# Technical Report: Vlar Medical Hospital Analysis

## Introduction

Healthcare today is more than just medicine, it’s data, decisions, and timing. This report explores Vlar Medical’s operations through the lens of data: patient admissions, treatments, costs, and outcomes. Our goal is simple, understand what’s working, where the pressure points are, and how we can improve care delivery.

Through a structured analysis of admissions, billing, treatment patterns, and hospital capacity, we’ve uncovered actionable insights that support both clinical efficiency and strategic planning.

## Story of the Data

Behind every data point is a patient. Someone walked into Vlar Medical on a Tuesday in June, not feeling well. Another came for a scheduled check-up, only to be admitted for something more serious.

Over 55,000 patient records reveal their stories, names, ages, medical conditions, hospital stays, prescriptions, and bills. The dataset doesn’t just show medical care, it shows demand surges, treatment patterns, insurance relationships, and care efficiency.

This isn't a spreadsheet. It's the pulse of a hospital.

## Pre-Analysis

Before diving into dashboards and DAX measures, we paused to listen to what the data might already be whispering.

Every day at Vlar Medical, patients arrive. Some come in pain. Others, for planned procedures. The hospital hums with movement, doctors writing prescriptions, nurses charting vitals, systems processing insurance claims.

Some names appear more than once. Some bills are higher than others. Patterns begin to form across months, ages, and diagnoses.

This pre-analysis told us: there’s a deeper story here. One that data can help uncover and solve.

## In-Analysis

1. Even with more doctors and bed space, Length of Stay (LOS) is going down, patients are recovering faster or being treated more efficiently.
2. Gender admissions are balanced, but some conditions and blood types show up more frequently.
3. Billing continues to rise, even as LOS decreases—likely due to more focused treatments or better insurance coverage.
4. Certain months, especially June and December, consistently see higher patient volumes.
5. Conditions like Hypertension and Diabetes show high abnormal test results and frequent admissions.
6. Cigna and Blue Cross account for a large portion of billed insurance, making them critical partners.

## Post-Analysis and Insights

1. Efficiency is improving. Patients are being treated faster and discharged sooner.
2. Care demand is seasonal. Admissions peak at predictable times each year.
3. Billing is climbing, aligned with more focused, intensive care.
4. Chronic illnesses dominate admissions especially Diabetes, Hypertension, and Cancer.
5. Insurance plays a huge role. Partner strategies can directly impact patient affordability and hospital sustainability.

## Recommendations and Observations

Observations:

1. Vlar Medical is managing more patients year after year.
2. The facility is responding well to capacity demands and clinical challenges.
3. Seasonal spikes are consistent and offer a chance for proactive planning.
4. here’s an ongoing shift toward data-informed care—and it’s working.

Recommendations:

1. I recommend that Vlar Medical prepare ahead for peak months like June, August, and December and add staff, resources, and medication inventory.
2. I recommend reassessing treatment protocols for high-frequency conditions like Hypertension and Diabetes.
3. I recommend strengthening partnerships with insurance providers, focusing on smoother claims and value-based billing.
4. I recommend implementing patient education especially for preventable conditions like obesity and high blood pressure.
5. I recommend adopting predictive analytics tools to anticipate high-risk periods and prepare proactively.

## Conclusion

The story Vlar Medical’s data tells is one of resilience, adaptation, and opportunity.

The hospital Group has grown more efficient, responded to seasonal demands, and adapted billing to match intensity of care. But now it stands at a powerful threshold, the opportunity to move from reactive care to proactive, data-led, patient-first healthcare.

With the right focus and continued investment in analytics, Vlar Medical can lead the way not just in treating illness, but in predicting, preventing, and personalizing care at scale.