The Impact of the Nursing Shortage on the Feasibility of Requiring Minimum Nurse-to-Patient Ratios

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AB 394 signed October 1999

- Department of Health Services established minimum licensed-nurse-to-patient ratios for each type of hospital unit
- Unlicensed personnel are prohibited from performing certain tasks
- Regulations were implemented initially January 2004
- Scheduled to further tightening January 2005—but held by governor
- Then March 2005, court ruled that they are to be enacted immediately
How Bad is the Shortage in California?

- RN to Pop-49th in US
  - Between 70,000 and 120,000 new nurses are needed to meet demand in 2020
- Hospital vacancy rates-double digit
- Constrained educational capacity
- Poor hospital work environment
  - Growing numbers of licensed nurses are thought to be working outside nursing
- Shortened LOS-work “speed up”
- Shortage of bedside nurses & nursing faculty
The California Workforce Initiative
Variation in medical-surgical nurse staffing

<table>
<thead>
<tr>
<th></th>
<th>25th percentile</th>
<th>50th percentile</th>
<th>75th percentile</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of med-surg units in hospital</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>Patient-to-RN ratio, day shift</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td>Patient-to-RN ratio, night shift</td>
<td>6</td>
<td>8</td>
<td>9</td>
<td>26</td>
</tr>
<tr>
<td>Hours per patient day</td>
<td>6.7</td>
<td>7.6</td>
<td>8.4</td>
<td>27.7</td>
</tr>
<tr>
<td>RN Hours per patient day</td>
<td>3.5</td>
<td>4.2</td>
<td>5.2</td>
<td>24</td>
</tr>
</tbody>
</table>

California OSHPD
Variation in hours per patient day

<table>
<thead>
<tr>
<th>Unit</th>
<th># Hosp’s</th>
<th>25&lt;sup&gt;th&lt;/sup&gt; Percentile</th>
<th>Median</th>
<th>75&lt;sup&gt;th&lt;/sup&gt; Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Med-Surg ICU</td>
<td>308</td>
<td>13.02</td>
<td>14.82</td>
<td>17.19</td>
</tr>
<tr>
<td>Coronary ICU</td>
<td>94</td>
<td>11.29</td>
<td>13.97</td>
<td>16.21</td>
</tr>
<tr>
<td>Pediatric ICU</td>
<td>30</td>
<td>13.84</td>
<td>16.82</td>
<td>21.11</td>
</tr>
<tr>
<td>NICU</td>
<td>148</td>
<td>8.57</td>
<td>11.48</td>
<td>13.13</td>
</tr>
<tr>
<td>Med-Surg Acute</td>
<td>342</td>
<td>3.35</td>
<td>4.13</td>
<td>5.10</td>
</tr>
<tr>
<td>Obstetrics</td>
<td>246</td>
<td>3.69</td>
<td>5.04</td>
<td>7.07</td>
</tr>
<tr>
<td>Newborn Nursery</td>
<td>254</td>
<td>2.38</td>
<td>3.50</td>
<td>5.64</td>
</tr>
<tr>
<td>Sub-Acute Care</td>
<td>38</td>
<td>1.30</td>
<td>1.63</td>
<td>2.76</td>
</tr>
</tbody>
</table>

Source: OSHPD, 1999-2000
## Share of hospitals not in compliance with DHS proposal

<table>
<thead>
<tr>
<th></th>
<th>DHS survey data</th>
<th>OSHPD data</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Initial ratios</td>
<td>Later ratios</td>
</tr>
<tr>
<td>Med-Surg</td>
<td>~20%</td>
<td>~50%</td>
</tr>
<tr>
<td>Pediatric</td>
<td>~40%</td>
<td>~40%</td>
</tr>
<tr>
<td>Obstetrics</td>
<td>25%</td>
<td>25%</td>
</tr>
<tr>
<td>L &amp; D</td>
<td>5%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Source: OSHPD; Kravitz, et al.
Estimated statewide FTE shortage from DHS survey data

<table>
<thead>
<tr>
<th></th>
<th>Initial ratios</th>
<th>Later ratios</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>4,880</td>
<td>7,230</td>
</tr>
<tr>
<td>Med-Surg</td>
<td>1,030</td>
<td>2,460</td>
</tr>
<tr>
<td>Pediatric</td>
<td>490</td>
<td>490</td>
</tr>
<tr>
<td>Obstetrics</td>
<td>520</td>
<td>520</td>
</tr>
<tr>
<td>L &amp; D</td>
<td>20</td>
<td>20</td>
</tr>
</tbody>
</table>

Source: Kravitz, Sauve, et al.
The Haves and the Have-Nots

- Money for RN salaries after the long dry 90s
- Future thinkers versus the head-in-the-sand group
- Public poor versus Private wealthy
Who has the right ratio now?

- Preponderance of research finds that more nurses are associated with better patient outcomes
- Causal link has not been demonstrated
- There is no “right” ratio
Who will never have the right ratio?

The arrow indicates periods of market-wide shortage of RNs in the US. Line A represents those hospitals that are always in shortage. Line B represents those hospitals that move in and out of shortage. Line C represents those hospitals that are never in shortage. The Shortage Line is the average point that hospitals declare shortage.
Predictors of Shortage

Persistent shortage (1990 & 1992)
- Deep South & West
- High Medicare & Medicaid populations.
- High county % of non-white population.

Intermittent Shortage (1990)
- Deep South & Midwest
- Higher case mix index
- High county % of non-white population.
Is the nursing shortage improving?

- Recently, there has been an increase in RNs in the US
- Buerhaus, 2004 the increase in nurses is primarily from RNs who have
  - Came out of retirement
  - Immigrants
What if hospitals cannot find the staff needed to meet the ratios?

- The nursing shortage in California will persist in the long term without greater supply
- Will hospitals turn away patients?
  - Will hospitals close units?
  - Will hospitals close entirely?
- Will hospitals have to meet the ratios every minute of every day?
Where is the enforcement of the legislation?

- No penalty
- DHS has suffered reductions in staff
Life Cycle of Shortages

- Cycles of shortage/excess are probably normal.
- Nursing markets are local, not national.
- Intermittent shortages will self-correct as local wages increase.
- Subsidized educational programs depress the wage rate.
What to do...

- Allow the market to correct itself.
- Link education to licensure… recognition that all nurses are not the same
- Eradicate salary-fixing practices of employers.
- Change “on-the-job” behaviors of physicians and hospital executives that drive nurses from the direct care hospital workforce.
But...

- The ratios cannot be sustained in light of the shortage
- Creative care delivery methods could be tried—but any legislated solution will likely not allow those methods
Acknowledgements & Sources

- Funding: Federal Reserve Bank of Boston