How to Include Technology in Workflow

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In today's changing health care environment, one constant is the role of technology in optimizing clinical care delivery. Today more than ever, organizations face increasing pressure from regulatory bodies to increase quality and reduce cost, while doctors are encouraged to see more patients during the same 8-hour work day, and patients grow frustrated with the fragmented and uncoordinated health care system. Technology can potentially be the answer, but only if it is embraced and implemented the right way. This article will examine high-level principles for ensuring that technology is optimized and incorporated smoothly.

Most organizations that are looking to make a significant change in the use of technology in their daily care delivery process, think of information technology (IT) as a magic bullet to solve all their problems. However, as electronic medical records (EMRs) and other IT platforms are implemented, studies have shown a reduction in provider satisfaction, even while most providers generally believe in the power of these tools. A RAND research report conducted in 2013, highlighted some key challenges faced by providers who adopted EMRs[1], particularly:

- Time-consuming data entry
- Inefficient and less fulfilling work content
- Inability to exchange health information
- Degradation of clinical documentation

[1] Friedberg, Mark W., Peggy G. Chen, Kristin R. Van Busum, Frances Aunon, Chau Pham, John P. Caloyeras, Soeren Mattke, Emma Pitchforth, Denise D. Quigley, Robert H. Brook, F. Jay Crosson and Michael Tutty. Factors Affecting Physician Professional Satisfaction and Their Implications for Patient Care, Health Systems, and Health Policy. Santa Monica, CA: RAND Corporation, 2013. http://www.rand.org/pubs/research_reports/RR439.html. Also available in print form.

To address these concerns, organizations should set expectations that any IT implementation requires "upgrades" to existing workflows but will not always be a perfect solution. Secondly, throughout the entire process, there must be a strong partnership formed between the IT and clinical teams where they plan and work together as equal contributors to the process.

As an organization prepares for a system disruption of any kind associated to technology, the following key principles can help ensure success.

Understanding current and desired state
It is important to acknowledge that IT needs are identified by understanding the current and future state of the workflow in question. Successful implementations spring from a joint effort between IT and clinical/operational teams working together at every step to understand the current state and agree on a future state of workflows. Clinical/operational teams are closest to their workflows, therefore have a natural tendency to perform this assessment on their own and simply produce a list of desired "functions" that IT should enable. When this happens in a silo, it generally leads to poor satisfaction with an infinite number of implementation cycles and customizations. Organizations should avoid performing any scoping and planning activities in a bubble without the IT team at that table at all times. Otherwise this may lead to the development of solutions that do not meet the expectations for the clinical/operational owners, and will result in endless development cycles and increase in resources, time and cost.

Gap assessment to implementation
Once the current and future states are defined, a thorough workflow analysis will determine how differences between the current and future state can be addressed. This analysis is more than just identification of gaps between the current and futures states. Rather it is the process through which IT and clinical/operations teams compromise and agree on the best approach to *close the gap* between the current and future states. A successful gap analysis process should lead to a new workflow that combines the best of technology and clinical operations.

This is the most crucial phase of any IT implementation project as it sets the tone for success for the remainder of the project. Following the guiding principles listed below can help any organization develop a process that works for them:

- Accept that technology doesn't replace the need for a clinical or operational workflow, rather it generates a new, enhanced version of the old.
- IT and clinical/operational teams must work together side by side to negotiate a compromise for a more *efficient and effective* design. This requires the engagement and buy-in of the leaders of both teams to begin the negotiation process and empower their teams to move forward.
- Both groups of stakeholders must be willing to acknowledge and address the limitations of their area. For instance, any system infrastructure weaknesses should be identified in order to minimize risks of not meeting expectations during implementation.
- Define the scope for the degree of IT and operational changes to address gaps – don't fix what's not broken.

Develop an implementation plan
In order to close these gaps, the end-user experience will change, but this change can be managed and carefully introduced to minimize significant disruptions to their daily work through an agreed upon and clear implementation plan. Organizations must address all their outstanding variables at this time, including resources, timelines, feasibility, internal politics and culture, particularly the organization's affinity for acceptance of change.

As the massive project plans and timelines are being created, there is an important decision that IT and clinical/operational teams must make – the interim solutions that should be established. Essentially, select the projects within a project. Most implementations range from weeks to years, depending on scale and scope. Therefore, interim workflows and incremental changes must be embedded within the implementation plan. As IT increases functionality overtime, workflows should be incrementally enhanced and updated to accept these changes, with a constant and direct feedback loop to continue steering all efforts towards the common goals established during the gap assessment.

Train to minimize impact

Change inevitably impacts productivity; with technology, this impact is usually a reduction in productivity. Many call this the productivity paradox: the inability for technology to boost productivity. This is not a new phenomenon, as Robert Solow, in 1987, eloquently stated, "You can see the computer age everywhere but in the productivity statistics."[2] Most providers have experienced this if they participated in the introduction of a new EMR system, where many providers noticed significant declines in their productivity that lasted months or years.

These declines can be attributed to multiple factors, including learning curve, design flaws, poor planning, and more. These can be minimized through joint collaboration between all stakeholders, support and unity from leadership, clear communication of expectations, and an appropriate training strategy. While all of these elements are important, perhaps the most crucial is the training approach. A training program that considers the complexity and scale of the project can ensure that a training isn't just about checking boxes, but influencing adoption.

Optimization

The last phase, and the longest, is continual optimization of the workflow. With time, everything that impacts a workflow continues to change, thus the workflow must continue to adapt. Regulatory changes in healthcare are abundant, patients expect more information faster, technology rapidly improves, and ultimately providers must meet these demands and operate at the top of their license. Organizations should get ahead by developing a task force for performance improvement and optimization that can establish a culture of rapid-cycle evaluation, where workflows and outcomes are continually measured for effectiveness and improved.

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[2] The Economist (2000, September 21). Solving the Paradox. http://www.economist.com/node/375522/print