
RCN Policy Unit

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Setting Appropriate Ward Nurse Staffing Levels in NHS Acute Trusts

ABSTRACT

This policy document draws together:

- Research evidence linking registered nurse numbers and expertise to patient outcomes
- Nursing workforce and nurse staffing levels data
- Methods available for setting nurse staffing levels
- Discussion about setting nurse: patient ratios

It provides guidance and principles on how to review ward staffing levels including the recommendation that a benchmark ward establishment skill mix ratio is set at 65% registered nurses : 35% health care assistants unless or until a thorough staffing review is undertaken in accordance with RCN principles.

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Setting Appropriate Ward Nurse Staffing Levels in NHS Acute Trusts

Introduction

The determination of appropriate nurse staffing levels has been a long term concern within the nursing profession. The RCN has undertaken several initiatives in this area in the past^{1 2 3}. However there is no consensus in the UK or internationally about two key issues:

- Nationally set mandatory nurse staffing levels⁴ (see Appendix 1)
- Universal agreement about a tool to measure and model ward staffing requirements (see Appendix 3)

At a recent RCN event for Directors of Nursing on ward nurse staffing levels, there were a range of views on the feasibility and usefulness of the RCN setting nurse staffing levels or endorsing a particular tool for modelling staff resources. This RCN paper sets out principles to underpin appropriate ward nurse staffing levels and the components of nurse staffing reviews. It does not endorse a particular tool for determining staffing levels or suggest set nurse staffing numbers.

However skill mix ratios within the staffing establishment for general NHS wards have remained at an average of between 62% - 68% registered nurses and 38% to 32% health care assistants⁵ over the last 5 years whilst patient acuity⁶ and bed occupancy have all increased⁷. This is an average figure and on some wards – for example those with general specialisms such as cardiac patients -- the appropriate skill mix ratio for the ward establishment is (and should remain) higher. But, because of the pressure of financial deficits and downward impact on nurse staffing costs, the RCN recommends that a skill mix ratio of 65% registered nurses to 35% health care assistants is regarded

¹ Scott, C.(2001) *Setting Safe Nurse Staffing Levels: A Discussion Paper* RCN :London

² RCN Scotland (2005) *Right for Nurses, Right for Patients* RCN Scotland

³ West et al (2004) *The Future Nurse: Evidence of the Impact of Registered Nurses* Universities of London and York/ RCN: London

⁴ However RCN Scotland as part of a campaign 'Right for Nurses, Right for Patients' is calling on the Scottish Parliament to introduce a statutory mechanism (rather than numbers or a formula) to ensure health organisations at local level adopt appropriate (not minimum) nurse staffing levels. The opportunity to do this arises from a successful RCN sponsored amendment to the NHS Reform Act Scotland (2004) which places a duty on NHS Scotland to workforce plan.

⁵ Exact titles may vary – the term health care assistant is used here to denote non registered staff who work with nurses to provide direct clinical care

⁶ The term acuity is used here to denote severity of illness

⁷ Employment Research (2003) *RCN Snapshot Survey 2003* RCN: London

as the *benchmark* for the general ward nurse staffing establishment, unless or until a thorough review of ward staffing levels in accordance with RCN principles has taken place.

This paper also maps information on the following:

- Nursing workforce and staffing levels data
- Research that links registered nurse numbers to a range of outcomes
- Methods available for setting nurse staffing levels
- Discussion about mandatory set nurse: patient ratios

The policy documents and directives referred to are English but in practical terms the challenges of staffing wards are very similar in the other UK countries⁸. The focus is NHS acute hospital wards rather than specific settings such as accident and emergency departments, intensive care units or day surgery units where staffing requirements will be different from general wards - although some of the findings are transferable. This paper does not address specialist nurse numbers outwith the ward establishment either.

The aim of the paper is to inform and foster debate on nurse staffing levels and encourage prioritisation of work on nurse staffing to optimise the contribution of nursing to clinical practice, quality and cost effectiveness. The RCN believes this is essential for the protection of patient care and nursing excellence.

⁸ The policy context in Scotland is set out in Nursing and Midwifery Workload and Workforce Planning Project and stems from the NHS Reform Act (2004) which places a statutory duty on NHS Scotland to workforce plan.

Nurse Staffing: The Context

The 2005 Healthcare Commission report *Ward Staffing*⁹ investigated links between nursing workforce composition, health of the workforce and patient outcomes using available data from trusts. It found an increase in the amount of clinical/ quality data collected by trusts but inadequate baseline data for relating nurse staffing levels to NHS patient care and outcomes (which earlier work by the Audit Commission in 2001¹⁰ corroborates). There was no rationale behind ward staffing levels and the Healthcare Commission concluded that these appear to be based on tradition and/or cost constraints rather than patient need or outcomes.

Other key findings are:

- Higher levels of bank and agency nursing staff relate to lower levels of patient satisfaction
- Patient satisfaction and clinical outcomes such as the incidence of pressure sores relate more to the numbers of experienced and skilled registered nurses employed by trusts (rather than total numbers of registered nurses in the workforce per se)

However we do know from the annual RCN Employment Surveys that skill mix ratios within the staffing establishment for general NHS wards have remained at an average of between 62% - 68% registered nurses and 38% to 32% health care assistants¹¹ over the last 5 years, whilst patient acuity¹² and bed occupancy have all increased¹³. This is an average figure and on some wards – for example those with general specialisms such as cardiac patients - the appropriate skill mix ratio for the ward establishment is (and should remain) higher. But, because of the pressure of financial deficits and downward impact on nurse staffing costs, the RCN recommends that a skill mix ratio of 65% registered nurses to 35% health care assistants is regarded as the benchmark for the general ward nurse staffing establishment, unless or until a thorough review of ward staffing levels in accordance with RCN principles has taken place.

The ward establishment figures are not identical to ward staff available for work, because of absences due to sickness, maternity leave and study leave, or because of unfilled posts and vacancies. Nor do they necessarily match the skill mix ratio per working shift, as there is a tendency for a higher ratio of health care assistants to work the early shift, presumably to help with essential nursing care. However, interestingly as set out in the following

⁹ Healthcare Commission (2005) *Ward Staffing* Healthcare Commission: London

¹⁰ Audit Commission (2001) *Acute Hospital Portfolio – Ward Staffing* Audit Commission: London

¹¹ Exact titles may vary – the term health care assistant is used here to denote non registered staff who work with nurses to provide direct clinical care

¹² The term acuity is used here to denote severity of illness

¹³ Employment Research (2003) *RCN Snapshot Survey 2003* RCN: London

table, as an *average* for day and night shifts across all wards, a skill mix ratio of between 62% to 66% registered nurses and 34% to 38% health care assistants has remained more or less constant over the last 5 years:

Staffing and Patient Data for NHS Hospital
Wards in 2001 and 2005¹⁴

	2001		2005	
	Day	Night	Day	Night
Number of beds	24	24	23.4	22.7
Total number of patients	22	22	22	21
Number of Registered Nurses (RNs) on duty	3.2	2.3	3.3	2.4
Number of HCAs/Auxiliaries on duty	2.1	1.3	2.1	1.3
Mix - % of nursing staff that are RNs	62%	65%	62%	66%
Patients cared for by individual respondent (mean)	10.6	14.6	10.3	13.5
Patients per RN (mean across ward)	8.0	11.1	7.7	10.1
Patients per nursing staff (mean across ward)	4.4	6.3	4.4	6.1

The majority of nurses surveyed by the RCN in 2005 believed there were still not enough registered nurses on the wards to provide a good standard of care¹⁵. Given that patient acuity and bed occupancy have all increased¹⁶, this is not surprising. Nurses still report they work beyond their contracted hours, and this has remained relatively stable over the last 10 years with around 60% of nurses who work full time reporting they work an additional 6 hours

¹⁴ Employment Research/RCN 2002 and 2005

¹⁵ Ball, J. and Pike, G. (2005) *Managing to Work Differently: Results from the RCN Employment Survey 2005* RCN: London

¹⁶ Employment Research (2003) *Op Cit*

unpaid overtime per week¹⁷. The RCN considers this to be evidence of a remaining underlying shortage of nursing staff.

The above also relates to the concept of health care workforce productivity, currently in vogue¹⁸. There is no universal agreement or consistency in how this is measured although the Office for National Statistics estimates NHS productivity by dividing health care outputs by inputs¹⁹. However, given that bed occupancy rates now average at between 97 – 99% on NHS general medical and surgical wards²⁰, and staffing levels appear to have remained more or less the same but with increases in patient acuity overall, and patient throughput (length of hospital stay) in surgical settings, it would seem reasonable to assume that nurse productivity has increased. The current average bed occupancy rates are not sustainable in the longer term given the pressure on nurse workload.

This is not just about nursing workload though – for there is a growing body of evidence that links higher proportions of registered nurses on the ward with better clinical and quality patient outcomes. An independent review of high quality research studies by the Universities of London and York²¹ concluded that there was evidence to suggest more registered nurses in the nursing workforce were associated with improvements in:

- Patient mortality
- Incidence of respiratory, wound and urinary tract infections
- Number of patient falls
- Incidence of pressure sores
- Medication errors
- Patient functional independence
- Patient experience and perception of health care

The research is summarised in Appendix 2.

The context of financial deficits and pressures and related loss of posts and vacancy freezes²², means that nurse leaders are under intense pressure to make decisions about levels of nurse staffing -- acute trusts spend an average of 30% of their budgets on staffing their wards²³. Given the impetus to reach 'quick fix' solutions in an attempt to achieve financial balance trust boards need to be influenced to make considered and evidence based decisions about appropriate levels of nurse staffing, as ad hoc change at high speed threatens to ignore existing evidence linking nurse staffing to patient

¹⁷ Ball, J. and Pike, G. (2005) *Op Cit*

¹⁸ Department of Health (2006) *Chief Executive's Report to the NHS: June 2006* Department of Health

¹⁹ Office for National Statistics (2006) 'Public Service Productivity' *Economic Trends* 628 ONS: London

²⁰ Employment Research (2003) *Op Cit*

²¹ West, E., et al (2004) *Op Cit*

²² RCN (2006) *Evidence to the Health Select Committee Inquiry into Deficits* RCN: London

²³ Healthcare Commission (2005) *Op Cit*

outcomes, and in the longer term is likely to impact upon health care costs and patient outcomes such as longer hospital stays or the development of complications such as infection. The RCN wants nurses to use this paper and the information within it including the benchmark of a ward staffing establishment of 65% registered nurses: 35% health care assistants as a tool to influence trust board and manager decisions on nurse staffing.

Background Nursing Workforce Data

Total numbers of registered nurses have increased over the last seven years by (whole time equivalents)²⁴:

- England 23%
- Scotland 10%
- Wales 17%
- Northern Ireland (18%)

This increase in nursing numbers needs to be put into the context though of:

- Considerable reductions in the registered nurse workforce numbers in the 1990's from which we are only just recovering
- A similar percentage growth in the number of doctors and allied health professionals
- A much greater growth in healthcare assistants at around 95%²⁵
- Differences between the four UK countries in numbers of registered nurses per population head
- The nursing population as an ageing workforce with around 16% of nurses on the nursing register aged over 55 years, with consequent impact on future nurse numbers as they retire²⁶.

However workforce analysis in the UK is neither sophisticated nor detailed and therefore we do not know with certainty where the increased numbers and 'extra' nurses were deployed and into which health sector, for example NHS acute or mental health care, independent sector, NHS Direct. The RCN believes they haven't appeared in some community specialisms such as practice nursing or health visiting, as these numbers have remained static and district nurse numbers have declined²⁷. They do not appear to have been significantly employed in NHS general wards either given that registered nurse: patient ratios appear to have remained the same over the last 5 years.

²⁴ DH Statistical Bulletin 2005/04; Northern Ireland – DHSSPSNI; Scotland – ISD Workforce Statistics; Wales – SB20/2005.

Note: Figures are rounded and England data includes bank nurses whereas the other three countries do not

²⁵ Buchan, J. and Seecombe, I. (2005) *Past Trends, Future Imperfect? A Review of the UK Nursing Labour Market 2004/5* RCN: London

²⁶ Buchan, J. and Seecombe, I. (2005) *Op Cit*

²⁷ Buchan, J. and Seecombe, I. (2005) *Op Cit*

Changing Health Care Roles

Registered nurses have a great deal to contribute to more efficient and appropriate health care services and continue to adapt and change their practice. Working differently is not just an issue for nursing staff though – as Lord Warner told the medical profession²⁸, changes in skills of other staff will also impact upon doctors and what they do. All who work in clinical health care are affected by changes such as the creation of new health care roles²⁹, skills extension in existing health professions, ‘substitution’ between professions and grades³⁰ and the increase in the number of assistants to professionals across the public sector³¹. Who does what, what technologies they use, in what clinical environments and how staff are educated, will also impact on the nature and volume of health care work.

Therefore the number, competence and deployment of registered nurses – both ward nurses and specialist nurses – need to be seen as a dynamic equation as roles change across the health care workforce. For example 63% of nurses reported a change in their role since they took up post³².

Registered nurses are also part of a wider nursing and ward team and setting appropriate ward nurse staffing levels must take into consideration not only numbers of registered nurses but also the appropriate use of them in providing health care. The role of health care assistants has developed enormously, and along with the development of housekeeping, administrative and secretarial roles can support registered nurses to use their time to best effect. However this message has not been widely enacted upon and registered nurses still undertake work that others could fulfil. For example Ball and Pike³³ found that whilst more than 75% of Staff Nurse (D/E grade) time was in clinical work, 26% of their total time was spent on clerical work. Work by Keith Hurst on modelling ward nurse staffing found that introduction of ward housekeeping roles can increase the time registered nurses spend in direct patient care by 10%³⁴.

²⁸ Speech by Lord Warner, Minister of State for NHS Delivery (Lords), 5 October 2005, Joint Consultants Committee Conference *Breaking with Tradition: The Future Role of Doctors in UK Healthcare*

²⁹ <http://www.gms.nhs.uk/core/dtw/assistant.htm> Assistant Practitioner scheme

³⁰ *Agenda for Change* replaces ‘grades’ with ‘bands’. In this paper ‘grade’ is used to signify the different levels of competence practitioners exhibit

³¹ Community Support Officers in the Police, Teaching Assistants in education, Health Care Assistants in the NHS

³² Ball, J. & Pike, G. (2005) *Op Cit*

³³ Ball, J. & Pike, G. (2005) *Op Cit*

³⁴ Hurst, K. (2006) *Presentation to RCN Event for Directors of Nursing on Setting Appropriate Ward Nurse Staffing Levels* May 8th

How to Review Ward Nurse Staffing

There are four key components to ward nurse staffing reviews:

- Choosing appropriate indicators relevant to nursing
- Choosing a combination of methods for reviewing ward nurse staffing
- The timing of the review of ward nurse staffing
- Nurse leadership

Choosing Appropriate Indicators Relevant to Nursing

Indicators are defined in slightly different ways but generally are accepted to be measurement tools that aid the monitoring, evaluation and improvement of patient care. The challenge lies in identification of indicators that reflect the nursing contribution to care and are sensitive to changes in nursing inputs. Good quality data has to be generated for meaningful results but can be time consuming to collect and analyse. An RCN mapping exercise in 2005³⁵ found that data collected at ward level could begin to form the basis for developing patient care and patient outcome indicators relevant to nursing. Some relevant data is already collated for internal and external scrutiny by a number of agencies such as the Healthcare Commission, Health and Safety Executive, National Patient Safety Agency, Clinical Negligence Scheme for Trusts and the Risk Pooling Scheme for Trusts. Data from adverse incident reporting mechanisms within NHS trusts is also available such as:

- Medication errors
- Needlestick incidents
- Patient slips, trips and falls
- Serious healthcare associated infections/outbreaks (not all NHS trusts are currently collecting data on all HCAs by ward)
- Patient complaints
- Serious untoward incidents

No one set of indicators can cover the entire breadth of the nursing contribution to patient health care so the development of data into indicators relevant to nursing has to be focussed - and also add value to nursing practice in that they are actionable and can lead to change. The following list of topic areas – whilst not exhaustive - is suggested as useful:

³⁵ Watterson, L., and Currie, L. (2005) *Report on Nursing Indicators Mapping Exercise* RCN: London (unpublished report)

Patient Perspective

- **Approaches**

The patient perspective is essential and could be drawn from sources such as trust patient experience/satisfaction surveys. Patient sensitive measures such as review of effective symptom control or pain management form another important approach.

Patient Safety

- **Pressure Ulcers**

Data on pressure ulcers is already collected by NHS trusts. However there are definitional and interpretation problems including categorisation of pressure ulcer severity that makes comparison within and between hospitals difficult³⁶. This needs to be remedied as pressure ulcers are preventable and relate to the quality of nursing care. Work on this is underway involving the RCN, EPUAG (European Pressure Ulcer Audit Group) and the NHS's Clinical Governance Support Team.

- **Patient Falls**

Trusts already collect data on patient falls and research (see Appendix 2) suggests falls are linked to registered nurse staffing levels. The RCN has guidelines on this issue³⁷.

- **Cleanliness of Care Environments**

The cleanliness of ward environments is a key component of safety, important to patients and should form part of the ward managers responsibility for the environment of care, for example staff and visitor hand washing and cleaning standards. Therefore a measure of the cleanliness of the ward environment might usefully be explored.

Nursing Activity

- **Patient Nutrition and Feeding**

The relationship between registered nurse input and patient nutritional outcomes is not clearly defined although previous research suggests the standard of nutritional care on wards may be a good predictor of overall quality of nursing care³⁸. Nutrition is also a key standard within the Essence of

³⁶ Healthcare Commission (2005) *Op Cit*

³⁷ RCN (2004) *Clinical Practice Guidelines for the Assessment and Prevention of Falls in Older People* RCN: London

³⁸ Savage, J. and Scott, C. (2005) *Patients' Nutritional Care in Hospital: An Ethnographic Study of Nurses Role and Patients Experience* RCN: London

Care benchmarks so arguably already a potential indicator of nursing input. A survey report by the Healthcare Commission³⁹ found that of patients who needed help to eat their meals, 18% said they never received help and 21% only sometimes (39% in total).

- **Length of Hospital Stay**

Good quality care should result in timely discharge of patients and time by which a patient's planned discharge is delayed, and the reasons for the delay, are arguably indicators relevant to nursing – but dependant upon whether nurses have been given authority to discharge patients when clinically fit to leave their acute hospital bed

- **Care Planning**

The absence of a nursing care plan, or failure to create and use one that is relevant, comprehensive and up-to-date, is data that is not collected nationally but could be useful in determining the impact of registered nurse input.

- **Communication**

Ward staff have a key liaison and co-ordinating role that contributes to many aspects of patient care. The role of nurses in communication amongst clinical teams, and with patients and their relatives/carers, is very important to patient satisfaction and quality care.

- **Infection Control**

All health care staff have responsibilities for infection control and reduction but there are some specific areas relevant to nursing such as the prevalence of urinary tract infections amongst catheterised patients.

³⁹ Healthcare Commission (2006) *Survey of Inpatients 2005* Healthcare Commission: London

Choosing Methods for Reviewing Ward Staffing Levels

Many hospitals do not have a systematic approach to choosing or using methods to review ward staffing levels and there is no agreement about the 'best' method or tool to use'. There are essentially two different approaches:

- measuring nurse staffing levels and their impacts on outcomes (patient, staff and organisational)
- measuring what staff actually do

These are of course related but methods in use at present are centred on the second approach – measuring what staff actually do - as standardised means of capturing nursing impacts at ward level are not yet available.

There are advantages and disadvantages to the different methods and tools used to model staffing levels⁴⁰ (and also a view that none of them are able to capture the communication and 'emotional labour' aspects of nursing work⁴¹ although not in itself a reason for not reviewing ward staffing). Hurst⁴² reviewed the five commonest workforce planning methods used in UK alongside an extensive review of the nursing workforce planning literature. He categorised and tested each of the systems as:

- Professional judgement approach
- Nurse per occupied bed method
- Acuity-quality method
- Timed-task/activity approaches
- Regression-based systems.

The detail of these is set out in Appendix 3.

Hurst concurs with research by Cockerill et al⁴³ that different systems applied to the same care environment can give different answers, and so recommends combining two or three methods to improve validity of the results. Standardising the methods chosen within organisations is important too for internal consistency and comparison⁴⁴.

⁴⁰ Hurst, K. (2003) *Selecting and Applying Methods for Estimating the Size and Mix of Nursing Teams* Nuffield Institute of Health: Leeds

⁴¹ ICN (2006) *Safe Staffing Saves Lives: Information and Action Tool Kit International Nurses Day 12 May 2006*

⁴² Hurst, K. (2003) *Op Cit*

⁴³ Cockerill, R. et al 1993 'Measuring Nursing Workload for Case Costing *Nursing Economics* 11(6)

⁴⁴ Audit Commission (2001) *Op Cit*

⁴⁴ Hurst, K. (2003) *Op Cit*

The Timing of Nurse Staffing Reviews

Staffing reviews should be undertaken regularly and the Healthcare Commission⁴⁵ suggests this should be at least 2-3 yearly. The RCN recommends reviews should also be conducted (in paediatric services but has a wider applicability) when there is:

- An increase in patient complaints and adverse incidents
- An increase in healthcare associated infections
- Falling care standards and failures to follow policies and procedures
- An increase in staff turnover
- Poor clinical placements evaluations from students
- Low staff morale
- Failure to ensure staff access essential training
- Insufficient time for staff to improve practice or innovate
- A change in the model of care delivery
- Breakdown in communication
- A change in bed occupancy or patient dependency
- Change in local or national standards⁴⁶

Nurse Leadership

The RCN Clinical Leadership Programme has demonstrated how well led ward teams produce higher standards of nursing care, better teamwork and more skilful roster management⁴⁷. A recent study of the leadership skills of 25 ward managers by the Hay Group suggests that the leadership style and knowledge of the ward manager has a major impact on ward performance with effective leadership linked to fewer medication errors, higher patient satisfaction, lower staff absenteeism and staff turnover⁴⁸. Other research on teamwork such as that by Borrill and West et al suggests effective teamwork is strongly linked to high quality patient care and the health and well-being of the team members⁴⁹. Leadership at Matron and Director of Nursing level is also key to ensure consistency of ward nurse leadership, and influence on trust board decisions about staffing resources in the light of short-term financial control measures. Patient care and longer term clinical and cost-effectiveness should not be jeopardised by measures such as freezing vacancies or deleting posts, opening and closing wards to deal with demand peaks, staffing them with temporary or displaced staff and juggling patients.

⁴⁵ Healthcare Commission (2005) *Op Cit*

⁴⁶ RCN (2002) *Defining Staffing Levels for Children and Young People* RCN London

⁴⁷ Large, S., Macleod, A., Cunningham, G. and Kitson, A. (2005) *A Multiple Case Study Evaluation of the RCN Clinical Leadership Programme in England* RCN: London

⁴⁸ Nolan, A. (2006) 'Leadership in Tune with the Team' *HSJ* 20th June

⁴⁹ Borrill, C. and West, M., (2002) *Team Working and Effectiveness in the Health Care: Findings from the Health Care Team Effectiveness Project* Aston Centre for Health Service Organisation Research, University of Aston: Birmingham

Principles for Appropriate Ward Nurse Staffing

1. A ward staffing establishment skill mix ratio of 65% registered nurses to 35% health care assistants must be maintained as a *benchmark* for general wards unless or until a thorough review of ward staffing levels has been undertaken.
2. Changes to the overall numbers and competence or specialist expertise of registered nurses must also be based on ward staffing reviews.
3. Executive nurse sponsors and nurse leaders such as matrons must lead staffing reviews.
4. Ward leaders and their staff must be directly involved in all stages of the staffing review.
5. Ward staffing must be reviewed regularly and systematically - at least biennially, and more often if patient needs or other factors change significantly. It is good practice to undertake these in partnership with nursing organisations such as the RCN.
6. Two or more recognised methods to measure and model ward staffing levels should be used to increase the validity of the results, and linked to available data on patient, staff and organisational outcome measures wherever possible. A consistent approach to ward staffing reviews needs to be used within trusts.
7. Protected staff time for undertaking data collection should be built in wherever possible.
8. Ward staffing review findings must be communicated effectively to inform executive and board decisions about risk management and investment
9. Patient safety is paramount and there must be a recognised process in each trust for nursing staff to record and report risks to patient care if they believe ward staffing is inadequate.
10. The ward manager must have authority and control over the ward care environment and delivery of nursing care including the human and budgetary resources they require.

11. Registered nurses must be enabled to work effectively and not undertake work that less skilled staff could do. Ward staffing reviews must consider how all ward staff are deployed.
12. Ward establishments must have an allowance of at least 25% built in to the ward staffing budget for annual leave, sickness absence, other types of leave, and training and development.
13. The ward establishment should be the focus for ward staffing reviews and staff time spent on services additional to the ward establishment such as ward based outpatient clinics and that of specialist nurses employed out with the ward should be excluded.

Conclusion

Nurse staffing matters because of the evidence that links patient outcomes to registered nurse input^{50 51}, staff morale, staff turnover and job dissatisfaction⁵². Nurse staffing is also a patient safety issue⁵³ and it should be accepted that human interventions are at least as important as technologies such as drugs, devices and techniques in health outcomes and so require an equally robust evidence base and commensurate research funding.

There are challenges in standardising approaches to ward nurse staffing and determining optimum nurse staffing levels. Further research is needed on:

- How some NHS trusts appear to perform well against the patient outcomes measured despite being in the lower quartiles for nurse staffing⁵⁴
- Which indicators matter most when setting staffing levels and maximising patient care and patient outcomes
- The clinical and cost effectiveness of different staffing patterns and ratios

There is also a need to educate the public on the link between registered nurse input and patient outcomes to inform the 'patient choice' agenda. Medical staff likewise need to be appraised of the evidence linking ward staffing to patient outcomes.

But whilst we need further research, this is not a time for complacency and ward staffing reviews must become a priority within nursing. All nurses must get involved in and take ownership of staffing reviews because they will be making decisions about patient safety and quality of care on a day- to- day basis, and so must understand how to marshal arguments to influence the deployment of appropriate numbers of nursing staff⁵⁵.

⁵⁰ West et al (2004) *Op Cit*

⁵¹ Carr-Hill, R. et al (1992) *Op Cit*

⁵² Sheward, L. et al (2005) 'The Relationship between UK Hospital Nurse Staffing and Emotional Exhaustion and Job Dissatisfaction' *Journal of Nursing Management*,13, 51-60

⁵³ Clarke, S.P., Aiken, L.H. (2006) 'More Nursing, Fewer Deaths' *Quality and Safety in Health Care* 15

⁵⁴ Healthcare Commission (2005) *Op Cit*

⁵⁵ Naish, J. and Tassa, B. (2006) 'Our Level Best' *Nursing Standard* Vol 20 No 18

Appendix 1

Mandatory Set Nurse Staffing Levels

In two countries national mandatory ward registered nurse staffing levels have been adopted (though not necessarily always implemented at health care practice levels). In California, US, a bill was passed in 2000 and enacted in January 2004 to set minimum registered nurse: patient ratios⁵⁶. In Victoria, Australia, similar legislation has been in place since 1999 (enacted between December 2000 and August 2001)⁵⁷. However continuing efforts are being made by both administrations to replace this legislation with more flexibility.

Nursing organisations in both countries campaigned for years for legislation⁵⁸ and believe patient care and nurse morale has improved since enactment. The Australian Nurses Federation claims^{59 60} there has been employment of more than 3000 extra nurses, decreased staff turnover and absenteeism, a 25% increase in candidates for nursing schools and improved public approval of the State government. However robust empirical research has not yet been put in place to confirm the impact.

Nurse patient ratios of 1:4 (plus nurse in charge) which are advocated by Aiken⁶¹ are not in place on NHS general acute hospital wards in the UK. The 2005 RCN employment survey⁶² found from a snapshot of respondents last working shift on an NHS hospital ward that there were mean ratios of 7.7 patients per registered nurse (day) and 10.1 (night). The independent sector had mean ward ratios of 5.5 patients per registered nurse (day).

A minority of clinical services in the UK have set national nurse staffing levels. They include intensive care units^{63 64}, burn care units⁶⁵, acute paediatrics^{66 67}

⁵⁶ ICN (2006) *Op Cit*

⁵⁷ Buchan, J. (2004) *A Certain Ratio? Minimum Staffing Ratios in Nursing* RCN: London

⁵⁸ Considine, G. and Buchan, J. (1999) *The Hidden Costs of Understaffing: An Analysis of Contemporary Nurses Working Conditions in Victoria* ACCIRT. ANF (Vic Branch)

⁵⁹ O'Dowd, A. (2005) 'Weighing up Nurse-to-Patient Ratios' *Nursing Times* Vol 101 no 31

⁶⁰ Buchan J. (2004) *Op Cit*

⁶¹ Aiken L.H. et al (2002) 'Hospital Nurse Staffing and Patient Mortality, Nurse Burnout and Job Dissatisfaction' *Journal of American Medical Administration* 288(16): pp 1987-93

⁶² Ball, J. & Pike, G (2005) *Op Cit*

⁶³ RCN (2003) *Guidance for Nurse Staffing in Critical Care* RCN: London

⁶⁴ O'Dowd, A. (2005) *Op Cit*

⁶⁵ National Burn Care Review Committee Report (2004) at <http://www.baps.co.uk>

⁶⁶ Department of Health (1991) *Welfare of Children and Young People in Hospital* HMSO: London

⁶⁷ Department of Health (2003) *Report of the Neonatal Intensive Care Services Review Group* DH: London: DH

and maternity services^{68 69}. They have not all been developed from a robust evidence base and are not always adhered to in the NHS.

The key concern in relation to national set nurse staffing levels is that these will be based on a minimum level (rather than an optimum or appropriate level) with the minimum becoming the maximum, regardless of context or changes to patient care and staff experience. There is therefore scepticism about setting national levels because of their inbuilt inflexibility which cannot be directly related to context or evidence and can become a hostage to fortune⁷⁰. Buchan reviewed the literature around set staffing levels and concludes: “nurse: patient ratios are a blunt instrument for achieving employer compliance, where reliance on alternative, voluntary (and often more sophisticated) methods of determining nurse staffing have not been effective”.⁷¹

Other disadvantages include:

- Fixed ratios are an unsophisticated way of calculating patient need – every situation is dependent on the skill of the nurse, complexity of patient’s needs and physical environment in which care is provided
- Difficulties in enforcing compliance on ratios
- Mandatory ratios may mean nursing staff have to remain on duty if there are insufficient staff for the next shift, for example due to sickness
- Mandatory ratios might not guarantee good quality care
- Ratios do not reflect the level of registered nurse expertise needed which is a factor in appropriate staffing ratios to patient acuity/dependency
- Staffing levels are a dynamic equation as roles change and evolve across the whole health care team

⁶⁸ Ball, J (1996) *Birthrate Plus: A Framework for Workplace Planning and Decision Making for Midwifery Services*

⁶⁹ Buchan J. (2004) *Op Cit*

⁷⁰ O’Dowd, A. (2005) *Op Cit*

⁷¹ Buchan J. (2004) *Op Cit*

Appendix 2

The Evidence Base: Nurse Staffing Levels and Registered Nurse Impacts

West et al⁷² and Hewitt⁷³ warn of the methodological difficulties in claiming causal relationships between nurse staffing levels and patient outcomes because of the complexity of isolating all the numerous variables within research. Nevertheless there is growing evidence of registered nurse impact on a range of outcomes including patient quality and clinical outcomes.

They can be sub-divided in categories (that inevitably overlap):

- Patient outcomes Patient health status
 Care quality and patient satisfaction
- Staff outcomes
- Organisational outcomes

Patient Health Status: Mortality and 'failure to rescue'

'Failure to rescue'⁷⁴ relates to the actions taken (or not taken) through nurses' direct observation of the patient and intervention to avoid deaths amongst hospital patients who develop avoidable and/or treatable illness complications⁷⁵. Patients are more likely to die within 30 days of hospital admission in acute hospitals with lower registered nurse: patient ratios^{76 77 78 79}⁸⁰. Registered nurse numbers, a higher proportion of registered nurses in the nursing team, levels of nurse education and units with higher mean years of nurses' experience⁸¹ are key factors. Aiken⁸² found that surgical patients in

⁷² West et al (2004) *Op Cit*

⁷³ Hewitt, C et al (2003) *Health Service Workforce and Health Outcomes – A Scoping Study* London: Service Delivery and Organisation

⁷⁴ Defined as "the probability that the hospital failed to rescue the patient after the adverse occurrence" in Silber J.H. et al (1992) 'Hospital and Patient Characteristics Associated with Death after Surgery. A Study of Adverse Occurrence and Failure to Rescue' *Medical Care* 1992;30(7): 615-629

⁷⁵ In the UK this competency is sometimes described as noticing the patient 'going off'

⁷⁶ Aiken L.H. et al (2002) *Op Cit*

⁷⁷ Rothberg et al (2005) 'Improving Nurse-to-Patient Staffing Ratios as a Cost-Effective Safety Intervention' *Medical Care* Vol 43(8) August 2005

⁷⁸ Needleman, J. et al (2001) *Nurse Staffing and Patient Outcomes in Hospital* Boston Harvard School of Public Health

⁷⁹ Hewitt, C et al (2003) *Op Cit*

⁸⁰ Tourangeau, A.E. et al (2006) 'Impact of Nursing on Hospital Patient Mortality: A Focused Review and Related Policy Implications' *Quality and Safety in Health Care* 15 pp 4-8

⁸¹ Tourangeau, A.E. et al (2002) '30-day Mortality for Hospitalised Patients' *Canadian Journal of Nursing Research* 33 pp 71-88

⁸² Aiken L.H. et al (2002) *Op Cit*

Pennsylvania in 1998/9 were more likely to die from developing avoidable complications in hospitals with lower registered nurse: patient ratios. Her research links a 10% increase in the proportion of graduate nurses with an associated 5% decrease in the likelihood of surgical patients dying within 30 days of admission and/or being the subject of failure to rescue events⁸³.

Rafferty et al⁸⁴ have been replicating Aiken's US study in the UK. Their research in 30 English acute hospital trusts suggests that surgical patients in the hospitals with the lowest nurse: patient ratios have an increased risk of mortality.

Patient Health Status: Morbidity and Adverse Incidents

The incidence of patient adverse incidents in hospital is a matter of international concern⁸⁵. The relationship between morbidity and adverse events with ward staffing levels^{86 87} suggests that the incidence is reduced when registered nurse: patient ratios are higher. Some research has found links between registered nurse numbers and increased length of stay (and costs)⁸⁸.

There is evidence that patients on wards with lower registered nurse: patient ratios are more likely to develop pressure ulcers^{89 90 91}, fall more often^{92 93 94}, are exposed to more medication errors^{95 96} and are more likely to develop healthcare associated infections (HCAIs)^{97 98 99}. They also appear to be readmitted more often¹⁰⁰ and develop illness complications such as pneumonia^{101 102 103 104}.

⁸³ Aiken L.H. et al (2003) 'Educational Levels of Hospital Nurses and Surgical Patient Mortality' *Journal of American Medical Administration* 290(12): pp 1617-23

⁸⁴ Rafferty, AM et al (2006) *Forthcoming*

⁸⁵ Lankshear, A. et al (2005) *Op Cit*

⁸⁶ Aiken L.H. et al (2002) *Op Cit*

⁸⁷ Hewitt, C et al (2003) *Op Cit*

⁸⁸ Cho, S.H. et al (2003) 'The Effects of Nurse Staffing on Adverse Events; Morbidity, Mortality, and Medical Costs' *Nursing Research* 52 pp 71-79

⁸⁹ Westwood, M., Rodgers, M. & Sowden, A (2003) *Patient Safety: A Mapping of the Research Literature* NHS Centre for Reviews and Dissemination, University of York

⁹⁰ Healthcare Commission (2005) *Op Cit*

⁹¹ Agency for Healthcare Research and Quality (2004) *Op Cit*

⁹² Westwood, M Rodgers, M. & Sowden, A (2003) *Op Cit*

⁹³ Agency for Healthcare Research and Quality (2004) *Op Cit*

⁹⁴ Commonwealth Steering Committee for Nursing and Midwifery and the Lillian Carter Centre for International Nursing at Emory University (2003) *Caring That Counts*

⁹⁵ Needleman, J. et al (2001) *Op Cit*

⁹⁶ Westwood, M Rodgers, M. and Sowden, A (2003) *Op Cit*

⁹⁷ Commonwealth Steering Committee for Nursing and Midwifery and the Lillian Carter Centre for International Nursing at Emory University (2003) *Op Cit*

⁹⁸ Needleman, J. et al (2001) *Op Cit*

⁹⁹ Westwood, M Rodgers, M. & Sowden, A (2003) *Op Cit*

¹⁰⁰ Hewitt, C et al (2003) *Op Cit*

¹⁰¹ Hewitt, C et al (2003) *Op Cit*

¹⁰² Needleman, J. et al (2002) 'Nurse-Staffing Levels and the Quality of Care in Hospitals' *New England Journal of Medicine* 346 pp 1715-1722

There is an economic and cost perspective to these findings. An economic review of health services by Wanless¹⁰⁵ suggests that a reduction of 15% in healthcare associated infections in acute care by 2012/13 would save £300M a year (2000/01 prices). In addition a £70M saving is estimated from a 10% reduction in other adverse incidents, including medication errors (£50M alone), of which Leape¹⁰⁶ attributes 38% to nurses. There is no doubt about the nursing contribution to these areas and work is urgently needed to measure and link them to registered nurse staffing levels.

Care Quality and Patient Satisfaction

It is important to distinguish between patient health status, patient quality of care, and patient satisfaction, although these are complex inter-relationships. The NHS is monitored annually by the Healthcare Commission on patient satisfaction through national patient surveying. Meeting patient expectations has become more important to NHS trusts who appear to be increasing their use of local patient surveys, although the extent to which findings influence investment decisions is more dubious.

The UK NHS Centre for Reviews and Dissemination¹⁰⁷ found registered nurse hours were related to patient complaints, which is corroborated in research by the Commonwealth Steering Committee for Nursing and Midwifery¹⁰⁸. The Healthcare Commission more recently also found evidence of a relationship between patient satisfaction and higher levels of registered nurses ratios and a worrying correlation between numbers of temporary nursing staff – bank and agency - and levels of patient dissatisfaction¹⁰⁹. Higher levels of bank and agency nurses were in turn strongly linked to high vacancy rates. The Healthcare Commission recommends that trusts where care is ‘demonstrably poor’ (for example high numbers of complaints, high incidence of pressure ulcers and poor patient satisfaction) should increase the proportion of registered nurses on wards to the national mean¹¹⁰. However some trusts with relatively low staffing expenditure and low proportions of registered nurses scored well on clinical outcomes and patient satisfaction.

¹⁰³ Tourangeau, A.E. et al (2002) ‘Nursing-related Determinants of 30-day Mortality for Hospitalised Patients’ *Canadian Journal of Nursing Research* 33 pp 71-88

¹⁰⁴ Cho, S.H. et al (2003) *Op Cit*

¹⁰⁵ Wanless, D. (2002) *Securing our Future Health: Taking a Long Term View* HM Treasury: London

¹⁰⁶ Leape, L. (2002) ‘Reporting of Adverse Events’ *New England Journal of Medicine* 347(20) pp 1633-1638

¹⁰⁷ Westwood, M Rodgers, M. & Sowden, A (2003) *Op Cit*

¹⁰⁸ Commonwealth Steering Committee for Nursing and Midwifery and the Lillian Carter Centre for International Nursing at Emory University (2003) *Op Cit*

¹⁰⁹ Healthcare Commission (2005) *Op Cit*

¹¹⁰ Healthcare Commission (2005) *Op Cit*

Staff Outcomes

The wellbeing of staff and organisational benefits are closely related. Several studies have shown that staffing levels affect nurses' wellbeing and health¹¹¹. For example Rafferty et al¹¹² found that nurses on wards with lower registered nurse: patient ratios were approximately twice as likely to be dissatisfied with their jobs, the quality of care on their wards/hospitals, and to show high burnout levels. The collective evidence links nurse job dissatisfaction to levels of burnout, which in turn increases the likelihood of nurses leaving posts, and in turn has an impact on organizational outcomes given that increased turnover has a detrimental effect on patient complaints, care continuity and costs.

Organisational Outcomes: Recruitment and Retention

Nurse staffing is a factor within recruitment and retention in the UK and internationally because of the evidence that excess workloads in general, and poor nurse: patient ratios specifically, lead to nurse job dissatisfaction¹¹³, burnout and their likelihood of leaving their post. For example 49% of nurses who left NHS posts in the 12 months preceding a survey in February 2005 did so because of stress/workload problems¹¹⁴.

The Healthcare Commission concludes that “higher quality of care will be delivered on wards when vacancies are minimised, and there is a stable workforce of experienced staff”, and, “freezing vacancies is unlikely to ease the cash flow crisis” unless the quality of service can be maintained without using temporary staff to cover vacancies¹¹⁵.

Cost Effectiveness

Nurse pay accounts for a significant proportion of any hospital's costs because there are proportionately more nurses in the professional workforce as patient care is labour intensive. However investment in the nursing workforce may be more cost effective in the long term if the costs associated with hospital adverse incidents and increased lengths of stay are minimised, plus of course there is the human cost of morbidity and mortality.

Rothberg et al¹¹⁶ did a cost-effectiveness analysis comparing patient: nurse ratios ranging from 8:1 to 4:1 within general medical and surgical patients. They looked at mortality and length of stay and related these to nurse costs, producing evidence for the costs per life saved. Eight patients per nurse was the least expensive ratio but associated with the highest patient mortality.

¹¹¹ Aiken L.H. et al (2002) *Op Cit*

¹¹² Rafferty, AM et al (2006) *Op Cit*

¹¹³ Rafferty, AM et al (2006) *Op Cit*

¹¹⁴ Ball, J. & Pike, G (2005) *Op Cit*

¹¹⁵ Healthcare Commission (2005) *Op Cit*

¹¹⁶ Rothberg et al (2005) *Op Cit*

However it was most cost effective to reduce the patient load per nurse from 8 to 7, than from 5 to 4. This study did not examine nurse: patient ratios higher than 8: 1 as pertains in some NHS wards and therefore needs to be replicated in the UK as the authors found small adjustments to nurse: patient ratios at the upper end of the scale were sensitive to changes in mortality.

Needleman et al¹¹⁷ found that patient length of stay increased as the number of registered nurse hours per patient fell. Anecdotal NHS evidence corroborates this with patients staying longer in hospital when they are 'outliers' on the 'wrong' wards – usually because of bed pressures. Whilst excess days patient stay in hospital are less expensive days given most of the hospital's costs of a patient are loaded in the first 48 hours, the saving to be made is in the opportunity costs of Payment by Results because a new higher fee-earning patient cannot use the bed. In addition, as Rothberg et al¹¹⁸ pointed out, the longer patients stay in hospital the more risk they will experience adverse events which are generally expensive and avoidable costs.

Conclusion

In conclusion nursing numbers matter for patient care and the effectiveness of NHS trusts. This needs to be raised with both patient organisations – to influence the patient choice agenda and choice of provider – and at executive and board decision making levels.

¹¹⁷ Needleman, J. et al (2002) *Op Cit*

¹¹⁸ Rothberg et al (2005) *Op Cit*

Appendix 3

Methods of Reviewing Ward Nurse Staffing

This appendix is based on the work of Keith Hurst¹¹⁹

Professional Judgement Approach

This involves an experienced nurse judging the number of registered nurses and non-registered staff (NRS) needed by a ward and then using a simple formula:

[shift length x number of RNs (by grade) x 7 days] + [shift length x number of NRS (by grade) x 7 days] = number of wte RNs & NRS (by grade) the establishment should contain + a % allowance for annual leave, training, maternity leave, sickness absence/unplanned leave.

It is simple to use and understand, easy to involve ward staff in, and applicable to a range of wards. The main risk is that the nurse who determined the number of staff needed per shift misjudged it.

Results can and should be re-checked regularly particularly in any of the variables affecting patient need (e.g. speciality, acuity, clinical techniques or technologies used) or the nature of the workforce (new competencies acquired by existing staff, length of breaks or shifts) change.

Nurse per Occupied Bed Method

Benchmarking data for actual worked establishments (rather than funded) is used which enables this second simple method to identify how many RNs and NRS each occupied bed needs in 24 hours. The formula is therefore:

[Number of RNs (by grade) who worked per 24 hours ÷ number of occupied beds] + [Number of NRSs (by grade) who worked per 24 hours ÷ number of occupied beds] + a % allowance for annual leave, training, maternity leave, sickness absence/unplanned leave = number of whole time equivalent (wte) RNs and NRS (by grade) per occupied bed needed.

The main risks are that:

- Base staffing was rationally determined
- Standards to improve quality are not built in
- Patient dependency may be inadequately described by 'occupied bed' (for example, it may underestimate the nursing time needed if the bed

¹¹⁹ Hurst, K. (2003) *Op Cit*

is occupied by 3 different patients in 24 hours or some patients are more ill/dependent than others)

- The physical size, shape and layout of wards impacts upon staffing requirements
- The contribution of, and demands from, learners are ignored.

It is also simple, allows staff to engage with it, and it can be used at frequent intervals.

Acuity/Quality Method

This method evaluates the size and mix of nursing teams needed to care for the assessed patient dependence/acuity and the care quality to be delivered. It is useful in wards where patient needs vary considerably (e.g. short stay assessment units).

It involves categorising patients by dependency levels, and agreeing quality standards that must be met as a baseline. There are many patient dependency rating scales which Hurst identifies. The formula used to calculate the establishment is:

Number of patients in each dependency category x number of minutes of RN and NRS each dependency category receives = ratio of staff time per grade to each patient dependency category.

Then multiply the ratios by the average number of patients per dependency category to obtain the workload index or acuity and apply the results to the number of occupied beds. Do not forget to add on the % allowance for annual leave, training, maternity leave, sickness absence/unplanned leave. In addition, a % allowance for non-direct patient care workload needs to be added.

It is important that the calculations are based on wards that have passed an agreed quality standard.

One of the advantages of this more sophisticated method is that the quality tools and patient dependency scoring systems can be selected, increasing staff involvement in the staffing review. Another advantage is that this method enables nursing benchmarks and performance indicators like nursing cost per occupied bed to be worked out.

Disadvantages of this method include:

- It can be used to 'fit' the number/dependency of patients into the available workforce and though some clinical services cannot, in practice, restrict access in this way, others such as some tertiary services can

- It (and others) fail to take account of patients' emotional health needs which form a key component of quality nursing care
- Data collection required by ward nurses with this method places an additional workload on them.

Timed-Task/Activity Approaches

This method requires working out the type and frequency of nursing interventions required by patients rather than standardising their needs into one of several dependency categories. It can be as simple as quantifying the number of minutes each intervention requires, of which grade of nurse, and using patient care plans to work out the totals needed. The formula is:

(Type of nursing interventions x minutes that intervention takes x number of times the intervention occurs by grade of staff) + % allowance for annual leave, training, maternity leave, sickness absence/unplanned leave + % allowance for non-direct patient care workload = number of whole time equivalent (wte) RNs and NRS (by grade) per ward needed.

This method is more difficult to apply across diverse wards or where the patient population is highly varied within one ward and will not be reliable if patient care plans are inadequate.

Other disadvantages include:

- Fragmenting nursing practice into a series of tasks
- Difficulty in quantifying patients' non-physical needs and non-task activity, for example, the application of an experienced RN's skills in noticing a patient's condition is subtly deteriorating and monitoring that
- Additional nurse workload burden of data collection

Regression-Based Systems

This method involves defining variables such as bed occupancy, theatre sessions per week, number of admissions, and attributing a value to each one (time spent by RNs or NRS by grade) derived from one of the other methods where data is collected at ward level or local professional judgement is applied. Statistical analysis then works out how many nurses by grade are needed for particular time periods (shifts, days, weeks, or parts thereof).

Advantages include:

- It is straightforward to adjust the independent variables if they change, and little ongoing input from ward staff is needed
- Likely validity when used across similar and diverse wards as long as inappropriate extrapolation is avoided (e.g. assuming that wards with significantly different bed numbers or physical layouts are the same)

- May be particularly useful when planning new or changed facilities and services.

General Points

All the methods risk corruption if additional inputs to, and outputs from, ward staffing are overlooked. In addition, none of them can be applied unthinkingly when small wards (16-12 beds or less) are being assessed as the economies of scale available for larger wards cannot be achieved whatever the method of analysis used. There are several other factors to be included.

Allowances

There is much debate about the percentage that should be loaded into establishments to allow for sickness absence, annual leave and/or vacancy/maternity leave cover. The RCN Paediatric Nurse Managers' Forum¹²⁰ advocates 25%. The Healthcare Commission advises that a minimum of 24% should be added to establishments based this on actual leave taken in its 2005 study¹²¹ (including 13-13.5% for annual leave¹²²). However many trusts still use 18-22% and the Healthcare Commission warns that undercooking the allowance means 'numbers on individual shifts will often be less than those planned, which could compromise care standards, particularly in relatively poorly staffed trusts'.¹²³

Additional Inputs to Ward Nurse Staffing

Some Clinical Nurse Specialists (CNSs) provide direct care to patients on inpatients wards, and sometimes their existence should be, or is, taken into account when setting nurse establishments. The Healthcare Commission¹²⁴ found no relationship between the amount of ward nurses employed and the number of CNSs.

Additional Outputs from Ward Nurse Staffing

Sometimes ward staff provide outpatient services or 'day attenders' services on the ward, or staff are released from the ward to provide outpatient services in their speciality. If these nurses' hours are funded from the ward establishment it is vital they are excluded from any review of ward establishments.

¹²⁰ RCN Paediatric Nurse managers Forum (2002) *Nurse Staffing in Children's Wards and Departments – Results of a Delphi Study* (unpublished report)

¹²¹ Healthcare Commission (2005) *Op Cit*

¹²² Pre- Agenda for Change

¹²³ Healthcare Commission (2005) *Op Cit*

¹²⁴ Healthcare Commission (2005) *Op Cit*