Care_Stat Project

Welcome to the Care_Stat Project presentation. Our team, Ali Hany Ali Nosseir, and Ali Aboud Abdelmaksoud, has developed a comprehensive database system to revolutionize healthcare data management.

Addressing Healthcare Data Challenges

The healthcare sector grapples with fragmented, diverse data, hindering efficient record tracking, appointment management, and financial analysis. Care_Stat provides a centralized, integrated database to enhance operational efficiency, improve healthcare quality, and support critical decision-making.

Care_Stat Database Design

Our relational database model ensures data integrity and minimizes redundancy for comprehensive hospital data management.

Key Tables

- Patients (name, age, gender, visit count)
- Doctors (name, specialization, rating, salary)
- Departments (name, capacity, staff count)
- Appointments (appointment_id, date, notes)
- Medical_Records (diagnosis, prescription cost)
- Payments (payment_id, amount, status)
- Visits (Visit_id, Visit_data)
- ChronicDiseases (Diseases_id, Name)

Linking Tables

- DoctorDepartment
- DoctorPhones
- DoctorWorkplaces
- PatientPhones
- Department_Equipment

Main Insights: Hospital Overview

Resources & Departments

Indicators on doctors, 12 departments, 500 max capacity, 201 current occupancy, and 10.00K patient IDs.

Department Utilization

Visualizations show effective space and resource usage.

Patient Turnover

Daily admissions and discharges tracked for patient flow and bed management.

Emergency Support

Dashboard highlights capacity and utilization of emergency services.

Main Insights: Doctors Performance

Doctor Rating Distribution

Identifies top-performing doctors and areas for improvement.

Specialization Distribution

Breakdown by specialization (Cardiology, Pediatrics, Radiology, Emergency).

Workload Distribution

Insights into doctors' workload across departments/specializations.

Salary vs. Rating

Correlation between doctor salaries and average ratings.

Main Insights: Patient Insights

Patient Demographics

Detailed info including age, gender, country, city, height, weight, and visit counts.

Department Utilization by Patient Count

Visualizations show most utilized departments, indicating patient flow.

Main Insights: Appointments & Visits

Appointment Scheduling

Analysis of dates and times, including earliest appointments and quarterly counts, optimizes scheduling.

Patient Turnover

Tracks patient turnover related to appointments and visits, similar to overall operations.

Main Insights: Financial Performance

Revenue & Payments

Total revenue, average transaction value, completed payment ratio.

Payment Methods

Identifies common methods (credit card, debit card, insurance, cash, online) and their contribution.

Payment Status

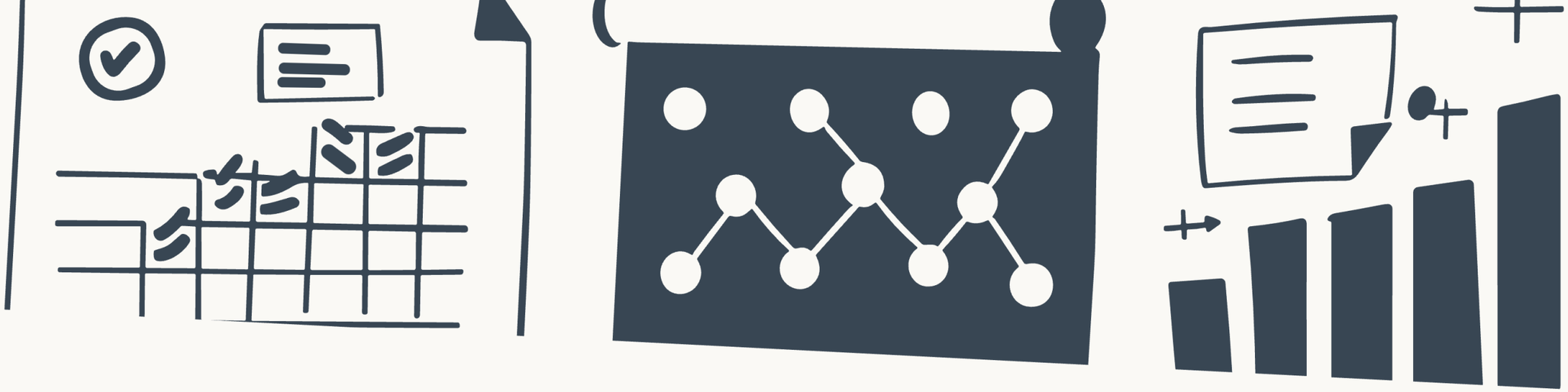
Analysis of statuses (pending, completed, failed, refunded) helps identify billing bottlenecks.

Monthly Revenue Trends

Tracking monthly revenues for seasonal trends and future forecasts.

Departmental Contribution

Insights into financial contributions per department or transaction ID.



Impact & Future Outlook

These analyses provide valuable insights for hospital management, supporting informed decision-making to improve healthcare quality, operational efficiency, and financial sustainability. Care_Stat empowers hospitals to optimize resource allocation and enhance patient care.

Thank You!

We extend our gratitude to Instant, Engineer Mohamed Abu Obeida, and Engineer Mariam for their invaluable support and guidance throughout the Care_Stat Project.