

Data collection and review in the delivery of safe care

Managers need timely and appropriate information to make the link between care inputs and patient outcomes to help determine optimum nurse staffing levels, as Jane Ball explains

Summary

Research shows that high patient-to-staff ratios compromise care, so quality data on staffing variables and patient outcomes are essential to ensuring that staffing is safe and cost effective. This article explains why data collection needs to be regular, routine and easily done to enable managers to draw connections between resource inputs and patient outcomes. It highlights that, while there are many tools to collect data, there is little evidence about their reliability, which is an issue that needs to be explored.

Keywords

Staffing levels, nursing metrics, patient outcomes

GETTING STAFFING levels right is important for delivering safe, good quality care. The Care Quality Commission (CQC), as the body with responsibility for regulating all care providers in England, requires, for example, that they 'take appropriate steps to ensure that, at all times, there are sufficient numbers of suitably qualified, skilled, and experienced persons employed for the purposes of carrying on the regulated activity' (CQC 2010).

The onus of assessment, however, lies with the care providers. The responsibility to determine what is 'sufficient' ultimately rests on the shoulders of directors of nursing, not an easy responsibility in the present climate. The consequences of not assessing the impact of staffing changes on quality of care and patient safety are evident from a number of recent health service failures.

An investigation at Mid Staffordshire NHS Foundation Trust, for example, by the Healthcare

Commission (2009) concluded: 'The trust was galvanised into radical action by the imperative to save money and did not properly consider the effect of reductions in staff on the quality of care. It took a decision to significantly reduce staff without adequately assessing the consequences.'

Research evidence

But with increasing pressure on trust boards to deliver savings, how can nurse managers ensure that staffing levels where they work are high enough to deliver care safely?

RCN guidance on safe staffing levels, published in December (RCN 2010a), sets out why nurse staffing matters. It provides the evidence of association with patient outcomes, what we know about current staffing levels and how they vary, and the various methods used to plan staffing. It also recommends the next steps in developing related policy.

Over the past ten years, the research evidence on the relationship between nursing inputs and patient outcomes has become substantial.

A large-scale survey undertaken by Employment Research, for example, identified patient-to-registered nurse ratios and related this to how frequently care was compromised by short staffing (Ball and Pike 2009).

On NHS wards where patient care is never compromised, the average number of patients per nurse on wards is five (Figure 1); those in which care is compromised work have twice this number of patients per registered nurse.

The potential consequences of such 'compromised' care are made explicit in research published last year by Aiken *et al* (2010), which

reveals that lower patient-per-nurse ratios are associated with lower mortality rates. To put it bluntly, the study found that fewer patients died in hospitals with better nurse staffing levels.

Good nursing care is the solution put forward in many of the efficiency savings that NHS staff are expected to deliver over coming months. Ensuring that fundamental care needs are well met, for example, minimises the costs associated with avoidable complications such as pressure ulcers, urinary tract infections and hospital readmission.

Disparities

Figure 2 depicts the relationship between increasing nursing input and better patient outcomes. During times of investment and growth, the focus is on ensuring that levels are comfortably within the green zone, in other words that there are enough nurses to provide good care, with staffing reviews enabling providers to identify disparities and highlight areas where staffing levels need improving.

But in the current financial climate, there is a risk that workforce changes that have not been fully assessed may push healthcare providers down the curve into the red zone, where care can be compromised and patients are put at risk.

Everyone would agree that we must have 'enough' nurses, but clearly the service cannot afford to have with more staff than are needed. According to the National Nursing Research Unit (2009), there is a point of diminishing return, where the patient benefit of extra nurses tails off. The goal therefore is to determine the optimal level and mix of nurse staffing: the 'sweet spot' on the curve.

There is no universal truth about the number of nurses needed, and no shortcuts to identifying the optimal level. Health services, and the staff required to provide them, are necessarily based on patient need and, as patient need and the nature of services vary between specialty and place, and over time, the workforce required needs to be determined locally.

The RCN staffing levels paper (RCN 2010a) sets out the range of factors that affect the total demand for staff and highlights the variety of methods for planning or reviewing staffing. It also explains the principles underpinning different approaches to planning and reviewing staffing and outlines some of the strengths and weaknesses of these methods.

There is a range of tools available to determine staffing levels, but there is little evidence of how reliable they are, and the lack of independent review or guidance is something the RCN would like to see addressed nationally. The college (RCN 2010a) suggests, however, a set of core principles (Box 1, page 22).

Figure 1 Patient-to-nurse ratios on NHS wards

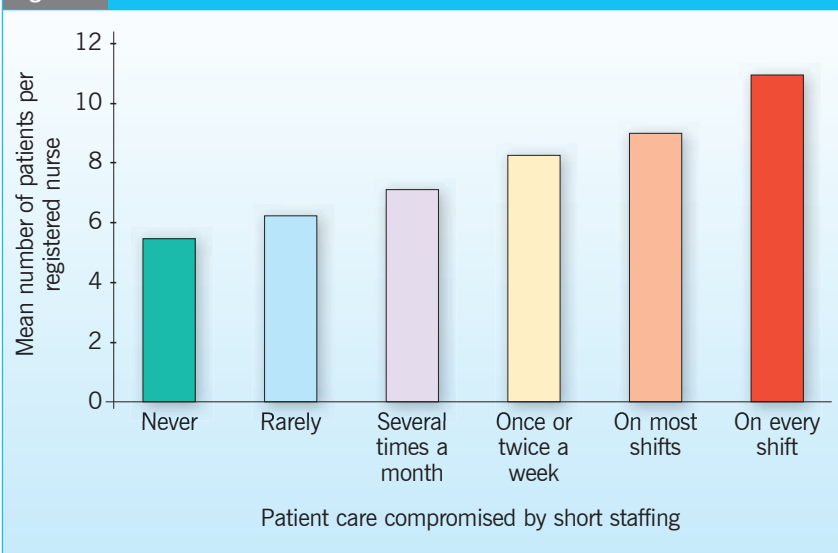
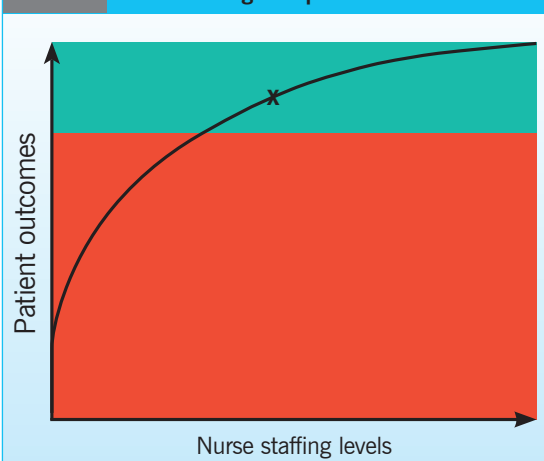


Figure 2 Determining the optimum level: nurse staffing and patient outcomes



Staffing levels and skill mix need to be reviewed and evaluated to ensure they meet patient needs adequately, and initiatives such as Energise for Excellence make the case for reviewing nurse staffing alongside measures of nursing impact and quality of care. The use of nursing metrics (Griffiths *et al* 2008) and benchmarking can help in this, and provide nurse managers with evidence of how nursing affects patient-related outcomes (RCN 2010b).

Quality data

Increasingly, healthcare providers are judged by care outcomes so having quality data on staffing variables and patient outcomes is essential to ensuring that staffing is safe and cost effective. The capture of such data needs to be regular, routine and easily done, for example through scorecard or dashboard systems.

With prompt feedback mechanisms, unit-level managers can use the data to inform practice, picking

Box 1 Core principles in staffing reviews

- Systematic: use a systematic approach and apply it consistently.
- Staff involvement: involve staff in both the process and outcomes of a review.
- Triangulate: patient dependency-based workload tools should be complemented for example with professional judgment and benchmark data from matched comparators.
- Adequate uplift: having identified nursing staff needed, establishments must be calculated to allow for shift patterns and staff time away from the service. The RCN recommends that a 25 per cent uplift is applied.
- Evaluation: optimal staffing level can be ascertained only by looking at indicators. This relies on the collection of good quality human resources data and patient outcomes or other quality data, and their use to review and inform services.
- Regular review: the Healthcare Commission recommends that staffing should be reviewed at least every two or three years.

Box 2 Staffing indicators

- Actual nursing staff in post as a proportion of total establishment.
- Proportion of registered nurses as a percentage of total nursing staff.
- Nurse staffing relative to population served.
- Nurse staffing relative to patients.
- Staff turnover.
- Sickness absence.

up service deterioration as it happens and responding accordingly. But the data need to be reviewed regularly and to be understood at board level too.

As well as reviewing patient-outcome data, nurse managers need to be able to describe accurately the nursing workforce in every part of their organisations. Periodic staffing reviews help in the planning of the nursing workforce, but in reality we know that many factors affect staffing, so that the staff in post and available to work can become insufficient to deliver care to agreed standards.

The RCN has identified indicators that can be used to profile the nursing workforce (Box 2), and reviewing these enables nurse managers to identify internal variation, monitor changes and review staffing against external benchmarks.

Benchmarking

Using indicators to benchmark staffing against those of matched comparator groups can be a powerful

tool to help nurse managers identify where staffing is likely to need further review (Hurst 2010). Wards staffed below funded establishment, either because of high sickness absence or lower-than-average skill mix, need to be reviewed, for example.

Health system regulators, such as the CQC, do not include staffing indicators to assess compliance with their safe-staffing standards, but such measures are used frequently to review the adequacy of staffing and skill mix of failing trusts.

For instance, the Healthcare Commission (2007) reported on the number of wards at Maidstone and Tunbridge Wells NHS Trust, Kent, with less than 65 per cent registered nurses. Likewise, Sir George Alberti's response to the report of the Healthcare Commission on Mid Staffordshire referred to the number of registered nurses relative to the number of patients or beds, reporting a ratio of about ten patients per nurse (Alberti 2009).

Nurse managers, as custodians of patient care safety and quality, need to be able to describe both nursing inputs and care outcomes, and enable boards to see the link between the two.

If boards can monitor their staffing using these simple metrics routinely and look at these data alongside measures of patient outcome and care quality, perhaps future care crises can be avoided.

Find out more

For copies of *Guidance on Safe Nurse Staffing Levels in the UK*, go to [http:// tinyurl.com/6crqxbe](http://tinyurl.com/6crqxbe)

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