The Integrative Review Process: Yes, You Can!

...Without dropping down a rabbit hole!
GOALS: Provide the participant with knowledge and tools necessary to conduct & write a integrative review. Various skill sets and related tools will be discussed in depth.

OBJECTIVES: At the end of this session, the participant will be able to:

- Discuss three strategies to find and gather relevant evidence for a integrative review
- Identify two components used to determine the quality of the evidence for a integrative review
- NOT drop down any rabbit holes while accomplishing the above!
The Evidence Journey

- FAQs: What, Where, and How
- Appraising & Grading: Tools of the Trade
- Final Synthesis: Now What?
Types of Evidence Reviews

- **Narrative or literature Review**: Critical research summary on a topic of interest, often to put a research problem into context. Captures a “snapshot” of the clinical problem or issue.

- **Integrative Review**: A review via a systematic approach that uses a detailed search strategy to find relevant evidence to answer a targeted clinical question. Evidence can come from RCTs, observational studies, qualitative research, clinical experts, and other types of evidence. Does not use summary statistics.

- **Systematic Review**: Comprehensive search strategies and rigorous research appraisal methods surrounding a clinical issue or question. Evidence is primarily based upon RCTs. Used to summarize, appraise, & communicate contradictory results or unmanageable amounts of research.
Why do a Integrative Review?

- Cornerstone of Evidence-Based (EB) Practice
- Ensures integration of research evidence into nursing practice
- Answers questions concerning current nursing and patient care practices
  - Critical tool providing the foundation for
    - EB nursing interventions
    - EB clinical practice guidelines
Evidence Review

Advantages

• Presents varied perspectives
• Combines diverse methodologies to create a more well-rounded evidence review
  – Experimental
  – Non-experimental
  – Qualitative
  – Disparate studies

• Depth and breadth of evidence without
  – Over-emphasizing RCTs
  – Overvaluing hierarchies of evidence

• Enhanced data collections strategies
Evidence Review

Disadvantages

- Combining diverse methodologies is a complex process & may contribute to:
  - Lack of rigor
  - Inaccuracies
  - Bias

- Poorly formulated methods of:
  - Analysis
  - Synthesis
  - Conclusion drawing

What is Needed

- Issues related to combining empirical and theoretical reports
- May do an incomplete synthesis
- Systematic methods to review the evidence
- Bias control
FAQs of Integrative Reviews

What, Where, and How ?
Evidence Review

Process

• Research reviews are research of research
  – Should meet the same rigorous methodological standards as primary research in terms of clarity, rigor, & replication

• Systematic Approach to Enhance Rigor
  – Problem Formulation
    • Narrow clinical topic with a focused question
Examples of Evidence Reviews

- Hourly Nurse Rounding
- Hospital Acquired Pressure Ulcers
  - Clinical question
  - Evidence Search
  - Critique & Evaluation
  - Synthesis
  - Summary
Question Formation

• Patient Population
• Intervention or Interest Area
• Comparison Intervention
• Outcome
• Time
The Clinical Question

Hourly Rounding
“What is the effect of hourly rounding by nursing staff in the acute care hospital setting, as compared to current practice?”

Pressure Ulcers
“What are the predictors of Pressure Ulcers (PU) in high risk adult patients in the acute care hospital setting?”
Integrative Review FAQs

• Where do I find the evidence?
• When do I stop looking?
• What counts as “evidence?”
• Doesn’t expert opinion count?
• How do I control bias?
Where do I find the evidence?

- Electronic databases
- Journal articles
- References
- Professional organizations
- Web-based search engines
Electronic Databases

- Cumulative Index to Nursing and Allied Health Literature (CINAHL)
- Ovid
- Medline
- PubMed
- EBSCO Host
- ClinicalTrials.gov
- Grateful Med
- Joanna Briggs Institute
- Virginia Henderson Library

KP Clinical Library Website

http://cl.kp.org

Medical Life Science Librarians
Use their expertise!
Synthesis of the evidence findings is the major activity of the integrative review

- Do not make database searches the major activity of the evidence review
  - Don’t get lost in databases!
The Searchable Question

**Hourly Rounding**
- **Search Terms:** Hourly rounding, hourly surveillance, nursing rounds, nurse rounding, nurse surveillance, outcomes, patient comfort rounds
- **Limits:** 2000-2007
- **Databases:** Cochrane, CINAHL, Ovid, PubMed, PSYCHOinfo
- **Web-Based:** Yahoo

**Pressure Ulcers**
- **Search Terms:** Braden Scale, operating room, pressure ulcer prevention, critical care, intensive care
- **Limits:** 1992-2006; 2002-2007
- **Databases:** Cochrane, CINAHL, Ovid, Medline, Pub Med
- **Web-Based:** AORN website, Yahoo, Google
When do I stop looking?

• When you have hit “saturation”
  – Need an exhaustive evidence review
  – When you start seeing the same articles, authors, themes, & patterns
  – When the same references are being cited in similar articles
  – When you can’t find any relevant evidence
Hourly Rounding: Relevant Evidence

<table>
<thead>
<tr>
<th>Key Search Terms (2000 to 2007)</th>
<th>Search Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cochrane Review</td>
<td>OVID</td>
</tr>
<tr>
<td>Hourly rounding, hourly surveillance, nursing rounds, nurse rounding, nurse surveillance, outcomes, patient comfort rounds</td>
<td>394</td>
</tr>
</tbody>
</table>
Pressure Ulcers: Relevant Evidence

• 2006 review for PU prediction & prevention
  – 83 articles/abstracts; 18 selected as relevant

• 2008 review update
  – Two WOCN interviewed for expert opinions
  – 282 articles; 14 reviewed, 8 selected as relevant
    • 4 articles from original review eliminated
    • 22 total relevant articles
What is relevant?

- Definition of relevant:
  - “Having a bearing on or connection with the matter at hand”
    (www.dictionary.com)

- Does the evidence have a direct bearing on or connection with the clinical question?
**What counts as “evidence?”**
Doesn’t expert opinion count?

- Yes, but ensure the experts are qualified
  - Evidence quality improves when experts are:
    - Nationally & internationally known
    - Conducted high quality research
    - Published their results in peer-review journals
  - Panel of experts from different geographic areas with expertise in complementary areas
Integrative Review FAQs

How do I control bias?

• Integrative reviews use a subjective viewpoint – yours!
  – Don’t “cherry pick” evidence to support your own viewpoints

• Control for possible bias by:
  – Document, document, document!
  – Objective colleagues to screen results
  – Clinical expert review
  – Independent reviews of the same topic
How do I control bias?

Keep an open mind!
# Documentation of Database Search Results

<table>
<thead>
<tr>
<th>Key Search Terms (2000 to 2007)</th>
<th>Cochrane Review</th>
<th>OVID</th>
<th>EBSCO host (CINAHL; Nursing &amp; Allied Health Collection)</th>
<th>Pub Med</th>
<th>PsycINFO</th>
<th>Total</th>
<th>Relevant Articles</th>
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</thead>
<tbody>
<tr>
<td>Hourly rounding, hourly surveillance, nursing rounds, nurse rounding, nurse surveillance, outcomes, patient comfort rounds</td>
<td>394</td>
<td>48</td>
<td>46</td>
<td>2</td>
<td>1</td>
<td>491</td>
<td>3</td>
</tr>
</tbody>
</table>
Electronic Database Search Methodology

Literature search topic: “For adult patients in the acute care hospital setting, what is the quantity, quality, and consistency of the evidence in determining the lower limit for body temperature?”

<table>
<thead>
<tr>
<th>Database</th>
<th>Key Word(s) and/or Controlled Vocabulary Terms</th>
<th>Total References Identified (hits)</th>
<th>No. of Relevant References</th>
<th>No. of Total Duplicate Articles</th>
<th>No. of Articles Selected for Review</th>
<th>No. of Articles Excluded</th>
<th>Final Relevant References</th>
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</thead>
<tbody>
<tr>
<td>Name: PubMed</td>
<td>“Therapeutic hypothermia parameters” + adults</td>
<td>14</td>
<td>3</td>
<td>0^</td>
<td>3</td>
<td>1</td>
<td>2</td>
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<tr>
<td>Name: CINAHL</td>
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<tr>
<td>Name: Yahoo</td>
<td>“Therapeutic hypothermia” (open search)</td>
<td>523,000</td>
<td>8</td>
<td>0 (See Note)</td>
<td>8</td>
<td>4</td>
<td>4</td>
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<tr>
<td>Name: PubMed</td>
<td>“Unplanned hypothermia”</td>
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<td>Name: CINAHL</td>
<td>Normothermia protocol</td>
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<td>0</td>
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<td><strong>TOTALS</strong></td>
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<td>523,160</td>
<td>23</td>
<td>1</td>
<td>22</td>
<td>10</td>
<td>12</td>
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</table>

Note: 2 articles referenced in Wikipedia Article on “Therapeutic Hypothermia”
Controlled vocabulary (subject terms: MESH terms, tagged terms specific to database)
*Use the first database as the main comparison for subsequent database searches and identifying duplicate articles

**Reference/Contextual Links #1** (Additional articles/information found in references lists and/or article review)

Total Articles Included in Literature Review: Database (12) + Contextual Links (1) = 13

Inclusion Criteria: Hypothermia (intentional, therapeutic, planned, unplanned); hypothermia definitions/guidelines/protocols; low body temperature, nursing management of hypothermia, adults, acute care settings

Exclusion Criteria: Ambulatory practice settings, perioperative, pediatrics, hypothermia occurring outside of the acute care setting
**QUANTITATIVE REVIEW WORKSHEET**

**Purpose/Research Questions/Hypotheses**

<table>
<thead>
<tr>
<th>Purpose of Study:</th>
<th>Research Variables</th>
<th>Design</th>
<th>Major Findings and Limitations</th>
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<tr>
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<td>Quantitative Design:</td>
<td>Findings: <em>(continue on back)</em></td>
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<tr>
<td>Research Questions / Hypotheses:</td>
<td>Dependent:</td>
<td>Descriptive Correlational Comparative Quasi-experimental Experimental</td>
<td>Limitations: <em>(continue on back)</em></td>
</tr>
</tbody>
</table>

**http://ccires.org**

**http://kpscnursingresearch.org**

**http://nursingpathways.kp.org/scal/research/projects/tools/index.html**

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<thead>
<tr>
<th>Age:</th>
<th>Gender:</th>
<th>Health Status:</th>
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<th>Other:</th>
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<td>Nursing Home Other</td>
<td>Location: Urban or Rural</td>
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<td>Reliability:</td>
<td>Statistics:</td>
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<td>Descriptive: Mean, Median, SD, SEM, Other:</td>
<td>Correlational: Univariate, Bivariate, Regression Inferential: T-test Mann-Whitney U ANOVA Other:</td>
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<td></td>
<td>#3</td>
<td>#1</td>
<td></td>
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<td></td>
<td></td>
<td>#3</td>
<td></td>
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</tbody>
</table>

| 7. Non-randomized controlled prospective studies |
| 6. Non-randomized controlled retrospective studies |
| 5. Cohort Studies |
| 4. Case-controlled studies |
| 3. Non-controlled, clinical series, descriptive studies |
| 2. Case Studies |
| 1. Consensus of Experts & Manufacturer’s Recommendation |
| 0. Anecdotes |

**Feasibility:**
Could this practice change be implemented easily in your organization and with minimal resources? ☐ Yes ☐ No

**Benefit/Risk:**
Would the benefits of the practice change outweigh the risks to patients? ☐ Yes ☐ No

**Comments:**

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# QUALITATIVE REVIEW WORKSHEET

(Created: 10/05 by C. Crawford, Kaiser Permanente, SCAL Nursing Research Program; revised 6/07)

<table>
<thead>
<tr>
<th>Purpose/Research</th>
<th>Questions/Inquiry</th>
<th>Qualitative Design</th>
<th>Major Findings &amp; Limitations</th>
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<tbody>
<tr>
<td><strong>Purpose of Study:</strong></td>
<td><strong>Research Question:</strong></td>
<td><strong>Biography</strong>&lt;br&gt;Case Study&lt;br&gt;Ethnography&lt;br&gt;Grounded Theory&lt;br&gt;Historical&lt;br&gt;Meta-synthesis&lt;br&gt;Narrative Analyses&lt;br&gt;Phenomenology&lt;br&gt;Other:</td>
<td><strong>Findings:</strong> (continue on back)</td>
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<tr>
<td>Other Information Sources:</td>
<td>Literature Review&lt;br&gt;Editorial&lt;br&gt;Anecdotal</td>
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</table>

<table>
<thead>
<tr>
<th>Sample</th>
<th>Setting</th>
<th>Major Tools</th>
<th>Quality of Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number:</strong></td>
<td><strong>Type:</strong></td>
<td><strong>Data Collection Methods(s):</strong></td>
<td>1. Researcher identifies, studies, and employs a consistent tradition of inquiry&lt;br&gt;2. Begins with single focus/idea&lt;br&gt;3. Includes a <strong>rigorous and systematic</strong> approach to:&lt;br&gt;- data collection&lt;br&gt;- data analysis – process&lt;br&gt;- data analysis – outcome&lt;br&gt;- description of findings&lt;br&gt;4. Adequate sample selection method &amp; size&lt;br&gt;5. Synthesizes data using multiple levels of abstraction&lt;</td>
</tr>
<tr>
<td>Acute care hospital&lt;br&gt;Ambulatory Care&lt;br&gt;Community</td>
<td><strong>Observation:</strong></td>
<td><strong>Yes No</strong></td>
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<tr>
<td><strong>Age:</strong></td>
<td><strong>Interviews:</strong></td>
<td><strong>Yes No</strong></td>
<td></td>
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<tr>
<td>Nursing Home&lt;br&gt;Other</td>
<td><strong>Group:</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>Gender:</strong></td>
<td><strong>Location:</strong></td>
<td><strong>Yes No</strong></td>
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</tr>
<tr>
<td>Location:</td>
<td><strong>Urban or Rural</strong></td>
<td></td>
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</tr>
<tr>
<td>Other:</td>
<td><strong>Written Accounts/Journals</strong>&lt;br&gt;Photographs &amp; Video Tapes</td>
<td></td>
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<tr>
<td><strong>Health Status:</strong></td>
<td><strong>Coding/Analysis</strong></td>
<td><strong>Validity Assessment</strong></td>
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<td><strong>Authenticity Criteria:</strong></td>
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<td><strong>Theme</strong></td>
<td><strong>Credibility:</strong></td>
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<td><strong>Theoretical</strong></td>
<td><strong>Criticality:</strong></td>
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<td><strong>Taxonomic</strong></td>
<td><strong>Dependability:</strong></td>
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<td></td>
<td><strong>Other:</strong></td>
<td><strong>Transferability:</strong></td>
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</tbody>
</table>

**Feasibility:**
Could this practice change be implemented easily in your organization and with minimal resources? Yes No

**Benefit/Risk:**
Would the benefits of the practice change outweigh the risks to the patients? Yes No

**Comments:**

---


**QUANTITATIVE REVIEW WORKSHEET**

Modified June 2007

---

**Time to put the articles away!**

**Use the Review Worksheet**

<table>
<thead>
<tr>
<th>Number:</th>
<th>Type:</th>
<th>Name(s):</th>
<th>Evidence Rating:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>#1</td>
<td>10. Meta-analysis of randomized controlled trials</td>
</tr>
<tr>
<td></td>
<td></td>
<td>#2</td>
<td>9. Large-sample randomized controlled trials</td>
</tr>
<tr>
<td></td>
<td></td>
<td>#3</td>
<td>8. Small-sample randomized controlled trials</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>7. Non-randomized controlled prospective studies</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6. Non-randomized controlled retrospective studies</td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0. Anecdotes</td>
</tr>
</tbody>
</table>

**Type:**
- Acute care hospital
- Community Nursing Home
- Other

**Health Status:**
- Urban or Rural

**Statistics:**
- Descriptive: Mean, Median, SD, SEM, Other:
- Correlational: Univariate, Bivariate, Regression
- Inferential: T-test, Mann-Whitney U, ANOVA
- Other:

**Reliability:**
- #1
- #2
- #3

**Validity:**
- #1
- #2
- #3

**Feasibility:**
- Could this practice change be implemented easily in your organization and with minimal resources? □Yes □No

**Benefit/Risk:**
- Would the benefits of the practice change outweigh the risks to patients? □Yes □No

**Comments:**
Matrixing the Evidence

- Something resembling a mathematical matrix, especially in rectangular arrangement of elements into rows and columns
- Something within or from which something else originates, develops, or takes form
<table>
<thead>
<tr>
<th>Common Evidence Headings</th>
</tr>
</thead>
<tbody>
<tr>
<td>– ID Code</td>
</tr>
<tr>
<td>– Article Type</td>
</tr>
<tr>
<td>– Aims</td>
</tr>
<tr>
<td>– Design</td>
</tr>
<tr>
<td>– Sample</td>
</tr>
<tr>
<td>– Population</td>
</tr>
<tr>
<td>– Data Collection</td>
</tr>
<tr>
<td>– Data Analysis</td>
</tr>
<tr>
<td>– Study Purpose</td>
</tr>
<tr>
<td>– Study Aim</td>
</tr>
<tr>
<td>– Results</td>
</tr>
<tr>
<td>– Findings</td>
</tr>
<tr>
<td>– Conclusions</td>
</tr>
<tr>
<td>– Recommendations</td>
</tr>
<tr>
<td>– Limitations</td>
</tr>
<tr>
<td>– Other</td>
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</tbody>
</table>
# Table of the Evidence

## THE BRAIN DUMP!

<table>
<thead>
<tr>
<th>Article</th>
<th>Title</th>
<th>Citation</th>
<th>Study Methods</th>
<th>Evidence Implications</th>
<th>Study Limitations</th>
<th>Quality of Evidence</th>
</tr>
</thead>
</table>
# Table of the Evidence: Excluded Articles

## Hospital-Acquired Pneumonia in the Acute Care Setting

An Integrative Review of the Evidence - June 2009

"What is the quality of the evidence concerning the prediction & prevention of HAP in the acute care hospital setting?"

Reviewed And Excluded Articles

<table>
<thead>
<tr>
<th>Article</th>
<th>Title</th>
<th>Citation</th>
<th>Study Methods</th>
<th>Study Purpose/Results</th>
<th>Conclusions/Recommendations/Nursing Implications</th>
<th>Study Limitations</th>
<th>Reason for Exclusion</th>
</tr>
</thead>
</table>
Primary aim: Identify the extent of HAI and most likely risk factors leading to such infections in this hospital setting.  
Secondary aim: Identify prevalence of inpatients with CAI and discuss their admission.  
Results: (N=62 with 80% occupancy rate)  
- 76 CAI  
  - 38 HAI patients (48%)  
  - 31.1% above age 50 years  
  - 25% between 20-29 years  
  - 14 BSI (31.1%)  
  - 13 VAP (28.9%)  
  - 11 UTI (24.4%)  
  - Gram negative pathogens responsible for most HAI  
  - 21 occurred in ICU (45.7%)  
  - VAP 47.6%  
  - BSI 13%  
  - UTI 13%  
  - 6 Medical floors (13.3%)  
  - 6 Surgical floors (13.3%)  
  - 9.1 times higher in ICU patients than Non-ICU patients  
  - 16.4 times higher for LOS >8 days  
  - Risk of VAP or BSI increased if on ventilator or had a line for >8 days  
  - **Sample Characteristics**  
    - Male 297  
    - Average age 36.0 years  
    - Female 265  
    - Average age 36.3 years | Conclusions:  
- Overall HAI rate of 8% was associated with significant risk factors including:  
  - Hospital LOS >8 days  
  - Venous or bladder catheter in place for >8 days  
  - Mechanical ventilation >8 days  
  - Gram negative pathogens  
Recommendations:  
- High rate of line-related BSI mandate further investigation and more detailed surveys to outline risk factors and method of reducing their occurrence  
- Continuous surveillance of VAP  
- More comprehensive institutional survey to examine the magnitude of misuse of antimicrobials | Average age of subject much different from hospitalized patients in US studies  
Mixed sample includes participants from rehabilitation, long term care, pediatrics and CAI  
Saud Arabia population demographics vastly different from US population | Difficult to separate HAP from HAI |
# Table of the Evidence

## Hourly Nurse Rounding

### A Review of the Evidence

**June 7, 2007**

<table>
<thead>
<tr>
<th>No.</th>
<th>Article Citation</th>
<th>Study Design</th>
<th>Sample Size &amp; Statistical Methods</th>
<th>Purpose/Results/Findings</th>
<th>Limitations</th>
<th>Conclusions/Recommendations/ Nursing Implications</th>
</tr>
</thead>
</table>
- 22 hospitals (46 inpatient units) from 14 states, representing urban & rural populations, ranging from 25 to 600 beds
- Eight hospitals (19 units) eventually excluded from data analyses re: poor reliability & validity of data collection
- Final sample consisted of 14 hospitals (27 units)
- Represented South, Eastern, and Mid-West United States
- Each hospital had at least 1 experimental unit & 1 control unit of similar patients
- Inclusion criteria:
  - Per diem staff 3% or less
  - Med-Surg, Surg, or Med units
- Strong nurse managers with ability to oversee study, supervise staff, manage data collection compliance | **Purpose:** Determine the frequency of and reasons for patients’ call light use, the effects of 1 hr & 2 hr nursing rounds on patients’ use of the call light, and the effects of such rounding on pt satisfaction & pt safety.
**Hypothesis:** Nursing rounds on medical, surgical, and medical-surgical units, conducted on a regular schedule by nursing staff who performs a specific set of actions, would:
- Reduce call light use
- Increase patient satisfaction
- Improve patient safety (# of pt falls)
**Results:**
- Specific nursing actions performed at set intervals were associated with statistically significant overall reduced pt call light use, as well as reduction in pt falls & increased pt satisfaction.
- Anecdotal verbal data from nursing staff on experimental units reported increased nursing satisfaction with:
  - Additional time for pt care & other tasks
  - Quiter environment
  - Increased attentiveness & responsiveness by staff re: reduction in "white noise."
- Call lights now heard and not part of "white noise" | **Quasi-experimental design does not ensure equivalence between groups**
- Frequency totals & mean scores given for most statistical findings; many readers are more comfortable with results given as a percentage
- Unable to specify specific factors used by each hospital to select experimental & control units
- Unable to ensure all nurses correctly performed the protocol & recorded data
- Nursing satisfaction not tested
- Did not have access to raw data for pt satisfaction scores. Calculations dependent on multiple vendor-supplied data being accurate & representative of requested discharge dates
- Float staff from | **Conclusions:** A protocol incorporating specific actions into nursing rounds, either every 1 or 2 hrs, can reduce frequency of pt call light use, increase pt satisfaction with nursing care, and reduce falls.  
**Recommendations:** Operational changes emphasizing nurse rounding on pts can achieve more effective patient-care management, and improved pt satisfaction & safety.  
**Nursing Implications:** Improved patient-care management and patient satisfaction & safety are achievable with interventions that nurses can independently initiate and carry out.  
**One Year Later:**
- 85.7% of units continue rounding
- 13 hospitals have expanded rounding to other or all units
- Mean pt satisfaction scores continue to increase (from 79.9 to 88.8)
- 2 hospitals have monitored “excellent” ratings only, and have gone from 38.3% to 80.1% |

### Quality of the Evidence

**Evidence Level:** 7  
**Evidence Grade:** Fair
Appraising the Evidence

• Evaluate *each individual piece of evidence* in a systematic fashion

• Grade the evidence for a *final grade for the body of the evidence*
  – Utilize available appraisal & grading tools to ensure a rigorous, systematic, & organized review
    – [http://ccires.org](http://ccires.org)
    – [http://kpscnursingresearch.org](http://kpscnursingresearch.org)
## QUANTITATIVE REVIEW WORKSHEET

**Modified June 2007**

<table>
<thead>
<tr>
<th>Purpose/Research Questions/Hypotheses</th>
<th>Research Variables</th>
<th>Design</th>
<th>Major Findings and Limitations</th>
</tr>
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<tbody>
<tr>
<td>Purpose of Study:</td>
<td>Independent:</td>
<td>Quantitative Design:</td>
<td></td>
</tr>
<tr>
<td>Research Questions / Hypotheses:</td>
<td>Dependent:</td>
<td>Descriptive</td>
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<td></td>
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<td>Quasi-experimental</td>
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<td>Experimental</td>
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<td></td>
<td>Findings: (continue on back)</td>
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</tr>
<tr>
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<td></td>
<td>Limitations: (continue on back)</td>
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### Sample

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<tr>
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<tr>
<td><strong>Type:</strong></td>
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<td>Age:</td>
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<tr>
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</tr>
</tbody>
</table>

### Levels of Evidence

- Evidence Rating:  
  10. Meta-analysis of randomized controlled trials  
  9. Large-sample randomized controlled trials  
  8. Small-sample randomized controlled trials  
  7. Non-randomized controlled prospective studies  
  6. Non-randomized controlled retrospective studies  
  5. Cohort Studies  
  4. Case-controlled studies  
  3. Non-controlled, clinical series, descriptive studies  
  2. Case Studies  
  1. Consensus of Experts & Manufacturer's Recommendation  
  0. Anecdotes

### Feasibility:
Could this practice change be implemented easily in your organization and with minimal resources? □Yes □No

### Benefit/Risk:
Would the benefits of the practice change outweigh the risks to patients? □Yes □No

### Comments:

---

Ranking the Evidence

Adapted from: Canadian Medical Association & Centre for Evidence-Based Medicine (2001).

1. Expert Consensus, Manufacturers Recommendations, Lit Review
2. Case Studies
3. Non-Controlled, Clinical Descriptive Studies
4. Case-Controlled Studies
5. Cohort Studies
6. Non-random, Controlled Retrospective Studies
7. Non-random, Controlled Prospective Studies
8. Small Sample RCT
9. Large Sample RCT
10. Meta Analysis of RCT
10. Systematic Reviews
### Table 2
AACN’s new evidence-leveling system

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Meta-analysis of multiple controlled studies or metasynthesis of qualitative studies with results that consistently support a specific action, intervention, or treatment</td>
</tr>
<tr>
<td>B</td>
<td>Well-designed controlled studies, both randomized and nonrandomized, with results that consistently support a specific action, intervention, or treatment</td>
</tr>
<tr>
<td>C</td>
<td>Qualitative studies, descriptive or correlational studies, integrative reviews, systematic reviews, or randomized controlled trials with inconsistent results</td>
</tr>
<tr>
<td>D</td>
<td>Peer-reviewed professional organizational standards, with clinical studies to support recommendations</td>
</tr>
<tr>
<td>E</td>
<td>Theory-based evidence from expert opinion or multiple case reports</td>
</tr>
<tr>
<td>M</td>
<td>Manufacturer’s recommendation only</td>
</tr>
</tbody>
</table>

**American Association of Critical Care Nurses**

*New as of September 2009*
## Collaborative Center for Integrative Reviews and Evidence Summaries

**CCIREs® Evidence Leveling System (ELS)**

<table>
<thead>
<tr>
<th>LEVEL</th>
<th>DESCRIPTION</th>
<th>RELEVANT ARTICLES</th>
<th>ARTICLE NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Meta-analysis of multiple large sample or small sample* randomized controlled studies, or meta-synthesis of qualitative studies with results that consistently support a specific action, intervention, or treatment</td>
<td></td>
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</tr>
<tr>
<td>B</td>
<td>Well-designed controlled studies, both randomized and nonrandomized, prospective or retrospective studies, and integrative reviews with results that consistently support a specific action, intervention, or treatment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Qualitative studies, descriptive or correlational studies, integrative reviews, systematic reviews, or randomized controlled trials with inconsistent results</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Peer-reviewed professional organizational standards, with clinical studies to support recommendations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>Theory-based evidence from expert opinion or multiple case reports, case studies, consensus of experts, and literature reviews</td>
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</tr>
<tr>
<td>MA</td>
<td>Manufacturer’s recommendation; Anecdotes</td>
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<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
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</tbody>
</table>

* A large sample has adequate power to detect the observed effect with confidence (as seen in significant Confidence Intervals). A small sample may lack confidence in the power of the desired effect (Polit & Beck, 2008)
## Levels of the Evidence

### Pressure Ulcer Integrative Review

<table>
<thead>
<tr>
<th>SCORE</th>
<th>LEVELS OF STUDIES</th>
<th>RELEVANT ARTICLES</th>
<th>ARTICLE NUMBER</th>
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<tbody>
<tr>
<td>10</td>
<td>Systematic Reviews/Meta-Analysis of Randomized Controlled Trials</td>
<td>4</td>
<td>#4, 13, 17, 21</td>
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<tr>
<td>9</td>
<td>Large Sample Randomized Controlled Trials</td>
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<tr>
<td>8</td>
<td>Small Sample Randomized Controlled Trials</td>
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<td>#5</td>
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<td>7</td>
<td>Non-random, Controlled Prospective Studies</td>
<td>2</td>
<td>#8, 14</td>
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<tr>
<td>6</td>
<td>Non-random, Controlled Retrospective Studies</td>
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<td>#3</td>
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<td>5</td>
<td>Cohort Studies</td>
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<td>#9</td>
</tr>
<tr>
<td>4</td>
<td>Case-Controlled Studies</td>
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<tr>
<td>3</td>
<td>Non-Controlled, Clinical, Descriptive Studies</td>
<td>1</td>
<td>#2</td>
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<td>2</td>
<td>Case Studies</td>
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<td>#11, 15, 20</td>
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<tr>
<td>1</td>
<td>Expert Consensus, Manufacturers Recommendations (Literature Reviews)</td>
<td>6</td>
<td>#1, 6, 7, 16, 18, 22</td>
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<tr>
<td>0</td>
<td>Anecdotes</td>
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<td>#10, 12, 19</td>
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<td><strong>Total Articles</strong></td>
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Levels of the Evidence

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<td>Small Sample Randomized Controlled Trials</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Non-random, Controlled Prospective Studies</td>
<td>1</td>
<td>#1</td>
</tr>
<tr>
<td>6</td>
<td>Non-random, Controlled Retrospective Studies</td>
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<td>5</td>
<td>Cohort Studies</td>
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<tr>
<td>4</td>
<td>Case-Controlled Studies</td>
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<tr>
<td>3</td>
<td>Non-Controlled, Clinical, Descriptive Studies</td>
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<tr>
<td>2</td>
<td>Case Studies</td>
<td></td>
<td></td>
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<tr>
<td>1</td>
<td>Expert Consensus, Manufacturers Recommendations (Literature Reviews)</td>
<td>2</td>
<td>#3, #4</td>
</tr>
<tr>
<td>0</td>
<td>Anecdotes</td>
<td>1</td>
<td>#2</td>
</tr>
<tr>
<td></td>
<td><strong>Total Articles</strong></td>
<td><strong>4</strong></td>
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</tr>
</tbody>
</table>
Grading the Body of the Evidence for Quality

- **Insufficient**
  - Major methodology concerns (bias, design, etc)
  - Major conflicts in results of research studies
  - Compelling reasons not to generalize to target patient population

- **Fair**
  - Minor methodology concerns
  - No major conflicts in results

- **Good**
  - Well-designed, high quality research studies with no major methodological concerns
    - Low risk of bias, adequate sample size/power
### Quantitative Grading Scheme

#### Kaiser National Clinical Content Network Review Board 2003

**“System for Grading the Strength of a Body of Evidence”**

<table>
<thead>
<tr>
<th>Level/Grade</th>
<th>Type and number of studies</th>
<th>Quality</th>
<th>Consistency</th>
<th>Relevancy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GOOD</strong></td>
<td>At least one well-designed, well-conducted systematic review (SR/MA) (consider heterogeneity) of RCTs</td>
<td>Low risk of bias</td>
<td>No major methodology concerns</td>
<td>No compelling reason not to generalize the published work to the target KP population</td>
</tr>
<tr>
<td></td>
<td>Two or more well-designed, well-conducted RCTs with narrow confidence intervals</td>
<td>Adequate sample size and power</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>One well-designed, well-conducted multicenter RCT with narrow confidence intervals</td>
<td>No major methodology concerns</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>For SR/MA, no major conflict in results (consider heterogeneity)</td>
<td>Consistency</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>If significant heterogeneity exists, drops to Poor</td>
<td>For individual RCTs, no major conflict in results</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>If major conflicts do exist, drop to “Insufficient”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>FAIR</strong></td>
<td>Single well-designed, well-conducted RCT with narrow confidence intervals</td>
<td>Minor methodology concerns</td>
<td>For SR/MA, no major conflict in results (consider heterogeneity)</td>
<td>No compelling reason not to generalize the published work to the target KP population</td>
</tr>
<tr>
<td></td>
<td>Two or more RCTs of lower quality</td>
<td>Consistency</td>
<td>For individual studies, no major conflict in results</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Well-designed, well-conducted SR/MA of cohort studies (consider heterogeneity)</td>
<td>Quality</td>
<td>If major conflicts do exist, drop to “Insufficient”</td>
<td></td>
</tr>
<tr>
<td><strong>INSUFFICIENT</strong></td>
<td>Single RCT of lower quality or insufficient size</td>
<td>Major methodology concerns (i.e., lack of concealed allocation, inadequate sampling, no ITT analysis)</td>
<td>For SR/MA, no major conflict in results (consider heterogeneity)</td>
<td>No compelling reason not to generalize the published work to the target KP population</td>
</tr>
<tr>
<td></td>
<td>Cohort studies</td>
<td>Consistency</td>
<td>For individual studies, no major conflict in results</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Major methodology concerns (i.e., lack of concealed allocation, inadequate sampling, no ITT analysis)</td>
<td>Quality</td>
<td>If compelling reasons why the results do not apply to the target KP population</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Studies that are well-designed, well-conducted (Good or Fair) but with major conflict in results</td>
<td>Consistency</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SR/MA with major conflict in results (consider heterogeneity)</td>
<td>Relevancy</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Compelling reasons why the results do not apply to the target KP population</td>
<td></td>
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</tr>
</tbody>
</table>

**Type and number of studies**

- At least one well-designed, well-conducted systematic review (SR/MA) (consider heterogeneity) of cross-sectional studies using an independent gold standard
- Two or more well-designed, well-conducted prospective cohort studies

**Quality**

- Low risk of bias
- Adequate sample size and power
- No major methodology concerns

**Consistency**

- For SR/MA, no major conflict in results (consider heterogeneity)
- If significant heterogeneity exists, drops to Poor
- For individual RCTs, no major conflict in results
- If major conflicts do exist, drop to “Insufficient”

**Relevancy**

- No compelling reason not to generalize the published work to the target KP population

---

### Table 1. System for grading the strength of a body of evidence

<table>
<thead>
<tr>
<th>Level/Grade</th>
<th>Type and number of studies</th>
<th>Diagnosis</th>
<th>Prognosis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GOOD</strong></td>
<td>At least one well-designed, well-conducted SR/MA (consider heterogeneity) of cross-sectional studies using an independent gold standard</td>
<td>Single well-designed, well-conducted cross-sectional study of lower quality</td>
<td>Single prospective cohort study of lower quality</td>
</tr>
<tr>
<td></td>
<td>Two or more well-designed, well-conducted RCTs with narrow confidence intervals</td>
<td>Case-control study</td>
<td>Retrospective cohort study</td>
</tr>
<tr>
<td></td>
<td>One well-designed, well-conducted multicenter RCT with narrow confidence intervals</td>
<td>Major methodology concerns (i.e., lack of concealed allocation, inadequate sampling, no ITT analysis)</td>
<td>Untreated control arm of RCT</td>
</tr>
<tr>
<td></td>
<td>Quality</td>
<td>Consistency</td>
<td>Relevancy</td>
</tr>
<tr>
<td></td>
<td>Independent gold standard</td>
<td>Studies that are well-designed, well-conducted (Good or Fair) but with major conflict in results</td>
<td>Compelling reasons why the results do not apply to the target KP population</td>
</tr>
<tr>
<td></td>
<td>No major methodology concerns</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>FAIR</strong></td>
<td>Single well-designed, well-conducted cross-sectional study of lower quality</td>
<td>For SR/MA, no major conflict in results (consider heterogeneity)</td>
<td>For individual studies, no major conflict in results</td>
</tr>
<tr>
<td></td>
<td>Two or more cross-sectional studies of lower quality</td>
<td>For individual studies, consistent diagnostic accuracy</td>
<td>No compelling reason not to generalize the published work to the target KP population</td>
</tr>
<tr>
<td></td>
<td>Well-designed, well-conducted SR/MA of lower quality studies</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>INSUFFICIENT</strong></td>
<td>Single RCT of lower quality or insufficient size</td>
<td>Major methodology concerns (i.e., lack of concealed allocation, inadequate sampling, no ITT analysis)</td>
<td>For SR/MA, no major conflict in results (consider heterogeneity)</td>
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<td>Consistency</td>
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<td></td>
<td>Major methodology concerns (i.e., lack of concealed allocation, inadequate sampling, no ITT analysis)</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Compelling reasons why the results do not apply to the target KP population</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:** Any evidence that fails to meet criteria for **GOOD** or **FAIR** evidence is considered to be **INSUFFICIENT**. Examples of insufficient evidence are provided for the different criteria.

---

**Table 1. System for grading the strength of a body of evidence**

<table>
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<td>Single prospective cohort study of lower quality</td>
</tr>
<tr>
<td></td>
<td>Two or more well-designed, well-conducted RCTs with narrow confidence intervals</td>
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<td>Major methodology concerns (i.e., lack of concealed allocation, inadequate sampling, no ITT analysis)</td>
<td>Untreated control arm of RCT</td>
</tr>
<tr>
<td></td>
<td>Quality</td>
<td>Consistency</td>
<td>Relevancy</td>
</tr>
<tr>
<td></td>
<td>Independent gold standard</td>
<td>Studies that are well-designed, well-conducted (Good or Fair) but with major conflict in results</td>
<td>Compelling reasons why the results do not apply to the target KP population</td>
</tr>
<tr>
<td></td>
<td>No major methodology concerns</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>FAIR</strong></td>
<td>Single well-designed, well-conducted cross-sectional study of lower quality</td>
<td>For SR/MA, no major conflict in results (consider heterogeneity)</td>
<td>For individual studies, no major conflict in results</td>
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<td>Relevancy</td>
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<td>Compelling reasons why the results do not apply to the target KP population</td>
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System for Grading the Strength of a Body of Qualitative Evidence

(Use this section for a final grade for a Body of Evidence by evaluating overall type & number, rigor, credibility, & relevance)

<table>
<thead>
<tr>
<th>Good Evidence</th>
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</tr>
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<tbody>
<tr>
<td><strong>Type &amp; Number Of Studies</strong></td>
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<td>- Studies are well designed and conducted, but with major conflict in results and/or heterogeneity exists.</td>
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<td>- Meets all Validity Criteria:</td>
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<td>o Authenticity: Multiple realities of participants have been synthesized.</td>
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<td>- Risks to the patients outweigh the benefits of the practice change.</td>
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Created 08/96 by C. Crawford, Kaiser Permanente, SCAL Nursing Research Program, Revised June 2007
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FAQ: Now What?

Final Synthesis of the Evidence

Cecelia L. Crawford, DNP, RN
NOW WHAT? SO WHAT?

• Integrate & synthesize key concepts
  – What are the strengths?
  – What are the limitations?
• Particular into the General
• Contrasts and Comparisons
• Common or unusual Patterns and Themes
Synthesizing the Evidence

**NOW WHAT? SO WHAT?**

- Other Synthesizing Elements
  - Consider visually displaying results
    - Graphs & charts
    - Matrices & tables
    - Conceptual maps
  - Relations between variables & themes
  - Finding influencing factors
  - Building a logical chain of evidence
Synthesizing the Evidence

- Most common mistake of the beginner is to repeat the evidence literature.
- Should be a fully synthesized report — *Not* a laundry list of topic findings.

**Synthesize:**

“To combine so as to form a new, complex product.”

[www.dictionary.com](http://www.dictionary.com)
Points to Ponder

- Describe particularly relevant studies in some detail
- Summarize using critical judgments
  - If they exist, include conflicting studies and ideas
    - Illustrates breadth and depth of the topic
Conflicting Evidence

• Difficult when conflicting results are equally:
  – From high quality reports
  – Compelling

• Often means future research is needed

• Explore whether confounding influences contributed to variability in findings
  – Sample characteristics

• Possible Strategy:
  – Vote counting
    • Compare frequency of *significantly* + results against frequency of *significantly* - results
Writing Up the Evidence

Central Tasks

- To organize and summarize the evidence in such a way that the current state of the knowledge is assessed
  - Topic Summary
  - Key Summary of the Evidence
  - Targeted Recommendations
  - Synthesis Summary Statement
How Cecelia Does It

• Iteration Process: (Wikipedia)
  – Act of repeating a process
  • Aim is to approach a desired goal, target, or result
  • Each repetition of the process is also called an "iteration"
    – Results of one iteration used as the starting point for the next iteration
How Cecelia Does It

• Iterative Process in Action

1. **Table of the Evidence**
   - Based on gathered evidence & worksheets

2. **Topic Summary**
   - Based on table of the evidence

3. **Key Summary of the Evidence**
   - Based on topic summary results

4. **Key Recommendations**
   - Based on summary of key evidence

5. **Synthesis Summary Statement**
   - Based on Key Evidence & Recommendations

*Results of one iteration used as the starting point for the next iteration*
Visual Guide to Conducting Integrative Reviews

- Systematic method for accessing, gathering, assessing, appraising, summarizing, and synthesizing the evidence
Synthesis:
Topic Summary

• Identify the topics within the evidence that answer the clinical question
  – Avoid interesting topics not answering the question!

• Gradual elaboration of a small set of generalizations that encompass a unique review topic in its entirety
  – Avoid premature analytic closure
  – Avoid exclusion of pertinent evidence
Pain Resource Nurse Integrative Review

1. PRN Implementation Strategies
   - PRG Evaluation
   - Outcomes

2. Education + Training
   - Resources + Tools
   - Structures - Process - CECELIA

3. Definitions

4. PRN Interventions
   - Multi-Factorial
   - Multi-Disciplinary
   - Single Interventions

5. Cost

6. Nurses: Implications

7. Nurses: Research - CECELIA

8. PRN Role + Resp: EMMA

Recommendations

- 9/14 10:30 AM
- 12:30 PM
- Send minutes
Pain Resource Nurse Programs: An Integrative Review of the Evidence
July 10, 2012 - INCLUDED

1 Question: "What is the quality, quantity, and consistency of the evidence for the use of a pain resource nurse program?"

Development of the PRN program:
- PRN 2-day course
- Email distribution of newsletter "Pain Expert Nurse" for PRNs to share in PRN clinical units
- PRN listserv for nurses to
  - network
  - seek assistance
  - communicate with other PRNs
- Rapidly disseminate pain related information
- PRN program evaluation include:
  - Knowledge & attitude of participants
  - Retention of the PRNs
  - Patient satisfaction
  - Pain prevalence
  - Compliance with documentation
- Individualized unit QI initiatives set by PRNs, clinical managers and PRN program director:
  - 2 goals for each PRN to meet during the year
- Clinical experience:
  - Attend rounds on palliative care unit
  - Observe in an outpatient chronic pain facility
- Develop competencies
  - Function as a role model and resource for pain management
  - Assume an active role in developing staff in regard to pain management
  - Active participant in initiatives to comply with care standards and to promote quality job satisfaction, as demonstrated by anecdotal feedback and a reduced staff turnover when compared to other nurses.

Author Stated Recommendations:
Nursing management involvement:
- CNO executive’s sponsorship is essential to establish pain management as a priority and to allocate appropriate resources.
- Managers to allocate staff time to create a PRN (or two) for the unit.
- Continued support, coaching, and mentoring of the PRNs
- Allowing PRNs to provide educational resources to the rest of the staff

Pharmacy involvement:
- Help build PRN curriculum
- Provide ongoing support
- Professional reinforcement

Organization involvement:
- Financial support
  - For a knowledgeable and qualified program director
  - For the PRNs to meet a few hours a month
- Support collaborative practice between the PRNs and the medical and house staff
- Leadership support in implementing important clinical improvements e.g. relevant Joint Commission standards for effective pain management.

Author Stated Nursing Implications:
- Nurses develop knowledge in the documentation of pain assessment and intervention.
- Nurses could effectively accelerate the creation and implementation of the PRN program.

Author Stated Future Research:
NA

Final Grade for the Body of the Evidence:
The organization and their impact were intertwined by design, it is difficult to precisely determine the role of PRNs in these improvements.
- One of the measures used to establish efficacy of the PRN program relies on patients' memories of whether a doctor or nurse asked them about their pain. Relying on the memory of ill, hospitalized persons may lead to error, yet it is the only measure available at this time.
- PRN staff may have been committed individuals who were less likely to leave the organization, thus skewing the data related to retention.
- Patient satisfaction measures associated with pain are difficult to interpret. Most patients report being highly satisfied, despite also experiencing pain.

Risks:
- NA

Benefits:
- Enhanced job satisfaction
- Reduced staff turnover
- Improved patient satisfaction

Feasibility:
Effective implementation.

Reviewer Limitation Findings:
Agree with author's limitations but may not be significant.

Risks:
- NA

Benefits:
Agree with author.
Pain Resource Nurse Programs: An integrative Review of the Evidence
March to September 2012

Organizational Factors - Cecelia

• Tools
  o Beliefs about Pain Control Questionnaire (BPCQ): 13 items
    ▪ BPCQ has 3 subscales
  o Internal Control (IS?): 5 items
  o Powerful Doctors (PD): 4 items
  o Chance Happening (CH): 4 items
  o Pre and post education changes in attitude towards pain management:
    ▪ Self-efficacy instrument (SEP) measured the belief of the nurse to perform at a desired level
    ▪ Insight test (C-PCON) identified knowledge of pain management
    ▪ Results of the SEP and C-PCON (n=38) showed increased competency; change in practice was implied but could not be measured.

• Resources
  o Allowing PRNs to provide educational resources to the rest of the staff

• Structures
  o Embedding pain management awareness into policies and procedures, education, care standards and other organizational structures within a variety of healthcare organizations does have a significant impact on pain control for patients
  o Support from administration, physicians, and other healthcare workers is essential for successful advocacy
  o Continued support, coaching, and mentoring of the PRNs
  o CNO executive’s sponsorship is essential to establish pain management as a priority and to allocate appropriate resources
  o Managers to allocate staff time to create a PRN (or two) for the unit
  o Allowing PRNs to provide educational resources to the rest of the staff
  o Pharmacy involvement:
    ▪ Help build PRN curriculum
    ▪ Provide ongoing support
    ▪ Professional reinforcement
  o Financial support:
    ▪ For a knowledgeable and qualified program director
    ▪ For the PRNs to meet a few hours a month
  o Support collaborative practice between the PRNs and the medical and house staff
  o Leadership support in implementing important clinical improvements e.g., relevant Joint Commission standards for effective pain management
1. Nurse Surveillance
2. Culture of Safety
   • Essential elements of an effective safety culture
3. Rounding
   • Specific nursing actions
4. Purpose of Rounding:
   • Hourly Rounding
   • 1 & 2 hour rounding:
     • 1 hour rounding:
     • 2 hour rounding:
5. Rounding Monitors
   • Studer Group Proactive Rounding Actions
   • Additional Rounding Activities
6. Rounding Outcomes
7. Barriers to the Process of Rounding
8. Facilitating Rounding

1. Pressure Ulcer Management
   • Change in Nursing Practice
   • Cost-Effectiveness
   • Education
   • Guidelines, Protocols, & Strategies
2. Pressure-Relieving and Other Devices
3. Nurses Perceptions, Beliefs, & Attitudes
   • PU Knowledge
   • PU Protocol Acceptance
   • Miscellaneous Observations
4. PU Risk Assessment Scales & Tools
   • Braden Scale
   • Modified Tools & Scale
   • Assessment Tool Cut Scores
   • Assessment Tool Subscales
5. Critical Care Environment
6. The Operative Experience
Key Summary of the Evidence

• Brief, overarching & synthesized concepts and themes that have emerged from the topic summary
  – 3 to 5 bullet points
• Answers the clinical question
  – NOT a reworking of the topic summary!

Synthesize:
“To combine so as to form a new, complex product.”
www.dictionary.com
Key Summary of the Evidence

Hourly Rounding

• A protocol incorporating specific actions into nursing rounds, either every 1 or 2 hours, can reduce frequency of patient call light use, increase patient satisfaction with nursing care, and reduce patient falls.

• Rounding has the potential to produce a quieter patient environment, provide additional time for patient care, and increase staff nurse satisfaction.

• Nursing leadership is a key factor to the implementation of rounding.

• Nurse managers are crucial for the success of unit-based nurse rounding.

• Creating a culture of safety is an ongoing developmental process requiring organizational, managerial, and staff partnerships.
**KNOW YOUR AUDIENCE**

- Target the recommendations to the person(s) or group who requested the review

Given the above conclusions, the following recommendations are offered for consideration:

- Evaluate local medical center-based rounding projects in order to design a comprehensive evidence-based rounding protocol that incorporates major nursing functions and tasks.
- Develop monitors and outcome measures to evaluate the effectiveness of rounding from both a patient and staff nurse viewpoint.
- Operationalize the role of nursing management and leadership in supporting an evidence-based rounding protocol.
Based on the reviewed evidence, the following recommendations are offered for consideration:

**Staff Nurses**
- Regard PU Prevention as a high priority in providing quality patient care

**Nurse Educators**
- Reframe evidence-based PU programs from a leadership and management viewpoint, rather than from a staff nurse viewpoint

**Nurse Managers**
- Provide staff nurses with educational resources, checklists, guidelines, and risk assessment scales as weapons for PU prevention

**Nurse Executives**
- Give practice changes time to become embedded within the organization structure, as well as within the nursing culture
- Operationalize the role of nursing management and leadership in supporting an evidence-based PU program
Synthesis Statement

• Analysis of important elements to reveal a gestalt of the topic, as based upon:
  – Key summary of the evidence
  – Key conclusions & recommendations

• An integrated summation of the question or phenomenon
  – New conceptualization of primary evidence sources
  – Integrates all topics into a comprehensive portrayal of the question or topic of concern
    • Completes the evidence review process!
Hourly Nurse Rounding: Conclusions & Recommendations

Current nursing culture fosters the lofty expectation of clinical perfection [4]. While clinical perfection is unrealistic, clinical excellence is a possible and attainable goal. The pursuit of clinical excellence has led to the fragmentation of nursing tasks and functions. Research has shown that improved patient-care management, patient satisfaction, and patient safety are achievable with interventions that nurses can independently initiate and carry out [1]. One intervention that shows promise for attaining clinical excellence while also decreasing fragmented patient care is hourly nurse rounding [1,2,3].

An examination of hourly rounding by nursing staff revealed only one research study exploring the complexities of this topic. Paired with anecdotal and other information, this groundbreaking study represents the best evidence to date on hourly nurse rounding. The appendix summary reveals that the quality of the reviewed evidence surrounding hourly rounding is insufficient to fair, demonstrating the need for more research. However, this back-to-basic nursing care method has the potential to link several organizational initiatives, while also promoting the professionalism of the bedside staff nurse. Organizational leadership and operational changes emphasizing nurse rounding on patients will be needed to achieve more effective patient-care management, and improved patient satisfaction and safety [1].
The Finished Product

- Overarching Synthesized Summary Statement
- Key Summary of the Evidence
- Key Targeted Recommendations
- Documentation of Evidence Search & Grading
- References
- Supplemental Documents:
  - Topic Summary
  - Table of the Evidence

Consider developing an evidence-based guideline!
Guideline Development

• Nursing Practice Guidelines should:
  – Be based on the best evidence available
  – Reference the evidence used for guideline construction
  – Practical, user-friendly, cost-effective, patient-driven

• Evidence-Based Practice Guideline Sites:
  – American Association of Critical Care Nurses
    • www.aacn.org
  – Association of periOperative Registered Nurses
    • www.aorn.org
  – Joanna Briggs Institute
    • www.joannabriggs.edu.au
  – Wound, Ostomy, and Continence Nurses Society
    • www.wocn.org
End of the Journey
Final Considerations

• Who “owns” the evidence review?
  – Integrative review sponsor
  – Person or group generating the original request

• Where will the integrative review “live” afterwards?

• Who will have access to the review?
  – Website, database, share drive, toolkit

• Who has the authority to disseminate the review?
  – Seek permission from the sponsor or original requester before disseminating the evidence review
  – *All documents must be properly branded & referenced*
Conclusions

Evidence Reviews

• Incorporate research methods in order to guarantee rigor
• Critically analyze & synthesize the evidence to
  – Create new perspectives
  – Generate new knowledge
• Examine many types & levels of evidence (experimental, non-experimental, qualitative, and expert opinion)
• May stimulate further research
• Directly impacts quality patient care via policy changes & development of clinical practice guidelines

Ensures nursing practice is based on science
YOU are the expert!

Evidence Wonderland
Questions?


Levels of Evidence, Canadian Medical Association & Centre for Evidence-Based Medicine (2001). Available at [http://www.cebm.net/index](http://www.cebm.net/index)


Purpose/intended Audience

Because we want everyone in our communities to have the healthiest lives possible, we are making our evidence reviews available to the communities we serve to help Californians and others lead healthier lives.

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Limitations On Use

These documents have been developed to assist clinicians by providing an analytical framework for the effective evaluation and treatment of selected common problems encountered in patients. These documents are not intended to establish a protocol for all patients with a particular condition. While evidence reviews provide one approach to evaluating a problem, clinical conditions may vary significantly from individual to individual. Therefore, clinicians must exercise independent professional judgment and make decisions based upon the situation presented.

Kaiser Permanente's documents were created using an evidence-based process; however, the strength of the evidence supporting these documents differs. Because there may be differing yet reasonable interpretations of the same evidence, it is likely that more than one viewpoint on any given healthcare condition exists. Many reviews will include a range of recommendations consistent with the existing state of the evidence.

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