Making the most of NHS frontline staff

June 2010

The NHS will be required to make significant efficiency savings in the next three years. This will mean doing things differently, as well as doing more with fewer resources. As the cost of doctors and nurses represents a significant proportion of NHS trusts’ and foundation trusts’ spending, these are areas where efficiency savings will need to be made.

The benchmarking work we have carried out at more than 50 NHS trusts and foundation trusts suggests there is the potential to make significant savings by making better use of doctors and nurses. Variations in nurse numbers, use of bank and agency nurses, and grade mix, suggest there is scope to improve productivity and reduce costs.

This briefing identifies areas where NHS trusts and foundation trusts may be able to make efficiency savings by making the most of their frontline staff.
We have collected data on ward staffing from 56 NHS trusts and foundation trusts covering 69 hospitals, 1,656 wards and 40,000 beds, and have found:

- wide variation in the cost per occupied bed and the number of nurses per bed;
- unexplained variation in grade mix;
- the size of wards is the most significant factor in nursing costs per bed; and
- great variation in the use of temporary nursing staff.

**What action should be taken?**

NHS trusts and foundation trusts should:

- understand the reasons for variations in the cost of staffing wards;
- benchmark themselves against other trusts to identify areas where efficiency savings could be made without compromising quality;
- have a suitable nurse grade mix;
- reduce the use of agency staff by effective workforce planning and management; and
- identify the longer-term efficiency savings that could be made by reconfiguring wards.

We estimate that the following savings could be made:

- reducing the nursing cost per bed to the level of the average – £300 million a year, and
- reducing grade mix to the level of the average – £60 million a year.

Whether these savings would, in practice, be released depends of course on the real circumstances of the ward and hospital, and not the data.

**How do you decide how many nurses you need?**

Do you know why your trust employs the number of nurses it does? Does the number equate to the funding available? Do you base it on how busy nurses appear to be? Is it about the same number you’ve always employed?

There is no magic formula to decide the number of nurses a hospital trust needs to provide good-quality, safe patient care. The number of nurses per occupied bed varies from trust to trust, as one would expect, but by how much does it vary?

This briefing pulls together work that Audit Commission staff have carried out at 56 trusts and foundation trusts – covering 69 hospitals – over the past two years, and national data on the number of nurses employed by NHS trusts in England. The briefing suggests NHS trusts and foundation trusts should consider carefully the numbers and types of nurses they employ and the way in which they are used to improve the efficiency of what is, for most trusts, their most valuable and expensive resource.
Is there a problem?

The NHS is aiming to make efficiency savings of £15-20 billion over a three-year period starting in 2011. This is around one-fifth of current NHS spending. Some of this cost reduction is expected to come from structural changes and a decrease in the number of management posts. However, we estimate that non-frontline activities only account for around £4 billion of NHS spending. So even if all management posts were removed from the NHS this would not deliver the required savings.

This will mean an increased focus on improving productivity through, among other things, better use of staff.

Nurses account for over a quarter of NHS trust and foundation trust spending. The number of nurses has increased significantly in recent years as the number of patients treated has risen sharply. To remain financially viable, NHS trusts and foundation trusts will need to be run efficiently and make the best use of their resources, especially staff.

But surely the NHS has been successful and has treated more patients with shorter waiting times in the last five years?

Hospital admissions have increased significantly in the last five years and waiting times have, in general, reduced, sometimes significantly.

Increased staffing has played a part. The number of hospital-based nurses working in NHS trusts and foundation trusts in England has increased from 163,000 in 1999 to 207,000 full-time equivalents in 2009 (Ref. 1). The pay bill for hospital-based nurses is around £6 billion.

Agenda for Change has resulted in improved pay for most nurses but the expected productivity gains have not materialised.

The taxpayer is getting more for more from the NHS but as the increases in funding slow down and demand continues to rise, as it is expected to do, NHS trusts and foundation trusts will need to do more for the same, at best, and probably will need to do much more with less.
How can trusts improve efficiency when it comes to nurses and doctors?

Our work with 56 NHS trusts and foundation trusts, covering 69 hospitals, suggests there are several ways in which efficiency might be improved.

What about nurse numbers?
The number of nurses per bed varies between 1.2 and 2.1 nurses (Figure 1). Such a wide variation is not entirely explained by the specialty mix, case mix or the condition of the patients. We have estimated the total additional spending on above-average-cost wards amounts to £2 million per year in a typical trust, or £300 million nationally. If all NHS trusts and foundation trusts were to reduce their nursing costs per occupied bed to the current level of the lowest quartile, the total saving to the NHS could be as much as £500 million.

Figure 2 shows the wide variation in nursing costs between wards; even between wards of the same type. If the number of available beds had been used instead of occupied beds, the number of nurses per bed would vary from 1.1 to 1.7. There is also sometimes significant variation between nursing costs in wards of similar size and type in the same hospital. Trusts and foundation trusts need to understand the reasons for such variations.

Figure 1: The number of nurses varies from 1.2 to 2.1 nurses per bed

Source: Audit Commission (data from ward staffing database)
Figure 2: **Nursing costs in general surgery wards vary from £72 to £148 a bed per day**

Source: Audit Commission (data from ward staffing database)

**Does ward size make a difference?**

Ward sizes at the hospitals we collected data from vary from four to 68 beds, with 94 per cent of wards having between eight and 39 beds. Larger wards cost less in terms of nurses, partly because of the need to maintain minimum staffing levels on wards. As can be seen in Figure 3, nursing costs per bed for wards of 20 or more beds are, on average, less than half the cost of wards with ten or fewer beds. Although there may be advantages of having smaller wards, these should be weighed against the additional costs. Efficient management of ward staff is key.

Economies of scale are clear across all types of ward. Combining any two wards into one saves, on average, £0.3 million a year. This is equivalent to the cost of a hypothetical ‘base’ nursing team of about ten nurses needed to provide round-the-clock, safe cover, irrespective of the number of patients on the ward.

Clearly, in most cases, reconfiguring wards to create larger, lower-cost wards is not something that can be easily achieved in the short term and is likely to require significant investment. Nor will it always be right. However, when making longterm decisions on new builds or refurbishment of hospitals the additional staffing costs of having small wards should be weighed against their potential non-financial benefits.
What about grade mix?
We found notable variation in the grade mix at the hospitals where we have collected data. Grade mix – defined as the percentage of nurses graded as Band 5 and above – varies from 56.3 per cent to 75.1 per cent as can be seen in Figure 4. There may be scope for some NHS trusts and foundation trusts to change their grade mix. If all trusts were to change their grade mix to the level of the average, this could save £60 million nationally. When considering possible changes in grade mix, NHS trusts and foundation trusts will need to ensure that any alterations do not compromise the quality of care, including patient safety. Hospitals may choose to have a richer grade mix but would need to be clear about the additional benefits this brings.

Is there an issue over the use of temporary staff?
There are two main types of temporary nursing staff used by NHS trusts and foundation trusts. Bank staff are nurses employed by the trust and used when needed to cover peaks in workload or absences. The cost of bank nurses is not significantly higher than permanently employed nurses.

Hospitals can also use agency-supplied nurses for the same reasons but they can be significantly more expensive compared with the average cost of permanently employed nurses of around £30,000 a year.
A third option is for trusts to use NHS Professionals, the national agency that supplies temporary staff to the NHS. This is cheaper than using nurses from other agencies. Providing that NHS Professionals or bank nurses are properly managed so that they keep their skills up to date and work on familiar wards, quality should remain high and they can add flexibility to staff management.

NHS trusts and foundation trusts with higher levels of spend on bank staff may be successfully lessening their use of full-time staff. NHS trusts and foundation trusts with higher use of agency staff might well have recruitment or sickness absence problems that cannot be covered by permanent or bank nurses.

The data we collected suggests a correlation between high use of bank and agency staff and the closeness of the trust to London. However, there are significant exceptions to this.

The proportion of temporary nursing staff costs to total nursing staff costs varies from 1 per cent to 28 per cent. Figure 5 shows the range. While most of the hospitals with the highest proportion of temporary nurses are in the South East, and most of the hospitals with the lowest proportion of temporary nurses are in the North West and North East as might be expected, this is not always the case.
It has not been possible to draw firm conclusions on the relative use of bank and agency staff because of inconsistent classification of NHS Professional-sourced agency staff. However, clearly some hospitals are able to run with low levels of agency staff and some with low levels of bank or agency staff.

**What about sickness absence?**
Hospitals need to have effective staff rostering and management of absences because of leave, sickness or maternity. According to the latest published figures, sickness absence rates for nurses in the period October to December 2009 were 5.55 per cent, compared with an NHS-wide rate of 4.64 per cent (Ref. 2). If sickness absence rates for nurses were to be reduced to the NHS average – a decrease of around two days per nurse per year – the NHS would save around £50 million (assuming absences are covered by the use of temporary nurses). We will be publishing a separate briefing on sickness absence later in 2010 which will examine managing sickness absence to identify potential efficiency savings.
Surely if we reduce the number of nurses, the quality of patient care will be affected?

Not necessarily. NHS trusts and foundation trusts will need to ensure nursing levels are sufficient to ensure good-quality care and patient safety are maintained when determining the number of nurses required. It is clear, however, that some hospitals are able to provide safe, high-quality patient care with fewer nurses and a less rich grade mix.

What about hospital doctors?

The importance of the medical staff to all aspects of an acute hospital's work makes this topic an important one for benchmarking, because hospital doctors:
- are central to the delivery of high quality patient care; and
- largely determine what a hospital does, and the resources used.

Direct costs alone account for 13 per cent of the acute hospital budget, and working practices have an important bearing on overall performance.

The number of hospital-based doctors, including those in training, has increased by 60 per cent since 1999, from 55,000 to 88,000 (Ref. 3). We have begun to collect standard data on the use of all types and grades of doctor at the level of 40 sub-specialties (Figure 6). Our sample is small, covering 12 trusts, so it is too early to draw any clear conclusions.

However, within this small sample the numbers and grade mix of doctors often does not seem to be the result of careful planning of service and training needs. Some NHS trusts and foundation trusts aspire to provide an essentially consultant-delivered service, while others make extensive use of specialty doctors to deliver activity. For example, the average number of trainees supervised per consultant in general surgery varies from less than one to more than six in the trusts we have looked at.

The number of doctors in specialties such as radiology, pathology and anaesthetics seems high when compared with activity.

The number of admissions per doctor varies by an unexplainable factor of more than two, from 129 per doctor each year to 329. The number of first outpatient appointments per doctor varies from 108 to 380 each year.

The cost of locum doctors in trusts varies from three per cent to 20 per cent of medical spending. Clearly there are concerns about the quality and continuity of care delivered when such extensive use is made of temporary doctors. In some cases, high spend is focused on particular departments.
### Figure 6: Key diagnostic questions

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<tr>
<th>Core questions</th>
<th>Diagnostic questions</th>
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<tbody>
<tr>
<td>Doctors (WTE) per 1,000 inpatients, day cases, outpatients appointments</td>
<td>Is staffing well matched with activity?</td>
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<tr>
<td>Percentage locum spend Longterm locum consultant percentage</td>
<td>Is locum use well managed?</td>
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<tr>
<td>Comparative direct care / supporting programmed activities</td>
<td>Are consultants’ contributions equitable and planned well?</td>
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<tr>
<td>Income by specialty</td>
<td>Is each specialty making an equitable contribution to the trusts’ financial objectives?</td>
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<tr>
<td>Non-consultant to consultant ratio</td>
<td>Do the structure and management of medical staff support safe and effective patient care?</td>
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<tr>
<td>Trainee to consultant ratio</td>
<td>Does the trust provide effective training and development?</td>
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Our early work with NHS trusts and foundation trusts also suggests that some are not making use of the discipline and transparency that the latest consultant contract was intended to introduce. The number of supporting professional activities assigned each week to consultants ranges from an average of 1 to 2.6. Some consultants are working 15 programmed activities a week; the equivalent of 64 hours. The essential problem is the quality of consultant job planning, which often lacks rigour or alignment with service objectives.

Source: Audit Commission
Is it worth reflecting on numbers of hospital admissions?

The number of hospital admissions has continued to rise year on year. However, there will be greater emphasis in the future on treating people earlier and closer to home so, in theory, reducing the demand for hospital care. This will put further pressure on staffing, making knowledge of the workforce and strategies for efficient management even more important.

Who should I speak to?

If you would like to find out more about the Audit Commission’s staffing tools and how we can assist you in improving efficiency, contact your usual Audit Commission contact or email nhsefficiency@audit-commission.gov.uk
References


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