

National Assembly for Wales / Cynulliad Cenedlaethol Cymru

[Health and Social Care Committee / Y Pwyllgor Iechyd a Gofal Cymdeithasol](#)

[Safe Nurse Staffing Levels \(Wales\) Bill / Bil Lefelau Diogel Staff Nyrsio \(Cymru\)](#)

Evidence from Professor Peter Griffiths - SNSL(Ind) 06 / Tystiolaeth gan Yr Athro Peter Grifiths - SNSL(Ind) 06

Consultation on the Safe Nurse Staffing Levels (Wales) Bill: written submission of evidence to the health and Social care Committee.

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Introduction & overview

I am making this submission in a personal capacity. I draw on over 25 years of experience of working in and alongside the NHS as a clinical nurse, advisor and applied health services researcher.

I have undertaken research related to the impact of the size and configuration of the health care workforce on patient and staff outcomes. From 2006–2011 I was director of the National Nursing Research Unit in England, funded by the Department of Health's Policy Research Programme to undertake research into the nursing workforce. I lead the work on patient outcomes in the international RN4CAST study, exploring associations between the hospital nursing workforce and patient outcomes in 16 countries, in Europe and beyond. I also co-lead the English arm of the study. Last year I led the team that undertook evidence reviews for the National Institute for Health and Care Excellence's Safe Staffing Committee as it developed guidance for nurse staffing on hospital wards and in emergency departments.

In addition to the evidence reviews for NICE, I have published extensively on this topic including contributions to recent papers of relevance, such as:

Aiken, L.H., Sermeus, W., Van den Heede, K., Sloane, D.M., Busse, R., McKee, M., Bruyneel, L., Rafferty, A.M., Griffiths, P., et al, 2012. Patient safety, satisfaction, and quality of hospital care: cross sectional surveys of nurses and patients in 12 countries in Europe and the United States. *BMJ* 344 (7851), e1717.

Aiken, L.H., Sloane, D.M., Bruyneel, L., Van den Heede, K., Griffiths, P., et. Al. 2014. Nurse staffing and education and hospital mortality in nine European countries: a retrospective observational study. *Lancet* 383 (9931), 1824-1830.

Ball, J.E., Murrells, T., Rafferty, A.M., Morrow, E., Griffiths, P., 2014. 'Care left undone' during nursing shifts: associations with workload and perceived quality of care. *BMJ Qual Saf* 23 (2), 116-125.

Griffiths, P., Dall'Ora, C., Simon, M., Ball, J., Lindqvist, R., Rafferty, et. al, 2014. Nurses' shift length and overtime working in 12 European countries: the association with perceived quality of care and patient safety. *Med Care* 52 (11), 975-981.

Griffiths, P., Jones, S., Bottle, A., 2013. Is "failure to rescue" derived from administrative data in England a nurse sensitive patient safety indicator for surgical care? *Observational study. Int J Nurs Stud* 50 (2), 292-300.

Below I offer some observations and analysis drawing on this expertise and related to research evidence that are relevant to the committee's questions.

Nurse staffing and patient outcomes

It seems clear from extensive evidence that lower levels of nurse staffing in hospitals are associated with poorer patient outcomes.

- There are inconsistencies in the evidence. Not all studies show an association. However, for a number of outcomes, including death, the overall pattern of evidence is clear. There are a number of evidence overviews (including our recent reports to NICE) supporting this.¹⁻³ I am not aware of any recent substantial reviews that come to a different conclusion.
- Relatively little of the evidence is from the UK, but what there is tends to be broadly consistent with this pattern.
- It does not follow from this evidence that the relationship between nurse staffing and patient outcomes is *causal*. That is, just because hospital death rates are higher in hospitals with fewer nurses, this does not mean that it is a lack of nurses that causes the increase in deaths. There might be other factors at play and indeed, there must be. For example, hospitals with fewer nurses also tend to have fewer doctors. There is also evidence on the importance of *medical* staffing levels for mortality rates.^{4 5}
- However, taken in the round, the evidence is consistent with poor nurse staffing *causing* some of the adverse patient outcomes observed in studies.¹⁻³

A considered appraisal of the evidence supports a conclusion that low nurse staffing is one cause of the variation in death rates, and other adverse outcomes between hospitals.

Local determination

It does not necessarily follow that mandatory staffing levels are an effective approach to addressing the problem. In principle, the argument that staffing levels are best determined locally is appealing. However, the evidence available suggests that local determination is not sufficient to assure safety.

- The consequence of variation in staffing levels seen between hospitals does not clearly indicate the correct level of staffing on particular wards.

- However, our review for NICE found little evidence about the use of any formal systems for local determination of staffing levels.¹ Crucially we do not know whether patient outcomes / experiences are improved when such systems are used.
- In our RN4CAST study we found that most of the English Trusts we surveyed claimed to be reviewing nurse staffing regularly and a majority used formal tools to determine staffing levels.⁶
- Despite this, we still found that variation in staffing levels was substantial, with many Trusts routinely operating at staffing levels far below that recommended by international guidance or required by legislation, including the level of 1 registered nurse to 8 patients which was identified by NICE as a threshold.⁷
- Crucially, it also appears that this variation in staffing is still associated with variations in mortality.^{6 8} The Mid-Staffordshire enquiry and the more recent Keogh review also highlight staffing deficiencies.

It is hard to conclude that 'local determination' alone (with or without the use of tools) is sufficient to assure safe staffing levels.

Mandatory staffing

By contrast, there is some evidence that points to improved outcomes for patients and nurses associated with various mandatory safe nurse staffing policies.

- Evidence from studies of mandatory staffing policies in the US and Australia, while not conclusive, do suggest that hospitals that meet the mandatory ratios have better outcomes than those that do not. There is some evidence of improvement over time and little evidence of adverse consequences.⁹⁻¹⁵
- Benefits attributed to the policies include improved patient outcomes and improved staff outcomes, including hospital's abilities to recruit and retain staff.¹⁶
- I am not aware of an unbiased comprehensive high quality review of this evidence. It is of note that NICE explicitly excluded consideration of such policies from their evidence review for guidance "safe staffing for nursing in adult inpatient wards in acute hospitals".

It appears that mandatory minimum staffing policies, which allow staffing to flex above specified minimums, can be beneficial to patient care.

Identifying the minimums

Recommended minimum staffing levels can operate (broadly) in one of two forms. A ratio of patients per nurse or an average number of number of nursing hours per day that are to be available to patients on wards of a given type.

- Typically, mandatory ratios from other countries are in the range of 4–6 patients per nurse in general wards. Ratios recommended for care of older people wards are sometimes lower, although the rationale for this is far from clear.¹⁷
- NICE identified ratios exceeding 8 patients to 1 nurse as a threshold associated with increased risk of harm and advised additional steps to assure safety once if this threshold was exceeded.¹⁸ The emphasis is on assuring safety if the 8:1 threshold is exceeded, implying 8:1 is safe.
- This figure (8:1) is appears to originate from that identified by the Safe Staffing Alliance (SSA). It is worth noting therefore the basis of the Alliance's campaign.
- The SSA position is that a ratio of more than 8 patients per RN significantly increases the risk of harm and constitutes a breach in patient safety. This is the level at which care is definitely considered to be unsafe, putting patients at risk. The emphasis here is on demonstrating and determining a safe staffing level at a ratio of 8:1 or below.
- The figure of 8:1 does not directly emerge from any research evidence as a clear 'cut point'. However, for most UK studies where specific patient to nurse ratios can be identified, ratios above 8:1 are clearly in the higher risk group. However, insofar as there is evidence of a threshold, it may occur at a lower ratio than this. For example in our study on missed nursing care, rates of missed care were only significantly reduced for wards with the highest staffing levels, where nurses cared for about 6 patients or fewer (see figure 1 below).¹⁹

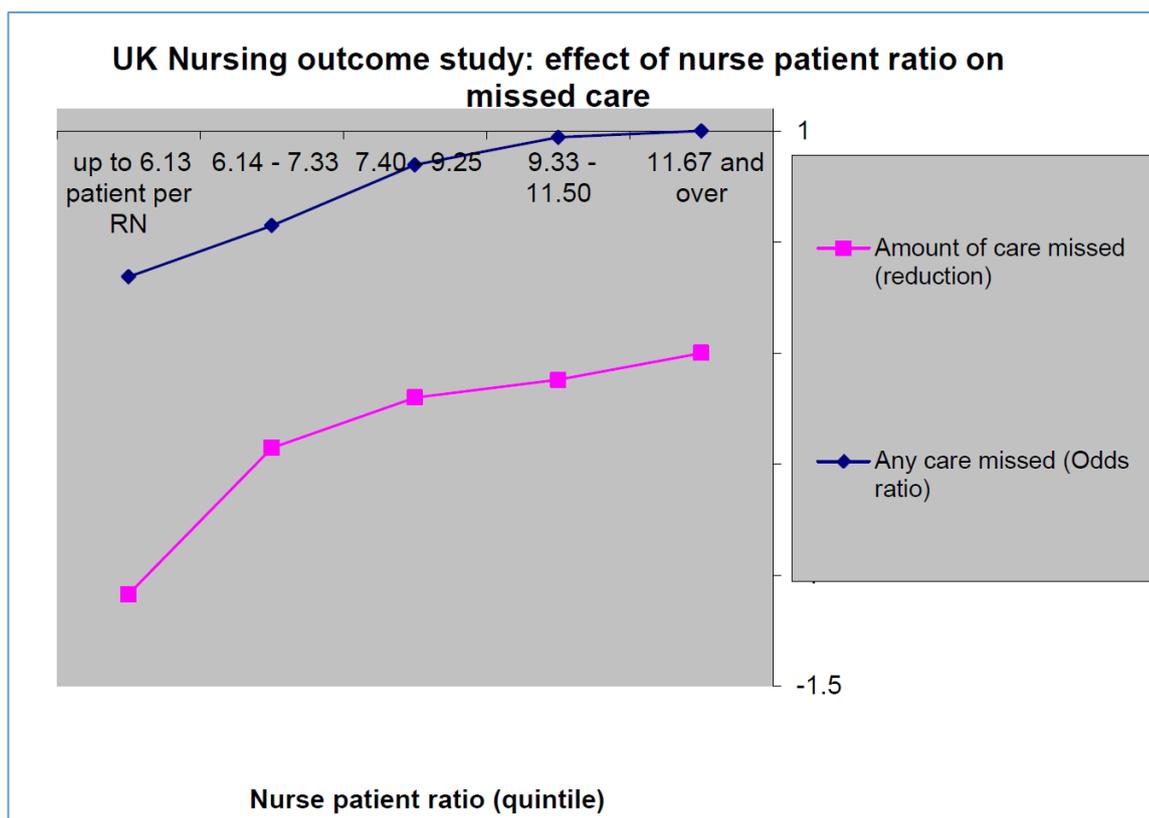


Figure 1: Data from 'Care left undone' during nursing shifts: associations with workload and perceived quality of care

- In all UK studies of nurse staffing patient outcomes, risk increases between the best-staffed hospitals compared to the next best-staffed group of hospitals. Risk is increased before staffing reaches levels that would be considered 'low' if benchmarked against the average (see addendum to the evidence review for the NICE safe staffing guidance¹).

The correct minimum staffing level cannot be derived solely from the scientific evidence base. Professional and indeed social judgement must be exercised. The international evidence points towards levels of staffing that are much higher than currently found in many hospitals the UK.

It is at least conceivable that while a policy that specifies a minimum level of (say) 6 patients to 1 nurse may have a positive effect, a policy that specifies a different level may have a different effect.

The 'correct' mandatory staffing level remains unclear. However, the widely recognised figure of 8 patients to 1 nurse should not be regarded as a safe level. Ratios from other countries general identify safe staffing minimums for general wards as between 4 & 6 patients per RN, depending on the setting.

Other considerations

While attention is focussed on mandating a staffing level, with the Safe Staffing Alliance campaign focussing on daytime staffing, consideration needs to be given to other factors.

- There is substantial evidence that night-time staffing in some units is extremely low.²⁰ There is a danger that focussing on daytime staffing could exacerbate this.
- One strategy for increasing the efficiency of the nursing workforce is a move from a three shift per day system to a 2 shift system. The potential advantages are efficiencies from reduced handovers and overlaps between shifts.²¹
- The 2 shift system also means that 'night time' staffing levels, typically much lower, can be operated for a longer period of the day.
- While it may indeed be that in many wards the requirements for nursing care are lower at night, a reduction in staff in this evening period is not necessarily warranted.
- There is growing evidence that these so called '12 hour shifts' are associated with poorer patient outcomes irrespective of the nurse to patient ratios.²²⁻²⁴ This could be in part because of reductions in the total amount of nursing care that is available or because of other factors.

While closely equivalent, mandating the average daily nursing hours per patient over 24 hours rather than the patient to nurse ratio at a given time, may be more appropriate than a mandatory ratio to be applied at particular times of day. This Nursing Hours Per Patient Day approach is taken in Western Australia.

The Nursing Hours Per Patient Day method gives some additional flexibility around how patient care is organised across the day but reduces perverse incentives to alter shift patterns and night-time staffing levels for reasons unrelated to patient need.

Conclusion

While the evidence is broadly in favour of mandatory minimum staffing levels, it is by no means conclusive and a careful, properly resourced evaluation of any such policy seems essential.

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