Making a case for improving efficiency and outcomes in the healthcare industry

IBM

Healthcare providers, healthcare plans and life sciences enterprises are facing significant challenges to improve quality of care and patient satisfaction while controlling rising costs. With fewer resources, there is increased pressure to streamline processes and comply with ever-changing government regulation and compliance requirements. These dynamics are driving an industry transformation, forcing organizations to find new and innovative ways to increase value, optimize processes and deliver better outcomes.

To support these demands, healthcare organizations need to improve their agility between processes and people through improved information sharing. There is a need to provide an integrated platform to manage multiple tools and business processes — as well as the thousands of documents, files and related content created on a day-to-day basis. Although great strides have been made to automate the healthcare industry, it remains burdened with processes that require high levels of manual intervention and operational inefficiencies. Many of these processes are supported with different systems, creating complex and redundant approaches that are costly to maintain and manage.

Building a case for the Smarter Planet

A *smarter* healthcare system starts with better connections, better data and faster, more detailed analysis. Smarter

healthcare is interconnected so that doctors, nurses, patients and insurers all share up-to-date information seamlessly and efficiently. In broad terms, healthcare organizations need to move toward a smarter, more effective healthcare experience for all. They need to exploit opportunities to improve quality and safety, form new partnerships and build future capabilities. And they must act with speed to institute change, set leadership agendas and manage risk and performance with transparency. Today, healthcare organizations that are using IBM applications and advanced analytics can manage oceans of data to identify patterns in patient care to improve safety, quality of care, process efficiency and patient satisfaction. With this type of knowledge, providers can work smarter through better collaboration and with greater insight, so that they can make quicker, more informed decisions: decisions that can reduce costs, minimize errors and improve efficiency.

Unfortunately, most healthcare providers are handicapped with multiple, and often isolated, business processes built on older systems that prohibit sharing health information and that frustrate clinicians and drive higher medical costs. Typically there are disparate systems for creating and managing patient records, viewing diagnostic images, reviewing lab results, supporting patient care plans and expediting billing — all of which need to be integrated to be more efficient. In addition, healthcare providers are in a constant state of flux. Everything from consolidation to new diagnostic and patient care technologies is changing the way they do business. Issues such as changes in procedures, increased regulatory oversight and cyber security, all have to be taken into consideration while trying to satisfy an increasing demand for improved financial performance.

"Raising the productivity of employees whose jobs can't be automated is the next great performance challenge — and the stakes are high."
— McKinsey

"Forrester defines case management as: A highly structured, but also collaborative, dynamic, and information-intensive process that is driven by outside events and requires incremental and progressive responses from the business domain handling the case. Examples of case folders include a patient record, a lawsuit, an insurance claim, or a contract, and the case folder would include all the documents, data, collaboration artifacts, policies, rules, analytics, and other information needed to process and manage the case."

"Dynamic Case Management — An Old Idea Catches New Fire," Forrester Research, Inc., December, 2009

To solve these business problems as they evolve and to coordinate the work of multiple people and groups requires timely and accurate communication of information among all of the parties involved. This improved communication requires a vehicle to merge all of a company's applications and content sources to improve access to information regardless of location. A vehicle that can speed-up the process, optimize productivity and aid in making the decisions that are critical to solving problems.

The solution is advanced case management (ACM) by IBM. Traditional case management in healthcare focuses on facilitating treatment plans to ensure that appropriate medical care is provided for the medically complex or chronically ill patients. Advanced case management by IBM defines a case as anything from a simple billing inquiry all the way to complex translational research, which focuses on iterative feedback from the bedside to the research lab and back again. A case contains all of the processes, information, correspondence, tasks, policies, rules and events that are required for resolution — all accessed, circulated and managed in the context of the case.

The need for Advanced Case Management

Healthcare providers need to manage incidents such as errors or disputes to improve patient care while protecting the business if escalations occur. Advanced case management provides enhanced service and risk management throughout the lifecycle of a case.

Management needs better tools to meet Key Performance Indicators (KPIs) for case handling. Outcomes are the driving force for cases; therefore, tools to drive optimal outcomes are needed. In addition, workers in all areas of the business, faced with fewer and fewer resources, need better tools to support the way they work. Often this requires the input and management of paper-based documents such as written orders, charts, patient histories, lab reports, faxes, and so on, in addition to electronic information to provide an all-encompassing view of the case. Advanced case management supports worker efficiency and effectiveness to help control costs for these activities as well as improve decision-making.

The need to manage important information and associated processes, decisions and other artifacts around a case for legal or compliance reasons is also increasing. Advanced case management manages the entire lifecycle of a case according to enterprise policies to mitigate risk and improve outcomes.

Healthcare organizations require solutions and tools to rapidly respond to changes in government regulations and patient care standards. Solutions need to be delivered in days instead of months. They also need to scale rapidly in response to growing demands. The faster an organization can implement a given case management solution, the faster the organization can start benefiting from its value.

Advanced Case Management combines people, processes and information

Advanced case management involves multiple information and process types that need to be collectively and interactively grouped, managed and related in both ad-hoc and structured ways.

Cases contain content related to a patient, provider, group, procedure, product, and so on. Content can be of any type, from any source, inside or possibly outside the organization. Examples include patient history, doctors' orders, telemetry, nursing reports, lab results, scans, charts, legal documents, insurance payments and correspondence.

Processes organize required tasks into manageable and auditable steps. They might require information to be moved dynamically and reviewed among people, or they might be more transactional and static in nature. Expressed as specific applications or horizontal business solutions, case management assets include data models, process models, user interface components, rule sets and case configurations.

Advanced case management by IBM provides comprehensive and integrated tools for business-user-driven lifecycle management of dynamic applications that serve case management requirements. Case lifecycle management includes design, simulation, execution, monitoring and optimization. A case and its contents persist past the lifecycle of processes within it, so the information remains available for search and retrieval when a case is closed.

Case management is a dynamic business application

Unlike the fixed, repetitive processes in many industries, the demands of case management in healthcare often require flexibility. Processes, while structured, are usually designed for specific instances, so they vary greatly depending on the task or project at hand. They are generally composed of a series of events, as well as controls that integrate clinical, operational, financial, claims and other information into an environment, which helps healthcare workers deliver more personalized care — in essence, processes that need to be orchestrated rather than driven through a series of preset routines and functions. It is the consistent delivery of the right information to the right people at the right time that results in the ability to use information in entirely new ways: to lower costs and provide better quality care for healthier patients and communities.

Advanced case management solutions by IBM include the following capabilities:

Analytics: Analytics help people working on cases make the right decisions in assessment, diagnosis, care plans, medication delivery, and so on. Analytics help detect patterns within or across cases, or simply optimize the overall case handling to optimize case outcomes.

Rules: Many decisions in a case depend on set values, such as compliance with care plans, eligibility rules, device parameters, policies and procedures, federal and state regulations, and so on. By separating rules from processes, case handling becomes much more agile as rules can change in lockstep with market changes.

Collaboration: Finding the right subject matter expert is often critical to make a case-specific decision required to resolve a case for optimal closure. Collaboration in the form of instant messaging and social networking and creating committees and teams enable an organization and its staff to work together to drive case outcomes.

Process: Cases might follow static processes that are prescribed for certain situations. They might also follow more dynamic paths based on changes to information associated with

a case. Straight-through, transactional processes can be specified as can more collaborative processes.

Content: By placing the case model in the content repository, information and other artifacts associated with a case are not only readily available for viewing, but also managed in the context of the case over its lifecycle. These include collaborations, process steps and other associated case elements.

Social Networking: Dynamic "to-do" lists that are role-based help people who are working on cases to establish conversations and actions that must take place to close cases and link to information about the resources that can help. Users can brainstorm solutions and actions and create wikis linked to particular case types to assist colleagues in resolving their cases.

Case management templates shorten time to value!

- Case templates are easy to create using the advanced case management tools.
- Each template is created using a goal-oriented to-do-list that meets specific organizational requirements.
- To-do-lists can contain individual tasks, compliance rules, required content items and forms.
- New tasks can be added to cases on the fly.
- Tasks can be a full process, process fragments, or individual steps.
- Case templates capture best practices for industry-specific tasks or horizontal business processes.
- Configured case templates can be used to create new case management templates.

Advanced Case Management Use Cases

One benefit of advanced case management is that it helps to successfully manage all of the case-driven information in the enterprise. Successful healthcare providers are those who find a way to make the information from case management work as a strategic resource in predicting future needs, expediting requests and improving productivity, which can have a dramatic effect on the bottom line. In addition, better case management can have a positive effect on meeting industry and healthcare regulations while mitigating risk. Today, healthcare providers face significant risk and fines if they lose or mishandle the content required for case resolution. This requires increased discipline in retaining, tracking, managing and retrieving all relevant information.

In order to better understand the types of cases that can be handled with Advanced case management by IBM, they are divided into four broad-based categories:

Investigation: Investigative bodies—both public and private—know they will receive hundreds of requests a year to provide information to administrators, regulators, board members and outside auditors. Yet the exact nature and timing of the requests is unknown. The impromptu, collaborative and unstructured aspect of investigations lends itself to case handling, and a wide range of use cases fall into this realm. The emerging regulatory environment that focuses on transparency and increased government oversight pressures organizations to provide rapid response to inquiries into all operations. Also, analytic capabilities are critical because those capabilities can pinpoint potential problems or fraud, uncover vulnerabilities and trigger remedial case activity. Key characteristics of investigative cases typically reflect unstructured resolutions; there are literally millions of ways to resolve a given case. There is no way to anticipate the volume of cases per year, yet most case closures need to occur within defined timelines.

Incident management: Incident management processes are triggered by an event. The event can be the simple submission of an inquiry or an unexpected accident. Independent of the incident type, the process that responds must keep track of actions, coordinate people, leverage collaboration for decision-making, use rules for escalation and document the entire

process. Visibility to process effectiveness through analytics is critical to guiding refinements to the processes used for resolution, which in turn should reduce the number of similar incidents over time. Problem tracking and complaint systems are excellent examples. Typically, incident management cases are somewhat structured with limited paths for resolution. Businesses can estimate the volume of cases per year, and outcomes focus on case closure, reduced volume of incidents, improved service, or a mix of these outcomes, while meeting KPIs.

Service requests: Service request cases revolve around structured processes that can be visually mapped, but these cases can also allow case-based progressions, collaboration for decision-making and variations to be added within the flow of the process. Unlike incident management and investigative cases, these use cases are more predictable. In some businesses, it might be the number of new customers that need to be brought online, or it might be managing the lifecycle of a given asset or facility in others. The key characteristics of service requests are mostly structured with finite paths to resolution. Outcomes focus on case closure, improved customer service and loyalty and KPIs.

Complex projects: Complex case management covers a wide range of procedures and processes, but centers around the ultimate delivery of a tangible service. The service can range from an individual procedure to a unique care plan given to a group or type of patient. The commonality of these cases is that production is driven through a care management process. These cases include a high degree of collaboration for decision-making, in which participant involvement is dynamic based on the resources needed and the specific stage of care required. Many of these cases involve external participants or providers, and case volume is controlled by the number of similar cases over a given period of time. Key characteristics of complex projects are that they are based on processes in which collaboration is central. Organizations can predict the volume of cases per year, and outcomes focus on delivery of specific services.

Advanced case management solutions for healthcare

Health Analytics		
Business Initiative	**Key Performance Indicators (KPIs)**	**Potential Return on Investment (ROI)**
Monitor quality, safety and outcomes Improve patient care and ancillary services	Provide real time anaylitics Enable advanced analytics capabilities	Real time, 360-degree view of services and outcomes
Claims Optimization and Fraud Management		
Business Initiative	**Key Performance Indicators (KPIs)**	**Potential Return on Investment (ROI)**
Improve claims administration and management efficiency Reduce claims and operational costs	Enable advanced analytics capabilities Boost claims retrieval times and processing Improve fraud detection	Decrease claims processing staff by 50% Increase operational efficiency and profits
360-Degree Member View		
Business Initiative	**Key Performance Indicators (KPIs)**	**Potential Return on Investment (ROI)**
Provide improved access and transparency	Provide a single view across the entire organization with advanced analytics	Real-time, 360-degree view of services for subscribers
Member Analytics		
Business Initiative	**Key Performance Indicators (KPIs)**	**Potential Return on Investment (ROI)**
Streamline medical and disease management	Improved disease-focused initiatives Accelerate wellness initiatives and quality improvement	Enable members to monitor health information, trends and solutions for cost savings

Advance case management by IBM unites information, processes and people around an enterprise infrastructure to:

- Support work management of structured and unstructured activities.
- Provide a 360-degree view of all cases, allowing all participants to understand relevant information for case progression and resolution.
- Improve patient processing and management, resulting in more efficient billing.
- Effectively manage regulatory compliance including HIPPA, JACHO, DNV, Sarbanes-Oxley as well as other state and federal regulatory audits.
- Provide patient and customer service solutions to improve problem resolution, patient and customer satisfaction and corporate competitiveness.
- Retain and manage a range of information formats, including electronic forms, documents, email, social media, web content, XML and multimedia assets—from the field to the back office

Expediting case resolution

IBM's advanced case management approach provides end-to-end process automation and a complete document archive for strategic information utilizing IBM's state-of-the-art Enterprise Content Management platform. By continuing to leverage the IBM platform, healthcare companies can maximize their investment in more ways than originally planned. The open platform expedites the collection, organization, management and retrieval of relevant information from a variety of applications in a security-rich environment. The system also supports records management policies by identifying the type and format of corporate records, monitoring compliance with business and legal retention requirements, and implementing established security requirements and user access in accordance with the company's business requirements.

ACM solutions also allow companies to move to a disciplined approach that controls their business processes, manages reporting of work-in-progress, helps support compliance, and delivers a more productive, agile response to resolving cases.

Generating business results

Advanced case management by IBM is an innovative, powerful solution that helps provide process automation and business collaboration for case handling across the healthcare value chain.

Advanced case management delivers functionality with standards to facilitate integration between applications and devices across business domains to healthcare providers. The solution is flexible and leverages functionality based on targeted business needs.

Advanced case management by IBM:

- Establishes an entity called a *case* and provides semantics and the tools required for complex handling of a case. Cases can be expressed as a wide variety of business issues such as a patient, procedure, device, unit, and so on.
- Unites information, processes and people around a case. It involves a variety of information sources (content and structured data) and work management techniques that can include predetermined processes, goal-driven processes and impromptu activities. Collaboration and social networking tools can also be integrated to support case progression and resolution activities.
- Provides 360-degree view of the case to allow all authorized participants to understand all of its content. The relevant information derived from the process, content and analytics help drive better decisions and optimized case outcomes.
- Leverages analytics to gain insight into cases to help speed diagnosis and treatment to improve patient care and help reduce healthcare costs.
- Extends governance and retention capabilities to the case, allowing for enterprise policies to be applied to and enforced on all important artifacts in a case.
- Enhance decision-making using the information aggregated from case management to analyze events and develop insights to improve business flexibility and performance.

- Speed medical research by transforming data-rich environments into intelligent, high-value information.
- Improve customer satisfaction by delivering a convenient, personalized patient experience that resolves issues in a timely, equitable manner.
- Model, manage and optimize the business processes to speed case resolution, reduce downtime and improve productivity.
- Meet regulatory, risk and compliance management requirements. Case contents, histories and forms can all be incorporated into a records management system, which is fully accessible for discovery to meet regulatory and legal requirements. Full audit trails are maintained to track decision-making and reduce risk while complying with government-mandated regulations.

Put advanced case management to work for you

IBM has the broadest portfolio of case management capabilities and the most extensive ecosystem of case management solutions. More than 3,000 partners help deliver over 200 out of the box tools and templating capabilities designed to solve specific case management problems in the energy and utility industries.

To learn more about how IBM advanced case management stratgey can help your organization manage and optimize your case management challenges, please contact your IBM representative or IBM Business Partner, or visit ibm.com

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