MedStar Franklin Square Medical Center

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Focused on You

MAGNET RECOGNIZED

The Development of an Electronic Bedside Shift Report Tool

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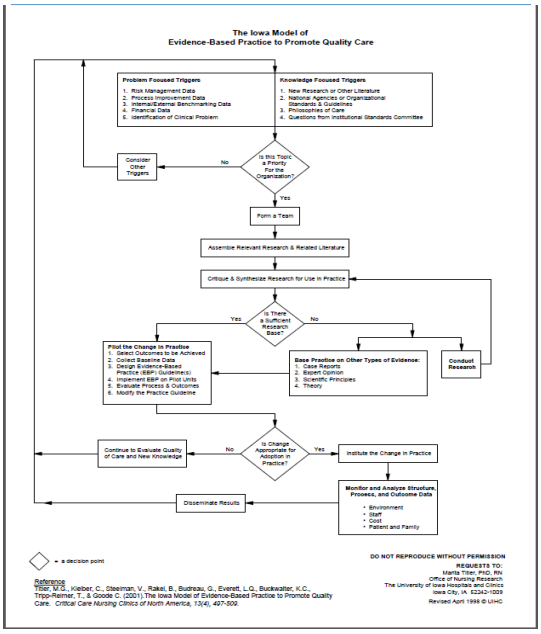
Background

- Bedside shift report (BSR) occurs 920,829 patients in US hospitals every day
- Communication issues account for 60-80% of all medical errors and preventable adverse events in the acute care setting

Objectives

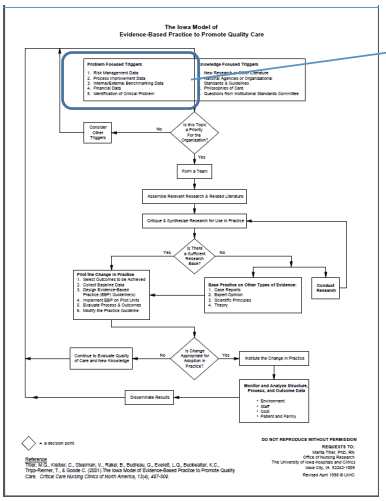
- 1. Discuss relevant literature related to bedside shift report
- 2. Describe essential information an off going nurse needs to share with an oncoming nurse to ensure an effective, efficient, and safe transfer of care during bedside shift report

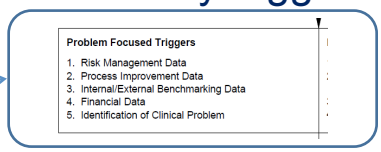


The 7 steps of the Iowa Model

- Selection of a topic (identified by triggers)
- Form a team
- Retrieve evidence (via literature search)
- Grade the evidence
- Develop an EBP Standard
- Implement the EBP
- Evaluate

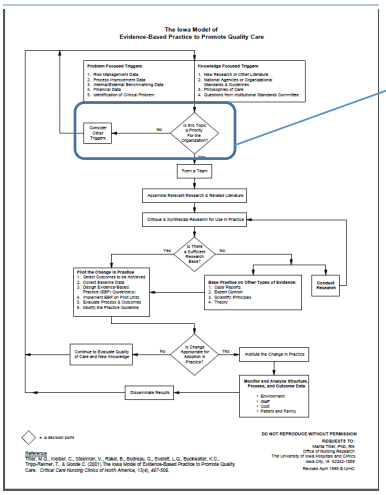
Step 1: Select topic and identify triggers

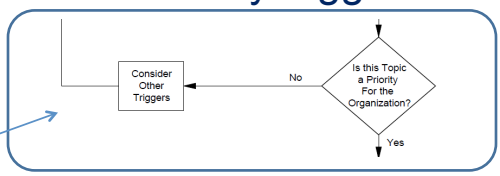




- MedStar Franklin Square Medical Center
  - Peer Review and Root Cause Analyses
  - Communication failures associated with RN to RN change of shift report

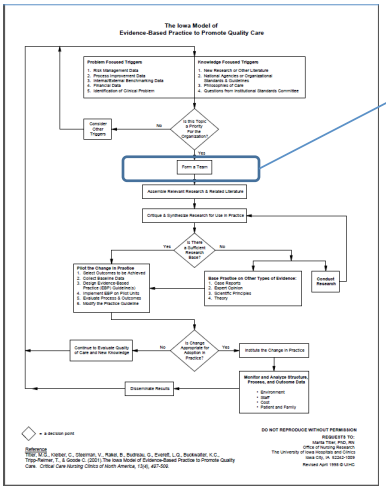
Step 1: Select topic and identify triggers

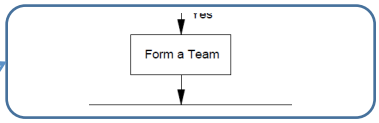




- Organization priority
- EBP and Research Council
  - Identified need for clear, concise and consistent RN to RN shift report to improve patient outcomes

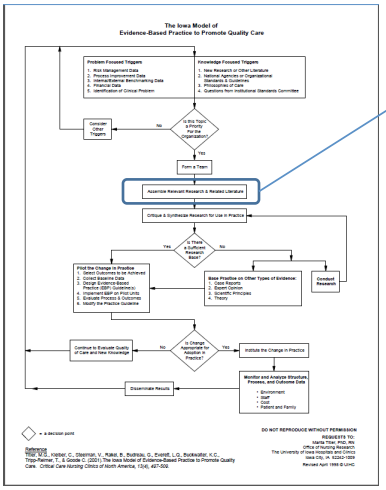
Step 2: Form a team

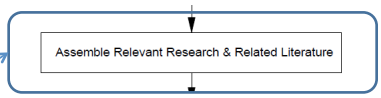




- Team membership from:
  - Council representatives from nursing units
  - Key stakeholders from other patient care disciplines (Pharmacy, Respiratory Therapy, Case Management, Dietary)
  - Resource areas (Nursing Professional Development, Informatics, Nurse Practitioners)
- Utilize group process (Outline goals, expectations, responsibilities)
- Define problem to be explored.

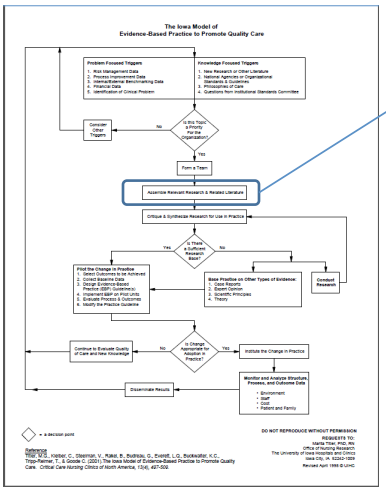
Step 3: Retrieve evidence

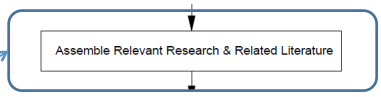




- To focus the literature review, it is first necessary to focus the clinical question.
- "In the acute care setting, what are the essential components required for effective BSR to ensure valid and accurate information is communicated?"

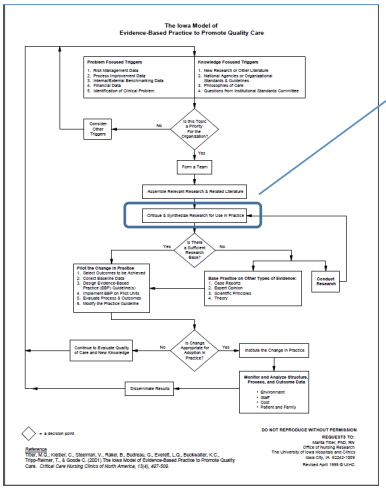
Step 3: Retrieve evidence





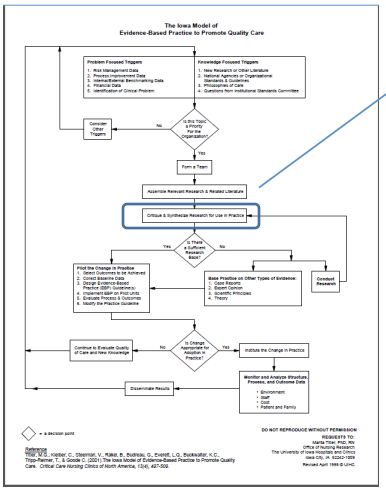
- **Search Strategy:**
- Nurses from three MedStar Health hospitals conducted and appraised the literature
- Four databases (PubMed, CINAHL, Ovid and Psych Info) were searched using the following keywords: handoff of care, handover, bedside shift-to-shift report, medical-surgical nursing, acute care, and communication.

Step 4: Critique and grade the evidence



- **Literature Search**
- 1,579 articles identified through database search
- 68 articles identified through other sources (e.g. author search)
- 1,323 articles after duplicates reviewed
- 1,230 articles did not meet criteria and were excluded
- 84 full-text articles assessed for eligibility

Step 4: Critique and grade the evidence



- Evidence was synthesized using GRADE.
- GRADE is an acronym for Grading of Recommendations Assessment, Development and Evaluation

Evidence Summary

- 19 articles addressed content of change of shift report including
  - 6 IRB approved research studies
  - 1 systematic review
  - 10 QI studies
  - 5 best practice
  - 1 literature review

Literature Results

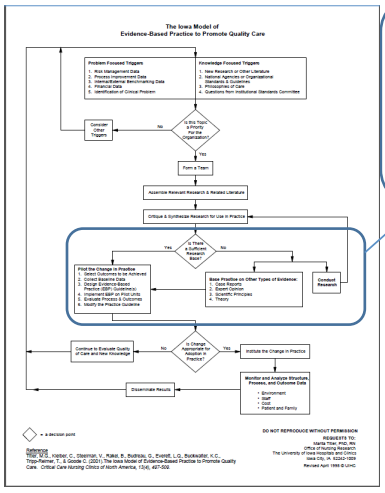
Publication	Methods
Athwal, P., Fields, W., & Wagnell, E. (2008). Standarization of change of shift report. *Journal Nursing Care Quality, 24*(2), 143-147.	Implemented the process on the unit and trialed for 1 month, modified the process, and then reimplemented through the council
Caruso, E. M. (2007). The evolution of nurse to nurse bedside report on a medical surgical cardiology unit. *MedSurg Nursing, 16*(1), 17-22.	Implemented on unit. No comparison groups. Used bedside report form contained in article
Davies, S., & Priestly, M. J. (2006). A reflective evaluation of patient handover practices. *Nursing Standard, 20*(21), 49-52.	none
Fenton, W. (2006). Developing a guide to improve the quality of nurses handover. *Nursing Older People, 18*(11), 32-36.	Direct observation of hand off with review of Med record for omissions pre and post audit of information
Johnson, M., Jeffries, D., & Nicholls, D. (2011). Developing a minimum data set for electronic nursing handover. *Journal of Clinical Nursing, 21*, 331-343.	Qualitative study to identify the scope of information currently conveyed by nurses at clinical handover aand related processes; field notes taken by researchers noting the process of handover
Klee, K., Latta, L., Davis-Kirsch, S., & Pecchia, M. (2012). Using continuous process improvement methodology to standardize nursing handoff communication. *Journal of Pediatric Nursing, 27*,168-173.	Mapped current processes, observed current processes. Set targets for improvement, involved family and more. Train the trainer program for implementing new handoff process
Lamond, D. (2000). The information content of the nurse change of shift report a comparative study. *Journal of Advanced Nursing, 31*(4), 794-804.	Implemented on unit
Mikos, K. (2007). Monitoring handoffs for standardization. *Nursing Management, 38*(12), 16-33.	Ten minute long training sessions on the unit. Give nurses a reference card with access numbers. Built in prompts into the system following SBAR. Spread entire process house-wide after one month of testing
Nelson, B. A., & Massey, R. (2010). Implementing an electronic change of shift report using transforming care at the bedside processes and methods. *Journal of Nursing Administration, 40*(4), 162-168.	7 testing cycles (TCAB staff nurse driven power of change) Series of minimal changes
Porteous, J. M., Stewart-Wynne, E. G., Connolly, M., & Crommelin, P. F. (2009). ISoBAR a concept and handover checklist the national clinical handover intiative, *Medical Journal of Australia, 190*(11), S152-S156.	Target acute transfer to higher level of care
Raines, M., & Mull, A. (2007). Give it to me: the development of a tool for shift change report in a Level I trauma center. *Journal of Emergency Nursing, 33*, 358-60.	
Riesenberg, L. A., Leitzsch, J., & Cunningham, J. M. (2010). Nursing handoffs: a systematic review of the literature. *American Journal of Nursing, 110*(4), 24-34.	no conclusive
Staggers, N., Clark, L., Blaz, J. W, & Kapsandoy, S. (2011). Why patient summaries in electronic health records do not provide the cognitive support necessary for nurses handoffs on medical and surgical units Insights from interviews and observations. *Health Informatics Journal, 17*(3), 209-223.	collected data as to how report done (audiotape, bedside and face to face)
Hunt, S. & Staggers, N. (2011). An analysis and recommendations for multidisciplinary computerized handofff applications in hospitals. *AMIA Annual Symposium Proceedings*, 588–597. PMC3243151	
Staggers, N., Clark, L., Blaz, J. W, & Kapsandoy, S. (2012). Nurses information management and use of elctronic tools during acture care handoffs. *Western Journal of Nursing Research, 34*(2), 153-173.	
Stevens, J., Bader, M. K., Luna, M. A., & Johnson, L. M. (2011). Implementing standardized reports and safety checklists. *American Journal of Nursing, 111*(5), 48-53.	Using Lewin and Knowles theories, used SBAR andto give report Used "catch of the day to describe near misses occurring at the unit level
Welsh, C. A., Flanagan, M. E., & Ebright, P. (2010). Barriers and facilitators to nursing handoffs Recommendations for redesign. *Nursing Outlook, 58*, 148-154.	Written & Taped end of shift reports used/ 14 item checklist for each pt
Wilson, M. J. (2007). A template for safe and concise handovers. *MedSurg Nursing, 16*(3), 201-206.	pre/post intervention using voicecare system
Yee, K. C., Wong, M. C., & Turner, P. (2009). Hand me an isobar: a pilot study of an evidence based approach to improving shift to shift clinical behavior. *Medical Journal of Australia, 190*(11), S121-S124.	

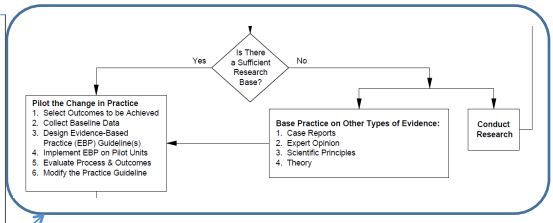
Evidence Summary

- The most pertinent articles were appraised using the GRADE framework

Authors	Design	Setting	Conclusions	Quality and Strength of Recommendation
Johnson et al 2011	Qual.	195 patient change of shift reports across 10 clinical settings (medical, surgical, respiratory etc)	Content divided into 7 categories including: patient identification; discharge, clinical presentation (relevant); clinical status; care plan; outcomes	Moderate/ Strong
Welsh et al 2010	Qual.	Large Midwestern VA medical center	Pertinent content for change of shift report for medical, surgical and acute care units defined	Moderate/ Strong

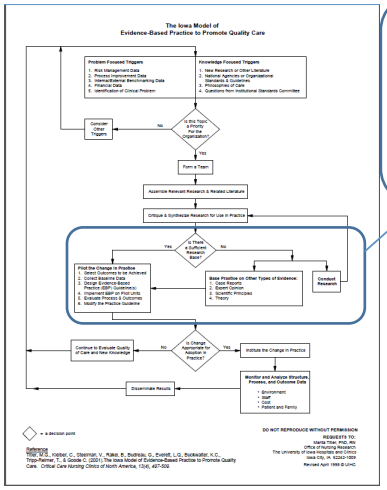
Step 5: Develop an EBP Standard

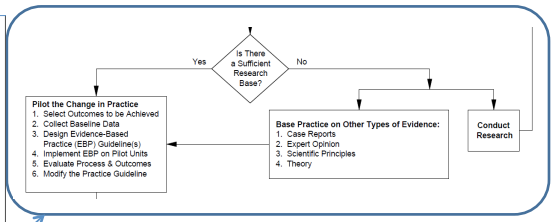




- The literature review resulted in mostly non-research based studies although content critical to BSR was culled from the articles

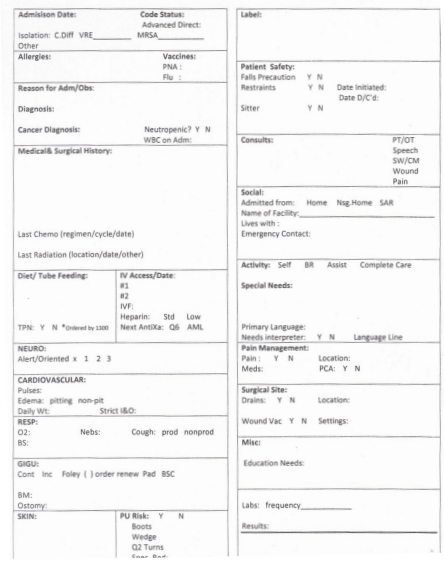
Step 5: Develop an EBP Standard





- A prototype was developed for the communication tool to be embedded in our electronic medical record as part of a clinical advancement project by a clinical nurse

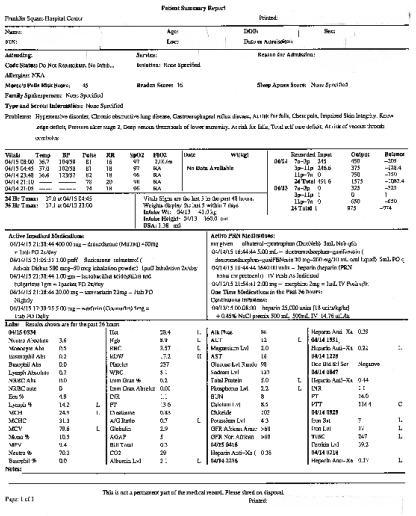
Option 1: Kardex



Pros:
- Currently in use by many RNs for report
- Customizable

Cons:
- RN dependent
- Pen and paper only

Option 2: Patient Summary Report Form



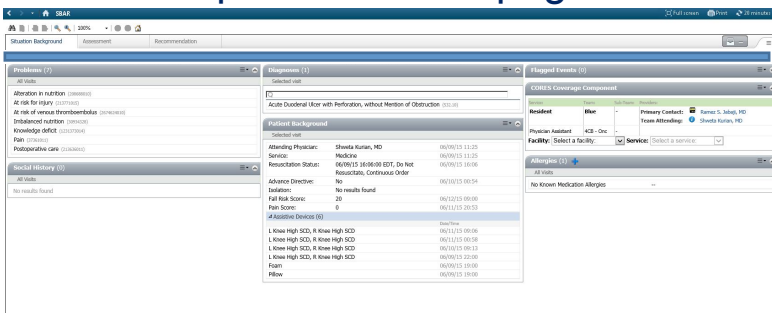
Pros:

- Typically single page printout
- Clear layout/flow
- Currently used by some RNs for report
- Includes the most data identified

Cons:

- Excess information
- Print only; no on-screen view

Option 3: SBAR page



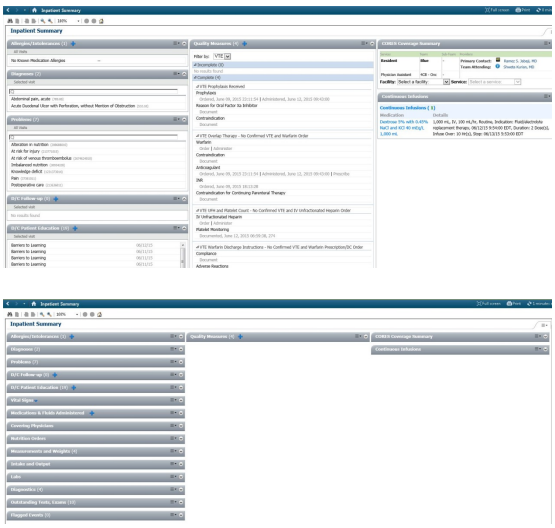
Pros:

- Not visually overwhelming

Cons:

- Broken by tabs
- Prints current tab only
- Multi-page printouts
- Repetitive

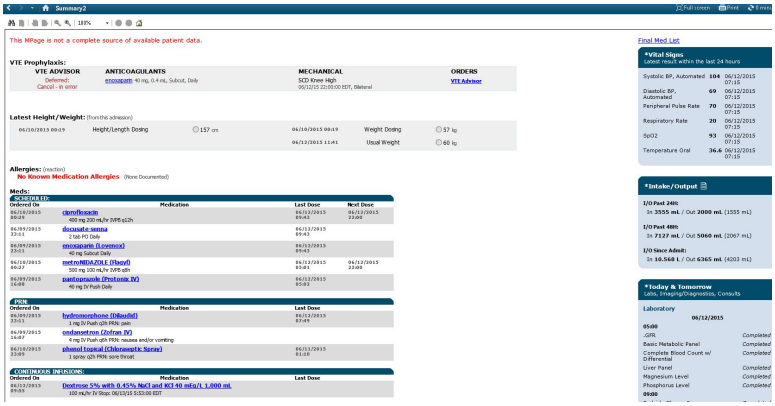
Option 4: Inpatient Summary page



Pros:
- Customizable

Cons:
- Multi-page printouts
- Repetitive
- Items limited by scroll bars

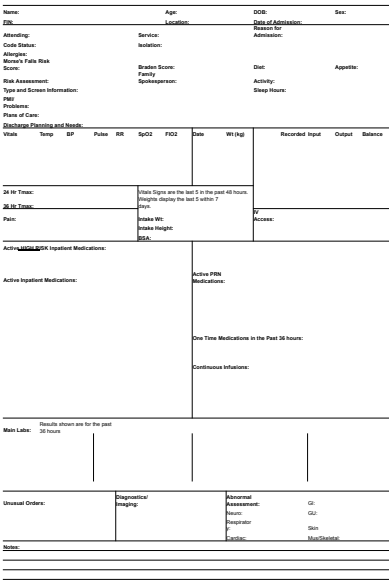
Option 5: Summary 2 page



Pros:
- Includes data other options don't: labs, transfusions
- Hyperlinks

Cons:
- Multi-page printout
- Overlaps data when printed
- Designed for MDs

Early Draft Prototype



Multiple variations developed:

- Verbal only
- Readable only
- All data
- Enhanced Medications
- Medication Timeline
- Hyperlinks
- Combinations

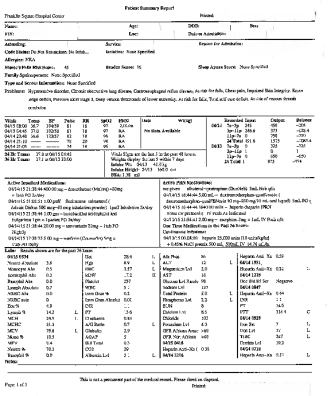
Recommendations

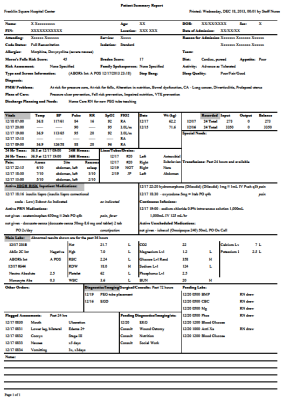
- Rapid Cycle Redesign Day: 1/2014
- RNs from our hospital system developed essential format and content of an effective BSR based on the evidence and expert opinion
- Elements of an effective BSR included vital signs, pain, medication issues, # hours of sleep and more. Focus is on communicating abnormal results and not normal results

Recommendations

- Two teams of RNs examined logistical and scripting processes of bedside shift report including the format and content.
- A prototype was generated, improving an existing eMAR page
- A multi-institutional, in-person Rapid Design Day was conducted
  - Formalized an innovative standardized electronic RN-RN communication tool for nurses to use.
  - Two features were requested by the teams of nurses:
    - That the form be printable
    - That the on-screen version has hyperlink capabilities

eMAR Developed Prototype





Crosswalk

Evidence	Kardex	Patient Summary Report	Bedside Shift Report Tool
Verbal Handoff Items (verbal exchange after quiet read of chart by oncoming RN)			
Name	x	x	x
Room #	x	x	x
Reason for Admit/ Problem of Day	x	x	x
Pain	x		x
Abnormal assessments include review of systems			x
Abnormal vital signs		x	x
Abnormal labs		all	x
Abnormal Medication issues ie; high risk medications, schedule change, intolerance etc		all	x
Abnormal I&O		x	x
Abnormal nutrition			x
IVF (type, rate, location, line)	x	med only	x
Procedures pending and resulted with in past 12-24 hours	optional		x
Interdisciplinary plan, goals, careplan, d/c planning			x
Sleep hours			sleep quality (good/fair/poor)
Comments/ Special needs	x	notes only	x

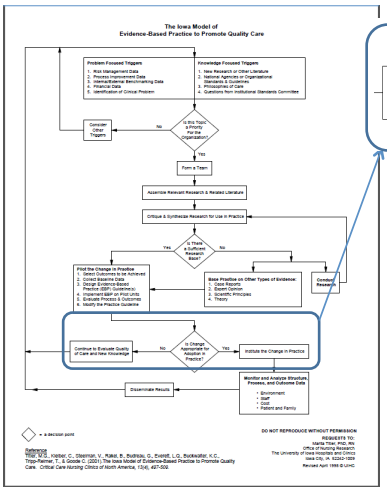
Crosswalk

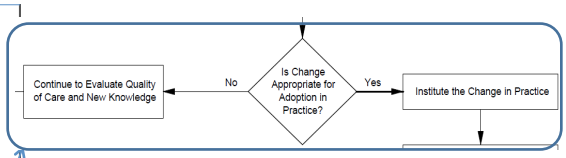
Evidence	Kardex	Patient Summary Report	Bedside Shift Report Tool
Mandatory Readables			
Name	x	x	x
Room#	x	x	x
Code Status	x	x	x
Diet/ Eating/ Activity	x		x
Allergies/ Clinical Alerts such as VRE, etc	x		x
Admitting MD	x	x	x
Clinical/ Past Medical History	x		x
Falls Assessment & other risk assessments such as pressure ulcers, suicide, CIWA, restraints, protocols	x		x
MAR last 12-24 hours		x	
Orders last 12-24 hours			
Pending diagnostic results			x

Crosswalk

Evidence	Kardex	Patient Summary Report	Bedside Shift Report Tool
Expert Opinion			
Service/Team			x
Isolation	x	x	x
Diagnosis			x
Appetite			x
Family Spokesperson	x		x
Type & Screen			x
Stop Bang (used by other hospitals)		x	x
24H/36H Tmax		x	x
24H/36H HR max			x
Lines/Tubes/Drains			x
Transfusions			x
Upcoming Labs			x
Upcoming Procedures/Imaging			x

Step 6: Implement the EBP





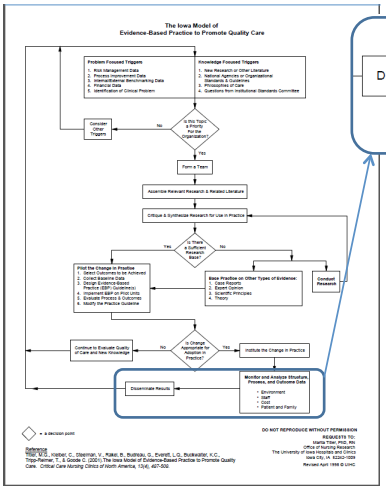
Implications

- A final crosswalk of the evidence, prototype, and final form developed by our network informatics team will be completed.
- The use of a standardized electronic bedside shift report tool has the potential to improve the quality of patient care across our 10 hospital network.

Barriers Encountered

- Electronic vs Printed
- SBAR
- Single site vs System
- Programmer challenges

Step 7: Evaluate



- Dissemination of project and results to other facilities within system
- Poster developed and displayed at MONE
- Presentations delivered at local conferences

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