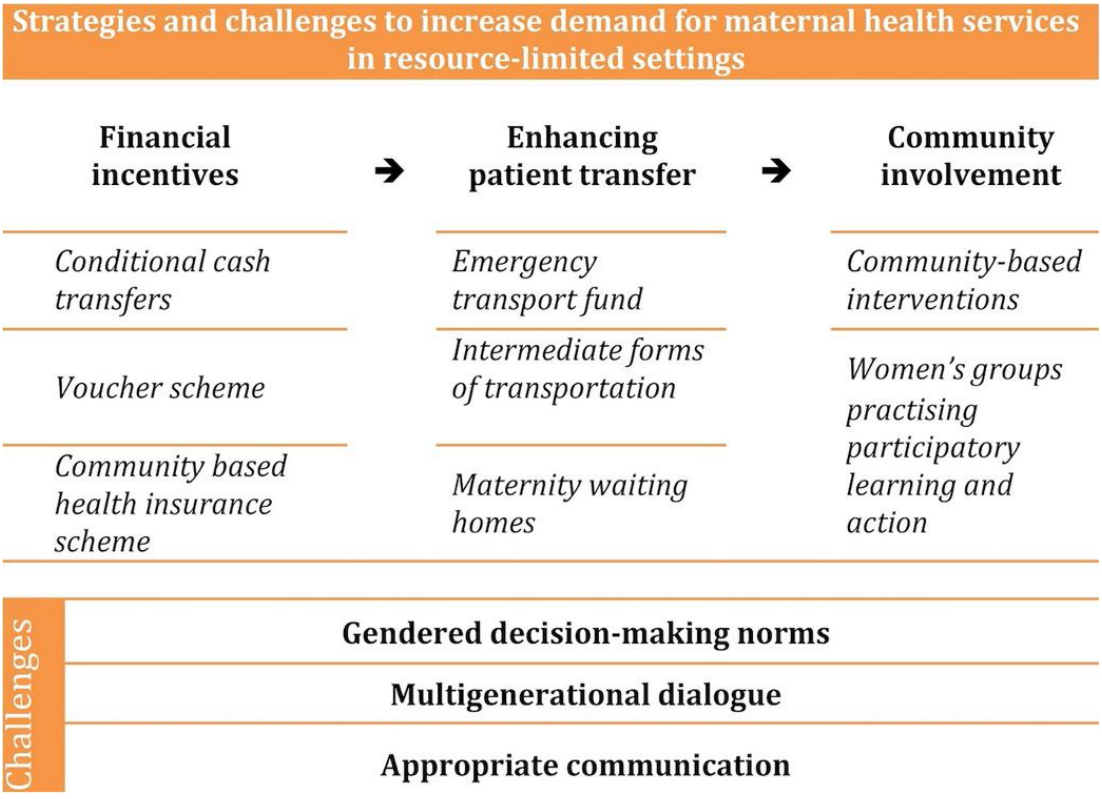

Figure 2: Conceptual framework for tactics in overcoming demand-side barriers to maternal healthcare access and their shortcomings

4. CONCLUSION

The health and well-being of women and their families in underserved West African communities is paramount and to future generations. While consideration is given to actions and strategies to advance maternal health, it is highly imperative to address health issues across the life course -- starting with adolescents and young girls and spreading through age of childbearing and beyond, while involving different stakeholders including states, tribes, and local communities; women and families; health systems, hospitals, and birthing facilities; healthcare professionals, health systems, hospitals, and birthing facilities; employers; payors; researchers; and innovators. Everyone can contribute via the creation of enabling environments which support the women well-being and health, encouraging healthy pregnancies, avoiding risk factors development, and ensuring access to high-quality healthcare before, during, and after pregnancy. The circumstances under which women are born, work, live, grow and age significantly affect their health risks, health status and outcomes. These social determinants also contribute to ethnic and racial differences in maternal health outcomes that are tenacious and are vital to address if progress on reducing maternal morbidity and mortality and improving maternal health can be achieved in underserved West African communities. There can be joint work to better understand these differences and to recognize and execute prevention approaches to achieve health equity. In conclusion, it is imperative to assist pregnant women while embarking onto the motherhood journey in order to harmonise the different maternal health procedures, and linking pregnant women with younger generations.

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