5 key points

1. A computerised system would show whether wards need extra staff and also indicate why a ward’s dependency has increased.

2. A group of “floating” staff can be employed to move from ward to ward to help out in busy periods.

3. Staffing should be organised with a view to long-term priorities.

4. The cost of additional staff can be offset against savings from improved patient outcomes such as reduced inpatient stays.

5. Identifying non-clinical tasks that can be allocated to non-nursing staff is one way of reducing the effects of low nurse to patient ratios.

Table 1. Safe nurse staffing levels

<table>
<thead>
<tr>
<th>Ward Type</th>
<th>Morning Shift</th>
<th>Afternoon Shift</th>
<th>Night Shift</th>
</tr>
</thead>
<tbody>
<tr>
<td>City hospital - medical/surgical wards</td>
<td>1:4 * in charge</td>
<td>1:4 * in charge</td>
<td>1:8</td>
</tr>
<tr>
<td>District general hospital - medical/surgical wards</td>
<td>1:5 * in charge</td>
<td>1:5 * in charge</td>
<td>1:10</td>
</tr>
<tr>
<td>Aged care facilities</td>
<td>1:7 * in charge</td>
<td>1:8 * in charge</td>
<td>1:15</td>
</tr>
<tr>
<td>Labour wards</td>
<td>1:1</td>
<td>1:1</td>
<td>1:1</td>
</tr>
<tr>
<td>Large city hospital - A&amp;E</td>
<td>1:3 * in charge + triage</td>
<td>1:3 * in charge + triage</td>
<td>1:3 * in charge + triage</td>
</tr>
</tbody>
</table>

This table shows the safe nurse staffing levels according to legislation in Victoria, Australia.

meetings or training were not accounted for.

According to Gurses and Carayon (2007) other factors, such as the physical environment and communication between staff, also affect patient outcomes. This links to the idea that hospitals with low staffing levels may also have a poor physical environment and lack resources. This will result in poor outcomes and makes it difficult to set a ratio.

There has been little robust research on the relationship between hospital mortality and staffing levels. In 2006, Rafferty et al produced a UK study based on the model used by Aiken et al (2002) in the US. Although UK hospitals varied far more in terms of how understaffed they were – with some having levels as low as one nurse to nearly 15 patients – mortality was similar to that in the US study.

Hospitals with the worst staffing had an mortality of 26% and 29% in the “failure to rescue” group. The nurses in the hospitals with the worst staffing were up to 92% more likely to show job dissatisfaction and burnout, and rated the quality of care on their wards as “low” or “deteriorating” (Rafferty et al, 2006). The findings suggested that, if the 30 trusts studied had had a nurse to patient ratio of around 1:7 (the best in the study), around 246 fewer deaths would have been seen.

Unfortunately, neither the US nor the UK studies suggest an optimal nurse to patient ratio, although they allude to 1:4 providing the best patient outcomes.

What the studies do agree on is that the more patients a nurse is allocated, the worse the patient outcome is likely to be. None of the studies includes information about non-nursing staff (which would greatly complicate the study designs) and their effect on patients and nurses. For example, low doctor to patient ratios may have a negative effect on outcomes, and affect nurses’ stress levels. There are also no studies that demonstrate an intervention, nor are there controlled trials. All the studies are observational, collecting data on existing situations without intervening (Kane et al, 2007).

Not all the studies are concerned with negative outcomes only in terms of mortality. Others focus on patients who develop unexpected complications but survive to discharge. Studies have found associations between poor staffing levels and urinary tract infections (Needleman et al, 2002), hospital-acquired pneumonias (Kovner and Gergen, 1998) and extended length of stay (Needleman et al, 2002), among other adverse events.

Supporting safe staffing levels

So, if there is a growing body of evidence to support the idea that low staffing levels increase patient mortality and adverse events, what is being done?

In California in the US and Victoria in Australia, there is legislative backing for safe nurse staffing levels. The Victoria levels are shown in Table 1 (RCN, 2003).

The Victoria ratios are set out in terms of group A and group B hospitals: group A hospital is equivalent to a city or teaching hospital in the UK; group B hospital is more on a par with a district general hospital. They cannot be compared directly because of the considerable differences between hospital and population size in Australia and the UK. However, the model can give a guide.

In California, the ratio has been set at 1:5 for medical and surgical wards, with an eventual aim of 1:4: this applies to public and private hospitals. In Victoria, the ratios only apply to public hospitals. Less detail was available, for example, on night shift staffing, for the US legislation.

Nurses’ self-esteem has been boosted since fixed staffing ratios were introduced. More have returned to practice and recruitment and retention have increased across Victoria (O’Connor, 2006). The Australia Nursing Federation (ANF) has suggested many nurses would consider quitting, retiring early or cutting their hours if protected nurse to patient ratios were