# Patient-Centered Workflow

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In the design of successful healthcare information technology implementations, patients matter. Although the importance of addressing the workflow needs of clinicians cannot be overstated, focusing on patient needs helps ensure newly designed workflows leverage the full capabilities of information technology tools. In addition, this delivers the clinical and financial outcomes desired by organizations. Entities that ignore the needs of clinicians in designing HIT-driven workflows can expect to experience either low levels of HIT adoption among clinicians, suboptimal patient care results, or both. Focusing on patient care provides a framework in which to create effective workflows that leverage new technology to deliver promised value to caregivers and their patients.

The Institute of Healthcare Improvement—founded by former administrator of the Centers for Medicare and Medicaid Services, Don Berwick, MD—displays this mantra throughout its facility:

> *Every system is perfectly designed to achieve exactly the results it gets.*[1]

Therefore, organizations that utilize new information technologies to mimic the existing workflow of clinicians deliver results no better than outcomes previously reached. In some cases, the inherent complexity of the information technology when deployed within a paper-based workflow can deliver results worse than originally obtained.

To effectively implement HIT, organizations must understand in-depth the capabilities of the available information technology, the requirements of the practicing clinicians, and the expected outcomes of all impacted stakeholders (i.e., patient, clinician, organization). Teams built from a cross-section of disciplines and perspectives hold the greatest promise in designing effective workflows. Building a comprehensive workflow across caregivers allows for efficient use of resources to achieve specific patient goals.

## Workflow Defined

Workflow is defined as any task performed in series or parallel by two of more members of a work group to reach a common goal. "Tasks" refer to any activities or actions undertaken by individuals. "Series or parallel" implies tasks performed one after another or simultaneously. "Work group" means a team of individuals working on the same project. Finally, "common goal" indicates that a group's various activities are performed in concert to contribute to a well-defined and agreed-upon outcome.

At a granular level, workflow functions to (1) deliver information to the appropriate people, (2) organize information to be immediately useful, (3) ensure that the information is acted on, and (4) file information and record actions taken.

The specific needs of the healthcare industry make it an ideal match with workflow concepts. Healthcare involves complex procedures that include both clinical and administrative tasks. As a result, workflow increases efficiency and effectiveness through the maximal integration and use of relevant, timely information. Due to its heavy reliance on information, healthcare is in a unique position to take advantage of the information benefits provided by the implementation of workflow concepts.

Creating a particular workflow requires the stringing together of various healthcare tasks, both clinical and administrative, to achieve a desired outcome in the most efficient manner possible. Patient-centered workflow fuses clinical and administrative protocols by sequencing care tasks, coordinating medical and nonmedical care resources, and establishing a defined timeline for completion of set tasks. Patient-centered workflow involves:

- Identifying a target process (e.g., patient care post-myocardial infarction).
- Defining both clinical and administrative tasks to be performed by a work group.
- Breaking down tasks, in some cases, into more specific actions that can be performed by different individuals but which, when completed together, accomplish the original tasks.
- Deciding on the skill set required to perform each task or action (e.g., skills of a physician, nurse, technician, receptionist, patient).
- Understanding the sequence in which the tasks are to be performed.
- Recognizing and applying conditional rules and logic branching, so that

[1] *http://www.psqh.com/julaug08/editor.html (Although Dr. Berwick often receives credit for this quotation, the attribution belongs to Dr. Paul Batalden)*

only necessary and indicated tasks are performed.
- Planning the sequence of tasks, assigning the tasks to individuals, and then documenting the process so that others can understand and follow it.
- Creating the forms, documents, and instructions needed by individuals at each step to perform the tasks (e.g., patient hospital discharge instructions).

### Invaluable New Technologies

Readily available healthcare information technologies offer invaluable tools such as single sign-on (SSO), roaming desktops, location awareness, and fast-user switching to support impactful patient-centered workflows.

For example, let us consider an inpatient post-myocardial infarction diabetic patient on the day of discharge. Administration of medications requires a nurse to sign-on to multiple HIT systems including a medication administration system to obtain a list of prescribed medications and an electronic medical record system to document patient care.

Single sign-on allows for rapid access to multiple systems through the use of a single two-factor authentication process: who you are (e.g., proximity identify card) and what you know (e.g., password). As the nurse previously reviewed the patient's record at the nurses station, roaming desktop technology permits rapid access to the identical desktop in the patient's room without needing to open or position the required applications on the display screen. With such technologies, devices function independently, allowing for the use of computers and tablets interchangeably during the continuum of patient care workflow.

As some applications may be inappropriate for display in a patient's room—email, human resource systems, web searches—location awareness technology filters in only information that is relevant to the patient. Such filtering allows for the use of dual displays that deliver simultaneous viewing of clinical information by the clinician and the patient. In addition, location awareness directs the convenient printing of relevant documents, in this case, patient discharge instructions at the patient's bedside printer.

Lastly, fast-user switching facilitates the use by multiple clinicians of the same HIT platform (e.g., bedside computer) by rapidly presenting user-specific displays, as defined by role (e.g., nurse, physician, specialist). The technology eliminates the need for frequent, complete sign-out and sign-in by each user, a ghastly process that is off-putting for clinicians.

Patient-centered workflow requires stringing together individual steps, the linking of processes, and the bridging of activities by multiple caregivers to create an effective and efficient orchestration of resources to enhance the health of the patient. Technology provides only the tool kit to achieve these workflows. Knowledgeable professionals from multiple disciplines synergistically working together hold the potential to build efficient models for care. By focusing on the patient, rather than the technology or the any individual participant in the workflow, provides the greatest opportunity to achieve successful outcomes that benefit the clinician, organization, and patient.

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### REFERENCES

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