

1. TITLE

STUDY OF INPATIENT MORBIDITY AND MORTALITY PATTERNS USING ICD-10 IN A MULTISPECIALTY HOSPITAL

2. INTRODUCTION

Accurate, structured hospital data is essential for improving clinical care, health planning, and policy-making. Medical Record Departments (MRDs), by recording patient data systematically and coding it under ICD-10, provide valuable insights into disease burden, service utilization, and treatment outcomes.

This study observes the inpatient data collected from a multispecialty hospital over five months (January–May 2025). It explores morbidity and mortality trends, common disease groupings (ICD-10 chapters and DRGs), patient demographics, departmental caseloads, discharge patterns, and average length of stay. These findings can help inform hospital operations, public health interventions, and research.

3. RESEARCH QUESTION

- What are the leading causes of morbidity and mortality among inpatients in the study hospital during the five-month period?
 - How are inpatient admissions distributed by age, gender, department, and ICD-10 categories?
 - What trends are observed in discharges (routine, LAMA, MLC, death) and admission types (IPD vs emergency)?
 - What operational insights (e.g., peak months, ALOS, insurance usage) can be drawn from the MRD data?
-

4. OBJECTIVES

Primary Objective:

- To study the patterns of morbidity and mortality among inpatients using ICD-10 classified MRD data.

Secondary Objectives:

1. To identify the top ICD-10 chapters and DRG categories contributing to overall hospital case mix.
2. To observe the distribution of inpatient admissions based on age, gender, and clinical departments.

3. To calculate the Average Length of Stay (ALOS)
4. To study patient demographics (age and gender), admission type (emergency vs. IPD), and departmental trends in relation to morbidity, mortality, and discharge outcomes.

5. MATERIAL AND METHODS

Study Design:

Retrospective, descriptive epidemiological study.

Study Setting:

A multispecialty hospital with a functioning Medical Records Department (MRD) and various departments including medicine, surgery, paediatrics, critical care, and others.

Study Population:

All inpatients admitted between Jan 1,2025 and May 31,2025 .

Inclusion Criteria: (PURPOSIVE SAMPLING METHODS)

- Patients admitted to the IPD during the study period.
- Patients with complete demographic, clinical, and discharge records.

Exclusion Criteria:

- Patients with incomplete or missing records.
- Patients admitted for less than 24 hours or for elective procedures without complications.

Data Source:

Secondary data extracted from MRD, including patient demographics, admission/discharge records, ICD-10 codes, DRG groupings, and type of discharge.

DATA COLLECTION PROCEDURE:

Data will be extracted from hospital records including patient demographics, admission/discharge dates, diagnosis (ICD-10), outcome (discharge, death, referral, LAMA), and duration of stay. These will be recorded in a structured format and cross-verified for accuracy.

OPERATIONAL DEFINITIONS:

- **Length of Stay (LOS):** Number of days from date of admission to discharge.
 - **Morbidity:** Presence of complications or multiple diagnoses recorded in patient file.
 - **Mortality:** Patients marked as "deceased" in discharge records.
 - **ICD-10 Chapters:** Standardized classification of diseases.
-

6. IMPLICATIONS OF RESEARCH

This study will provide evidence-based insights to hospital administrators for improving resource planning, bed utilization, and clinical outcomes. The findings may help develop protocols to manage high-risk patient groups more efficiently, thereby reducing LOS and enhancing quality of care.