**Improving Cancer Patient Data Management to Enhance Healthcare Outcomes**

Cancer is one of the leading causes of mortality worldwide, with millions of new cases diagnosed each year. Early detection and

effective treatment can significantly improve survival rates, but this requires robust and accurate patient data management systems. Currently, many healthcare facilities struggle with managing patient data effectively, which can lead to delays in diagnosis, treatment, and follow-up care.

This project aligns with Good Health and Well-being, which aims to ensure healthy lives and promote well-being for all at all ages. Specifically, this project addresses the target of reducing premature mortality from non-communicable diseases (NCDs) through prevention, treatment, and promotion of mental health and well-being.

Problem Statemen

The problem is the inefficient and often inaccurate management of cancer patient data in healthcare facilities, which contributes to delayed diagnosis, treatment inefficiencies, and suboptimal patient outcomes. The lack of a standardized and streamlined data management system results in fragmented information that hinders healthcare providers' ability to make informed decisions.

Objectives:

Primary objective too develop an efficient, user-friendly, and reliable cancer patient data management system that can be used by healthcare facilities to improve the accuracy and accessibility of patient records.

Specific Objectives

1. Automate the data entry process for cancer patient records to reduce manual errors.

2. Implement a robust database to store patient information, including demographics, diagnosis, treatment, and follow-up data.

3. Develop a system that supports real-time data retrieval and analysis for healthcare providers.

4. Enhance the ability of healthcare facilities to track patient outcomes and improve treatment plans based on data-driven insights.

Scope

The project will focus on developing a database and data management system specifically for cancer patients. The system will be designed to handle data related to patient demographics, diagnosis, treatment plans, and outcomes. The project will be implemented in healthcare facilities with an emphasis on integrating with existing health information systems.

Methodology

-Data Collection: Gather requirements from healthcare providers to understand the data points that need to be captured and the current challenges faced in data management.

System Design Develop an Entity-Relationship Diagram (ERD) to model the database structure, including tables for patient records, treatment plans, and outcome tracking.

System Development: Implement the database and data management system using MySQL for database management, and develop necessary interfaces for data entry, retrieval, and reporting.

Testing and Validation: Test the system in a controlled environment with sample data to ensure it meets the requirements and addresses the identified challenges.

Training and Deployment: Train healthcare providers on the use of the system and deploy it in selected healthcare facilities.

Expected Outcomes

- Improved accuracy and completeness of cancer patient records.

- Enhanced ability for healthcare providers to make informed decisions based on comprehensive and up-to-date patient data.

- Reduction in delays associated with data retrieval and analysis.

- Increased efficiency in managing patient treatment plans and tracking outcomes.

Impact on SDG

This project will contribute to achieving SDG 3 (Good Health and Well-being) by improving the management of cancer patient data, leading to better health outcomes and potentially reducing the mortality rate associated with cancer. By streamlining data management, the project will support more effective treatment planning and follow-up care, directly addressing the SDG target of reducing premature mortality from non-communicable diseases.