Patient Journey & Financials Report

Executive takeaways

1. Demand is steady with mild seasonality; adults and senior citizens dominate encounter volume, aligning with chronic-care patterns.
2. Throughput is adequate but costly: an average LOS of 16 days implies significant bed-day consumption; several high-volume conditions are driving both count and spend.
3. Financials are concentrated: a small set of doctors, hospitals, and five insurers account for the majority of billed amount; this concentration creates clear levers for operational and contracting focus.

Method in one line

Standardized the raw dataset (typed numeric, parsed dates, trimmed/lower-cased categories), engineered LOS and cost metrics, and analysed cohorts via a unified semantic view that powers three dashboards.

Findings by area

1. Patient mix and seasonality

- Balanced gender mix supports unbiased comparisons; no single gender drives results disproportionately.
- Age cohorting shows adults and senior citizens as the largest groups, consistent with higher chronic-condition utilization; resource planning should weight these cohorts
- Monthly patient counts display mild seasonality with repeatable peaks and troughs, visible in the treemap and the multi-year admissions line; staffing rosters and inventory should align to these months.

2. Clinical burden by condition

- Arthritis and diabetes lead by patient count and total billed amount, making them prime targets for pathway standardization and discharge education.
- Hypertension, cancer, obesity, and asthma follow closely, confirming chronic conditions as the core utilization drivers; these cohorts should anchor clinical audits and patient education materials.
- The distribution suggests a Pareto pattern where a few conditions account for most volume and spend; focusing on the top five yields the highest operational ROI.

3. Throughput and LOS insights

- Average LOS of 16 days indicates high bed-day usage; throughput improvements of even 5–10% would release meaningful capacity.
- Variability likely differs by condition and provider; comparing LOS and cost per day side-by-side helps separate complexity from process issues.
- Admissions trend is broadly stable year-over-year with end-period dips/spikes; weekly/monthly monitoring should be used for early staffing signal.

4. Financial concentration and payer mix

- Top doctors: A small subset contributes a disproportionate share of billed amount; combine LOS and cost per day to detect unwarranted variation versus legitimate case-mix.
- Top hospitals: A handful of facilities dominate totals, typical of hub-and-spoke systems; compare their LOS and cost profiles to spread best practices.
- Insurers: Five payers account for the majority of encounters and billed amounts; prioritize documentation, pre-authorizations, and follow-up processes for these payers to reduce denials and speed collections.

5. Data readiness and governance

- Canonicalization (typing, trimming, lower-casing) eliminated grouping fragmentation for doctors, hospitals, conditions, and insurers, reducing reconciliation cycles.
- Date parsing and LOS derivation standardized throughput metrics across the portfolio, enabling consistent KPI cards and reproducible filters.
- Cost metrics (per stay/day) created a common baseline for financial and operational dialogues, improving cross-team alignment.

6. Actionable recommendations tied to these findings

- Staff and bed planning: Align rosters to peak months flagged in the journey trend; use LOS to size required bed-days.
- Chronic-care focus: Start improvement rounds with arthritis and diabetes; formalize discharge education and follow-up call scripts to reduce avoidable bed-days.
- Provider benchmarking: Review top-doctor LOS and cost-per-day outliers; investigate whether differences stem from case complexity, protocols, or handoffs.
- Payer operations: For the top five insurers, implement pre-auth/documentation checklists and weekly exception reviews to improve first-pass yield.
- Metric governance: Keep KPI definitions (LOS, cost per day, totals) visible on dashboards and versioned in docs to preserve trust during reviews.

Known limitations (for transparency)

- Same-day discharges (LOS=0) can inflate cost per day; label or exclude in KPI cards.
- Billing captured as a single amount per encounter; no line-item or reimbursement splits are available in this version.
- Readmission and risk adjustment were not part of the current scope; conclusions focus on descriptive throughput and spend.

One-slide summary for execs

- Who and when: Adults/seniors drive steady demand with mild, predictable seasonality.
- How efficiently: Average LOS 16 days; opportunity in reducing variation by condition/provider.
- Where money sits: Spend is concentrated in a few conditions, doctors, hospitals, and five insurers—clear levers for immediate action.