CASE STUDY

AI-Enhanced Patient Recruitment Matching Platform

Client	Industry	Solution
Mid-Size Pharmaceutical Company in Boston, Massachusetts	Pharmaceutical Research Development	Intelligent Patient Recruitment Clinical Trial Matching System

Challenge

Boston pharmaceutical company conducting Phase II/III trials for cardiovascular therapies faced 18-month average patient recruitment timelines, $4.8M annual costs from delayed trial starts and extended recruitment periods, 35% of trials failing to meet enrollment targets within planned timeframes, manual patient screening processes missing qualified candidates, and difficulty matching patient profiles with complex inclusion/exclusion criteria across multiple study sites.

AI Consulting Approach

• Patient Data Analysis: AI consultants analyzed historical recruitment patterns, patient databases, and eligibility criteria to identify optimization opportunities using machine learning models and predictive analytics for clinical trial enrollment.

• Intelligent Matching Implementation: Advanced algorithms processing electronic health records, patient demographics, medical histories, and geographical factors to identify and match eligible patients with appropriate clinical trials.

AI Solution

• Automated Patient Screening: AI application analyzing electronic health records and patient data to identify potential trial candidates based on medical history, current medications, and eligibility criteria

• Geographic Optimization: Machine learning system mapping patient populations against trial site locations to optimize recruitment strategies and reduce patient travel burden

• Predictive Enrollment Analytics: Advanced algorithms forecasting recruitment timelines and identifying potential enrollment challenges before they impact trial schedules

• Site Performance Intelligence: Intelligent platform analyzing individual site recruitment performance and recommending optimization strategies for underperforming locations

Implementation (24 weeks total)

• Data Integration (5 weeks)

• Algorithm Development (9 weeks)

• Site Integration (7 weeks)

• Testing Validation (3 weeks)

Key Results

Recruitment Efficiency:
• 11-month average recruitment timelines (vs. 18 months), $2.9M reduction in recruitment costs, 85% of trials meeting enrollment targets within planned timeframes

Patient Matching:
• 70% improvement in qualified patient identification, enhanced site performance consistency, reduced patient screening time and costs

Business Impact:
• $3.7M annual value creation, accelerated drug development timelines, 185% consulting ROI, strengthened competitive positioning in clinical research

Technologies:
• Patient matching algorithms
• electronic health record integration
• predictive analytics platform

- site management systems
- geographic optimization tools