

Baseco Public Hospital

123 Healthcare Avenue, Medical District, City 12345

Cardiology Department

Analytics Report

Overview:

This report provides comprehensive analytics insights for healthcare management. It integrates patient demographics, health trends, medication patterns, and forecasting to support evidence-based decisions and improve patient care outcomes.

Executive Summary

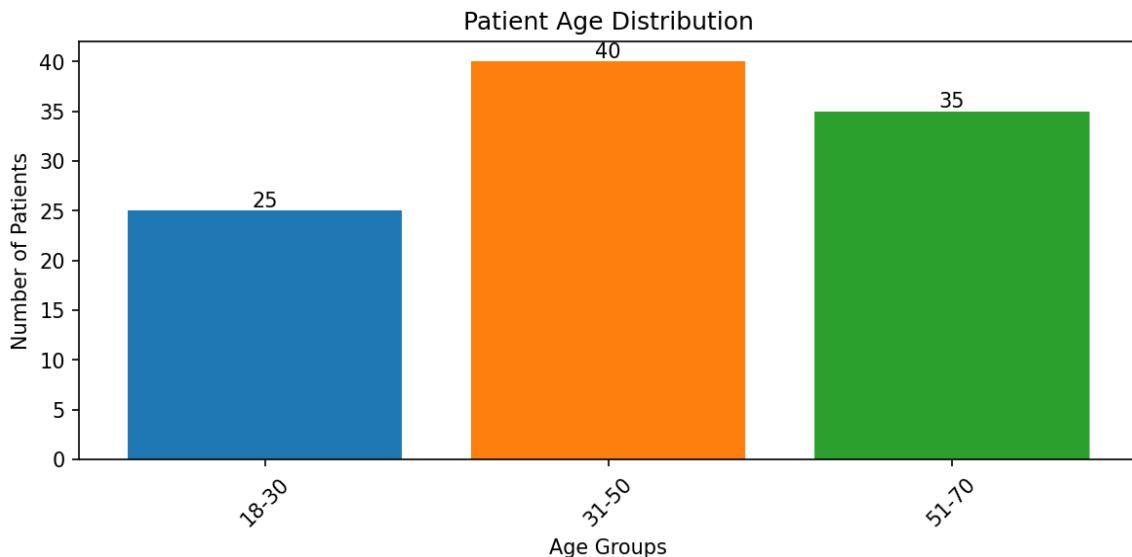
This report synthesizes recent analytics across demographics, clinical trends, medication patterns, and forecasting. It provides an evidence-based interpretation, factor analysis, and prioritized recommendations to inform care planning and operations.

Key Highlights:

- Patient demographics show a concentration in the 31-50 age group, indicating specific healthcare needs for this population segment.
- Health trend analysis reveals Hypertension as the most prevalent issue, suggesting targeted intervention strategies.

1. Patient Demographics

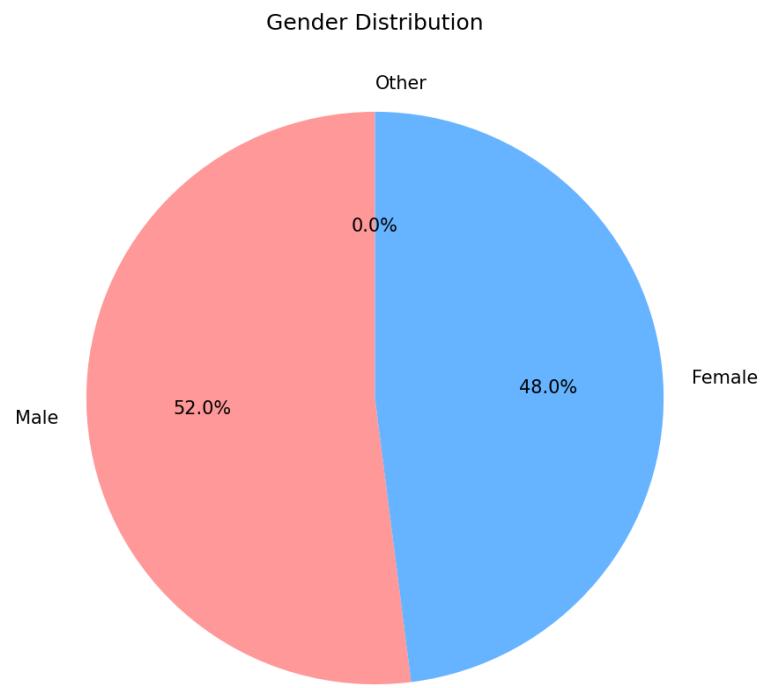
Age Distribution:



Interpretation: Majority of patients fall in the 31-50 group.

- 18-30: 25 patients
- 31-50: 40 patients
- 51-70: 35 patients

Gender Distribution:

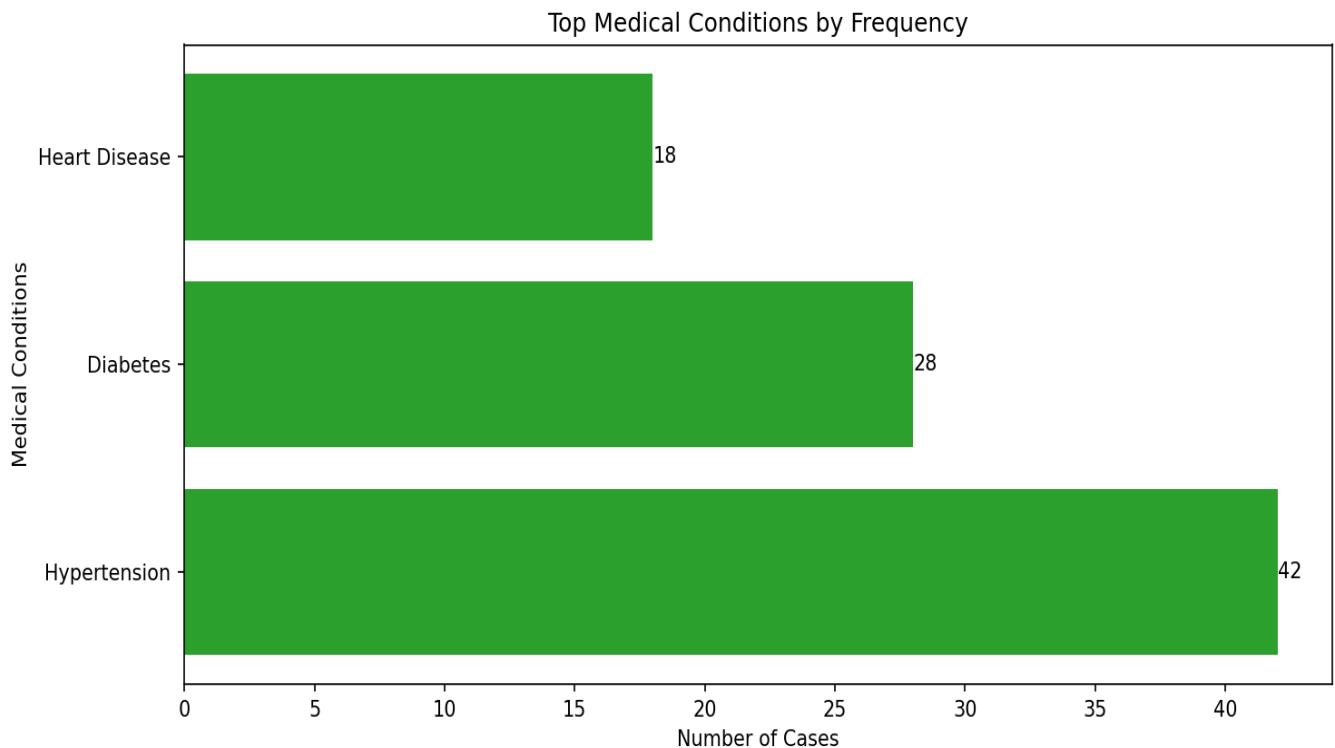


Interpretation: Male segment is most represented.

- Male: 52.0%
- Female: 48.0%
- Other: 0.0%

2. Patient Health Trends

Top Medical Conditions by Week:

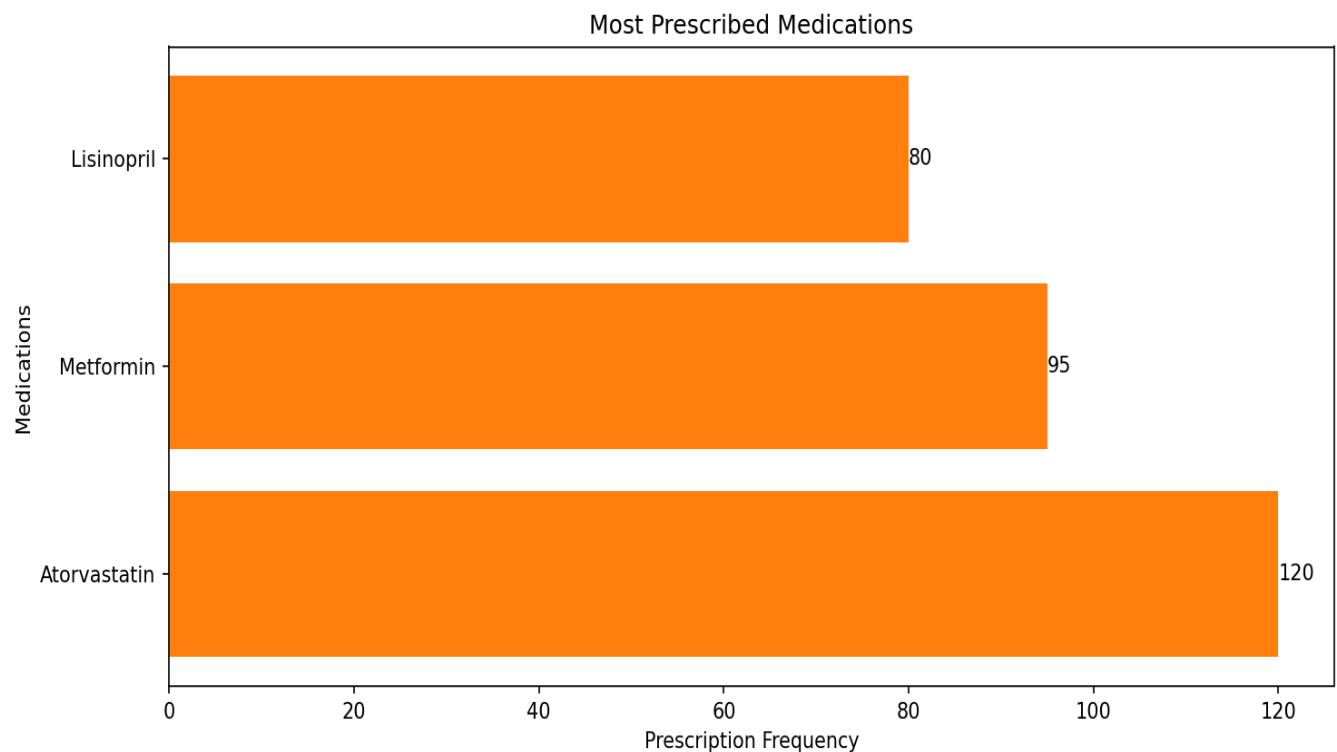


Interpretation: Hypertension shows highest frequency in recent weeks.

- Hypertension: 42 cases
- Diabetes: 28 cases
- Heart Disease: 18 cases

3. Medication Analysis

Most Prescribed Medications:

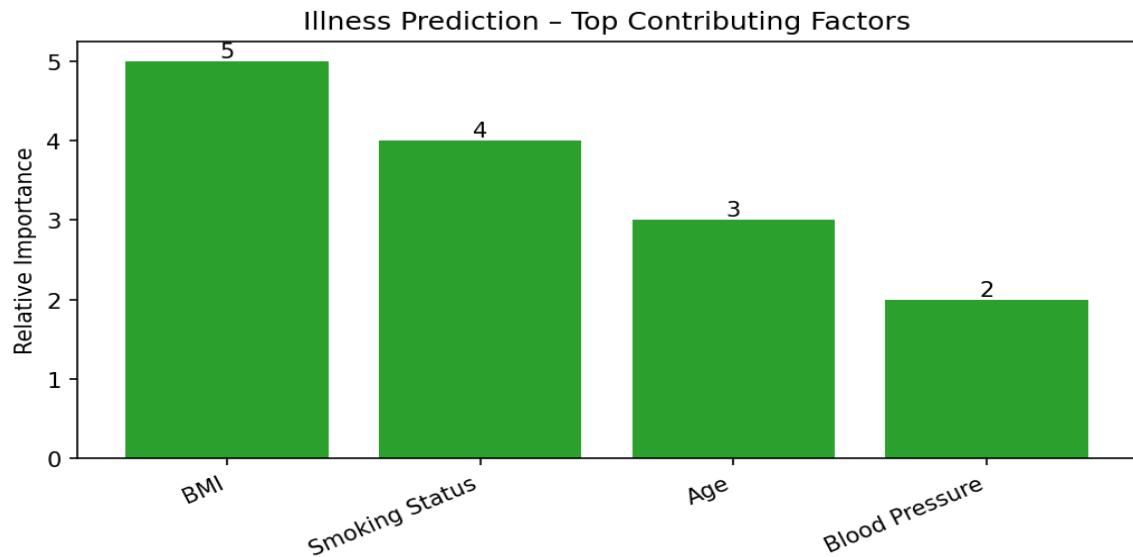


Interpretation: Atorvastatin is frequently prescribed; review inventory and protocols.

- Atorvastatin: 120 prescriptions
- Metformin: 95 prescriptions
- Lisinopril: 80 prescriptions

4. Illness Prediction Analysis

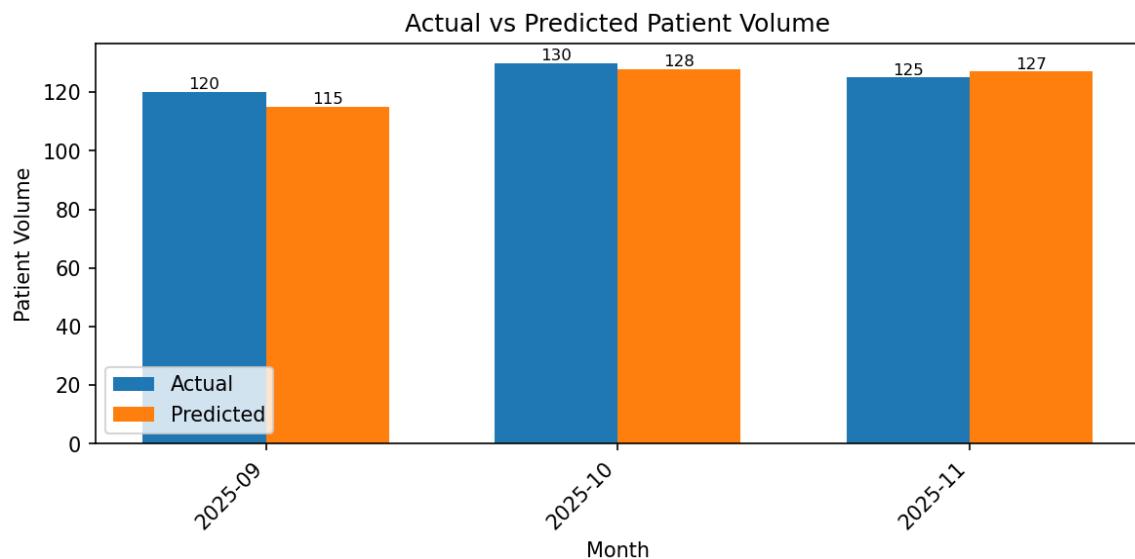
Top Contributing Factors:



Interpretation: Factors such as BMI, Smoking Status, Age are driving predicted illness risk.

5. Patient Volume Prediction

Actual vs. Predicted Cases:



Interpretation: Actual patient volume appears increasing across recent months, with close alignment to predictions.

- 2025-09: Actual=120 | Predicted=115
- 2025-10: Actual=130 | Predicted=128
- 2025-11: Actual=125 | Predicted=127

6. Illness Surge Prediction

Interpretation of Results

Patient Demographics

Age distribution indicates a concentration in the 31-50 group, which may necessitate age-specific care protocols.

Gender proportions show Male as most represented, influencing preventive strategies and educational materials.

Health Trends

Recent weekly analyses consistently identify Hypertension as the most prevalent condition, suggesting targeted screening and early intervention.

Medication Analysis

Pareto analysis highlights Atorvastatin as frequently prescribed; review inventory, dosing protocols, and potential adverse event monitoring.

Forecasting and Capacity

Six-month projections suggest increasing case trajectory; align staffing schedules and bed management accordingly.

Factor Analysis

Factor	Influence Score (0-100)
Demographic Risk	0.0
Clinical Risk	0.0
Trend Risk	15.6
Capacity Risk	0.0
Overall Score	3.9

Factor Impacts

Demographics: Higher elderly ratios increase acuity and monitoring needs (score=0.0).

Clinical Trends: Rising high-risk conditions elevate intervention urgency and staffing requirements (score=0.0).

Forecast Trends: Short-term increases in case counts inform capacity planning and scheduling (score=15.6).

Indicators

- Protective: Younger patient population

AI Recommendations

High Priority

- Set vitals: Every 6-8 hours; assessments: Every 6-8 hours.
 - Guidance: Implement enhanced nursing surveillance
 - Guidance: Initiate risk-specific interventions
 - Estimated Outcome: Time to risk assessment completion
 - Estimated Outcome: Adherence to monitoring protocols
- Implement fall precautions and delirium prevention for elderly patients.
 - Guidance: Implement enhanced nursing surveillance
 - Guidance: Initiate risk-specific interventions
 - Estimated Outcome: Time to risk assessment completion
 - Estimated Outcome: Adherence to monitoring protocols
- Provide education on smoking cessation, nutrition, and exercise; arrange referrals.
 - Guidance: Implement enhanced nursing surveillance
 - Guidance: Initiate risk-specific interventions
 - Estimated Outcome: Time to risk assessment completion
 - Estimated Outcome: Adherence to monitoring protocols

Medium Priority

- Follow escalation criteria; notify charge nurse/physician per policy on deterioration.
 - Guidance: Implement enhanced nursing surveillance
 - Guidance: Initiate risk-specific interventions
 - Estimated Outcome: Time to risk assessment completion
 - Estimated Outcome: Adherence to monitoring protocols
- Coordinate staffing adjustments and triage flows for forecasted volume changes.
 - Guidance: Implement enhanced nursing surveillance
 - Guidance: Initiate risk-specific interventions
 - Estimated Outcome: Time to risk assessment completion
 - Estimated Outcome: Adherence to monitoring protocols

Low Priority

- No recommendations available.

Key Takeaways

- Patient demographics show a concentration in the 31-50 age group, indicating specific healthcare needs for this population segment.
- Health trend analysis reveals Hypertension as the most prevalent issue, suggesting targeted intervention strategies.

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