Risk Alerts in an On-line Nursing Assessment
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Background
The combination of patient data with clinician defined rules can generate an automated alert designed to inform nurses about potentially serious clinical situations. Computer-based alerts have been shown to improve the care of hospitalized patients[1]. Alerts described in the literature are targeted to physicians and guide or recommend medical treatment. Very few automated alerts exist that are specific to nursing care and outcomes. At Beth Israel Deaconess Medical Center in Boston we have designed and implemented clinical risk alerts in our automated nursing admission assessment[2].

Constructing the risk alerts
The first alert to be included in our automated nursing admission assessment was, “Potential for injury, due to slips/falls.” This alert was constructed using functional status variables and three specific variables known to indicate a patient’s risk to fall[3]. Each variable, if true, independently activates the risk alert.

The second alert we incorporated uses the Braden Scale for risk assessment of skin breakdown. The Braden Scale is a valid and reliable measure of a patient’s risk for development of pressure ulcers[4]. Each of the six assessment items is scored and the total score indicates the level of risk. Low, medium or high risk scores activate the alert.

Description of the risk alerts
The risk alerts are designed to interrupt workflow and to require an action. When the pre-defined conditions are met for each risk alert, an immediate red highlighted display of the specific message appears “on screen.” In addition, the alert requires action to be taken by the nurse in order to continue documenting the assessment. The nurse must choose to either print the associated standard of care or to display it on-line.

Evaluation
The ‘risk for slips/falls’ alert has been in place for two years. Currently, about 35% of the 2000 assessments completed on-line each month generate the slips/falls alert. Data gathered from this alert is used in our Quality Improvement program. Three nursing care units with a high percentage (40-56%) of patients who generate the risk alert are targeted for intense slips/falls prevention programs.

The ‘risk for skin breakdown’ alert was implemented within the past year. Of the 48% of on-line assessments with the Braden Scale completed, 20% generate the alert. Units with a high percentage of patients at risk for skin breakdown are targeted for hospital-wide prevention initiatives. Evaluation of the impact of these alerts is ongoing.

Discussion
It is important to identify patients at risk for slips/falls and skin breakdown as early in an admission as possible. The on-line nursing assessment is an effective tool within which to integrate risk alerts. Information is collected and stored in a structured format, and nurses receive immediate feedback. Early identification of problems leads to the early implementation of interventions. By providing nurses with alerts about potentially serious outcomes, we can impact the quality of patient care and potentially reduce adverse outcomes.

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References