### Aim

Efficiently extract patient-focused pressure ulcer data directly from the EMR that can be used by patient care providers and quality reviewers as a means to evaluate and promote quality care.

Health care organizations submit pressure ulcer (PU) data to a variety of internal and external groups including hospital quality committees, hospital boards of directors, National Database for Nursing Quality Improvement (NDNQI), and CMS. Hospital PU surveys are time-intensive and require extensive resources and personnel. Accuracy of the data is paramount. Feedback of real-time PU data to hospitals that submit pressure ulcer data directly from the EMR are using electronic formats and transmitting information extracted from the electronic medical record (EMR).

According to NDNQI, only about 8% of hospitals that submit pressure ulcer data are using electronic formats and transmitting information extracted from the electronic medical record (EMR).

### Process

WOCNs, IT MD specialist, Informatics Nurse, Quality Director and Database Coordinator from one urban medical center met to discuss the idea of developing a process for extracting pressure ulcer data from nursing documentation in the EMR.

Preliminary steps included:

1. Analyze nursing documentation workflow in the EMR
2. Translate specific clinical questions into the queries that would derive necessary data to be extracted from the EMR
3. Work with Information Technologies (IT) specialist to develop queries
   - WOCNs identified the specific key information needed along with the location of the information in the EMR
   - IT specialist designed the queries and ran reports
4. Develop a series of reports that could be used by the WOCNs and unit-based skin champions to complete NDNQI surveys and to be used for real-time feedback of pressure ulcer information to units
   - A series of simulated test runs conducted by IT, WOCNs, and unit-based skin champions was completed to verify accuracy of data
   - Beta site testing was completed in one of the hospitals followed by an introduction to the other hospitals in the system.
   - Process rolled out to a four hospital health system (Continuum Health Partners of NY, now Mount Sinai Health System).
   - IT consultant services approved and the process was fully integrated into an online questionnaire that is directly uploaded to NDNQI. There is “one click” access to unit specific pressure ulcer status, and documented community and hospital acquired pressure ulcers for any hospital within the system at any time.

### Outcomes

The value deriving reports from the EMR

Reports are available to allow identification of patients at risk for pressure ulcers, specific risk factors identified in the Braden score, patients with community acquired pressure ulcers and patients with hospital-acquired pressure ulcers. Interventions such as moisture, nutrition, bed surface and repositioning can be evaluated.

Time for survey completion is decreased by at least 50% and the need for manual input of information to NDNQI which could take several days is eliminated.

Pressure ulcer data is extracted and utilized in a more timely manner by providing “one click” access to all hospital system pressure ulcer data.

Improved external and internal quality reporting is enhanced including multi-departmental usage of data by nutrition, medicine and surgery departments.

Development of an internal data base of pressure ulcer information is available as a rich resource for research.

WOCNs are able to do real-time validation of skin assessments to ensure the accuracy of the pressure ulcer data.

WOCNs are able to provide nurses with real-time education regarding differentiating pressure ulcers from other skin problems significantly improving documentation accuracy.

Case finding for patients in need of WOCN services is improved.

Patient-specific and unit-specific comments by surveyors provide staff nurses with immediate feedback that can lead to improvements in patient care.

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**References**