

**National Health Threats and Challenges in Senegal**

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## **Introduction**

Healthcare funding is rising in the developing world, and Senegal needs to continue increasing funds for preventative and population health. Senegal is a country located on the westernmost point of the continent of Africa. The population consists of 16.7 million inhabitants, with 1/4 of them located in the capital city of Dakar. 3/4 of the population has to rely on rural healthcare with little to no resources. 95% of the population practices Islam, and many rely on spiritual and traditional medicine practices to treat health problems. The country is politically stable, with small disruptions at the beginning of 2024. According to the World Bank, "Political tensions, persistent inflation and delays in hydrocarbon production affected growth in 2023." (World Bank, 2024). This was mainly due to the upcoming election, which affected economic and health growth (World Bank, 2024). These changes especially affected sustainable development goal 3, ensuring healthy lives and promoting well-being for all ages (United Nations, 2024). This goal's biggest threats include three major health problems: Malaria, maternal mortality, and increased hypertension and cardiovascular disease. To fight these killers, the country must implement preventative programs for hypertension, increase access to quality healthcare for mothers, and increase prevention and treatment for malaria.

## **Malaria**

The first major health threat is malaria. According to the WHO, "Malaria is a life-threatening disease spread to humans by some types of mosquitoes." (WHO, 2023). Malaria is concentrated in tropical, warm climates, and rates increase during the rainy season. The symptoms range from life-threatening to mild and include fever, chills, headache, confusion, and seizures. The disease is found through a rapid TDR test of the blood and treated by different forms of medication that increase in severity (WHO, 2023). The main prevention focus is on

vector control or control of the mosquitoes. Examples are mosquito nets, preventative chemoprophylaxis drugs and clothing to decrease the amount of getting bit. The issue is that preventative drugs are expensive and difficult to obtain for the general population. Travelers regularly use chemoprophylaxis, but the local population cannot access this medication. Senegal has multiple preventative programs but needs more funding to grow them. In Senegal, Malaria is endemic in most of the country, and adolescents have a higher risk of infection. According to a study on malaria prevalence in control in Senegal, “developing a strategy for screening and treatment of adolescents as well as an enhanced community-based surveillance for fever case management could be options to consider.”(Tairou, et. al, 2024). Focus on adolescent health and malaria prevention is the first consideration the committee must make. Secondly, The National Malaria Control Programme (NMCP) recommends that pregnant women receive at least three doses of sulfadoxine-pyrimethamine (SP) as intermittent preventive treatment during pregnancy (IPTp). These are different chemoprophylaxis drugs given to pregnant women during the first trimester; many of these women are confused as to why they need the drugs and receive very little education (Severe Malaria Observatory, 2022). Increasing education for all Senegalese citizens, especially those pregnant, is vital for decreasing the endemic of malaria. Overall, malaria prevention is on the rise in Senegal and must be focused on adolescents and children under 10. This can be done by increasing the funds for the seasonal malaria prevention chemotherapy program and providing preventative medication to these children during the rainy season.

### **Maternal Mortality**

The second major health threat is maternal mortality. Maternal mortality is the death of a mother due to complications during pregnancy or childbirth. These rates have been on the

downclimb for the past century but are still increasing in Sub-Saharan Africa, where Senegal is located. For example, in high-income countries, 1 in 5300 women will die from childbirth complications, while 1 in 49 women will die in lower-income countries (WHO, 2024). Senegal has decreased maternal mortality rates more than other sub-Saharan African countries, but these complications still wreak havoc on the population. According to a study done in an urban health center in Dakar, the main causes of death during childbirth were due to hemorrhaging and dystocia. While only 52.8% of these women had completed prenatal visits, Senegal has a well-structured prenatal care government plan (Delali et al., 2018). Many women lack access to transportation or help at home to look after other children, thus making it more difficult for them to attend their prenatal appointments. Another challenge for women in labor is access to a quality medical facility. Most rural villages are 30 or more minutes away from the local centre de sante, and many women end up birthing their children at home. This increases the risk of complications and infections for the child and mother. According to a study by Denali, “The challenge posed by major obstetric complications must be addressed to reduce maternal morbidity and mortality to reach the third Sustainable Development Goal (SDG), of good health and wellbeing, in Senegal by 2030.” He continues, “To promote prevention and thus reduce maternal mortality, the CSPMS must maintain its quality of care requirements and continue its computerization program of medical records.”(Delali et al., 2018). Through the computerization of medical records, prenatal care visits will be easier to document, maintaining health records of mothers and families and increasing quality of patient care will be achieved. Another important aspect to decrease maternal mortality rates is increasing education and comprehension of information for mothers. When mothers understand how important prenatal care and birth in a health facility can be, they will be more likely to participate in these activities, thus increasing their chance of survival.

Overall, to prevent maternal mortality in Senegal, medical services and the ministry need to maintain quality levels of care, continue to computerize their medical records, and promote prenatal care and education surrounding pregnancy to increase the survival rate in mothers.

### **Hypertension**

The final health threat is hypertension and cardiac disease. Hypertension is one of the major risks of developing heart disease and is the most common risk factor. Hypertension develops from consistent high blood pressure from lack of exercise, bad diet, and more. It can lead to different arrhythmias, stroke, and heart failure (Cleveland Clinic, 2021). Senegal's struggle with hypertension has increased; according to the CDC, "nearly 30% of the Senegalese population is estimated to be afflicted with hypertension, the control rate in Senegal is just 8% (compared to 53% in the United States)." (CDC, 2021). The control rate is immensely low in Senegal, mainly due to a lack of screening and medication access. Generic hypertension medications are not expensive, but with 30% of the population in need of them, access is low. Currently, a national hypertension program is monitored by the Ministre de Sante, but it is only active in urban areas. Only medical professionals in urban areas have been trained in hypertension awareness and treatment. The committee must strengthen the skills of community health workers in educating the population on the prevention and treatment of hypertension. This is done through helpful graphics, healthy food choices, and daily exercise. Another aspect to focus on is developing standard documents and protocols for the prevention and management of disease. By standardizing care across all healthcare facilities, the likelihood of decreasing the rate of disease will decrease (CDC, 2018). By implementing these changes into the hypertension program, we will be closer to reaching SDG #3 by 2030. Overall, the mortality rate will decrease by increasing the number of people surveyed and treated for hypertension. This can be done by

increasing the treatment and prevention program and training more health providers in health education and prevention of hypertension.

### **Conclusion**

In summary, malaria, maternal mortality, and hypertension are the largest health threats in Senegal in 2024. Major changes in the next six years must be obtained to reach SDG #3: Good health and well-being. These changes focus on the health education of healthcare workers and the population, leading to higher prevention rates and lower disease rates. Other changes include the computerization of charts, leading to better management of hypertension and maternal health, increased preventative medicine in adolescents for malaria, and increased prenatal care for mothers. All of these require funding for public and population health. We must focus on preventative care first and secondary and tertiary care. Prevention will put us on track to SDG #3 and increase the population health of Senegal. With these major changes in access and quality of care, hypertension, maternal mortality, and malaria rates in Senegal will fall, and the health and well-being of the country will steadily improve.

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