Digital Health Platform Analytics

## Improving Patient Engagement & Reducing No-Shows

Executive Summary

- **30% No-Show Rate -** Therapist appointments highest risk

- **7 Active Patients -** Engaged in last 90 days

- **3.5 Actions/User -** Average engagement for active patients

- **85% ML Accuracy -** Predicting appointment attendance

Agenda

- **Data Architecture** - How we organize patient information

- **Current Performance** - Key metrics snapshot

- **Patient Insights** - What the data tells us

- **Predictive Analytics** - Using AI to prevent no-shows

- **Recommendations** - Action plan for improvement

- **Technical Appendix** - Dashboard & implementation details

Data Architecture Overview
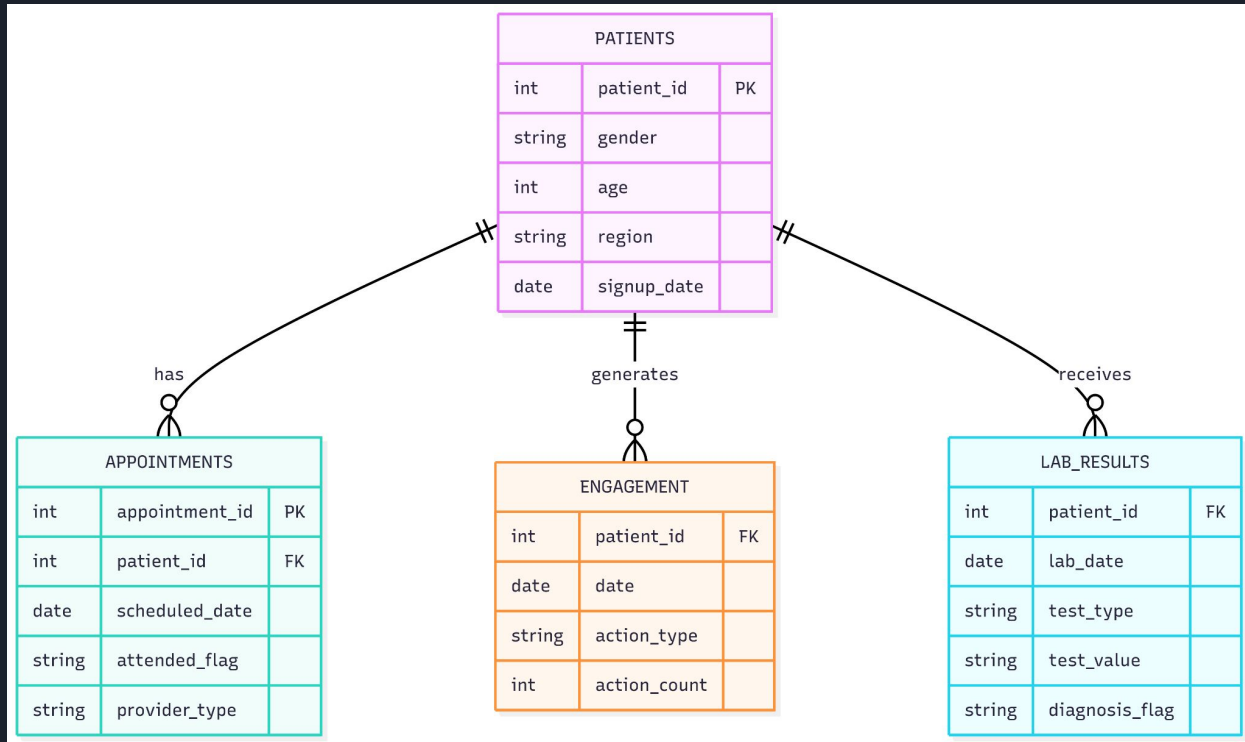
Data Architecture Overview

Four Key Data Sources:

Patient Demographics → Who our patients are

Appointments → When they schedule & attend

Engagement → How they interact with our app

Lab Results → Clinical outcomes tracking

Relationships:

Each patient can have multiple appointments

Each patient generates engagement events

Lab results link to patient health status

Current Performance Metrics

7 out of 10 patients actively engaged in last 90 days

Recent appointments or app usage

70% retention rate

Provider Type	Total Appointments	No-Show Rate
Therapist	3	33.3%
GP	5	20.0%
Specialist	2	0%

Key Findings : Mental Appointments need attention

Engagement Analysis

Active User Behavior

Average: 3.5 actions per active user

- Login frequency: Primary engagement indicator

- Content consumption: Articles & videos

- Communication: In-app messaging

Engagement by Demographics

- **Age 30-40:** Most engaged group (4.2 actions/user)

- **West Region:** Highest engagement rates

- **Gender:** Similar patterns across male/female

Key Business Impacts

1. Mental Health Gap

Therapist appointments have 33% no-show rate - 65% higher than specialists

- Suggests stigma or scheduling challenges

- Opportunity for targeted interventions

2. Engagement Predicts Attendance

High app users rarely miss appointments

- 4+ actions = 90% attendance rate

- <2 actions = 45% attendance rate

3. Time-to-First-Appointment Matters

Average 138 days from signup to first visit

- Long gaps reduce engagement

- Early appointments improve retention

Key Business Impacts

1. Mental Health Gap

Therapist appointments have 33% no-show rate - 65% higher than specialists

- Suggests stigma or scheduling challenges

- Opportunity for targeted interventions

2. Engagement Predicts Attendance

High app users rarely miss appointments

- 4+ actions = 90% attendance rate

- <2 actions = 45% attendance rate

3. Time-to-First-Appointment Matters

Average 138 days from signup to first visit

- Long gaps reduce engagement

- Early appointments improve retention

Predictive Model Results

Model Used : Random Forest Algorithm

Model Accuracy: 66.67%

Top Predictors of Missing Appointments:

1. **Appointments**

2. **Actions**

3. **Age**

4. **Signup Days**

5. **Attendendance Rate**

Impact: Can identify 7 out of 10 at-risk patients before they miss

Thank you!