

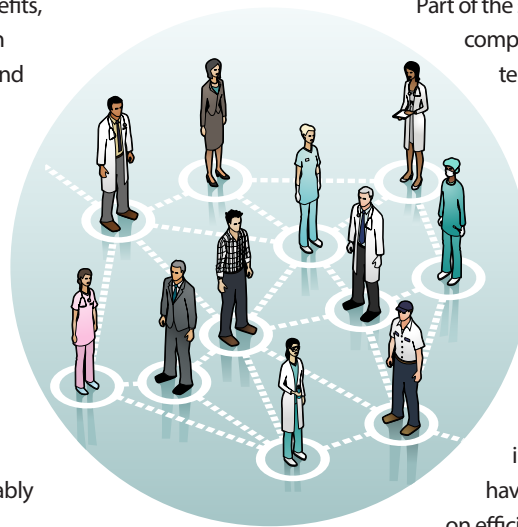
Workflow fundamentals for clinical excellence and improved care outcomes

BY CIC ANALYSTS

Modern healthcare brings great benefits, but faces many challenges. Although treatments can cure more diseases and allow us to live longer, the number of treatments, rising costs, and the increasing volume of patients, puts healthcare providers to the test.

Even for the most developed nations, healthcare spend is finite. What is most critical is the pursuit of more efficient and effective delivery of care, that leads to improved patient outcomes and experiences, in which all are inextricably linked.

Knowledge, insight and relevant information at the point of care are fundamental goals, that are too often elusive in the delivery of healthcare.



Part of the solution to the challenges and complexities presented by healthcare is technology. There is already significant technology deployed in the provision of healthcare services, however while this is proving to have benefits, it is also creating its own challenges.

Many healthcare providers recognize that clinical workflows and supporting processes are a cornerstone for achieving excellence in a medical setting. Clinical workflows have been shown to have a direct effect on efficiently transitioning a patient through their care plan, and ultimately in delivering an improved outcome.

Improving healthcare outcomes

Although clinical workflows are a critical part of modern healthcare operations, they are one of many workflow concerns for a healthcare provider. Others may include on-boarding clinical staff and administrators and supporting their HR requirements; streamlining patient engagement; orchestrating financing and payment charges and much more. Securing and centralizing visibility, tracking, and real-time access to cross-departmental orders, activities and documentation, along with robust integration support for third party applications, will be a valuable feature of any supporting technology platform.

Triaging the realities of clinical workflows

If improving patient outcomes is the goal, determining which workflows merit particular attention must be a priority.

Understanding what constitutes a clinical workflow is an important first step in assessing this priority.

A clinical workflow is a series of steps and tasks that ultimately achieves a clinical outcome or resolution. It

typically includes one or more practitioners, along with technology solutions or applications. A workflow can be as simple as logging into a healthcare system and registering a patient. It can also be something much more complex, with numerous nested steps and tasks, involving a multi-disciplinary clinical team working together with crossover from other workflows – both clinical and non-clinical.

There are many aspects underpinning clinical workflows that warrant attention if they are to be improved. Outlined below are four core areas of focus:

Streamlined core workflow functions and overlaps:

There are many different roles, clinical functions, technology solutions, and workflows involved in the treatment of a single patient. While some workflows will have greater prominence in certain departments, there are core workflow themes/functions that cut across all key clinical departments.

For example, with patient registration, administration for prescribing medicines, charting, clinical assessment and documentation, the communication and referrals will be fundamentally the same across maternity, pediatrics, oncology, and other areas of medicine. Therefore, the same checks and balances will be required, whether one is administering medicine in the middle of an emergency department or prescribing medicine to someone on the maternity ward or in intensive care. Different types of diagnostics may be ordered in different clinical departments, but the process for making the diagnostic order will be the same.

Some workflows will intersect. For example, a clinical workflow may incur a patient charge that is managed through finance. Similarly, there may be an oversight requirement (such as auditing) that is most easily facilitated by a single cross-functional view.



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Flexibility, Intelligence and Standardization

While some workflow functions may fundamentally be the same, there can be differences, and this creates a need for flexibility. For example, in one scenario, simply stating the patient's condition may be enough, whereas in another it may be critical for additional information to be provided. Ideally, any supporting technology will not only allow the flexibility of entering more, or less, data, but also have the intelligence to know when certain data is required and when not.

A supporting technology platform that can drive real-time information into associated clinical workflows and systems, such as the Electronic Healthcare Record (EHR), allows the entire process to be connected. All systems are aligned, and the information, whether standardized or customized, is captured and shared across teams and departments to support patient care, on-boarding, asset management and other connecting workflow services.

Ultimately, technology that centralizes visibility, tracking, and access to cross-departmental orders, activities and documentation, with robust integration support for third party applications, delivers significant benefits. Most notable is the ability to leverage core workflow functions, enabling standardization and continual improvement across a spectrum of connected workflows. Furthermore, systems that respond quickly and can prioritize, remediate and streamline various workflows, will help save valuable time, allowing greater care to be delivered and patient satisfaction.

Data capture and transfer:

Navigating through workflows and data to reach the relevant application or system to execute a task can be onerous, unintuitive and often redundant. For some US healthcare providers, the processes involved can be so challenging that employees are often assigned to follow clinicians for the sole purpose of entering data, in order to streamline data capture allowing the clinician to focus on the patient.

In healthcare, due to manual workflows or disconnected digital processes, there is often duplication. Clinicians may be put into a convoluted process where information captured on paper is then translated into an electronic document, then manually transcribed for a subsequent consultation, only for it to be scanned back into electronic format.



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Efficient use of Time

Ultimately, the inability to capture clinical insights and information in a timely manner presents a barrier to progression for many healthcare organizations. Processes are often inefficient and ineffective, leading to time wasted, incorrect data entry, and/or workarounds that negate many of the benefits of having a sophisticated technology solution or application system, such as an Electronic Health Record (EHR). Supporting technology solutions which increase the use of **automation** to mitigate **repetition** and **duplication** are therefore key. Similarly, in order to ensure continued opportunities for efficiency, there will be a need to leverage important innovations, such as voice interaction technologies, when they become stable and widely available.

Complexity and Application sprawl:

While EHR systems have a solid footprint across the healthcare provider landscape, there are still a significant number of providers globally where EHR systems have yet to be employed. Regardless of the current landscape, there remain multiple applications supporting both clinical and business services, resulting in multiple processes and workflow steps.

For healthcare providers worldwide, the integration of the many applications used continues to be a challenge, especially in getting them to work together to reduce variation and deliver value. The issues of integration and interoperability are familiar within businesses across all industries. In the case of many healthcare applications, enabling these integrations is imperative.



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Interoperability, Integration, Orchestration and Data Mobility

With application system sprawl and complexity created by intersecting clinical and business workflows, the ability to orchestrate, integrate and interoperate becomes very important. Clinicians want easy access to all linked data and applications to enable the best and most effective care for their patients. As a result, it is vital for the underpinning systems to have visibility, to prioritize, streamline and remediate to save time and make the overall workflow more efficient.

Workflow exceptions and workarounds:

Even when a sophisticated clinical system is in place to facilitate documentation and support staff at the point of care, often clinicians must resort to manual processes to capture their observations, make a note to call a technician for an outage or find the next available room for their patient. Hardware and software can fail completely, or just fail to meet the needs of the situation. As a result, when pressed for time, clinicians look for workarounds to record important information and data. This unreliable practice can increase risk and potentially lead to breaches in security.

Poor application integration and interoperability can lead to a lack of trust in the workflows and systems involved and bring a degree of risk to patient safety.

Weak bridges also increase risk of errors that in healthcare can have extremely serious consequences, especially if it leads to missed diagnoses.



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Risk, Trust, Compliance and Security

Workflow and technology integration are critical. Even in the best systems, vulnerabilities will penetrate the walls of the health system and remediation and recovery must be core to the organization. A well-designed security strategy to reinforce trust, compliance and patient (or consumer) confidence and wellbeing is essential in today's care environment.

Summary: Clinical workflow improvement for the delivery of integrated care

Clinical workflows that support the capture and seamless transition of clinical and business data are paramount. Today, workflows are a cornerstone for delivering medical excellence and improved patient outcomes. As such, these workflows need to be designed and supported by technology and solutions that:

- 1 Release clinicians from non-clinical administrative tasks
- 2 Enable better care to be delivered by leveraging data available across the spectrum of platforms
- 3 Deliver a modern experience and streamline the engagement for common themes of clinical interactions (e.g. logging, navigation, observation, etc.)
- 4 Enable the orchestration of relevant data and information (e.g. test results, medical equipment used, clinical documents, etc.) to where it is needed, creating the opportunity for portals that both unify and centralize care
- 5 Enable greater collaboration between clinical disciplines, workflows and staff
- 6 Ensure the capture of patient information does not succumb to negative value transfer or the degradation of data value that results from repetitive data capture throughout the patient care plan journey
- 7 Recognize and relieve the complexity of the multitude of applications, workaround processes and infrastructure systems employed within many healthcare organizations

The technology in healthcare today is fundamental in a healthcare organization's ability to deliver value, while maximizing its investments.

How ServiceNow strengthens the clinical workflow for improved care outcomes

ServiceNow, through its work with healthcare customers worldwide, has come to see first-hand many of the challenges faced by clinicians, patients and healthcare providers. Rather than trying to replace applications across clinical, IT, and business functions, its platform and solutions address the challenges that result from the workflow issues outlined previously.

Clinical Workflow Support Focus	ServiceNow Portfolio Capability
<ul style="list-style-type: none"> Flexibility, Intelligence and Standardization 	Align and connect to deliver accurate unified information: The Now Platform provides a single environment that can bring together and bridge different capabilities using a single data model. This can support and extend clinical workflows quickly, facilitating speed and accuracy with insights and AI powered experiences.
<ul style="list-style-type: none"> Interoperability, Integration and Orchestration 	Integrate and interoperate with healthcare applications: Many ServiceNow solutions work with EHR products, including one such solution that integrates into the EHR system. If the clinician encounters a problem using the system, they can easily report the problem to support. The issue is then investigated, while the clinician carries on their work of treating the patient - they do not have to wait on a phone line.
<ul style="list-style-type: none"> Efficient use of Time 	Optimize and automate to deliver efficient and effective workflows: ServiceNow IT Operations Management uses artificial intelligence for IT operations (AIOps) to improve the availability of critical services and establish complete visibility so healthcare organizations can remove manual and time consuming steps to free up clinician time, enabling them to focus on care.
<ul style="list-style-type: none"> Risk, Trust, Compliance and Security 	Identify, prioritize, and respond to security risks and compliance issues with automation: Bridging the gaps between security, risk, and IT helps ensure patient privacy. Respond faster to security incidents, vulnerabilities, risks, and non-compliance through a shared platform and orchestration to help prevent the loss of sensitive data. Use real-time reporting to communicate and improve visibility and performance.

Clinical and technology goals aligned

The release of frontline clinical staff from non-clinical, administrative tasks and the opportunity for easy and unified access to data, to do their job effectively and deliver improved patient outcomes and experiences, is eagerly sought after.

There is an overriding goal of investing in technology that supports the smooth and seamless transition of patient information (or data) captured and shared across different, but related, clinical workflows. Through enabling, supporting and securing clinical workflows, the ServiceNow platform and portfolio for healthcare is well

positioned to deliver on these goals to any healthcare organization worldwide.

To learn more about improving healthcare outcomes, check out the links to these related **CIC Healthcare Series** articles:

- Engagement fundamentals for improved patient care outcomes
- Security fundamentals for clinical excellence and improved care outcomes
- HR fundamentals for clinical excellence and improved care outcomes

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