**FAITH SPECIALIST HOSPITAL**

## Problem Statement

Faith Specialist Hospital, a key healthcare provider serving a diverse population, faces challenges in leveraging its extensive patient data to improve outcomes. The hospital has observed an increasing number of discharges against medical advice (DAMA), a rising prevalence of chronic diseases, and elevated mortality rates among specific patient groups. This analysis aims to provide actionable, data-driven insights to address these issues and enhance hospital management and patient care.

**INSIGHTS**

**Discharge Against Medical Advice (DAMA)**

* **Prevalence and Demographics**:
  + A total of 275 patients were discharged against medical advice, with a near-equal gender distribution (144 males, 131 females).
  + The young age group (15–47 years) had the highest DAMA rates, followed by the middle age (48–64 years) and elderly (65+ years) groups.
  + Patients with SSCE (119 cases) and FSLC (118 cases) education levels exhibited the highest DAMA rates, indicating a potential correlation with lower educational attainment.
  + Marital status showed married patients as the most likely to opt for DAMA, followed by widowed and single patients.
* **Primary Reason**:
  + Financial constraints were the leading cause of DAMA, suggesting socioeconomic barriers significantly impact patient retention.
* **Length of Stay (LOS) Impact**:
  + DAMA rates were elevated for hospital stays between 4–14 days, indicating a critical window where patients are more likely to leave prematurely.

**Mortality**

* **Overall Mortality**:
  + A total of 290 deaths were recorded, with males and the middle age group (48–64 years) showing the highest mortality rates.
* **Leading Causes**:
  + Sepsis was the primary cause of death, particularly in the middle age group, followed by cardiac arrest.
  + Emergency medicine recorded the highest mortality, with sepsis as the leading cause.
* **LOS and Mortality**:
  + Mortality was elevated within the first 3 days and between 4–7 days of admission, suggesting critical early intervention periods.

**Chronic Disease Prevalence**

* **Distribution**:
  + Stroke: 33.46%
  + Chronic Kidney Disease (CKD): 31.24%
  + Peptic Ulcer Disease (PUD): 16.20%
  + Diabetes Mellitus: 16.01%
  + Cancer: 3.09%
* **LOS by Condition**:
  + Diabetes Mellitus: 13.52 days
  + Stroke: 13.24 days
  + CKD: 12.77 days
  + Cancer: 10.81 days
  + PUD: 10.65 days
  + The overall average LOS was 12.85 days, with a range from 1 to 113 days.

**Lifestyle Factors**

* **Impact on Mortality**:
  + Patients with no history of alcohol, tobacco, or NSAID use had the highest death rates, particularly in the middle age and elderly groups.
  + Among lifestyle-affected patients who died, CKD and stroke were the most prevalent chronic conditions.

**Workforce and Specialty Workload**

* **Staffing**:
  + The hospital has 39 doctors, with emergency medicine and cardiology specialties facing the highest workloads, each staffed by only two doctors.
  + Other specialties have at least three doctors and comparatively lower workloads.
* **Impact**:
  + Emergency medicine recorded the highest DAMA and mortality rates, likely exacerbated by understaffing and high patient volume.
  + Cardiology also faced significant workload pressures, contributing to elevated DAMA and mortality.

**Recommendations**

**Addressing DAMA**

1. **Financial Support Programs**:
   * Establish a patient assistance fund to alleviate financial constraints, targeting low-income patients, particularly those with SSCE/FSLC education levels.
   * Partner with local NGOs or government programs to subsidize treatment costs for chronic disease patients.
2. **Patient Education and Engagement**:
   * Implement targeted counseling during the 4–14-day LOS window to address concerns and improve treatment adherence, especially for young and married patients.
   * Develop educational campaigns to inform patients about the risks of DAMA, focusing on chronic disease management.

**Reducing Mortality**

1. **Strengthening Emergency Medicine**:
   * Increase staffing in the emergency medicine department by hiring at least two additional doctors to reduce workload and improve patient outcomes.
   * Implement sepsis-specific protocols, including early detection and rapid response systems, to address the leading cause of death.
2. **Critical Care Focus**:
   * Enhance monitoring and intervention capabilities within the first 3 days and 4–7 days of admission to reduce mortality spikes.
   * Train staff on early warning systems for sepsis and cardiac arrest, particularly for middle-aged patients.

**Workforce Optimization**

1. **Staff Redistribution and Recruitment**:
   * Reallocate doctors from less burdened specialties to support emergency medicine and cardiology during peak times.
   * Prioritize hiring additional specialists in emergency medicine and cardiology to balance workloads.
2. **Training and Support**:
   * Provide continuous training on managing high-prevalence conditions (stroke, CKD, sepsis) to improve care quality and reduce DAMA and mortality.
   * Introduce workload management tools, such as triage systems, to optimize doctor efficiency.

**Chronic Disease Management**

1. **Specialized Clinics**:
   * Establish dedicated clinics for stroke and CKD, given their high prevalence, to provide tailored care and reduce LOS.
   * Offer multidisciplinary care teams to manage diabetes and PUD, focusing on preventive measures and lifestyle counseling.
2. **Data-Driven Monitoring**:
   * Implement a real-time data dashboard to track DAMA, mortality, and LOS trends by specialty and condition, enabling proactive interventions.
   * Use predictive analytics to identify high-risk patients (middle-aged, elderly) for targeted follow-up care.

**Community and Lifestyle Interventions**

1. **Health Awareness Campaigns**:
   * Launch community programs to educate middle-aged and elderly populations on chronic disease prevention, focusing on stroke and CKD risk factors.
   * Address misconceptions about lifestyle factors, emphasizing that non-lifestyle-related deaths still require robust chronic disease management.
2. **Support for At-Risk Groups**:
   * Develop support groups for patients with chronic conditions to improve adherence and reduce DAMA, particularly for married and widowed patients.

**Conclusion**

Faith Specialist Hospital faces significant challenges with high DAMA (275 cases), mortality (290 deaths), and chronic disease prevalence (stroke 33.46%, CKD 31.24%). Financial constraints drive DAMA, while understaffing in emergency medicine and cardiology contributes to poor outcomes. Middle-aged and elderly patients are at highest risk, particularly for sepsis and chronic conditions. By implementing financial support, specialized clinics, enhanced staffing, and data-driven systems, the hospital can reduce DAMA and mortality, improve chronic disease management, and optimize doctor performance. These interventions will strengthen Faith Specialist Hospital’s ability to deliver high-quality care and improve patient outcomes.