



Healthcare Patient Analysis

Summary Report

This report provides a comprehensive analysis of 300 hospital patients, focusing on department-wise distribution, risk factors, readmission patterns, and demographic insights. The goal is to identify trends that can help improve patient care, reduce readmissions, and support data-driven decision-making in healthcare management.

1. Key Performance Indicators (KPIs)

KPI	Value	Insight
Total Patients	300	Sufficient data for reliable analysis
Average Length of Stay	7.43 days	Moderate hospital stay duration
High BP %	0.41 (41%)	High blood pressure is a common condition
Average Risk Score	4.41	Indicates moderate patient complexity
Readmission Rate (30 days)	0.33 (33%)	One-third patients return within 30 days

Insight:
BP-related risks and moderate complexity indicate the need for better monitoring programs.

2. Department-Level Analysis

Patient Count by Department

- **Oncology** has the highest number of patients (~70–75).
- Followed by **General Medicine**, **Cardiology**, **Orthopedics**, and **Neurology**.

Readmissions by Department

Readmission patterns show:

Department	N	Y
Cardiology	44	19
General Medicine	42	21
Neurology	34	18
Oncology	45	22
Orthopedics	36	19

Insight:

- Oncology and General Medicine show the highest readmission counts.
 - These departments may require improved follow-up care and discharge planning.
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3. Demographic Insights

Gender Distribution

- **Male:** 147
- **Female:** 153

Almost equal gender representation.

Age Group Distribution

- **Senior (60+ yrs):** 126
- **Middle-Aged (40–59 yrs):** 64
- **Adult (20–39 yrs):** 61
- **Young (<20 yrs):** 49

Insight:

Senior citizens make up the largest portion and are at higher risk for readmission and complications.

4. Medical Risk Insights

- **41% patients have high blood pressure**, indicating cardiovascular risk factors.
- **Average risk score of 4.41** suggests moderate clinical complexity.
- **Longer hospital stays (7+ days)** correlate with higher comorbidities.

Insight:

Patients with high BP, glucose issues, and multiple comorbidities need enhanced monitoring.

5. Readmission Analysis

- Overall readmission rate = **33%**
- Highest readmission seen in:
 - **Oncology**
 - **General Medicine**
 - **Orthopedics**

Insight:

These areas may benefit from structured post-discharge programs to reduce early return cases.

6. Overall Findings

- Cancer, chronic illnesses, and complex cases contribute to longer stays and higher readmissions.
- Senior population is the largest and most vulnerable group.
- Departments with high patient volume also show higher readmission rates.
- Blood pressure management is a major concern.

7. Conclusion

The analysis reveals important trends in patient demographics, clinical risks, and department-specific patterns. Addressing high-risk areas—especially chronic diseases and senior care—can significantly improve patient outcomes and reduce avoidable readmissions. The dashboard provides actionable insights for hospital leaders to optimize healthcare delivery.

