



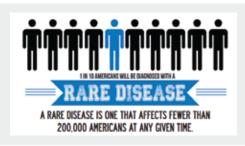


CLINICAL TRIALS - THE CURRENT PICTURE

In a clinical trial, there is a need for patients to be enrolled as per the eligibility criteria defined in the study protocol.



Identification and enrolment of suitable patients poses a significant challenge for investigators and sponsors. During study plan and conduct, sites usually spend most of their time on patient recruitment, and yet, statistics show that despite their efforts, reaching enrolment goals per timelines seem elusive in many studies [1]. The majority (nearly 85%) of clinical trials conducted in the United States fail to enrol subjects within the contract period [2].



Patient Identification Process & Industry Pain Points

- Unsatisfactory patient enrolment rate (>85%)
- · Adoption of rescue sites in studies (30%)
- · Average rate of patient attrition (26-30%)

The patient recruitment problem gets compounded even more for specialty drugs where the market is expected to increase by 19% over its 2011 level to 42% in 2016.

We need

- Analytics driven approach using real world data sources
- Identify patient network based on geographic location and study inclusion/exclusion criteria
- Identify top treatment experts using patient and physician network

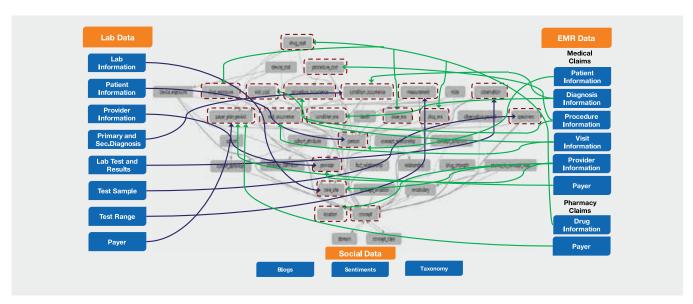
Opportunity

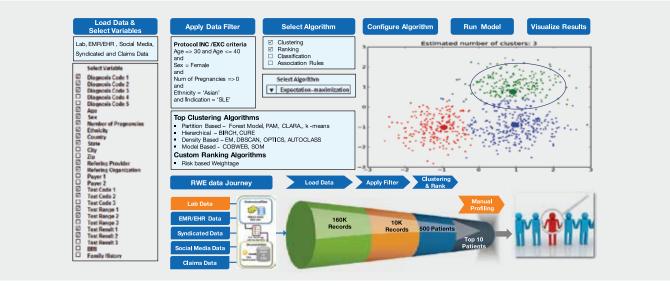
Improved patient recruitment rates can significantly increase profitability and effectiveness of trials while benefitting the patient in bringing much needed new drugs to market faster.

HCL ANALYTICS DRIVEN PATIENT RECRUITMENT SOLUTION

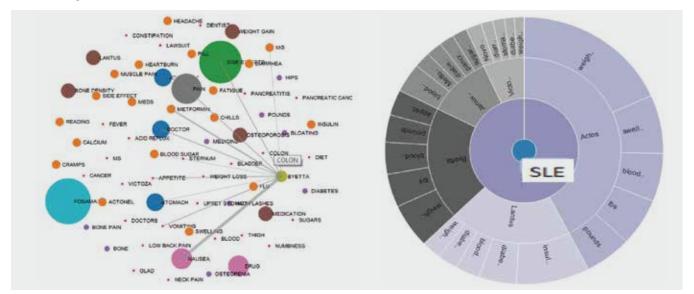
HCL's solution follows a well-defined analytics-driven approach for patient identification. Key features:

- Integrate, standardize & profile patients on a big data platform
- Data ingestion/standardization leveraging OMOP data model
- Customize rules to score and Identify relevant patients for related market access





- ✓ Visualization maps to help identify potential targets patients on a real time basis
- ☑ Drill down capabilities by Therapeutic area → Specialty → ICD Codes → Test Results → Test Ranges → Patients → Investigators/ HCPs/HCOs



Benefits

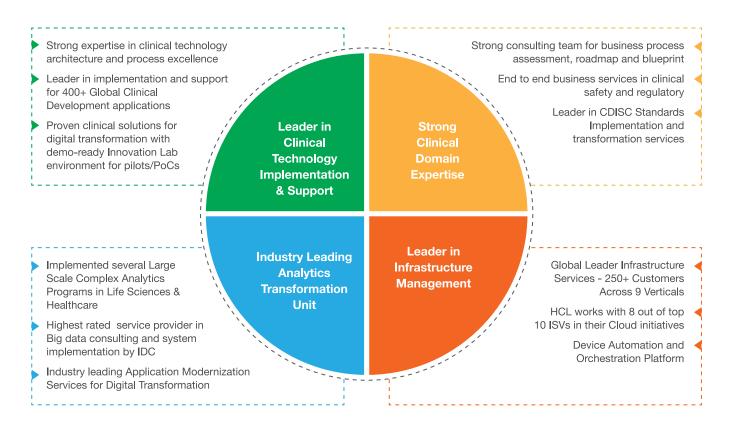
- Predictable study budget forecast & planning
- ✓ Improved site selection with greater success rate for patient enrolment & retention
- Improved effectiveness with greater understanding of requirement of patient profile by Therapeutic Area and Indication
- Elimination of unnecessary costs and overheads by avoiding over/under recruitment
- ✓ Decreased subject dropout rate
- Overall, increase profitability and effectiveness of trials while benefitting the patient in bringing much needed new drugs to market faster

Key Considerations

- ✓ Computer Systems Validation, 21CFR Part 11
- HIPAA compliance
- ✓ Data de-identification
- ✓ Investigator Training
- ✓ Patient Informed Consent
- ✓ Patient Data Safety & Privacy
- Security, Audit & Archival Policies

WHY HCL FOR ANALYTICS DRIVEN PATIENT RECRUITMENT

HCL is a "Full Services Provider" that is uniquely positioned to deliver truly Integrated Clinical Analytics Services. Some of the reasons for HCL's strong position are as below.



REFERENCE

- 1. http://www.pmean.com/11/lasagna.html (http://blog.gobalto.com/2011/10/04/the-site%E2%80%99s-side-patient-recruitment/) (Access: 24th Nov 2014)
- 2. http://commons.emich.edu/cgi/viewcontent.cgi?article=1164&context=theses (Access: 24th Nov 2014)

HCL LIFE SCIENCES & HEALTHCARE

HCL is a leading provider of Life Sciences and Healthcare Business and Technology services. We are the chosen service provider for enabling new growth drivers for our clients, providing them with industry leading best practices, taking care of their compliance needs and ensuring gold standard process cycle times. Our clientele includes eight of the top ten global pharmaceutical companies, nine of the top ten medical devices companies, six of the top ten health plans, three of the top five CRO's and two of the top three data providers. Equipped with certified technology experts and domain specialists, HCL offers services in critical areas of the life sciences and healthcare eco system such as drug discovery, clinical development, drug safety, regulatory compliance, manufacturing and plant automation, commercial, Healthcare analytics, Population Health Management [PHM], mHealth, member experience management [MEM], fraud, waste and abuse management [FWA].

Let's connect:









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ABOUT HCL

ABOUT HCL TECHNOLOGIES

HCL Technologies is a leading global IT services company working with clients in the areas that impact and redefine the core of their businesses. Since its emergence on the global landscape, and after its IPO in 1999, HCL has focused on 'transformational outsourcing', underlined by innovation and value creation, offering an integrated portfolio of services including software-led IT solutions, remote infrastructure management, engineering and R&D services and business services. HCL leverages its extensive global offshore infrastructure and network of offices in 31 countries to provide holistic, multi-service delivery in key industry verticals including Financial Services, Manufacturing, Consumer Services, Public Services and Life Sciences & Healthcare. HCL takes pride in its philosophy of 'Employees First, Customers Second' which empowers its 104,000+ employees to create real value for customers. HCL Technologies, along with its subsidiaries, had consolidated revenues of \$6.2 billion in FY 15 as on 31st March, 2016.

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ABOUT HCL ENTERPRISE

HCL is a \$7 billion leading global technology and IT enterprise comprising two companies listed in India – HCL Technologies and HCL Infosystems. Founded in 1976, HCL is one of India's original IT garage start-ups. A pioneer of modern computing, HCL is a global transformational enterprise today. Its range of offerings includes product engineering, custom & package applications, BPO, IT infrastructure services, IT hardware, systems integration, and distribution of information and communications technology (ICT) products across a wide range of focused industry verticals. The HCL team consists of over 110,000 professionals of diverse nationalities, who operate from 31 countries including over 500 points of presence in India. HCL has partnerships with several leading global 1000 firms, including leading IT and technology firms.

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Relationship

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