Regulating Licensed Nursing Practice in Nursing Homes: Enacted RN and LPN scope of practice and care outcomes


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Significance

• Increasing evidence of LPN and RN role confusion (Mueller et al, 2012)
  – Licensed practical nurses (LPNs) comprise the majority of licensed nurses in nursing homes (AHCA 2014).

• Quality of nursing care is affected
  – RN practice may be limited to conducting licensed nursing tasks, restricting comprehensive assessment and care planning
  – Nurse delegation and supervision may not ensure RN accountability and expertise

• Need for models of effective RN-LPN collaboration
Study Purpose

• To identify the set of behaviors and strategies that RNs and LPNs in nursing homes can use to enact their full scope of practice to improve quality of care, accounting for between state differences in Nurse Practice Acts (NPAs).
Design

- The study design is a quantitative, cross-sectional, observational survey design.
Sample

• Nationally-representative, stratified, random sample of RNs and LPNs in Medicare and/or Medicaid-certified nursing homes (N=1,500 homes)
  – Strata defined by characteristics of state NPAs in relation to RN and LPN scope of practice.

• Supplemental recruitment strategies
  – Multi-state corporate chains
Strata (N=10) Defined by State NPA Regulation of LPN contributions to RN Assessment, Care Planning, Delegation and Supervision (from Corazzini et al, 2013)
Survey Instrument

• Web-based survey of nursing practice comprised of the following core components:
  – Factorial vignette video survey (Rossi & Nock, 1982) of how RNs and LPNs assess, care plan, delegate and supervise
  – Perceptions of Nursing Practice scale (Corazzini et al, 2013b)
  – Reciprocal Learning scale (Leykum et al, 2011)
More about Factorial Video Vignette Survey

• Builds on three key practice patterns identified in comparative case study data (Corazzini et al, 2013c):
  - High, mixed, and low capacity practice patterns
    - Rich RN-LPN Connections
      - RNs are distinct from LPNs
      - High RN/LPN Ratio
    - Few RN-LPN Connections
      - High Interchangeability
      - Low RN/LPN Ratio
  - Rich RN-LPN Connections
    - RNs are distinct from LPNs
    - High RN/LPN Ratio

“As far as duties, there are some duties that an RN has to be immediately available... but pretty much they’re tit for tat in what they do do...we don’t have any...nursing skills here that both an LPN or an RN cannot do” – DON

“If I’m not able to track what it is that may be...[going on]...then I’m going to bring in my RN and have my RN do an assessment... everything that we do here is basically going through the RNs throughout the course of any given day.” – LPN
### Factorial Video Vignette Survey Design

- Factorial of combinations:
  - $3 \times 3 \times 3 \times 3 = 81$ possible combinations of how practice may occur

<table>
<thead>
<tr>
<th>Low-capacity practice</th>
<th>Assess</th>
<th>Plan Care</th>
<th>Delegate</th>
<th>Supervise</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
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<table>
<thead>
<tr>
<th>Mixed-capacity practice</th>
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<th>Plan Care</th>
<th>Delegate</th>
<th>Supervise</th>
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More about Factorial Video Vignette Survey…

• Two sets of combinations were developed:
  – 81 of a short-stay patient experiencing pain
  – 81 of a long-stay resident who falls

• Each survey respondent views 4 randomly selected videos

• Example of long-stay resident who falls:
  – Combination 1: low assess, low care plan, low delegate, low supervise:  http://youtu.be/_y7qkFrEXK4
  – Combination 2: high assess, high care plan, high delegate, high supervise:  http://youtu.be/MZ9vBJq0x50
Preliminary Analyses

• Descriptive analysis of vignette ratings across capacity levels
  – “To what extent does the practice in this video reflect practice in your nursing home?”
    • 0 (not at all) to 10 (just like practice)
  – “To what extent would you like practice in your nursing home to look like this video?”
    • 0 (not at all desirable) to 10 (very desirable)

• Multivariate analysis of relationships of vignette characteristics with ratings
Results: What does current pain management practice look like? (N=122 rated vignettes)

“To what extent does the practice in this video reflect practice in your nursing home?” 0 (not at all) to 10 (just like practice)

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Scene 1: LPN learns of patient’s arrival</th>
<th>Scene 2: LPN connects with CNA</th>
<th>Scene 3: CNA provides care</th>
<th>Scene 4: Resident outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>6.0 (2.6)</td>
<td>5.9 (2.5)</td>
<td>5.9 (2.5)</td>
<td>6.1 (2.7)</td>
</tr>
<tr>
<td>Mixed</td>
<td>5.7 (2.4)</td>
<td>5.8 (2.3)</td>
<td>5.7 (2.5)</td>
<td>5.4 (2.3)</td>
</tr>
<tr>
<td>Low</td>
<td>5.6 (2.6)</td>
<td>5.6 (2.8)</td>
<td>5.5 (2.8)</td>
<td>5.8 (2.5)</td>
</tr>
</tbody>
</table>
Results: What does preferred pain management practice look like? (N=122 rated vignettes)

“To what extent would you like practice in your nursing home to look like this video?” 0 (not at all) to 10 (just like practice)

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<tr>
<td>High</td>
<td>6.6 (3.8)</td>
<td>6.9 (3.5)</td>
<td>7.0 (3.7)</td>
<td>8.9 (2.6)</td>
</tr>
<tr>
<td>Mixed</td>
<td>5.9 (3.7)</td>
<td>7.1 (3.7)</td>
<td>5.6 (3.9)</td>
<td>7.0 (3.7)</td>
</tr>
<tr>
<td>Low</td>
<td>6.1 (4.0)</td>
<td>4.7 (3.9)</td>
<td>4.5 (3.7)</td>
<td>4.0 (3.3)</td>
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Results: What does current falls management practice look like? (N=121 rated vignettes)

“To what extent does the practice in this video reflect practice in your nursing home?” 0 (not at all) to 10 (just like practice)

<table>
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<tr>
<th>Capacity</th>
<th>Scene 1: Resident falls</th>
<th>Scene 2: LPN connects with RN</th>
<th>Scene 3: Shift change</th>
<th>Scene 4: Resident outcome</th>
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<tr>
<td>High</td>
<td>6.7 (2.4)</td>
<td>6.5 (2.3)</td>
<td>6.6 (2.9)</td>
<td>7.1 (2.2)</td>
</tr>
<tr>
<td>Mixed</td>
<td>6.1 (2.5)</td>
<td>6.6 (2.4)</td>
<td>6.5 (2.3)</td>
<td>6.1 (2.4)</td>
</tr>
<tr>
<td>Low</td>
<td>6.6 (2.2)</td>
<td>6.2 (2.4)</td>
<td>6.3 (2.3)</td>
<td>6.0 (2.4)</td>
</tr>
</tbody>
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Results: What does preferred falls management practice look like? (N=121 rated vignettes)

“To what extent would you like practice in your nursing home to look like this video?” 0 (not at all) to 10 (just like practice)

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<td>High</td>
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</tr>
<tr>
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<td>7.2 (3.2)</td>
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<td>7.0 (3.2)</td>
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<tr>
<td>Low</td>
<td>7.3 (3.0)</td>
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<td>6.9 (3.1)</td>
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Results: What components of pain management practice predict desired practice?

- Quality of LPN interaction with CNA (scene 2; p < .05)
  - How is the assignment made?
- Quality of the CNA-provided care (scene 3; p < .05)
- Quality of outcome for the resident (scene 4; p < .001)
  - How are the CNA observations received by the LPN?
  - Does RN-level comprehensive assessment build on LPN data collection?
  - Is the RN present with the LPN and CNA for care planning?
- $R^2 = .45$, model $p < .001$
Results: What components of falls management practice predict desired practice?

- RN availability and the quality of RN and LPN interaction (scene 2; p<.01)
  - Is the RN immediately available or only available by phone?
  - Does the RN conduct a comprehensive assessment that builds on the LPN data collection?
  - Does the RN review the possible contributing factors with the LPN?
- Quality of outcome for the resident (scene 4; p<.001)
  - Does the resident fall again?
- $R^2 = .28$, model $p<.001$
Discussion

• Factorial vignette videos are a feasible approach to measuring nurses’ perceptions of nursing practice
  – Nurses identified high, mixed, and low capacity practice in their practice settings

• Nurses practicing in nursing homes can identify high-capacity practice
  – Greater RN presence, strong RN-LPN connections, and distinctions between RNs and LPNs, rated as desirable for better quality
Next Steps

• Complete data collection and analysis
  – Describe classes of practice patterns in relation to quality of care
    • Identify significant factors at state, facility, and individual nurse levels
    • Identify most promising levers for change
  • Develop intervention
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