Royal College of Nursing

Mandatory Nurse Staffing Levels

Policy Briefing

03/12

March 2012

Royal College of Nursing
Policy & International Department
20 Cavendish Square
London
W1G 0RN

Telephone: 020 7647 3723
Fax: 020 7647 3498
Email: policycontacts@rcn.org.uk

Introduction

At RCN Congress 2011, our members voted overwhelmingly in favour of legally enforceable staffing levels to safeguard patient care (RCN, 2011b). This briefing paper provides background to our position, with an overview of the evidence around nurse staffing levels and the experiences of other countries who have introduced mandatory nurse-to-patient ratios.

In summary the case for moving to a system of mandated safe staffing levels is as follows:

1) There is a growing body of evidence which shows that nurse staffing levels make a difference to patient outcomes (mortality and adverse events), patient experience, quality of care, and the efficiency of care delivery.

2) Successive reports into care failings have highlighted the risks associated with employing too few nursing staff. The ongoing Francis Inquiry is looking into failings at Mid Staffordshire NHS Foundation Trust, where low staffing levels and skill mix were a significant factor.

.

3) Despite a number of research studies showing the correlation between higher nurse staffing levels and improved care outcomes, RCN members continue to report lower nurse-to-patient ratios than research suggests is safe, and the dissatisfaction this causes them.

4) The current NHS financial challenges and global economic downturn are leading to higher numbers of nursing posts being cut, and concerns exist over a significant dilution of the workforce and a greater reliance on health care support workers (HCSWs). The RCN's Frontline First campaign highlighted in its November 2011 report that over 56,000 posts that remain at risk in the UK until 2015 (RCN, 2011a).

These concerns should also be seen against the backdrop of NHS reform and its potential effects on patient care.

The RCN believes that mandatory nurse staffing levels would provide an important guarantee for patients during this challenging period.

Policy context

At present in the UK, nurse staffing levels are set locally by individual health care providers. This includes both the number of patients per nurse and the skill mix of staff (the number of registered nurses to unregistered HCSWs, and the mix of skills and experience of registered nursing staff). Both the Department of Health (England) and professional organisations (including the RCN) have produced guidance outlining recommended staffing levels for some care settings, however there is no compliance regime or compulsion on providers to follow these when planning services. A detailed list of current guidance can be found in Appendix 1.

NHS Trusts in England must provide adequate staffing in order to meet the pledge of the NHS Constitution (DH, 2009a) guaranteeing that patients are treated with a professional standard of care in an organisation that meets required levels of safety and quality. The Care Quality Commission (CQC) also takes into account staffing levels in its current inspection regime (CQC, 2012). The standards state that: "In order to safeguard the health, safety and welfare of service users, the registered person must 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."

In Scotland, standardised workforce planning tools are in place across the NHS. In addition, standards exist that cover inspections of the social care sector and NHS wards. These are currently under review. Local Health Boards (LHB's) in Wales undertake workforce planning within the context of Welsh Government guidance and oversight. Because workforce planning is essentially localised, with individual LHBs setting their own staffing establishments, there is significant variation in workforce models across NHS organisations in Wales. This issue has been recognised by the Welsh Government and it is likely that it will make a commitment in the future through a new *Human resources and Organisational Development Framework* to improving the situation, making more explicit workforce planning arrangements and addressing variations in workforce models across the NHS in Wales.

The RCN believes that standards used by commissioners and providers should be strengthened through the use of more specific benchmarks and ratios. Inspections, for example, may highlight where staffing is inadequate, but they do not prevent staffing levels being set too low in the first place and potentially affecting patient care. Focusing on staffing at this stage is retrospective rather than preventative.

In 2006 the RCN recommended the use of use of a 65:35 skill mix on acute general and surgical wards in England, where 65% of the staff should be registered nursing staff (RCN, 2006). Despite ongoing calls for investment in the nursing workforce and

warnings over the risk of short staffing, there has been minimal change in the nurse-to-HCSW skill mix as table 1 illustrates.

Table 1: The mix of registered nursing staff to HCSWs. Figures show the percentage of registered nursing staff on duty as a percentage of the total shift nursing staff (Ball and Pike, 2009 and RCN, 2011c).

Year	Older Persons	Mental Health	Children & Young People	Adult General Medicine & Surgery
2009	48%	50%	83%	62%
2011	49%	50%	80%	64%

Although valuable, the 65:35 ratio does not address how many patients a nurse should be allocated to care for, despite this being a recognised indicator of lower morbidity and mortality. The number of patients per nurse varies dramatically across sectors in the UK, as table 2 shows.

Table 2: Numbers of patients per nurse on "the last shift worked" (Ball and Pike, 2009).

Year	Older Persons care	Mental Health	Children & Young People	Adult General Medicine & Surgery
2009	11.3	9.2	4.6	9.1

The RCN's most recent employment survey (RCN, 2011c) found that over half (54.1%) of members working in the NHS have seen a reduction in staffing levels for registered nurses in the last year. 31% report that changes in staffing levels have led to increased caseload or workload.

A recent media report (Nursing Times, 2011) shows how skill mix varies greatly between different hospital trusts and between regions in England, with some acute trusts employing nearly twice as many HCSWs in relation to registered nurses as others. The RCN believes that these variations cannot be explained through clinical need alone and indicate the need for a more standardised system of nurse staffing as a safeguard against poor care.

The England-wide target to save £20 billion in the NHS through efficiency savings by 2015 (known as the "Nicholson Challenge") has put further pressure on providers to increase productivity while limiting costs. The Office of Budgetary Responsibility (2011) has increased its forecast of public sector posts to be lost to 710,000, many of which will be in health services. Our Frontline First campaign has shown that approximately 56,000 NHS posts in the UK have either been lost or are at risk, and that many trusts are downgrading staff and diluting skill mix (RCN, 2011a). Recent research commissioned by the RCN (Buchan and Seccombe, 2011) demonstrated the potential for the workforce to decline by 42,800 nurses by 2021/22.

This comes at a time of uncertainty for the NHS – the Health and Social Care Bill 2011 includes significant structural changes, some of which have been implemented "on the ground" during the Bill's passage through Parliament.

In April 2011, RCN Congress voted in favour of legally enforceable staffing levels to safeguard patient care in the current economic climate (RCN, 2011b). This led to the RCN actively supporting an amendment to the Health and Social Care Bill in December 2011 put forward by Baroness Emerton (RCN, 2011d). The amendment sought to guarantee safe nurse-to-patient and registered nurse-to-HCSW ratios. Although not passed by the Lords, the amendment successfully highlighted the importance of safe nurse staffing levels, and a number of peers from across the house spoke in support of the issue. The RCN has welcomed and is a member of the Nursing and Care Quality Forum, announced by the Prime Minister in January 2012. We would strongly encourage the forum to consider nurse staffing levels as part of the important work it will undertake.

The evidence – why nurse numbers matter

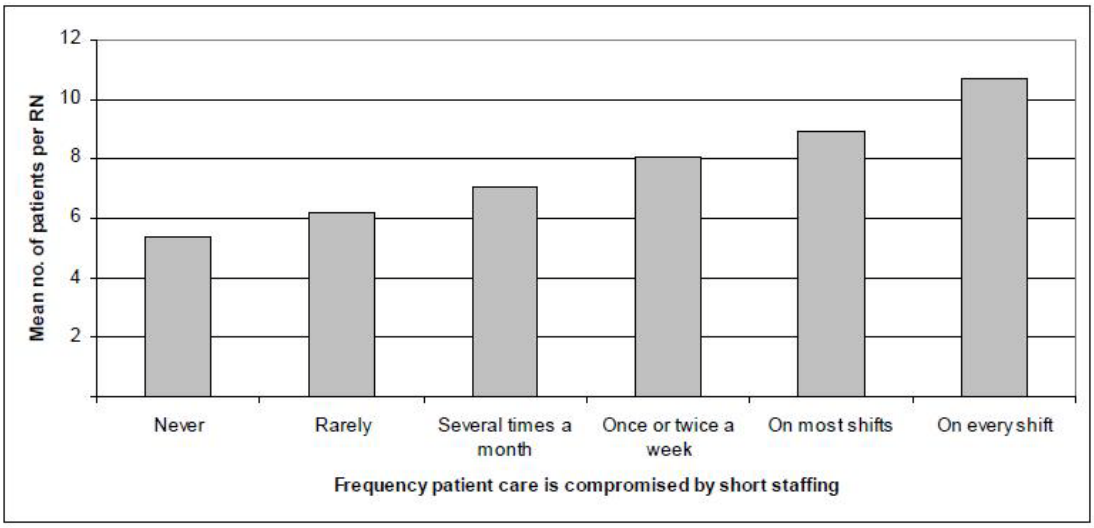
The RCN views safe staffing levels as an essential prerequisite to delivering quality patient care. As previously outlined in the RCN's guidance on safe nurse staffing levels (RCN, 2010), there is a wealth of evidence-based research across health systems worldwide showing the direct correlation between higher levels of nurse staffing and:

1. improved patient outcomes
2. improved recruitment and retention of nursing staff
3. economic benefits to employers and communities.

1. Improved patient outcomes

RCN research has shown that patient care is compromised by low staffing levels. For example, the RCN's 2009 employment survey showed that nurses who report that patient care is regularly compromised in their workplace have higher numbers of patients per nurse than those who rarely see patient safety compromised (Ball and Pike, 2009).

Figure 1: Frequency that patient care is compromised in NHS hospitals compared to the mean number of patients per RN (Ball and Pike, 2009)



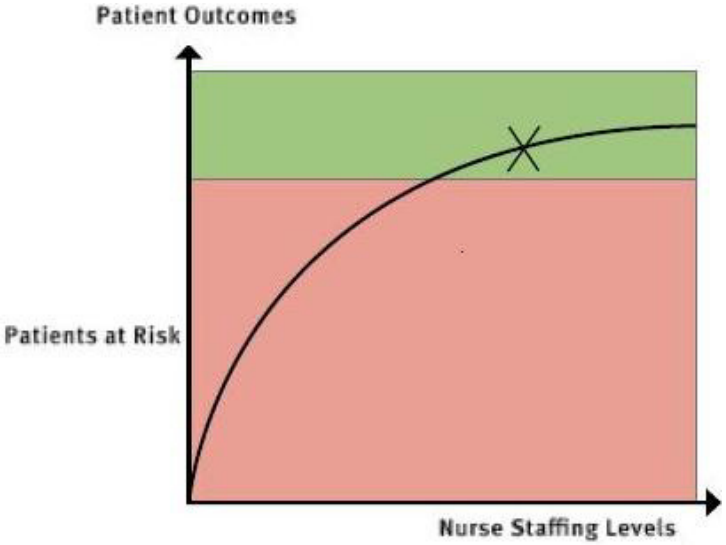
The RCN's most recent employment survey (RCN, 2011c) indicates that nurses in care of the elderly settings are still caring for on average 10 patients per shift.

In all the research detailed below, either patient satisfaction with care, nurse satisfaction with care delivered, or health related outcomes improve with higher staffing levels:

- The study by Rafferty et al. (2007) shows that in the UK "Patients and nurses in the quartile of hospitals with the most favourable staffing levels (the lowest patient to nurse ratios) had consistently better outcomes", and that there was a 31% difference in mortality between hospitals where staff care for eight patients compared to those who cared for four. The study found that 246 patients died because they were not in hospitals with the best nurse staffing levels.
- The study by Aiken et al. (2002a) carried out a cross national review of nurse staffing outcomes across Canadian, American, English and Scottish sites. It indicated that higher staffing levels led to higher nurse reported satisfaction with care given, resulting in better nurse retention and reduced reporting of nurse "burn out".
- In a study of Finnish patient satisfaction, Tervo-Heikkenen et al. (2008) found that once nursing staff were caring for more than eight patients, satisfaction with the care received dropped.
- Needleman et al. (2002) reviewed the association between increased registered nurse hours of patient care in medical and surgical settings in the United States. They demonstrated that this increase brought about "better care for hospitalised patients".

Figure 2 below summarises the relationship between nurse staffing and patient outcomes. While acknowledging that there comes a point of diminishing returns, it shows that where there is understaffing, quality patient care and safety will be put at risk (Ball and Catton, 2011).

Figure 2: The relationship between patient outcomes and nurse staffing levels (Ball and Catton, 2011).



2. Improved recruitment and retention of nursing staff

If nursing staff are to give the care they would want to give there must be sufficient staff on duty. Research has shown that nursing numbers not only make a significant difference to the quality of care delivered, but in addition also improve morale and aid workforce stability:

- The Boorman Report into the health and wellbeing of the NHS workforce (Boorman et al., 2009) found that potential efficiencies and savings could be generated by improving health and wellbeing. The report also found a link between staff health and patient safety, patient experience and the effectiveness of patient care.
- The NHS Institute for Innovation and Improvement (2008) recognises that poorly managed and designed workloads are a major cause of workplace stress.
- In the United States, a study by Aiken et al. (2002b) surveyed over 10,000 nurses across Pennsylvania and found that nurses in hospitals with the lowest nurse-to-patient ratios were twice as likely to suffer job related burn out and twice as likely to be dissatisfied with their role.
- A study by Gelsema et al. (2006) of hospital nurses in the Netherlands reported that time and physical demands at work were the strongest indicators of “emotional exhaustion”.

- A report from the American Agency for Healthcare Research and Quality (Kane et al., 2007) shows the impact on patient safety of nurse-sensitive indicators of care and excess workloads, for example how perceived or higher workloads resulted in a greater risk of patient falls.

The RCN's 2011 employment survey (RCN, 2011c) highlighted the worsening morale of the NHS nursing workforce. A greater number of respondents stated that their enthusiasm for their work was decreasing. Fewer than 50% of respondents now say they would recommend nursing as a career. Morale is decreasing as workloads and stress increase and half of all respondents say they are too busy to give the care they would want to give.

The RCN believe that the development of safe nurse-to-patient staffing ratios established nationally and used by commissioners and service regulators will significantly improve morale, wellbeing and retention of the nursing workforce.

3. The economic benefits of nursing to employers and communities

The RCN's submission to the Prime Ministers Commission on Nursing and Midwifery (RCN, 2009a) highlighted the economic and other benefits that are attributable to nursing. Evidence shows that investment in the nursing workforce can lead to reduced inpatient stays, better health outcomes and improved patient experience.

- A study by Dall et al. (2009) highlighted within the RCN's submission showed that while not all nursing work can be quantified to show pecuniary gain, there are clear cost savings and efficiencies to be made through investment in nursing.
- The RCN has shown how increased levels of registered nurse employment, and in particular specialist nursing, can realise savings for employers through delivering more efficient care (RCN, 2009a).
- In addition Thungjaroenkul et al. (2007) carried out a literature review covering 16 years of research for cost-benefit outcomes relating to higher nurse staffing. They showed that a registered nurse workforce with higher levels of knowledge and skills led to more effective patient care.

The RCN acknowledges that there would be some increased cost to some employers in meeting a new system of standard nurse to patient ratios. However the research above indicates the long term benefit in both efficiency and recruitment savings as these ratios become established. The willingness to meet the cost of new staffing levels "depends on the value patients and payers assign to avoidable deaths and complications" (Needleman, 2006).

The RCN believe that the development of safe nurse-to-patient staffing ratios established nationally and used by commissioners and service regulators would be of economic value to the NHS as a whole.

International experience of mandatory nurse staffing levels

California (USA)

The California Nurses Association (CNA) began lobbying for mandatory nurse-to-patient ratios in 1992 due to concerns over poor or missed care, the sustainability of the nursing workforce, and increasing demand on services. Legislation was introduced in 1999 and came into full effect in 2004.

Table 3 shows the mandated staffing levels across Californian care settings. The mandate provides a minimum number of nursing staff to patients that must be on duty, not including the ward manager. In the general medical and surgical ward, for example, the mandate is one nurse to five patients. It should be noted that the Californian mandate is a recognised minimum and a dependency or acuity system should be used to provide extra staff as needed.

Table 3: Mandatory nurse-to-patient ratios in California (CNA and NNOC, 2008).

Care setting	Number of registered nurses	Number of patients
Intensive/critical care	1	2
Neo-natal critical care	1	2
Operating room	1	1
Post-anaesthesia Recovery	1	2
Labour and delivery	1	2
Antepartum	1	4
Postpartum couplets	1	4
Postpartum women only	1	6
Emergency room	1	4
ICU pts in the ER	1	2
Trauma pts in the ER	1	1
Medical surgical	1	5
Other speciality care	1	4
Psychiatry	1	6
Paediatrics	1	4
Step down	1	3
Telemetry	1	4

California is still the only state in America with mandatory staffing levels, but the Washington State legislature is currently discussing mandatory ratios. Some states have legislated for committees to assess and plan nurse staffing. The membership of these has to be equal between nurse managers and “direct care nurses”. The role of these committees varies from state to state. For example, the state of Oregon

requires hospitals to act on the committee's recommendations, while Illinois requires only that the committee's views are given "significant weight and regard" (Gordon et al., 2008). Thrall 2008 highlighted the differing approaches to legislation in varying states but the common aim of increasing nursing's presence and voice in planning service delivery.

In May 2011 the National Nursing Shortage Reform and Patient Advocacy Act was tabled before the US House of Representatives as the first legislative step towards minimum nurse-to-patient ratios being set across all American hospitals, but failed to make it onto the statute book.

Benefits of the Californian mandate

Since their implementation, the issue of mandatory ratios has been a matter of ongoing debate by nurse researchers and academics. After a number of years, research indicates wider support for their use as a tool for improving patient care and providing successful staff management.

- A study by McHugh et al. (2011) carried out a longitudinal study of Californian hospital care since the introduction of mandatory levels and found that there were increases in overall staffing numbers and nurse hours per patient day.
- A study by Aiken et al. (2010) compared the workloads of nursing staff in California, Pennsylvania and New Jersey and found that the nurse-per-patient workload remained at or better than the prescribed mandate in California.
- Aiken et al. (2010) also found that the mandated staffing levels led to lower mortality rates than where the same staffing levels were not in use in similar care environments.

Australia

In Australia, two states have mandatory nurse staffing measures. Their development is part of negotiations over pay terms and conditions, with ratios or hours of nursing per bed per day being a part of some states' pay offers. This integral link to pay awards has led to industrial action after ratios were threatened as part of cost saving measures. Nursing staff have taken high profile industrial action and campaigned for their continuation with patient safety and workforce benefits integral to their campaigns.

In 2001, Victoria became the first state in Australia to implement a mandatory nurse-to-patient staffing levels. Again the concerns that the RCN continues to raise (patient safety, decreasing staff numbers, economic constraint and workforce casualisation) were those that the Australian Nursing Federation (Victorian Branch) highlighted in their campaign to get mandatory levels introduced.

Similar in design to the Californian mandate, the Victorian mandate prescribes the number of nursing staff to patients that must be in place across care settings.

Table 4: Mandatory nurse-to-patient ratios in Victoria (adapted from Gordon et al., 2008).

Care environment	Nurse-to-patient ratio		
	am shift	pm shift	night
General medical/surgical wards			
• Level 1 hospital	1:4 + in charge	1:4 + in charge	1:8
• Level 2 hospital	1:4 + in charge	1:5+ in charge	1:8
• Level 3 hospital	1:5 + in charge	1:6 + in charge	1:10
• Level 3a hospital	1:6 + in charge	1:6 + in charge	1:10
Hospitals other than levels 1, 2, 3, & 3a	1:6 + in charge	1:7 + in charge	1:10
All aged care wards	1:7 + in charge	1:8 + in charge	1:15
Acute wards	1:6 + in charge	1:7 + in charge	1:10
Ante/postnatal wards (all hospital levels)	1:5 + in charge	1:6 + in charge	1:08
Delivery suites levels 1, 2, & 3	all shifts 2 midwives to 3 delivery suites		
NICU (neonatal intensive care unit)	all shifts 1:2 + in charge		
Discreet level 2 special care units	a) where 10 or more cots: 1:3 on all shifts b) where less than 10 cots: 1:4 on all shifts		
Group 1 accident and emergency departments	1:3 + in charge + triage	1:3 + in charge + triage	1:3 + in charge + triage
Group 2 accident and emergency departments	1:3 + in charge	1:3 + in charge	1:3 + in charge
Designated coronary care unit	1:2 + in charge	1:2 + in charge	1:3
High dependency units (stand alone units in level 1 hospitals)	1:2 + in charge	1:2 + in charge	1:2
Palliative care	1:4 + in charge	1:5 + in charge	1:8
Rehabilitation and geriatric evaluation Management			
• *Category 1 rehabilitation*	1:5 + in charge	1:5 + in charge	1:10
• *Category 2 rehabilitation*	1:5 + in charge	1:7 + in charge	1:10
• Geriatric Evaluation management beds	1:5 + in charge	1:6 + in charge	1:10
Operating theatre	3 per theatre		
Post-anaesthetic care unit/recovery	All shifts 1:1 for unconscious patients		

The “level” of hospital in table 4 relates to the size and location of the hospital. As a guide, a level 1 hospital would be a large teaching and research centre. A level 3a hospital would be a medium country hospital (Gordon et al., 2008).

Within the Victorian mandate there is a degree of flexibility built in. The mandate allows employers to keep a baseline of one nurse to five patients, for example. However if a patient's condition worsens or an emergency arises, staff can be moved within the ward to deal with this. One nurse may only care for one patient with remaining patients spread among remaining staff. This degree of flexibility is commonly known as the 5:20 rule to ensure that there are always five nurses to 20 patients. If acuity varies across the patient group, then one nurse could be asked to care for more than the ratio prescribes while the need for extra care or extra staff is addressed (Gerdtz and Nelson, 2007).

New South Wales also has mandatory staffing ratios, introduced in 2010 (NSWNA, 2010). The ratios can be seen in table 5.

Table 5: Mandatory nurse-to-patient ratios in New South Wales (adapted from NSWNA, 2011).

Care environment	Nursing hours per patient day	Equivalent nurse-to-patient ratio		
		am shift	pm shift	night
General medical/surgical wards				
• Principal referral hospitals	6 hours	1:4	1:4 + in charge	1:7
• Major metropolitan and major non-metropolitan	5.5 hours	1:4	1:5 + in charge	1:7
• District group hospitals	5 hours	1:5	1:5 + in charge	1:7
Palliative care units	6 hours	1:4	1:4 + in charge	1:7
Inpatient mental health				
• Inpatient adult acute in general hospitals	6 hours	1:4	1:4 + in charge	1:7
• Inpatient adult acute in specialist mental health facilities	5.5 hours	1:4	1:5 + in charge	1:7
Rehabilitation				
• Specialist Brain and spinal injury units	6 hours	1:4	1:4 + in charge	1:7
• General Rehabilitation units	5 hours	1:5	1:5 + in charge	1:7

Benefits of the Victorian mandate

The nurse-to-patient ratio used in Victoria is still a relatively new system and research showing the beneficial outcomes to patient care continues to develop. However, there is evidence that the ratios have been beneficial to the nursing workforce, even if patient outcomes-related research is currently lacking.

- Simeons et al. (2005) state that the Victorian Government reported 2,650 nurses had re-entered the nursing workforce following the introduction of mandatory ratios, and that there was a 25% increase in applications to nurse education programmes.
- Gordon et al. (2008) report ratios as having bought about a renewed sense of pride in the nursing workforce, an increased ability to use clinical judgement, and improved team working.

South Korea

In 1999 the government of South Korea implemented financial management systems to ensure funding was per nurse per bed. This was due to concerns about dilution of the nursing workforce and to prevent care being carried out by family members, which was having a detrimental effect on patient care. The aim is that the ratio of nurses to patients should be no more than one nurse per 2.5 inpatients within general hospitals, or one nurse per two beds in tertiary units. Compliance with this regime is reportedly poor (Kim et al., 2005).

Conclusion

The evidence base in respect of nurse staffing levels, patient outcomes and the health of the nursing workforce is compelling and overwhelming. For many years the RCN has highlighted these critical relationships and developed policy, advice and guidance to support safe nurse staffing levels. However it is clear that responses to the current economic and efficiency challenges facing the NHS present a clear and present danger to both nurse staffing levels and patient safety.

In order to safeguard patient care, the RCN believes that now is the time to set more clearly defined standards and that mandatory nurse staffing levels must be adopted by providers, regulators and commissioners of health services. The RCN is committed to working with governments, health departments and key stakeholders to bring forward further staffing level recommendations. Our patients and the public have a right to a guarantee of safe nurse staffing levels.

Policy & International Department, RCN
March 2012

Appendix 1 – current staffing guidance in the United Kingdom

The following is taken from *Guidance on safe nurse staffing levels in the UK* (RCN, 2010).

Adult intensive care

The "gold standard" ratio of one registered nurse to one patient was set in 1967. This continued to be the standard for decades, until revised guidance produced jointly by the British Association of Critical Care Nurses (BACCN), British Association of Critical Care, and the RCN (BACCN, 2009) highlighted the complexity of teams and need for staffing to be planned to map local variation (in patient mix, unit/bed layout and team mix).

The general recommendations regarding staffing numbers were:

- every patient in critical care unit to have access to a registered nurse with post registration qualification in the specialty
- ventilated patients should have one nurse per patient
- the nurse-to-patient ratio of a unit should not fall below one nurse to two patients
- there should be a supernumerary clinical co-ordinator (senior critical care qualified nurse) for units of six beds or more.

Children and young people's community nursing

To enable every child and young person to have the right to be cared for at home unless hospital admission is required, the RCN recommends that an average-sized district with 50,000 children requires a minimum of 20 WTE community children's nurses (RCN, 2009b).

Children's wards and departments

The RCN has developed guidance for general paediatric wards.

Table 6: Minimum registered nurse-to-child ratios for general paediatric wards (RCN, 2003).

Child age	Number of nursing staff	Number of children
Under 2 years	1	3
Above 2 Day shifts	1	4
Above 2 night shifts	1	5

Neonatal services

British Association of Perinatal Medicine (2001) has developed recommended staffing levels for neonatal services.

Table 7: Recommended minimum registered nurse-to-child ratios (BAPM, 2011).

Care Setting	Number of Nursing Staff	Number of children
Intensive Care	1	1
High Dependency	1	2
Special Care	1	4

The Department of Health (2009b) has also produced best practice guidance for neonatal staffing. This recommends a nurse coordinator on every shift (in addition to those providing direct clinical care) and that units have a minimum of two registered staff on duty at all times (one of which holds a qualification in the specialty).

Table 8: Minimum nurse staff-to-infant ratios (DH, 2009b).

Care Area	Number of Nursing Staff	Number of Children	Skill Mix if identified
Intensive care	1	1	RN to have specialist training/qualification or be in post-reg training under supervision.
High dependency	1	2	RN to have specialist training/qualification or be in post-reg training under supervision.
Special care	1	4	Minimum of 70% registered nursing staff

Mental health: psychiatric liaison

The Royal College of Psychiatry (2010) has developed minimum staffing levels/skill mixes for psychiatry liaison teams serving different functions. The College states that these minimum staffing levels will need to vary to accommodate different deployment patterns or levels of need. For example, the suggested benchmark for a liaison team serving a general hospital with 650 beds and 750 new self-harm patients per year is:

- one medical consultant (10 programmed activity/sessions)
- one WTE Band 8 RN
- three WTE Band 7 RNs
- one Band 8 clinical psychologist
- 1.5 WTE Band 4 team PA.

Mental health: acute adult wards

In 1998, the Royal College of Psychiatrists stated: “It is unlikely that a ward of 15 acute patients could be safely managed with less than three registered nurses per shift during the day and two at night, irrespective of other staff available.”

Children and adolescent in-patient psychiatry units

The primary focus of the Royal College of Psychiatrists (1999) guidelines relates to shift ratio – ensuring that the specific number of staff on a particular shift relates to the number of patients cared for during that shift. For example, the report suggests a ratio of 1:3 at night for ”high” dependency patients, or two staff plus additional on-call for emergency for ”low” dependency patients.

Nursing homes

The Regulation and Quality Improvement Authority (2009) in Northern Ireland produced guideline staff-to-patient ratios and skill mix for this care setting. They proposed that nursing homes are staffed so that over a 24-hour period there is an average of 35% registered nurses and 65% HCSWs.

Table 9: Guideline skill mix for nursing homes (RQIA, 2009).

Shift	Number of nursing staff	Number of patients	Suggested skill mix RN/HCSW
Early Shift	1	5	35%: 65%
Late Shift	1	6	35% : 65%
Night Shift	1	10	35% : 65%

References

Aiken L H, Clarke S P and Sloane D M (2002a) Hospital staffing, organization, and quality of care: cross-national findings, *International Journal for Quality in Health Care,* 14 (1), pp.5-13.

Aiken L H, Clarke S P, Sloane D M, Sochalski J and Silber J H (2002b) Hospital nurse staffing and patient mortality, nurse burnout, and job dissatisfaction, *Journal of the American Medical* Association, 288 (16), pp.1987-1993.

Boorman S et al. (2009) *NHS health and well-being – final report*, London: DH.

Ball J and Catton H (2011) Make sure nurse numbers add up, *Health Service Journal*, 12 May 2011, pp.20-22.

Ball J and Pike G (2009) *Past imperfect, future tense - nurses' employment and morale in 2009*. London: RCN.

British Association of Critical Care Nurses (2009) *Standards for nurse staffing in critical care*, Newcastle-Upon-Tyne: BACCN.

British Association of Perinatal Medicine (2001) *Standards for hospitals providing neonatal intensive and high dependency care* (2nd edition) and categories of babies requiring neonatal care, London: BAPM.

Buchan J and Seccombe I (2011) *A decisive decade – mapping the future NHS workforce*. London: RCN.

California Nurses Association and National Nurses Organizing Committee (2008) *The ratio solution*, Oakland, California: California Nurses Association.

Care Quality Commission (2012) *The essential standards*. Available at: www.cqc.org.uk/organisations-we-regulate/registered-services/essential-standards (accessed 02/03/12) (Web).

Dall T M, Chen Y J, Seifert, R F, Maddox P J and Hogan P F (2009) The economic value of professional nursing, *Medical Care*, 47 (1), pp.97-104.

Department of Health (2009a) *The Handbook to the NHS Constitution*, London: DH.

Department of Health (2009b) *Toolkit for high-quality neonatal services*, London: DH.

Gerdtz MF and Nelson S (2007) 5-20: A model of minimum nurse-to-patient ratios in Victoria, Australia, *Journal of Nursing Management,* 15 (1), pp.64-71.

Geselma T I, van der Doef M, Maes S, Janssen M, Akerboom S and Verhoeven C (2006). A longitudinal study of job stress in the nursing profession: causes and consequences, *Journal of Nursing Management*, 14 (4), pp.289-99.

Gordon S, Buchanan J and Bretherton T (2008) *Safety in numbers: nurse-to-patient ratios and the future of health care*, Itheca, New York: Cornell University Press.

Kane R L, Shamliyan T, Mueller C, Duval S and Wilt T J (2007) *Nursing staffing and quality of patient care*, Rockville, Maryland: Agency for Healthcare Research and Quality.

Kim Y M, June K J and Cho S H (2005), Factors related to nurse staffing levels in tertiary and general hospitals, *Journal of Korean Academy of Nursing*, 35 (8), pp.1493-1499.

McHugh M D, Kelly L A, Sloane D M and Aiken L H (2011) Contradicting fears, California's nurse-to-patient mandate did not reduce the skill level of the nursing workforce in hospitals, *Health Affairs*, 30 (7), pp.1299-1306.

Needleman J, Buerhaus P, Mattke S, Stewart M and Zelevinsky K (2002) Nurse-staffing levels and the quality of care in hospitals, *New England Journal of Medicine*, 346 (22), pp.1715-1722.

Needleman J, Buerhaus P I, Stewart M, Zelevinsky K and Mattke S (2006) Nurse staffing in hospitals: Is there a business case for quality?, *Health Affairs*, 25 (1) pp.204-211.

New South Wales Nurses' Association (2010) *What is the nurse staffing ratio claim.* Available at: www.nswnurses.asn.au/news/28970.html (accessed 12/03/12) (Web).

New South Wales Nurses' Association (2011) The offer on ratios, *The Lamp*, 68 (1).

NHS Institute for Innovation and Improvement (2008) *Quality and service improvement tools – managing stress*. Available at: www.institute.nhs.uk/quality_and_service_improvement_tools/quality_and_service_improvement_tools/human_dimensions_-_managing_stress.html (accessed 01/03/12) (Web).

Nursing Times (2011) Gulf in skill mix between hospital trusts revealed, *Nursing Times*, 107 (42).

Office of Budgetary Responsibility (2011) *Economic and Fiscal Outlook November 2011*, London: Stationary Office.

Rafferty A M, Clarke S P, Coles J, Ball J, James P, McKee M and Aiken L H (2007) Outcomes of variation in hospital nurse staffing in English hospitals: cross-sectional analysis of survey data and discharge records, *International Journal of Nursing Studies*, 44 (2), pp. 175-182.

Regulation and Quality Improvement Authority (2009) *Staffing guidance for nursing homes*, Belfast: RQIA.

Royal College of Nursing (2003) *Defining staffing levels for children's and young people's services*, London: RCN.

Royal College of Nursing (2006) *Setting appropriate ward nurse staffing levels in NHS acute trusts*, London: RCN.

Royal College of Nursing (2009a) *Submission to the Prime Minister's Commission on Nursing and Midwifery*, London: RCN.

RCN (2009b), *A child's right to care in the home*, London: RCN.

Royal College of Nursing (2010) *Guidance on safe nurse staffing levels in the UK*, London: RCN.

Royal College of Nursing (2011a) *Frontline First – November 2011 update*, London: RCN.

Royal College of Nursing (2011b) *Congress 2011 agenda – 8 Safe staffing levels*. Available at: www.rcn.org.uk/newsevents/congress/congress_2011/congress_2011_agenda/8._safe_staffing_levels (accessed 05/03/012) (Web).

Royal College of Nursing (2011c) *Views from the frontline – RCN employment survey 2011*, London: RCN.

Royal College of Nursing (2011d) *Royal College of Nursing briefing on amendment 139 to the Health and Social Care Bill 2011 (Committee of the Whole House)*, London: RCN.

Royal College of Psychiatrists (1999) *Guidance on staffing of child and adolescent in-patient psychiatry units*, London: Royal College of Psychiatrists.

Royal College of Psychiatrists (2010) *Quality standards for liaison psychiatry services* (2nd edition), London: Royal College of Psychiatrists.

Simeons S, Villeneuve M and Hurst J (2005).*Tackling Nurse Shortages in OECD Countries*, Paris: OECD.

Thrall T H (2008) Nurse Staffing Laws: Should You Worry?, *Hospital Health Networks*, 82 (4), pp.36-39.

Tervo-Heikkinen T, Kvist T, Partanen P, Vehviläinen-Julkunen K and Aalto P (2008) Patient satisfaction as a positive nursing outcome, *Journal of Nursing Care Quality*, 23 (1), pp. 58-65.

Thungjaroenkul P, Cummings GG and Embleton A (2007) The impact of nurse staffing on hospital costs and patient length of stay: a systematic review, *Nurse Economics*, 25 (5), 255-265.