**SDG 3: Good Health and Well-Being**

**MATERNAL HEALTH ZAMBIA**

**Date:** 18/08/2024

**Problem Title:**  
Maternal Mortality Rate in Zambia

**Project Owner:**

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**Problem Overview:**  
Zambia faces significant challenges in achieving SDG 3, particularly in the area of maternal health. With an estimated maternal mortality rate of approximately 224 deaths per 100,000 live births, the country is among those with the highest maternal mortality rates globally. The high mortality rate is primarily driven by inadequate access to healthcare facilities, a shortage of skilled birth attendants, insufficient prenatal care, and socio-economic barriers that prevent women from receiving timely and effective maternal health services.

**Specific Problem Statement:**  
One of the most critical issues contributing to the high maternal mortality rate in Zambia is the lack of timely access to maternal healthcare services in rural areas. This problem is exacerbated by several factors:

* **Geographical Barriers:** Many rural communities are located far from healthcare facilities, making it difficult for pregnant women to receive timely care.
* **Limited Transportation Options:** The lack of adequate transportation infrastructure further hinders access to healthcare services.
* **Shortage of Healthcare Professionals:** There is a scarcity of skilled healthcare workers, particularly in rural areas, leading to inadequate care during pregnancy and childbirth.

**Objective:**  
To address this problem, we aim to improve the accessibility and quality of maternal healthcare services in rural Zambia. By leveraging data, we can identify the critical gaps in service provision and develop targeted interventions to reduce the maternal mortality rate.

**Proposed Approach:**

**1. Data Collection:**

* Gather data on the availability and distribution of maternal healthcare facilities across Zambia.
* Collect information on the distance between rural communities and the nearest healthcare facilities.
* Record the number of trained healthcare professionals available in these facilities.
* Collect data on transportation options and infrastructure in rural areas.

**2. Relational Database Design:**

* **Healthcare Facilities Table:** Captures details about healthcare facilities, including their locations, types (hospital, clinic), and the number of beds available.
* **Healthcare Workers Table:** Includes data on healthcare professionals, their qualifications, and the facilities where they work.
* **Maternal Health Records Table:** Tracks patient visits, outcomes, and related healthcare services provided.
* **Mothers Table:** Records demographic information and health history of mothers.

**3. Data Analysis:**

* Analyse the collected data to identify areas with the greatest need for maternal healthcare services.
* Determine the relationship between healthcare facility accessibility and maternal health outcomes.
* Identify gaps in healthcare worker availability and propose solutions to address these shortages.

**4. Dashboard Visualization:**

To visualize key insights from the database, an interactive dashboard will be created using Google Sheets. This dashboard will include various charts and graphs that represent critical aspects of maternal healthcare in Zambia:

* **Bar Chart**: Illustrating the number of beds by healthcare facility. This chart will help identify which facilities are more equipped to handle patient loads based on available beds.
* **Pie Chart**: Visualizing the distribution of healthcare worker qualifications. This will provide insights into the availability of skilled professionals across different facilities.
* **Line Chart**: Tracking visits over time. This chart will help in analysing trends in maternal healthcare visits, identifying peak periods, and understanding the effectiveness of healthcare delivery.

These visualizations will enable stakeholders to make data-driven decisions, ensuring that resources are allocated where they are most needed, and interventions are targeted effectively to reduce the maternal mortality rate in Zambia.

**5. Targeted Interventions:**

* Based on the data analysis, develop targeted interventions to improve maternal healthcare accessibility in rural areas.
* Propose solutions such as mobile clinics, training programs for healthcare workers, and improved transportation infrastructure.

**Conclusion:**  
Addressing the high maternal mortality rate in Zambia requires a comprehensive approach that leverages data to inform targeted interventions. By focusing on improving access to maternal healthcare services in rural areas, we can make significant progress towards achieving SDG 3 and ensuring good health and well-being for all women in Zambia.