

# Challenges facing Technology Organizations in today's Children's Hospital's

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Rather than viewing a health care organization as a conglomerate of units, think of it as a system, a combination of processes, people, and other resources that working together can achieve an end.

Children's hospitals, which comprise only 3% of all hospitals in the United States, support specialized equipment and technology to support an increasingly complex care environment with distinctive and sensitive demands. As a result, these facilities are searching for ways to improve HIT use to impact care and promote effective improvement strategies. To achieve this goal, hospital executives must consider broad, key elements, including developing the right culture, attracting and retaining the right people, devising and updating the right in-house processes, and supplying staff with the right tools to do the job.

While children's hospitals seek to make gains in quality of care and improve their bottom line through the use of HIT, industry reports continue to point to the complexity and difficulties of implementing even small-scale systems.

The depth and breadth of the HIT challenges faced by children's hospitals is immense. At minimum, any strategy to overcome these hurdles must include collecting and reviewing financial and operational data. The quantitative and qualitative results should provide insights into HIT planning, implementation, life cycle, and bottlenecks.

The challenges come in many forms, but typically fall into three categories.

Organizational Challenges

- Change: If all change is difficult, managing the introduction of a new technology must rank near the top of the organizational pain meter.
- Planning and decision making: IT departments still rely on return on investment models when they should adopt cost-effectiveness analysis focused on value and fit.
- Reactive posture: Don't wait for physician requests or adoption by other hospitals to trigger the planning process.
- Forecasting technology: A lack of neutral territory to develop industry agreements about potentially beneficial and cost-effective technologies impacts service-line demand and capacity requirements.
- Stakeholders: With limited access to capital, health care organizations are struggling to influence stakeholders, making it difficult to build capital commitment for HIT initiatives.

### Clinical Challenges

- Improve physician collaboration: Physicians have reported a loss of professional autonomy when computerized physician order entry (CPOE) systems prevent them from performing routine practices such as ordering tests and medications. They also object to the technology limiting their narrative flexibility.
- EMR implementation: Despite many children's hospitals selecting a single EMR vendor, in some cases the solution isn't deployed across the organization, causing information to be captured outside of the EMR. As a result, clinical and outcome data collection isn't centralized or properly validated.
- Lack of intelligence: Clinical or business platforms to support decision making, uncover patterns, root cause, cost\ expense control, and quality of care aren't sufficient.
- Enabling technology: A lack of agility in technology solutions and infrastructures is impeding the ability of clinicians to improve clinical outcomes and reduce medical errors.

### Technology Challenges

- Planning: Being ill-prepared for an HIT implementation can result in poor product selection, leaving a facility with a solution that doesn't adapt well to the local clinical environment and inadequate testing and training.
- Integrated approach: If not carefully integrated, technology systems can create new work, complicate workflow, and slow the speed at which clinicians carry out clinical documentation and ordering processes.

- **Communication:** One of the biggest tasks for IT departments is to determine how much communication between users and the technology is considered sufficient to streamline operations before it becomes bothersome.
- **Safety:** Patient safety becomes impaired when IT departments are unable to retool technology when it becomes counterproductive, especially when the unsolved problems engender dangerous workarounds.

## Plan for Success

Despite the plethora of challenges faced during the implementation and adoption of HIT, there are numerous strategies and approaches to overcome these hurdles. Keep in mind that many hospitals realize successful outcomes and enjoy the benefits of IT throughout various adoption stages. Consider the following strategies to get a head start on a winning implementation:

- Examine workflow processes and procedures for risks and inefficiencies and resolve issues prior to any technology implementation. Involve representatives from all disciplines—whether they be clinical, clerical, or technical.
- Actively involve clinicians and staff who will ultimately use or be affected by the technology. Enlist IT staff with strong clinical experience in the planning, selection, design, and reassessment.
- Assess the hospital's technology needs on a regular basis. Investigate how best to meet those needs by requiring IT staff to interact with users outside the hospital to learn about the real-world capabilities of potential systems.
- Continuously monitor new technology for problems and address any issues as quickly as possible, particularly those obscured by workarounds or incomplete error reporting.
- Establish a training program for clinicians and operations staff that includes frequent refresher courses.
- Develop and communicate policies that delineate which staff members are authorized and responsible for the technology's implementation, use, oversight, and safety review.
- Prior to go-live, ensure that all standardized order sets and guidelines are developed, tested on paper, and approved by the hospital's pharmacy and therapeutics committee.

- Develop a system of safety alerts to help clinicians determine urgency and relevancy. Decide which alerts need to be hard stops and provide appropriate supporting documentation.
- Construct a system that mitigates potential harmful CPOE drug orders by requiring departmental or pharmacy review and sign off on orders that are created outside the usual parameters.
- Create an environment that protects data entry staff from undue distractions when using the technology.
- Following implementation, reassess and enhance safety effectiveness and error-detection capability, including the use of error tracking tools and the evaluation of near-miss events.
- Monitor and report errors and near misses caused by technology through manual or automated surveillance techniques.
- As more medical devices interface with the IT network, reevaluate the applicability of security and confidentiality protocols. Reassess compliance with HIPAA privacy and security requirements annually.

While many HIT challenges are not exclusive to pediatric hospitals, these facilities often experience unique implementation challenges that must be overcome within a limited environment. Additionally, children's hospitals are more likely to bear the negative outcomes of a dynamic and, at times, volatile HIT field, particularly as they face significant financial risk if they take on debt to invest in technology and fail to meet meaningful use.

When implementing new technology, it is imperative for hospital leaders to consider the availability of financial, operational, and institutional resources, all of which ultimately affect the success of HIT projects.