NURSE TURNOVER, PATIENT, NURSE, AND SYSTEM OUTCOMES

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Christine Duffield
Study

- Prospective, longitudinal study
  - Conducted in two waves, one year apart
- Nurse survey
- Unit profile
- Patient data

3 States/Territories

11 hospitals

62 Medical-surgical nursing units
Data Collected

• Nurse survey
  – Demographics, experience, work activities
    • Job Satisfaction
      – (McCloskey & Mueller 1990)
    • Nursing Leadership
      – (Shortell et al. 1991)
    • SF-12 Health Survey
      – (Ware et al. 1996)
    • Practice Environment Scale
      – (Lake 2002)

• Nursing unit profile
  – Unit characteristics
  – Turnover
  – Turnover costs

• Patient data
  – Demographics
  – Adverse events
    • (falls, medication errors)
  – Adverse outcomes
    • (e.g. UTI or decubitus ulcer post admission)
Turnover

- Turnover
  - The voluntary transfer or resignation of nursing staff from their primary employment position

- Turnover rate
  - In accordance with previous studies
    - (Jones 1990, O’Brien-Pallas et al. 2006, North et al. 2012)

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**Fulltime Equivalent Terminations**

\[
\text{Budgeted Fulltime Equivalent Positions} \times \frac{\text{100}}{}
\]
Turnover Costs

**Termination**
- Holiday pay, length of service bonus, unused sick leave
- Administrative & manager costs
- Human resources costs

**Temporary replacement**
- Costs for temporary replacement (e.g. overtime)
- External nurses assigned to fill vacancies
- Informal training of temporary staff
- Administrative costs

**Hiring**
- Advertising
- Recruiters’ costs
- Human resources screening & processing
- Management time
- Employer relocation costs

**Startup**
- Orientation & training
- Training equipment & staff costs
- Preceptor costs
- Decreased productivity
Data

• 1673 nurse surveys
  – 44% response rate

• 5268 patient files audited

• Up to 6 monthly turnover profiles for each of the 62 units

• Data were analysed at the nursing unit level

• First finding was in relation to executives...
Executive Turnover

State Health Dept.

19

Area/Hospital

30
## Overview

<table>
<thead>
<tr>
<th>Experience</th>
<th>Age</th>
<th>Worked ≥ 41 hours last week</th>
<th>Overtime has increased</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.7 years</td>
<td>39.2 years</td>
<td>13.4%</td>
<td>35.5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Satisfaction</th>
<th>Leadership</th>
<th>Intending to leave</th>
<th>Actively looking</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1 / 10</td>
<td>7.3 / 10</td>
<td>22.3%</td>
<td>19.6%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tasks Delayed per Shift</th>
<th>Tasks Not Complete per Shift</th>
<th>Medication Errors</th>
<th>Adverse Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-13</td>
<td>0-11</td>
<td>0-31%</td>
<td>0-26%</td>
</tr>
</tbody>
</table>
## Nursing Turnover & Vacancies

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Min-Max</th>
<th>Variation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Turnover % / Unit</strong></td>
<td>16.4</td>
<td>0 – 76.7</td>
<td></td>
</tr>
<tr>
<td><strong>Vacant FTEs % / Unit</strong></td>
<td>6.5</td>
<td>0 – 34.8</td>
<td></td>
</tr>
</tbody>
</table>
Turnover Costs per FTE (AUD)

- Temporary Replacement: 45%
- Startup: 26%
- Termination: 25%
- Hiring: 4%

- Mean $ excluding Temporary Replacement: 26464 (9755-55677)
- Mean $ including Temporary Replacement: 48342 (17519-104532)
Turnover %

- Increased Overtime
  - Working more than 41 hours / week

Quality of care
Actively Looking for a New Position

Nursing tasks not completed

Job satisfaction
Adequate staffing
Quality of care
Medication Errors

Intention to leave current nursing position

SF-12 mental health score
Nurse experience
Adequate staffing
**Overall**

**Negative**
- Increased Overtime
- Working more than 41 hours / week
- Nursing tasks not completed
- Intention to leave current nursing position

**Positive**
- Nurse experience
- Adequate staffing
- Quality of care
- High SF-12 mental health score
- Job satisfaction
Investigators

• Co-principal investigators
  – Dr. Linda O’Brien-Pallas (Canada)
  – Dr. Judith Shamian (Canada)

• Team members
  – Dr. James Buchan (UK)
  – Dr. Christine Duffield (Australia)
  – Dr. Frances Hughes (New Zealand)
  – Dr. Heather Laschinger (Canada)
  – Dr. Patricia Stone (USA)
  – Dr. Pat Griffin (Canada)

• Supported to date by Health Canada, the Ontario Ministry of Health and Long Term Care and the Ministry of Health New Zealand

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