**NICE** National Institute for
Health and Care Excellence

## NICE guidelines

# Safe staffing for nursing in adult inpatient wards in acute hospitals

**Example scenario to illustrate the process of setting ward nursing staff requirements**

This example scenario is intended to illustrate the process of setting ward nursing staff requirements as described by the recommendations in sections 1.3 and 1.4 of the safe staffing for nursing in adult inpatient wards in acute hospitals guideline.

- **The figures used in this example are to illustrate the process and are not intended to represent recommended numbers**

- **These processes and calculations could be facilitated by a NICE endorsed decision support toolkit.**

The ward used in this example is a 28-bedded surgical ward that treats a combination of patients who have undergone elective surgery as well as patients who have been admitted as emergencies who are likely to need urgent surgery.

*Setting the ward nursing staff establishment*

| Stage 1: Calculate the average nursing staff requirement throughout a 24-hour period | | |
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| **Factors** | **Example numbers*** | **How these were calculated in this example scenario** |
| **Average nursing needs of patients for each 24-hour period** | **5.32 hours** | The average nursing needs of patients treated on the sample ward over the previous 6 months for each 24-hour period was 5.32 nursing hours using a NICE endorsed staffing toolkit. |
| **Average bed utilisation** | **30** | Over the same period of time, the average number of patients treated during each 24-hour period was 30. This was because, on average, all of the beds were occupied each day, plus there were on average 2 patients discharged each day with new patients subsequently admitted in their place. |
| **Additional workload for each 24-hour period** | **5.6 nursing hours** | The additional workload was estimated using professional judgement to be 5.6 nursing hours for each 24-hour period. This was calculated based on the additional activities and responsibilities of the nursing staff, other than direct patient care, which included, for example, supervising other nursing staff, and coordinating workflow. There was also additional time deemed necessary to deal with other ward factors that were not accounted for by the decision support toolkit. These related to: allied healthcare professional work delegated to the nursing team; work involved with maintaining a clean, tidy and well stocked environment; administrative activities not covered outside of normal working hours. |
| **Total nursing requirement for each 24-hour period** | **165.2 hours** | **This was calculated as average nursing needs of patients (5.32) X bed utilisation (30) + additional workload (5.6) = 165.2 nursing hours for each 24-hour period.** |

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| Stage 2: Determine required ward nursing staff establishment and shift allocation* | | |
| --- | --- | --- |
| **Factors** | **Example numbers*** | **How there were calculated in this example scenario** |
| **Skill mix** | **68% registered nurses** | Analysis of the nursing needs of patients showed that the majority of care required registered nurses. It was estimated that up to 37% of required total nursing requirement could be delegated to healthcare assistants.

This was reduced to 32% to allow for the fact that healthcare assistants would not be able to undertake the activities that require registered nurses, but registered nurses could undertake all healthcare assistant activities. The specialist competencies that were required amongst the registered nurses were also determined when determining the skill mix. |
| **Nursing staff required each day** | **15 registered nurse and 7 healthcare assistant shifts** | The nursing staff on the example ward all work 7.5 hour shifts (after taking all planned breaks into account), therefore 22 nursing shifts for each 24-hour period were required (165.2/7.5).

Based on 68% needing to be registered nurses, 15 registered nurse and 7 healthcare assistant shifts were required for each 24-hour period.

Analysis of the time when patient nursing needs were required showed that there were obvious peaks between 8:00 am and 10:30 am and between 1:00 pm and 2:30 pm. These peaks were associated with dietary and hygiene activities, mobilisation and medication/treatments.

The roster was therefore designed to accommodate additional staff working in the early morning and |

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|---|---|---|
| | | late evening by: overlapping the start and end times of the various shifts; allocating more healthcare assistants to the morning shift, when the majority of the activities that could be delegated to healthcare assistants took place |
| **Average number of hours a full time equivalent member of the nursing team is anticipated to provide** | **1620 hours per year** | Full-time working (37.5 hours per week) equates to a maximum of 1950 working hours per year (37.5 x 52), excluding any leave or absence. Historic data from the ward showed that the annual leave and study leave entitlements, plus other anticipated absence such as sick leave or maternity leave, was an average of 44 days or 330 hours (44 X 7.5) per year for each member of the nursing team. On average, a full time existing member of the nursing team could therefore provide an anticipated 1620 hours per year (1950 – 330). This is equivalent to an uplift 20.4% (1950/1620). |
| **Ward nursing staff establishment (full time equivalents)** | **25 registered nurses and 12 healthcare assistants** | **This was calculated as follows:** <br> • **The ward's total nursing requirement of 165.2 nursing hours for each 24-hour period equates to 60,298 nursing hours per year (165.2 x 365).** <br> • **On the basis that an average each full time equivalent member of the nursing team can provide 1620 hours per year, the number of full time equivalent nursing staff required is 37.22 (60,298/1620).** <br> • **Based on the skill mix assessment that 68% need to be registered nurses, 25 registered nurses and 12 healthcare assistants were required in the ward nursing staff establishment.** |

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## Assessing if nursing staff available on the day meet patients' nursing needs*

| Factors | Example numbers* | How these were calculated in this example scenario |
|---|---|---|
| **Available nursing staff (planned nursing requirement was 165.2 hours)** | **150 hours** | Because of unplanned absence at short notice, the available nursing staff on a particular day was 13 registered nurse and 7 healthcare assistant shifts. The available nursing staff could therefore provide 150 nursing hours that day (20 x 7.5) or 97.5 registered nurse hours and 52.5 healthcare assistant hours. |
| **Actual total nursing requirement** | **194 hours** | On the same day, the average nursing needs of the patients that were being treated on the ward was determined to be 6.08 nursing hours per patient for each 24-hour period using a NICE endorsed decision support toolkit. Anticipated bed utilisation during that 24-hour period was 31. Additional workload remained at 5.6 hours for each 24-hour period. <br><br> The actual total nursing requirement for that 24-hour period was therefore 194 hours (6.08 X 31 + 5.6). Based on a required average skill mix, this should be 132 registered nurse hours and 62 healthcare assistant hours. |

| Nursing red flag events | 2 | On the same day two red flag events occurred:<br><br>(i)     a shortfall of 34.5 registered nurse hours (132-97.5)<br><br>(ii)    a delay of more than 30 minutes in providing planned pain relief to 2 patients. |
|---|---|---|
| **Staffing problems addressed in real time** | | **The nursing matron was notified about the red flag events which included the shortfall from the required nursing hours. Additional nursing staff were therefore allocated to work on the ward that same day.** |
| **Review of nursing red flag events** | | **At the weekly staffing review, the events leading to the shortfall were analysed to see if changes to the nursing staff roster or ward nursing staff establishment were needed. As the shortfall in available nursing staff was due to unplanned absence at short notice and there were no previous nursing red flag events in the last month, no changes to the nursing staff roster or ward nursing staff establishment were deemed necessary.** |

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**National Institute for Health and Care Excellence**

Level 1A, City Tower, Piccadilly Plaza, Manchester M1 4BT; www.nice.org.uk