**SDG Problem Definition Document**

**Pitchdeck link: https://gamma.app/docs/Solving-Healthcare-Inefficiencies-with-Data-90hbo6qxdja1o35?mode=doc**

**1. SDG Selection**

* **Selected SDG:** SDG 3: Good Health and Well-being
* **Brief Description:** SDG 3 aims to ensure healthy lives and promote well-being for all at all ages. It focuses on reducing maternal mortality, ending epidemics, achieving universal health coverage, and ensuring access to essential medicines and vaccines.

**2. Problem Definition**

* **Specific Problem:** High rates of preventable diseases in rural communities due to inadequate access to healthcare services.
* **Context and Background:**
  + Many rural communities face significant challenges in accessing healthcare. These challenges include a shortage of healthcare facilities, insufficient medical supplies, and limited health education resources.
  + As a result, residents in these areas experience higher rates of preventable diseases, which exacerbates health disparities compared to urban populations. These issues contribute to increased morbidity and mortality rates that could be mitigated with improved healthcare access and support.
* **Objective:**
  + To enhance healthcare access and improve health outcomes in rural communities by using data to identify gaps in healthcare services, evaluate existing programs, and propose targeted interventions. The goal is to reduce the incidence of preventable diseases and improve overall well-being in these underserved areas.
* **Proposed Solution:**
  + **Database Design:** Develop a relational database to track key data points related to healthcare services in rural areas. This will include:
    - **Healthcare Facilities:** Information on location, capacity, and services provided.
    - **Medical Supplies:** Data on availability, distribution, and usage of medical supplies.
    - **Health Education Programs:** Details about ongoing health education initiatives and their reach.
    - **Patient Records:** Aggregated data on disease incidence and healthcare utilization.
  + **Data Analysis:** Utilize SQL queries to analyze the data and identify:
    - Areas with insufficient healthcare facilities or supplies.
    - Effectiveness of health education programs.
    - Patterns in disease incidence relative to healthcare access.
  + **Intervention Development:** Based on the analysis, propose data-driven recommendations for improving healthcare access and resource distribution in rural communities. This may include strategies for optimizing facility locations, improving supply chains, and expanding health education outreach.
* **Data Requirements:**
  + **Entities:**
    - **Healthcare Facilities:** Name, location, capacity, services provided.
    - **Medical Supplies:** Type, quantity, distribution details.
    - **Health Education Programs:** Program name, scope, participant data.
    - **Patient Records:** Disease types, incidence rates, healthcare usage.
  + **Key Metrics:**
    - Number of healthcare facilities and their capacity.
    - Distribution and availability of medical supplies.
    - Coverage and effectiveness of health education programs.
    - Rates of preventable diseases and healthcare utilization patterns.
* **Expected Outcomes:**
  + **Insights:**
    - Identification of healthcare service gaps and areas with high needs.
    - Evaluation of the effectiveness of health education and resource distribution.
    - Data-driven recommendations for targeted interventions to improve healthcare access and reduce preventable diseases.
  + **Impact:**
    - Enhanced access to healthcare services in rural areas.
    - Reduced incidence of preventable diseases.
    - Improved overall health outcomes and well-being in underserved communities.