

## Presentation Topic: Healthcare Enterprise Business Intelligence and Care Management using Microsoft Technology

### Citius Tech Presentation Details

Date	Wednesday, August 22 <sup>nd</sup> , 2007
Time	2:30 PM
Venue	Microsoft Corporate Campus Redmond, WA
Presenters	Chuck Siemon (CIO, Whole Health Management Inc. (WHM)) Abbas Kurawarwala (President, CitiusTech)

### Presentation Background

WHM is a leading provider of onsite primary care and wellness programs for large private employers. It operates more than 80 facilities nationwide. A majority of the clinics employ practice management and EMR applications along with tools for population health risk assessment and other specialized applications.

CitiusTech has helped WHM design and develop a cutting-edge business intelligence and Data Warehouse Solution that delivers high value reports and analytics to the WHM business managers. Additionally, the solution helps improve quality of care by delivering critical reports to clinical staff. Highlights of the solution include use of latest Microsoft Technologies and the HL7 Reference Information Model.

### Business Requirement

WHM uses Electronic Medical Records and Practice Management Systems from leading vendors. However, the reporting and analyses needs of the different stakeholders could not be met by the limited capabilities of the existing applications. WHM executives saw the tremendous value in a solution that provides easy access to key reports, with timely information, across the entire organization and to end customers. For example,

- Administrators need to assess and plan clinic utilization (e.g., visits, procedures)
- Clinicians want to improve care management of chronic diseases and wellness programs
- Medical Operations needs to measure and execute care guidelines and quality improvement programs
- Employers (customers) demand accurate visibility to aggregate employee health and impact of wellness and disease management programs on overall healthcare costs.

### CitiusTech Project Approach

A comprehensive enterprise wide assessment was the first step in defining the vision and scope of the application. Interviews and review sessions were conducted across all stakeholder groups – WHM Executives, Client (Employers) Executives, Physicians, Nurses, Business Managers, Analysts, IT and Medical Operations. All were engaged throughout the project to gather detailed input, review design and report project progress.

A specialist consulting partner - with strong knowledge of Healthcare business applications – was engaged throughout the project life cycle. 140 different measures across all key functional areas were identified and prioritized for delivery as reports. A detailed UI prototype was constructed and reviewed with Stakeholders.

The Data warehouse schema was based on the comprehensive HL7 v3 Reference Information Model - ensuring that the core architecture is independent of the source applications (EMRs, Practice Management, Health Risk Assessment Tools, Personal Health Records, etc.) and that reports across the entire healthcare enterprise spectrum can be generated.

Microsoft Technologies were used for the entire solution because of a) compatibility with existing source application platforms (Allscripts Touchworks, e.g.), b) rich functionality of SQL 2005 and SharePoint Server and c) Lowest total cost of operation.

### Solution Highlights

- Leveraged industry standards such as the HL7 v3 Reference Information Model in the design and architecture of the Healthcare Data Warehouse Solution.
- Extracted and collated information across both Electronic Medical Records and Practice Management Systems – enabling the solution to provide new clinical and business insights
- Integrated multi-level approach for continual improvement in data quality and associated change management to enhance the effectiveness of the enterprise reporting solution
- Used Microsoft SQL Server 2005 and Microsoft Office SharePoint Services to build a comprehensive enterprise wide reporting and analytics solution in the healthcare provider environment.