GENERATING **HEALTHCARE** IMPACT

Using smart data services to realize a Patient 360 view

Introduction of the American Recovery and Reinvestment Act (ARRA) – and within it, the HITECH Act – has led managed care and accountable care organizations (MCOs and ACOs) to redirect their focus. Their new intent: Leverage enhanced data management technologies to improve organizational visibility into, and understanding of, how processes are managed. The goal: delivering better patient care.

Business challenge

Wide-scale EMR platform adoption together with the emergence of Health Information Exchanges (HIEs) have enabled providers to return responsibility for overall patient care to primary care physicians through the formation of MCOs and ACOs. These organizing technologies were introduced to improve patient care and simultaneously reduce costs. However, in pursuing that end, the effective and efficient assimilation of aggregated patient data presents significant concerns.

An MCO, for example, manages healthcare through private insurers and government plans (i.e. Medicare and Medicaid) using a specific provider network and specific services and products. An ACO, meanwhile, delivers care management through preventive care, patient education and following quality measures and relies on different reimbursement models. Pioneer Model ACO program or Medicare ACO involves CMS license for Medicare Shared Saving program, however Commercial Model ACO program is similar to a Medicare ACO, without any licensing. The ACOs have a shared savings contract with private health insurance organizations. Today, ACOs are gearing for a transition away from "Fee for Service" to a capitation model. That model relies on one fixed payment per patient per month for managing the cost of care for each patient enrolled.

Notably, physician bonuses given by Centers for Medicare and Medicaid Services (CMS) are based on the cost of managing care and the physicians ability to meet well-defined targets (as set by such metrics as ACO clinical outcome, Hedis and Star Measures, and defined by care-improvement bodies like ARHQ, NCQF, etc.). The emphasis here, as one might expect, is on improving clinical outcome and containing costs. Unfortunately, such emphasis tends to lead to neglect of other areas important to overall success. However, by managing data more holistically through predictive analytics, and risk stratification, MCOs and ACOs can more accurately identify high-risk patients. Smart analytics like predictive analytics, and risk stratification can also help them more

effectively manage global payment systems while simultaneously providing this information to payers and CMS.

MCOs and ACOs are responsible for maintaining a patient-centered focus that ensures (1) adherence to evidence-based medicine, (2) increased and continued patient engagement in improving their health (3) coordination for continuum of care, and (4) regular and complete internal reporting on the quality and cost of healthcare delivered. To make sure all of these conditions are satisfied, data and information must be available at the right place and time. All the above mentioned outcomes rely on the use of clinical and claims data to enable a MCO and an ACO to achieve their primary objectives of managing population health and controlling the total cost of care for their enrolled patient population. As of now, major challenges lie in assimilating and integrating the large swathes of clinical data available. For MCOs and ACOs, the greatest challenge ahead rests with collecting and harnessing clinical and claims data and translating it into meaningful information to help manage costs by driving improvements in the quality of patient care.

MCOs and ACOs face major challenges in trying to effectively implement Smart Data Services. These challenges include the following:

- Fragmented information – Lack of visibility and access to information
- Data quality – External data sources provide incomplete, inaccurate, and untimely data
- New data sources – New consolidated data sources of information such as semantic services cannot be leveraged optimally.
- Data architecture – The information model might not adequately reflect business concepts
- Changing data requirement – Development of rational/consistent link between ICD 9 and ICD 10
- No one truth source – Duplicate data elements

Our experience with an MCO and a pioneering ACO has helped us to truly understand the core issues and challenges they share. One of the biggest challenges is the **lack of consistency in reporting of patient and clinical data across multiple EMRs and other external data sources**. Challenges due to inconsistency in the formats, may make scheduling, and representation of healthcare data formidable. Extensive analysis, quality checks, data cleansing, and normalization must be completed before data can be assimilated in subsequent processes for clinical and financial reporting. Some major issues identified for ACOs include: (1) The inability to track a patient using a common identifier across all files received from external sources, (2) members deciding not to share their data with an ACO (3) consistent timing of file delivery (3) variations in file structures (4) variability in source data quality and (5) limited number of data elements.

Does enhanced technology really help?

The introduction of health information exchanges could solve integration and interoperability problems across EMRs. However, HIEs are still far away from generating data that could combine clinical and claims data.

Such issues clearly demonstrate the complexity of building the comprehensive "360 degree" view of an individual patient needed for managing the care of a defined population. Further, they make a compelling case for predictive analytics and technologies that can drive dramatic improvements in patient care, and significantly lower medical costs for MCO and ACO managed populations.

Does enhanced technology, and appropriate use of clinical information, really help MCOs and ACOs achieve their goals? Well, the most critical success factor for an MCO and an ACO is the ability to pinpoint opportunities that will improve clinical quality and patient care. This can happen only when they have the resources and technology in place to deliver relevant data and information in sufficient detail.

Becoming technology agnostic will be a major contributor to establishing and monitoring successful MCO/ACO operations through efficient and effective homogenous use of EMR, HIE and claims data. Other information technology factors that will determine the degree of success are: (1) smart analytics or smart data services through efficient and meaningful use of data integrated from all external and internal systems (clinical, financial, and claims) and (2) leverage process management with information technology forming an integrated solution to drive MCO/ACO operations.

Our solution

Genpact's two-step process of introducing smart data services and leveraging process management is an excellent solution to the current information challenges faced by MCOs and ACOs.

We enable our clients to design, transform and run their master data management (MDM) environment with a service oriented architecture (SOA) to manage enterprise content for complete, accurate and current information that is geared up to meet current and future business requirements. This solution intends to "Improve the Information Model" to reflect present and anticipated enterprise wide business concepts. It also aims to provide a "Single Source of Truth" with rigorous data governance to manage content quality; automate the reporting environment with robust quality checks; prepare for leveraging the upcoming consolidated external data source; and reduce manual effort.

Our approach

The hybrid approach to implementation of the enterprise content program is dual-track. On Track 1 is the enterprise data strategy, and on Track 2 is the iterative execution of strategy. Track 1 focuses on designing the architectural framework defining the project plan, approach, and strategy. Track 2 focuses on designing a master data management and data warehousing strategy that can help store a complete patient profile with an end-to-end view. Steps that can help identify the same patient

High-level architecture design
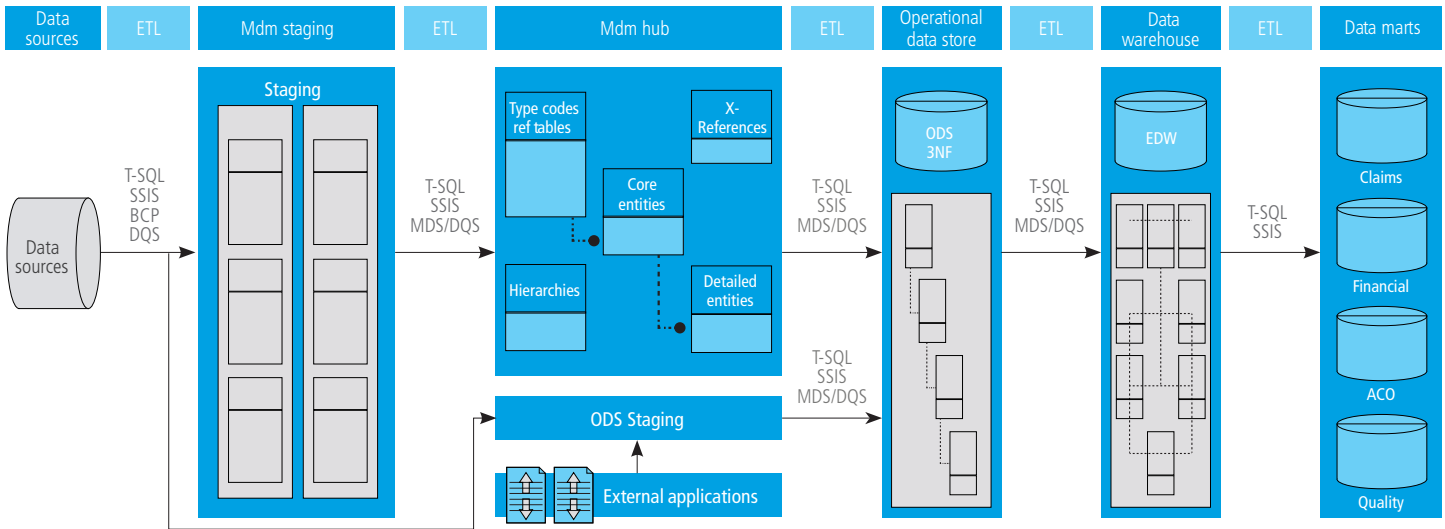
regardless of various sources using a common master patient index, hence delivering a complete Patient 360 view.

Equally important to success is the need for cleansed data to support clinical intelligence, business intelligence, and predictive analytics. Among the data areas that benefit immensely from such cleansing efforts for clinical intelligence are KPI reporting (including CMS reporting), quality improvement, and population management; provider performance management (physician profiling, scorecards, physician outcomes); utilization analysis (therapy based); and quality of care analysis (demographic, socio-graphic, cost-variation minimization).

Business intelligence addresses areas such as financial modeling, ROI, contract modeling; plan performance management and resource utilization.

While predictive analytics addresses areas such as but not limited to, disease management, identifying risky patients, and cost modeling for chronic care patients to support payment.

Leveraging process management

Process management using the Six Sigma and Lean framework documents the key operational

and business processes for MCOs and ACOs. BPM not only automates key business processes but also helps make overall MCO/ACO processes lean. Using statistical BPM tools directly benefits patients, staff, and partners of the organizations.

Genpact's Reengineering team, for example, used DMAIC (Define, Measure, Analyze, Improve and Control) methodology to understand and a design the future state for one MCO and pioneering ACO. Using DMAIC, we quickly identified low-hanging-fruit improvement opportunities as well as critical-

Using patient 360 to manage health and financial needs of patients and providers
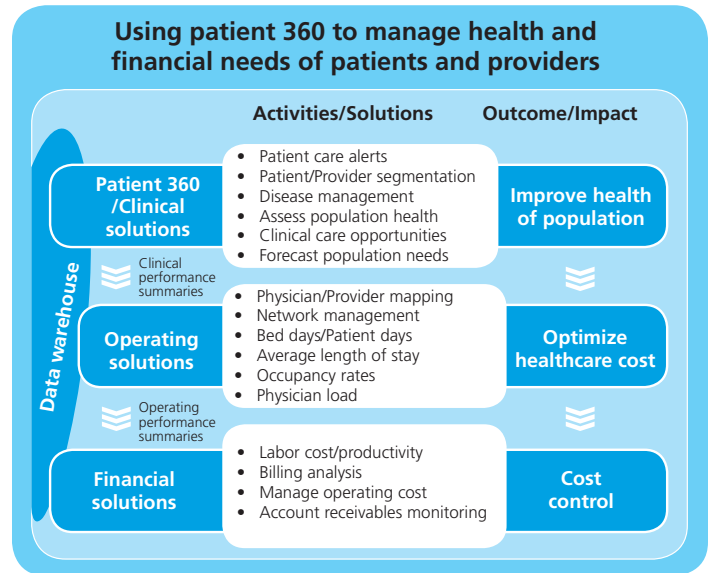
to-quality metrics, which needed more refined data before we could arrive at information that was suitably actionable. Using SIPOC, it was easy to lay out the Suppliers, Input, Process, Output, and Customer for the data flow within a business process. This helped in enhanced process visibility to identify areas of concern.

Laying out the Level 0 organization map helped map the databases to the business processes and identifying areas of opportunity for prioritizing the database reengineering. BPM allowed the unused resources to be identified during the define stage and remove them, improving overall database efficiency. BPM encouraged operational process teams to collaborate across a common framework and helped capture the database and reporting requirements. It also helps in documenting the process into adapted SOPs for all the activities.

Final thoughts

With changing paradigms in patient engagement, it becomes critical for MCOs and ACOs to be a success in evolving-care and payment models. These models will ultimately require robust tools for analytics, which can improve patient population and predict risk-management-enabling reporting capabilities. Using smart data services makes an MCO and an ACO integrate information management across the continuum of care. This, in turn, drives accountable care delivery, process efficiency and innovation.

MDM with a data warehouse will help deploy passive data collection technology to facilitate real-time care management. Using BPM directly helps in process and product development, and data diagnostics and leveraging BPM supports relationship between technology and operational process making MCOs and ACOs to be a more effective care management enterprise.

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