Describing Nurses’ Work
Using the Critical Decision Method

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Nurses' Work

What is observed is only the tip of the iceberg

Beneath the surface nurses are continuously:

• Perceiving
• Organizing
• Remembering
• Interpreting
• Deliberating
• Analyzing
Cognitive Task Analysis

Makes the knowledge, judgments, and strategies underlying observable behavior explicit.

Data collection may include:
• Observation
• Interview
• Self report (questionnaires, diaries, logs)
• Automated data capture.
Observing nurses’ work: What can we observe the nurse “doing?”

What would be missing?
The Critical Decision Method is well suited to describing nurses’ work. CDM probes cues and patterns that experienced decision makers use. CDM is a structured retrospective interview centered on a specific case including the following steps:

- Preparation
- Incident selection
- Incident recall by participant
- Incident retelling by researcher
- Build a time line of events
- Identify decision points
- Probe decision points, what if queries
How is the cognitive work of nurses described through cognitive task analysis using the critical decision method?

CINAHL, MEDLINE, and PsychINFO search terms “critical decision method”, “cognitive task analysis”, clin*, nurs*
Data Abstraction

Decision or work situation studied

Sample characteristics

Key findings

Organized by CDM

Interview probes

Perceptual cues
Information
Experience
Decision Making
Guidance
Goals.
<table>
<thead>
<tr>
<th>Clinical Situation</th>
<th>Author and Title</th>
<th>Sample</th>
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<tbody>
<tr>
<td></td>
<td>Cioffi (2010) The decision to suture after childbirth</td>
<td>19 registered midwives</td>
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<td>Gazarian (2010) Nurse decision making in the pre-arrest period.</td>
<td>13 RN on medical units</td>
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<td>Pryor, (2007). Characteristics of staff who do, and do not, work well with people with acquired brain injury.</td>
<td>28 RNs on brain injury rehabilitation units</td>
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<td>Pryor, J (2004). Environmental factors that irritate people with acquired brain injury</td>
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<td>Crandall, (1993). Assessment indicators from the intuition of NICU nurses.</td>
<td>19 RNs in a NICU</td>
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<td>Work environment</td>
<td>Ebright, (2004). Novice nurse near-miss and adverse-event situations</td>
<td>12 novice nurses</td>
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<td></td>
<td>Ebright, (2003). Complexity of registered nurse work in acute care settings.</td>
<td>8 expert RNs</td>
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<td>Shirey (2009) Nurse Manager decision making</td>
<td>21 nurse managers</td>
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## Synthesis of Key Findings

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<td>Nurses do not use a single cue in isolation</td>
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<td>Look for patterns of early, ambiguous and subtle perceptual cues</td>
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<td>Constantly compare current state to previous state.</td>
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<td>Clinical situations are complex and influenced by multiple factors</td>
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Implications

- CDM and other cognitive task analysis makes nursing expertise explicit
- When this knowledge is explicit, it can be shared, so nurses are able to practice safely in novel situations.
- Exposes the unique situated decision making of practicing nurses
Questions?

Contact

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