

Peer's HCIT Adoption and Optimization Methodology

Article 3: Technology: Optimizing Existing Technology to Improve Clinical Processes and Clinician Satisfaction

Information technology continues to offer healthcare organizations the means to enhance workflows. While healthcare organizations have made great progress, many improvement opportunities remain. Nationally, few care delivery organizations report attaining Stage 7 of the HIMSS EHR Adoption Model. A review of the data along with the direct observation of clinical workflows at various sites suggests clinician documentation appears to be a sticking point that is proving to be a challenge.

Anecdotal evidence from multiple hospitals suggests that the challenges faced typically stem from:

- Gaps in available system functionality
- Issues related to integration / interfacing multiple systems
- Required use of specialized paper forms

As a result, duplicate documentation frequently occurs: the same information is electronically recorded in multiple systems; it is recorded both electronically and on paper forms; or, it is documented on multiple paper forms. The obvious goal of reducing duplicate documentation is related to the clinical accuracy of the data being captured. Also for consideration is the significant timesaving for caregivers to record data only once. In addition to timesaving, there is a high potential for legal ramifications if transcription errors are made such that documents recording the same event do not agree. Finally, many clinicians rely on and prefer the use of hand-written cheat sheets as personal worklists, which they then use to document electronically at a later time. In addition to optimizing the available technology to simplify documentation and promote data accuracy, the clinical workflows along with policy and procedural requirements must also be addressed.

Client Case Study:

A large 9-hospital non-profit healthcare organization launched an initiative designed to better leverage their EHR to reduce the time nursing staff spent on clinical documentation. The organization contracted Peer Consulting to manage the project. The organization had previously implemented electronic clinical documentation tools including admission and shift assessments, vital signs and Intake / Output, barcode assisted medication administration and discharge instructions. While the implementation addressed workflow requirements, after using the system for a period of time, the organization recognized the need for optimization, including technology, nursing adoption and process improvement. The key engagement objectives were:

- Assess current nursing workflows and identify clinical documentation improvement opportunities
- Support future state workflow development
- Assess current technology and find opportunities to improve upon existing capabilities
- Identify, select and measure performance metrics "pre" and "post" implementation

Background:

Our client had been successful in using technology to improve clinical workflows. Technology had been applied to enhance nursing workflows, reduce the amount of duplicate clinical documentation and eliminate redundant data recording and forms. However, improvements had plateaued and nursing satisfaction surveys revealed that time spent on documentation was an issue. As a result, nursing leadership initiated a project to provide additional focus on clinical documentation and to improve this process through utilizing system functionality that was either not in use or was under-utilized.

Peer Consulting was asked to assess the current clinical documentation technology and workflow and assist with developing recommendations to improve performance in this area.

Project Approach:

Planning and organizing: Initial planning activities ensured that a combined team of the organization's IT representatives, Nursing Informaticists (NIs), nursing managers and Peer Consulting staff were involved in identifying the nursing units where the current state assessment would occur. As existing current state workflow maps were available, this effort verified the documented processes, identified improvement opportunities and conducted an inventory of the paper forms and documents currently in use. Current state workflows were updated as required.

Following the current state analysis, a joint team comprised of IT representatives, Nursing Informaticists (NIs), selected nursing representatives and the consultants would develop recommended future state workflows. These recommended workflows would incorporate the use of additional system functionality, extend under-used functionality, suggest changes to workflow activities and recommend metrics to be used as success / improvement measures. The recommended future state workflows and suggested metrics were reviewed, revised and approved by a wider team of nursing staff that included selected line staff, nurse managers and leadership.

Engagement Execution: Peer Consulting led the workflow observation and analysis activities. The NIs and the consultants began their observations at nursing shift change. Roles observed included nurses, clinical nursing assistants and unit coordinators. The team observed all clinical documentation activities for each role. Observations included a brief description of the activity along with how and where it was performed, noting variations among caregivers in the same role.

During the observations, the organization's staff were very open to the observers. The staff provided a great deal of useful information regarding the clinical documentation process as well as redundancies and suggested opportunities for improvement. Many of their suggestions were incorporated into the future state design.

The recommended future state design sessions leveraged the knowledge and experience of the combined team. IT representatives provided the expertise regarding available system functionality; nursing staff and NIs provided detailed knowledge of nursing workflows, issues, and policies and procedures; and the consultants lead the discussion on metric identification and selection. The consultants used the LEAN Value Stream Mapping approach to develop the recommendations and to obtain approval for the future state workflows and metrics selection.

The Peer Consulting team led the activities to measure the metrics pre and post implementation using the selected metrics, the data collection via time studies and the analysis of forms used. The time studies included shadowing nursing staff to record time spent on clinical documentation activities.

Conclusion:

The joint team identified current system functionality that could be implemented and / or extended to address several identified opportunities. Future state workflows were approved and implemented. Using the baseline metrics that were gathered prior to implementation. The selected metrics were re-measured after training, the technical implementation and a "settling-in period were completed. An audit of the selected metrics following implementation revealed that clinical documentation workflow performance along with staff satisfaction had improved.

The primary benefits on the pilot nursing units included:

- Average reduction in clinical documentation time of 23 minutes per nurse per 12 hour shift

- Elimination of 8 separate pre-printed forms
- Improved relationships between nursing, IT and the Nursing Informaticists

The achievement of these benefits were driven by the system implementation and expanded utilization of the following functionality:

- Implementation of care plans
- Extending the use of admission and shift assessments to incorporate fall risk requirements and Meaningful Use and core measure requirements
- Extending the use of automated charge capture functionality
- Enabled printing of patient labels and wrist bands at the nursing station rather than in the admitting department, saving a trip for each printing

Based the audited metrics, project success was demonstrated through the utilization of available technology to enhance nursing workflows. The workflow analysis also suggested that additional opportunities for further improvement were available. Recommended next steps include:

- Reduce the number of verbal and telephone orders. Work with physicians to utilize available remote access to enter orders via Computer Provider Order Entry (CPOE).
- Conduct further analysis on the shift change process
- Work with nursing to identify options to reduce reliance on personal cheat sheets

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