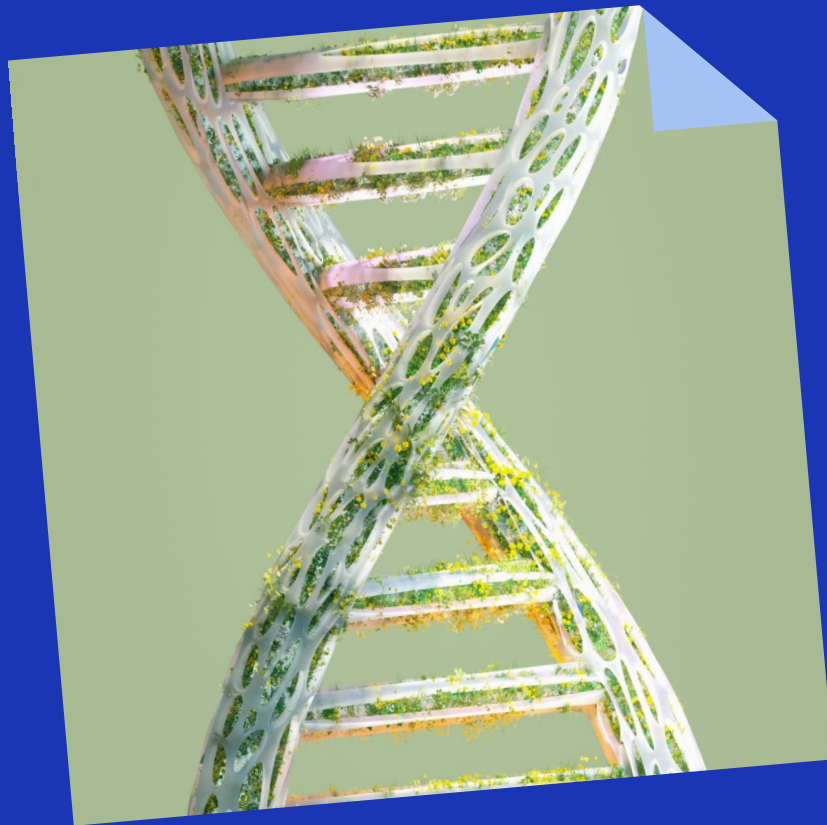


Investigating the decline in hospital resource use over time

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Admissions & LOS Trends

1. Total Admissions Overview

- **Total Admissions: 16.44K**
- This represents **all General Surgery encounters** recorded in the dataset.
- The volume of admissions is a key metric for **understanding hospital demand** and **resource utilization**.

2. Average Length of Stay (LOS) Trend

- The **LOS fluctuates throughout the year**, with notable **peaks and dips**.
- **High LOS Months: January, October, and November** show **higher than average LOS**.
- **Low LOS Months: May and December** see the **shortest hospital stays**.
- The general trend **declines mid-year**, indicating **potential improvements in efficiency** (e.g., faster discharges, more outpatient cases).

3. Possible Implications

- **Operational Efficiency:** The **gradual reduction in LOS** in some months suggests **improved care coordination**.
- **Seasonal Effects:** The **spike in LOS in October and November** may indicate **higher patient complexity** during certain periods.
- **Outpatient Growth Impact:** If **outpatient surgeries are increasing**, it could be driving the **lower LOS trend** in some months.

Total Admission

16.44K

Average of Length of Stay by Month



Inpatient vs. Outpatient Trends

General Surgery Admissions Breakdown

- The majority of General Surgery admissions are surgical (SURG), while medical (MED) cases make up a much smaller proportion.
- **Highest Admission Months:** April, June, and May show the highest surgical admissions, exceeding 1,500 cases per month.
- **Lowest Admission Months:** October, November, and December have significantly lower admissions, with numbers dropping below 1,100 in some months.

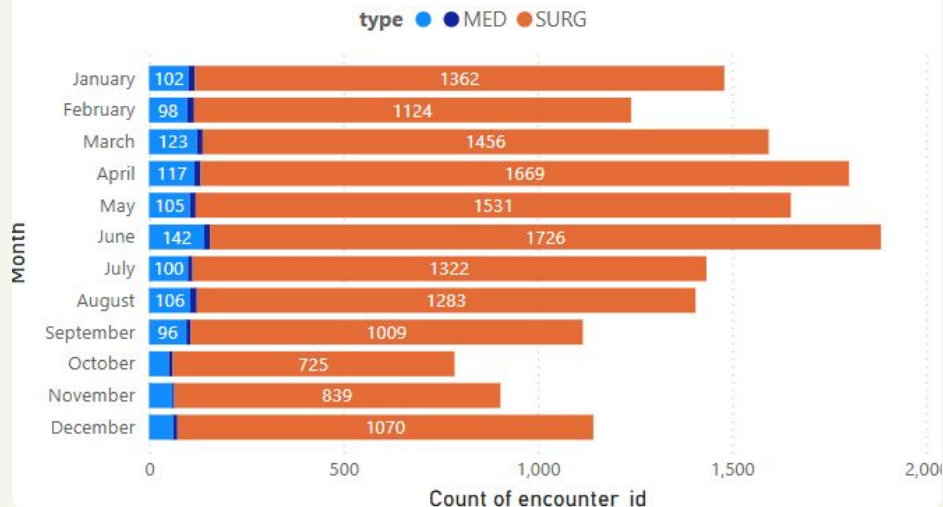
2. Decline in General Surgery Admissions Toward Year-End

- Admissions gradually decrease from July onwards, reaching their lowest in October and November.
- The sharp drop in surgical cases in October and November could indicate seasonal variations, policy changes, or increased outpatient procedures.

3. Possible Implications

- **Shift Toward Outpatient Care?** If minimally invasive procedures are increasing, fewer patients may require full hospital admission.
- **Seasonal Trends:** The end-of-year decline in admissions could be due to fewer elective surgeries during holidays or operational changes.
- **Resource Planning Impact:** Lower admissions in October–December may allow for resource reallocation, while peak months (April–June) require higher staffing and bed availability.

General Surgery Admissions by Month



Identifying Contributing Factors

1. Operational Changes Driving Shorter LOS & Lower Admissions

- **Faster Discharges:** The decline in **average LOS mid-year** suggests **better discharge planning** and **improved post-surgical care**.
- **More Outpatient Procedures:** The drop in inpatient cases (October–December) may indicate **a shift toward same-day surgeries**.
- **Improved Care Coordination:** Hospitals may be optimizing patient flow, leading to **shorter hospital stays and fewer unnecessary admissions**.

2. External Factors Influencing Admissions & Resource Utilization

- **Seasonal Variation in Elective Surgeries:** The decline in admissions **October–December** may be due to **fewer elective surgeries during the holiday season**.
- **Changes in Insurance Policies:** Some insurers are **incentivizing outpatient procedures**, reducing inpatient volumes.
- **Patient Preferences:** Patients may **choose minimally invasive surgeries or outpatient care over hospitalization** when available.

3. Advances in Surgical Techniques Reducing LOS

- **Minimally Invasive Procedures (e.g., Laparoscopic Surgeries)** require **less recovery time**, leading to **shorter hospital stays**.
- **Enhanced Recovery After Surgery (ERAS) Protocols** help **reduce LOS** by optimizing pain management and mobility post-surgery.
- **Technology & Robotics in Surgery** are improving **efficiency and reducing complications**, leading to **faster discharge times**.

Recommendations & Next Steps

1. Expand Outpatient Surgery Programs

- **Increase the use of minimally invasive procedures** to reduce inpatient stays.
- **Evaluate eligibility criteria** for more procedures to be done as outpatient cases.
- **Invest in ambulatory surgical centers (ASCs)** to support the transition toward outpatient care.

2. Optimize Discharge Planning & Post-Surgical Care

- **Implement enhanced recovery protocols (ERAS)** to help **further reduce LOS**.
- **Strengthen follow-up care for outpatient surgeries** to minimize readmissions.
- **Improve care coordination** between surgeons, nurses, and post-hospital care teams.

3. Align Resource Allocation with Seasonal Demand

- **Adjust staffing levels and bed availability** to match peak admission periods (April–June).
- **Prepare for lower admissions in Q4 (October–December)** by reallocating resources to other hospital needs.
- **Monitor insurance and policy changes** that may impact inpatient vs. outpatient case distribution.