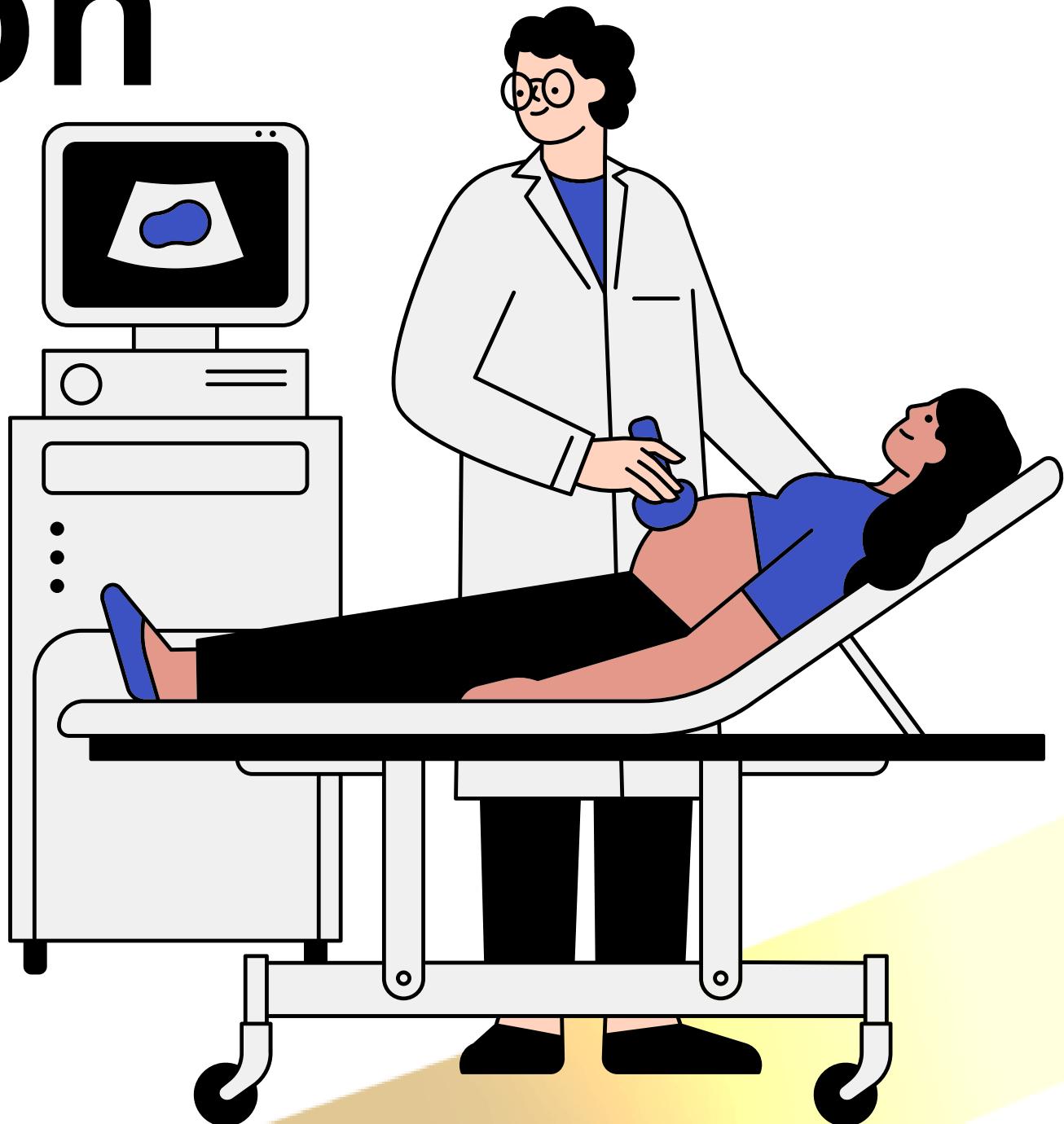




Patient Readmission Analysis

Presentation

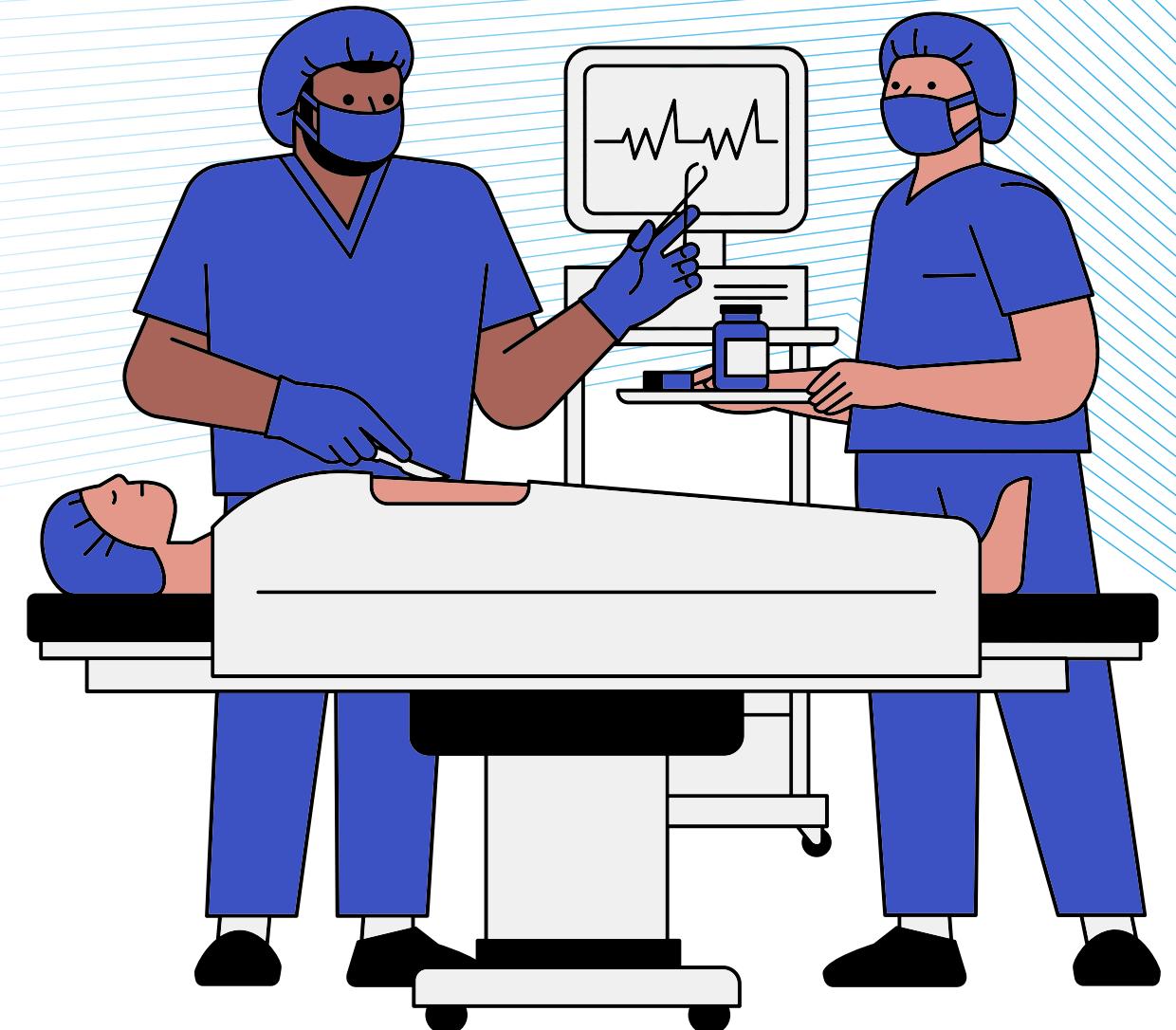
Presented By :
Steve Adeniyi Baale





Objective

To classify patients into meaningful groups (diagnosis severity, age group, admissions history, blood pressure stage, blood sugar status, length of stay) and analyse readmission patterns for actionable healthcare insights.

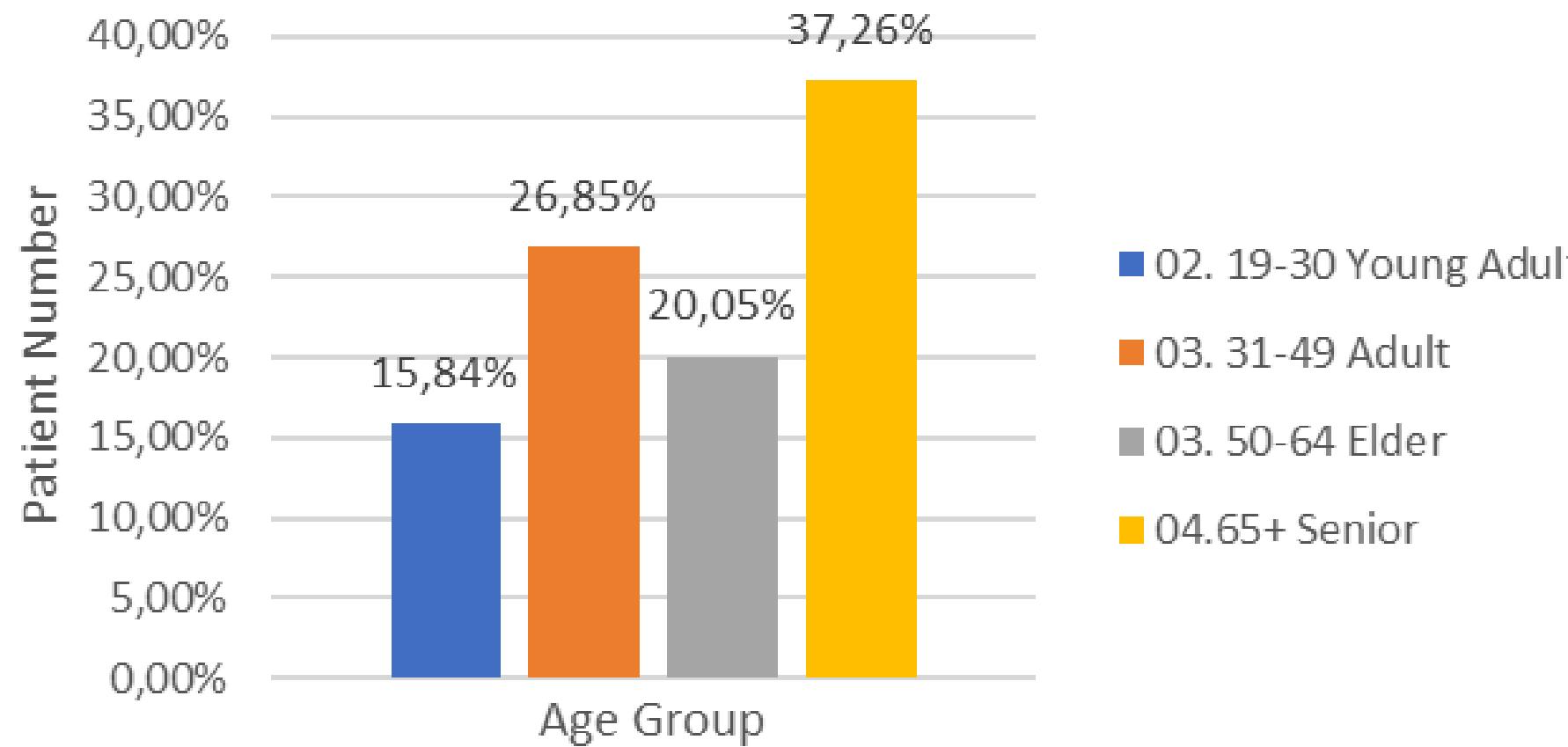


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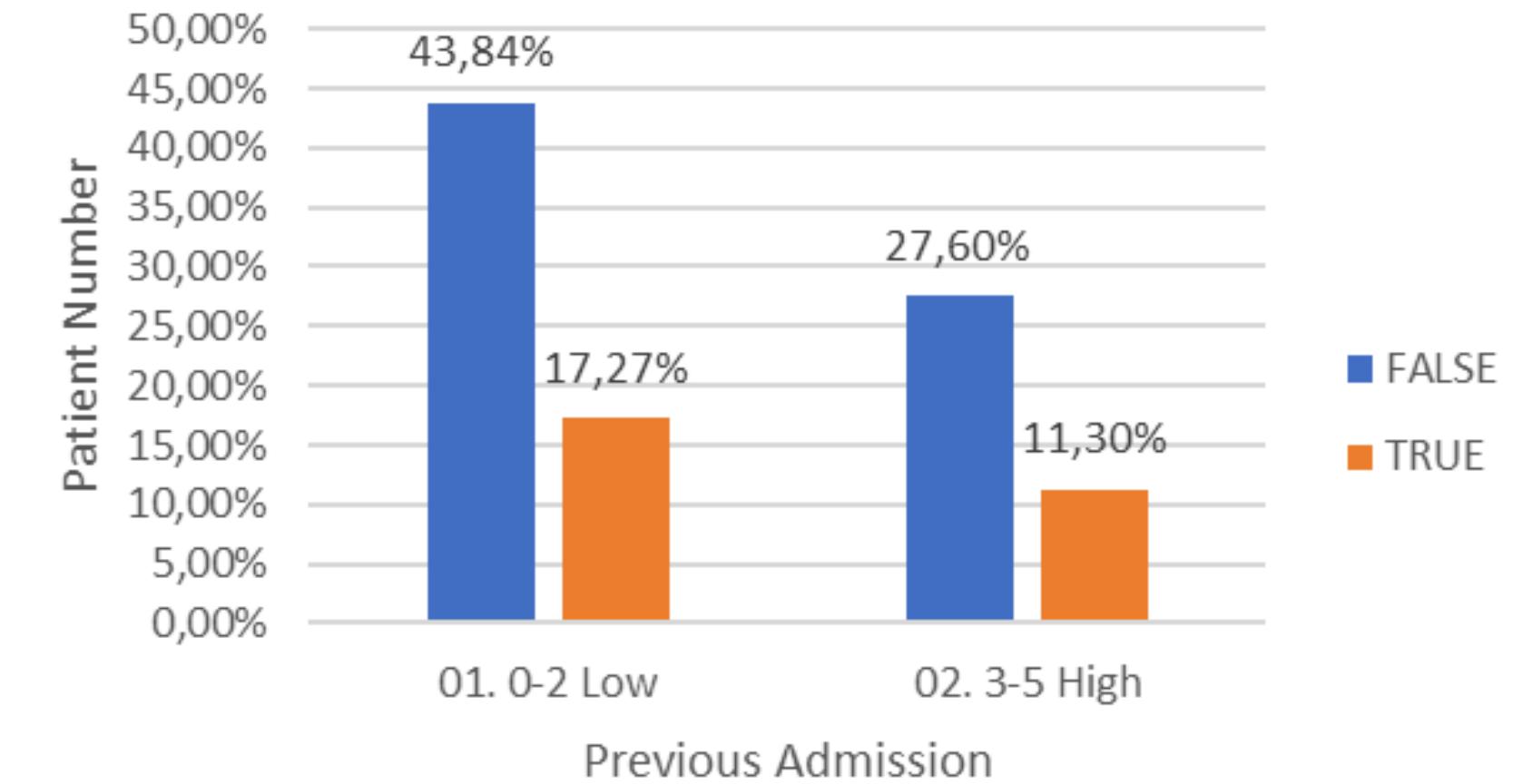
Readmission by Age Group

Readmission and Previous Admission

Readmission by Age Group



Previous Admissions vs Readmission



Insights:

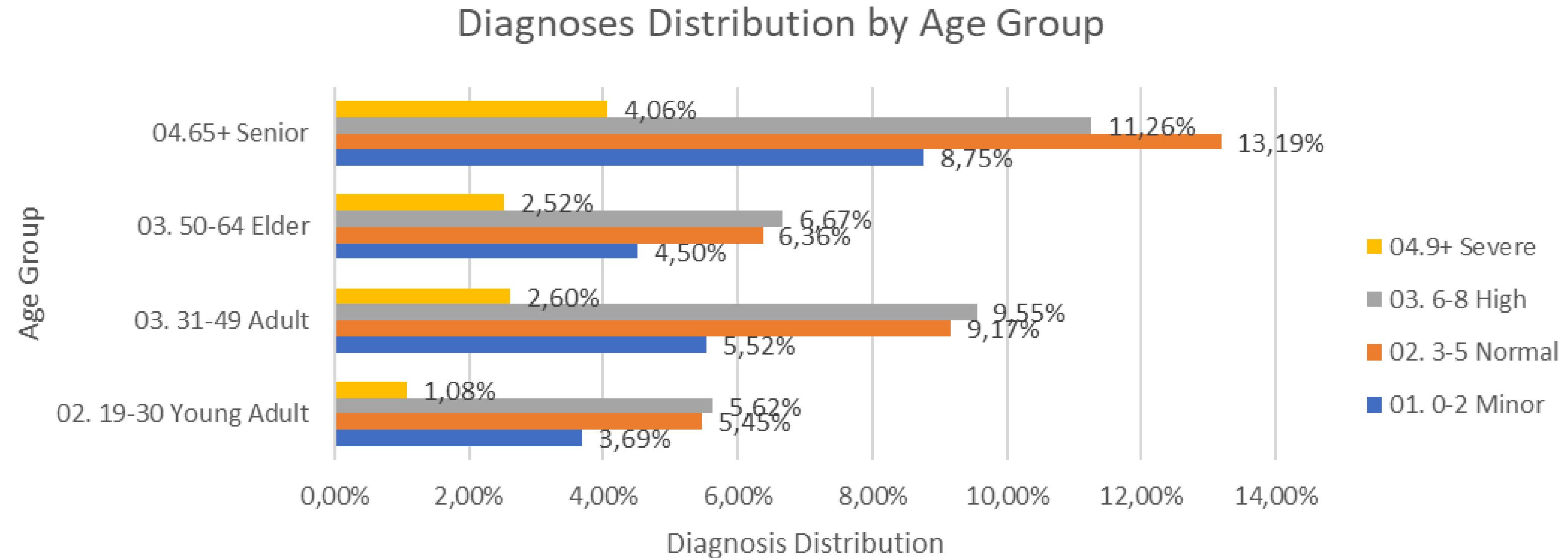
Patients aged 65 years and older exhibit the highest readmission rate at 37.26%, whereas young adults have the lowest readmission rate at 15.84%.

Insights:

- Patients with 3+ prior admissions have a critical risk of readmission.
- First-time or low-admission patients show much lower readmission rates.



Number of Diagnoses Distribution by Age Group



Insights:

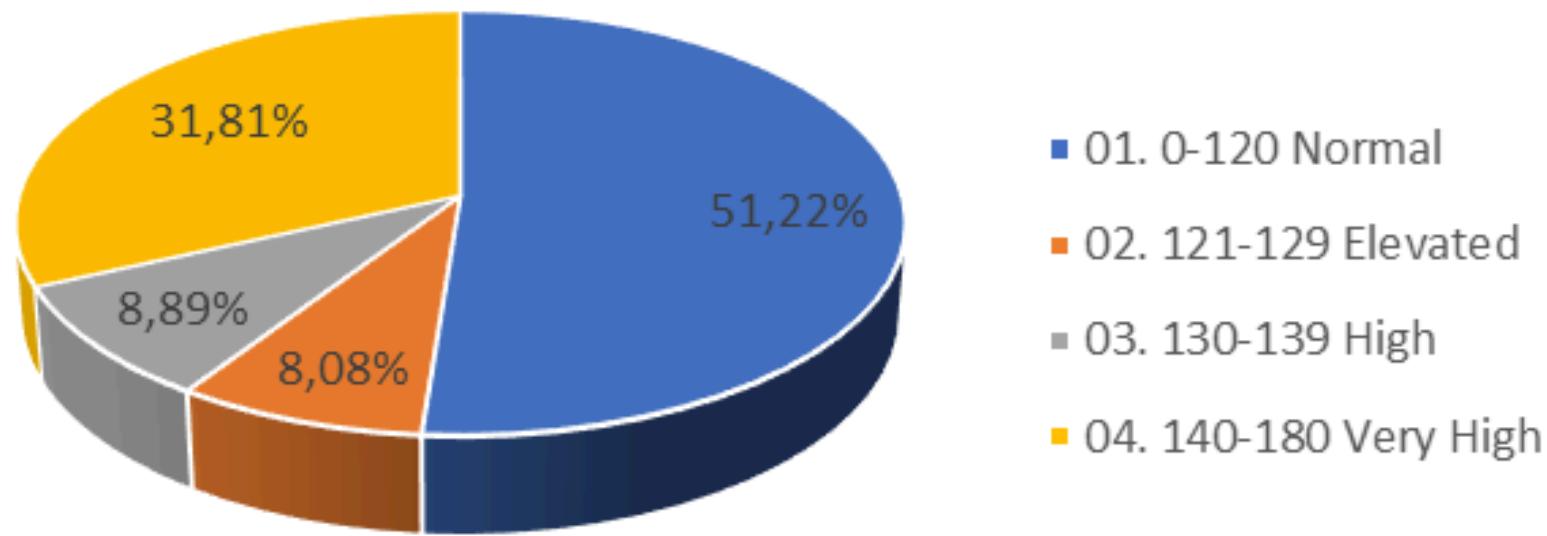
- Patients with 65+ diagnoses are significantly more likely to be readmitted.
- The majority of patients fall into the Normal (3–5 diagnoses) category.



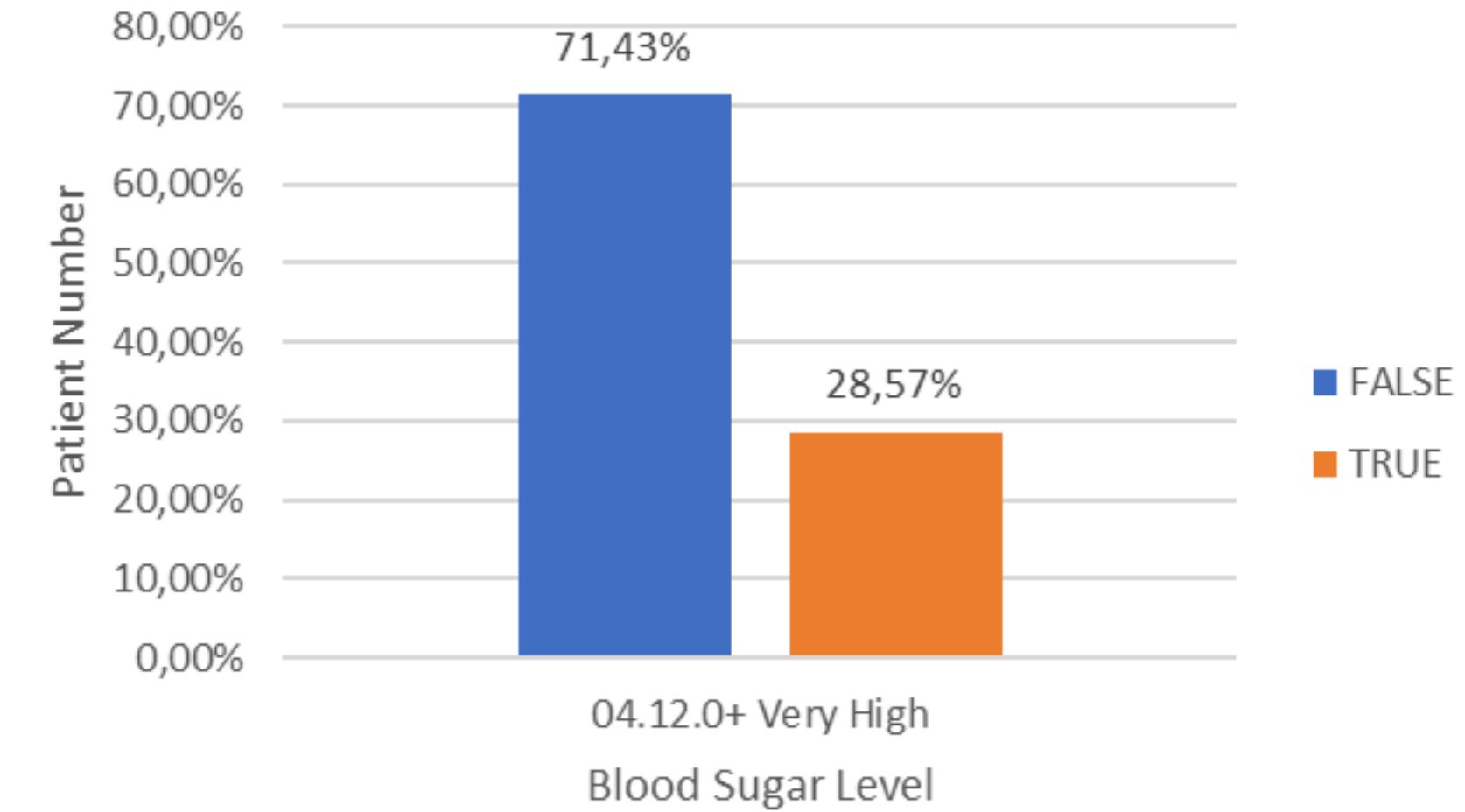
Blood Pressure and Sugar Level



Blood Pressure Stage Breakdown



Blood Sugar Levels vs Readmission



Insights:

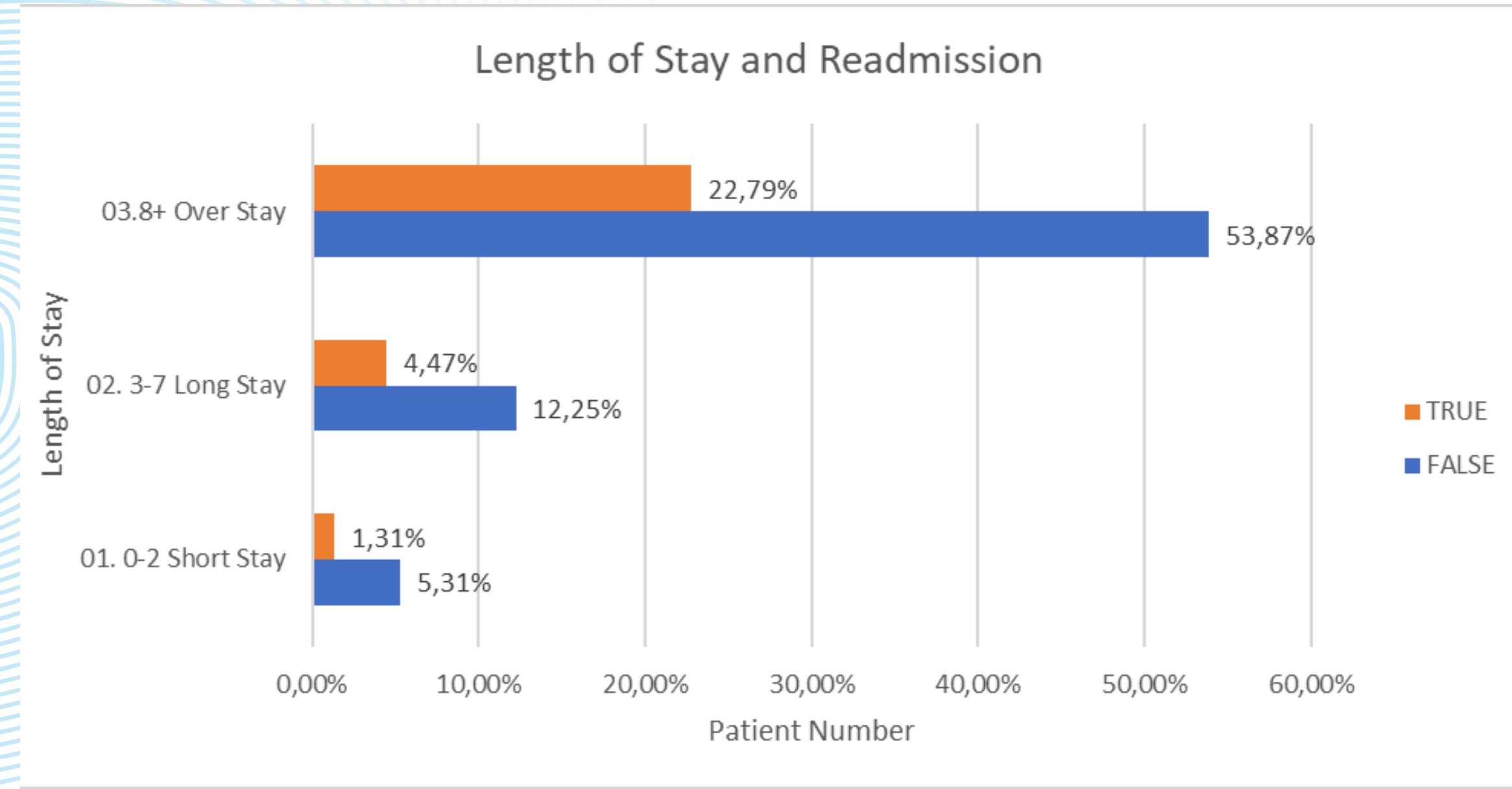
- High and very high blood pressure categories correlate with higher readmission risk, which accounts for 40.7%
- Normal blood pressure patients are less likely to be readmitted with 59.3%

Insights:

- Patients with Very High blood sugar (12+) show increased readmission.
- Excellent (5-7) levels are associated with fewer readmissions.



Length of Stay Duration



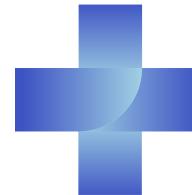
Insights:

- Long stays (3–7 days) and overstays (8+) are linked to higher readmission, which contributed to 93.38%
- Short stays (0–2 days) have lower readmission rates, accounting for 6.62%



Recommendation

- Focus preventive care on high-risk groups, which are the Age 65+ years and above.
- Address clinical risk factors: Patients with elevated blood pressure, very high blood sugar levels, and long hospital stays (7+ days) show possible and significantly higher readmission rates.
- Implement proactive monitoring: Introduce early warning systems to flag patients with critical vitals or extended stays, enabling timely intervention and medical assessment before discharge.
- Enhance discharge planning by delivering individualised discharge instructions and ensuring appropriate follow-up appointments for high-risk patients to minimise preventable readmission.
- Implement creation of a dashboard for continuous monitoring that visualises readmission trends by age group, diagnosis severity, admission history, and vital signs, enabling clinicians and administrators to make informed, data-driven decisions

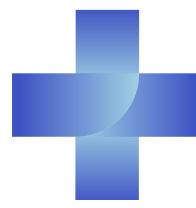




Insights



- Clinical focus on patients with severe diagnoses and abnormal vitals.
- Operational focus on elderly and high-admission patients through better discharge planning and monitoring.



Thank You

