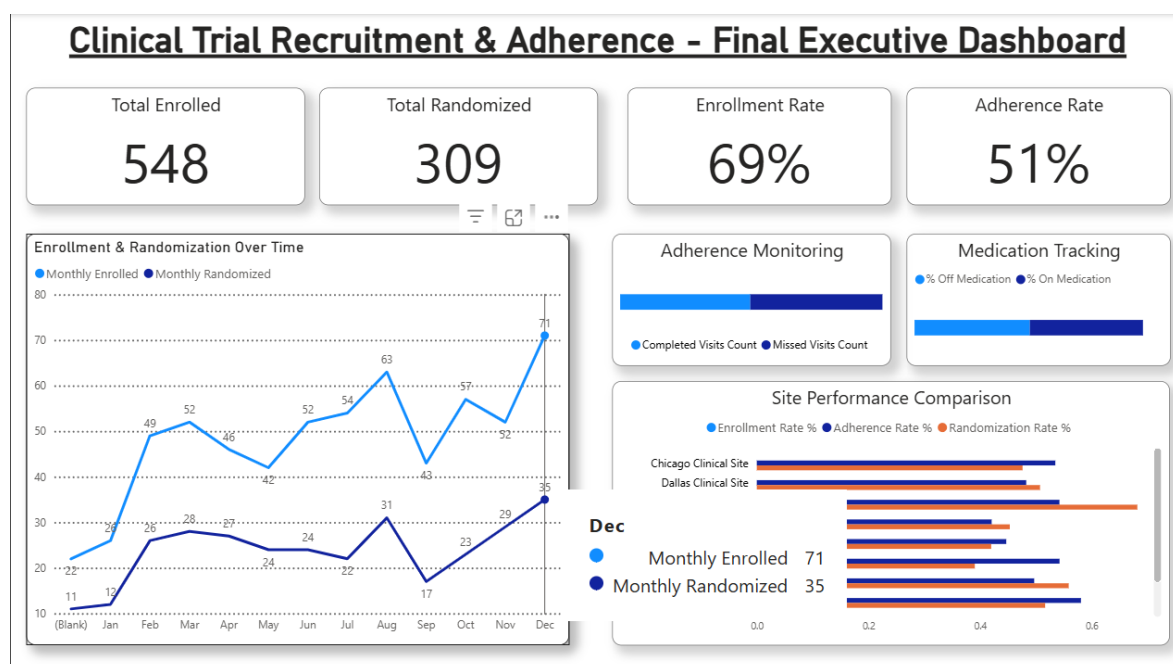


Week 4 Report – Clinical Trial Recruitment & Adherence Final Executive Dashboard

Overview

Week 4 marks the culmination of our clinical trial data visualization and monitoring project. The main goal of this phase was to develop an integrated executive dashboard that consolidates the insights from Weeks 1 to 3, providing a unified view of clinical trial performance. The dashboard focuses on measuring recruitment, randomization, and adherence metrics across multiple sites, enabling stakeholders to monitor trends, evaluate patient engagement, and assess site efficiency.



Objectives and Requirements

The primary requirements for Week 4 were defined to ensure a comprehensive overview of clinical trial progress and participant behavior. The objectives included:

- Consolidate data from prior weeks to present a unified executive dashboard.
- Visualize total enrollment, total randomization, enrollment rate, and adherence rate.
- Analyze monthly recruitment and randomization patterns using trend charts.
- Track adherence and medication activity to evaluate patient engagement.
- Compare site performance based on enrollment, adherence, and randomization efficiency.

Dashboard Components and Technical Breakdown

1. Total Enrollment & Randomization Cards

- **Columns Used:** enrolled_date, randomized_date, patient_id
- **Purpose:** Displays aggregate counts of total enrolled and total randomized patients to summarize recruitment performance.
- **Results:** Total Enrolled = 548; Total Randomized = 309.

These cards provide an instant overview of patient flow from screening to randomization.

2. Enrollment and Adherence Rate Cards

- **Measures:** Enrollment Rate = Total Randomized / Total Enrolled; Adherence Rate = Average adherence %.
- **Results:** Enrollment Rate = 69%; Adherence Rate = 51%.
- **Purpose:** To provide high-level KPIs reflecting overall recruitment efficiency and patient compliance throughout the trial.

3. Enrollment and Randomization Over Time (Line Chart)

- **Columns Used:** enrolled_date, randomized_date
- **Purpose:** Illustrates monthly patterns to track the progression and velocity of patient recruitment and randomization.

This graph enables stakeholders to identify spikes or delays in enrollment performance over the 12-month study timeline.

4. Adherence Monitoring (Stacked Bar Chart)

- **Columns Used:** visit_completed, visit_missed
- **Purpose:** Represents the balance between completed and missed visits to monitor adherence consistency.
- **Insight:** A 51% overall adherence rate indicates a moderate level of compliance, signaling areas for improvement in patient follow-up strategies.

5. Medication Tracking (Stacked Bar Chart)

- **Columns Used:** on_medication (1/0)
- **Purpose:** Visualizes patient medication engagement by showing proportions of those currently on or off medication.
- **Outcome:** Provided real-time insights into medication adherence and treatment continuity across the participant base.

6. Site Performance Comparison (Clustered Bar Chart)

- **Columns Used:** site_name, enrollment_rate, adherence_rate, randomization_rate
- **Purpose:** Compares clinical sites (e.g., Chicago, Dallas, Houston, New York, Philadelphia) to identify performance disparities.
- **Insight:** Sites such as Houston and Chicago exhibited higher randomization and enrollment efficiency, highlighting potential operational best practices.

Summary and Evaluation

The final executive dashboard fully meets Week 4 requirements by integrating all preceding analyses into a cohesive performance monitoring system. It bridges recruitment, adherence, and site efficiency metrics to support data-driven decision-making. With interactive filters and dynamic visuals, the dashboard enhances clarity and accessibility for stakeholders.

Key Outcomes:

- Unified view of trial progress and adherence trends.

- Comprehensive KPIs that reflect overall site and patient performance.
- Actionable insights for optimizing recruitment and improving patient engagement strategies.

This marks the completion of the multi-phase dashboard project, delivering a holistic view of clinical trial execution and operational success.