National Nursing RESEARCH UNIT

RN4CAST Nurse Survey in England

Jane Ball
Geoff Pike
Peter Griffiths
Anne Marie Rafferty
Trevor Murrells

June 2012

RN4CAST nurse forecasting in Europe

University of Southampton | Centre for Innovation and Leadership in Health Sciences

King's College London

Acknowledgements

This study was funded by the European Union 7th framework, and is part of the larger international RN4Cast project, led by Prof Walter Sermeus and Prof Linda Aiken, in association with the RN4Cast consortium (15 countries).

The research in England was led by the National Nursing Research Unit (NNRU) at the Florence Nightingale School of Nursing and Midwifery, King's College, London. Principal Investigators of the study are Prof Anne Marie Rafferty, and Prof Peter Griffiths, (formerly King's College London, now at the University of Southampton).

The survey of nurses was managed and administered by Employment Research Limited (ERL), and Geoff Pike of ERL undertook much of the data analysis presented here.

Contact address for further information:
National Nursing Research Unit
Florence Nightingale School of Nursing and Midwifery
King's College London
James Clerk Maxwell Building
57 Waterloo Road
London SE1 8WA

Email: nnru@kcl.ac.uk

NNRU: http://www.kcl.ac.uk/nursing/research/nnru/index.aspx

RN4Cast: www.rn4cast.eu

Contents

1. Introduction

The RN4CAST study aims to develop innovative forecasting methods of future nursing requirements by considering not only volumes, but quality of patient care. England is one of the 15 countries making up the RN4Cast consortium[1]. The National Nursing Research Unit (NNRU) has led the study in England and also led the development of an agreed protocol for collecting health outcome data across the nations of the consortium and dissemination strategy.

Within the England study, data on nursing and organisational variables have been collected from 31 partner trusts. These data will be analysed alongside secondary data on patient mortality rates (and patient satisfaction) to explore the nature of the relationship between inputs and outcomes. The findings from these analyses will be used to inform the parameters used in nurse workforce planning models.

The study has four main data elements:

- Registered nurse survey
- Patient outcomes (mortality rates, failure to rescue from HES)
- Patient satisfaction (CQC national patient survey)
- Trust/Hospital characteristics (survey of Trusts taking part)

This report covers the findings from the survey of registered nurses; 2990 respondents responded from 401 general medical and surgical wards, in 31 Trusts in England.

[1] The RN4CAST Consortium consists of Walter Sermeus, Koen Van den Heede, Luk Bruyneel, Emmanuel Lesaffre, Luwis Diya (Belgium, Catholic University Leuven); Linda Aiken, Herbert Smith, Timothy Cheney, Douglas Sloane (USA, University of Pennsylvania); Juha Kinnunen, Anneli Ensio, Virpi Jylhä (Finland, University of Eastern Finland); Reinhard Busse, Britta Zander (Germany, Technical University Berlin); John Mantas, Dimitrios Zikos (Greece, University of Athens); Anne Scott, Anne Matthews, Anthony Staines (Ireland, Dublin City University); Ingeborg Strømseng Sjetne (Norway, Norwegian Knowledge Center for the Health Services); Tomasz Brzostek, Maria Kózka, Piotr Brzyski, Lucyna Przewoźniak, Anna Ksykiewicz-Dorota (Poland, Jagiellonian University Medical College); Teresa Moreno-Casbas, Carmen Fuentelsaz-Gallego, Esther Gonzalez-María, Mónica Contreras-Moreira (Spain, Institute of Health Carlos III); Carol Tishelman, Rikard Lindqvist, Sara Runesdotter, Lisa Smeds (Sweden, Karolinska Institute); Sabina De Geest, Maria Schubert, René Schwendimann (Switzerland, Basel University); Maud Heinen, Lisette Schoonhoven, Theo van Achterberg (The Netherlands, Radboud University Nijmegen Medical Centre); Peter Griffiths (England, University of Southampton); Jane Ball, Simon Jones, Brian McIntosh, Anne Marie Rafferty (England, King's College London). The research leading to these results has received funding from the European Union's Seventh Framework Programme (FP7/2007-2013) under grant agreement n° 223468.

For more information please visit http://www.rn4cast.eu.

The RN4Cast study builds on a previous research undertaken in 1999: the International Hospital Outcome Study[2] . Similarities and differences in the design are captured in the following table.

Table 1.1: Differences between RN4CAST and International Hospital Outcome Study

	IHOS (1999)	**RN4CAST (2011)**
Regions	Sample from 4 of 8 regions	All regions
Population of Trusts	51 Trusts (drawn from those where outcomes data were available) invited	64 randomly stratified (geographical area, size, teaching status)
Achieved sample	32 Trusts	31 Trusts, 46 hospitals
Units surveyed	All wards meeting inclusion criteria	10 per hospital
Nurses surveyed	Staff nurses only	All RNs (staff nurses, ward sisters, and others)
Distribution	Questionnaires addressed to named individuals – via internal post or by hand (but no ID number on questionnaire)	Number of RNs per ward known, but packs unnamed. Relied on distribution via ward manager.
Anonymity/IDs	Questionnaires anonymous (blanket reminder) bar colour code to indicate Trust.	Ward and Trust code on each questionnaire, but anonymous for individuals
Key questionnaire differences	Modified NWI – 50 items Last shift staffing – grid for total number of staff – registered, unregistered	Modified NWI/PES – 32 items Last shift staffing – asked specifically re "direct patient care" staff, including yourself. Also includes: patient safety, missed care, views of specific aspects of working conditions.

Source: KCL RN4CAST Survey, 2012

[2] Aiken, L. H., et al (2001). Nurses' reports on hospital care in five countries. Health Affairs, 20(3), 43-53. doi: 10.1377/hlthaff.20.3.43 & Rafferty, A. M., Clarke, S. P., Coles, J., Ball, J., James, P., McKee, M., & 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), 175-182.

2. Method

The methodology of the study followed a protocol established by the RN4CAST consortium[3]. A cross-sectional survey of registered nurses working in general medical or surgical wards was undertaken between January and September 2010 through an anonymous paper based survey, with optional online completion.

Sample

A random stratified sample of NHS general acute hospital Trusts in England was drawn to ensure mix by size, teaching status and region. Thirty-one of the 64 Trusts selected in the sample agreed to take part, covering 46 hospitals and 401 wards. During the course of recruitment to the study, we aimed to maintain the quotas identified in the sampling frame (through more proactive follow up) to ensure a representative mix of Trusts.

Table 2.1 Trust sample

	large	medium/small	teaching	*Total*
London	1	2	2	*5*
North	6	5	4	*15*
South	2	7	2	*11*
Total	***9***	***14***	***8***	***31***

Source: KCL RN4CAST Survey 2012

Ten medical and surgical wards in each hospital were sampled randomly to be included in the survey, and all registered nurses were invited to take part. In trusts that covered multiple hospitals, ten wards from each hospital were selected (e.g. 20 wards from a trust with two hospitals). High tech, specialist or intensive units (CCU, ITU, HDU) were excluded from the wards sampled.

A study contact was identified at each trust, who helped to identify the wards that met the inclusion criteria, and number of registered nurses working on each (i.e. the sample). The questionnaires were collated into ward packs and sent to the study contact to be distributed locally. The ward packs included information about the study for ward managers.

[3] Sermeus, W., Aiken, L. H., Heede, K. V. , Rafferty, A. M., Griffiths, P., Moreno-Casbas, M. T., Reinhard Busse R, Lindqvist R., Scott A. P., Bruyneel L, Brzostek T, Kinnunen J, Schubert M, Schoonhoven L, Zikos D and RN4CAST consortium (2011). Nurse Forecasting in Europe (RN4CAST): Rationale, design and methodology. *BMC Nursing, 10* (6).

The initial pack (with a covering letter, questionnaire, free-post envelope and pen) was followed up with three reminders – a postcard, full reminder pack, and final post card. Returns were sent direct to the researchers in free-post envelopes. Study contacts were also sent the link to the online version of the questionnaire that they could send to staff on the appropriate wards. Although individuals were anonymous, unit identifiers were used to enable data collected through the nurse survey to be linked subsequently to data on the organisations, and to secondary data on patient outcomes.

Response rate

In total 7609 questionnaires were distributed to registered nurses, and 2990 responses were received, representing an overall response rate of 39%. Response rates varied considerably between hospitals, and between wards within the same hospital.

3. Profile of nurses responding

All registered nurses working on the sampled wards were invited to take part in the survey. Roughly three-quarters (73%) of respondents were staff nurses, and the majority of these staff (95%) were on pay band 5 (see Table 3.1). One in four (24%) of those responding were sisters/charge nurses (59% on pay band 6, and 40% pay band 7).

Table 3.1: Respondents pay-band by job title

	Staff nurse	Sister/charge nurse	Other	All
Pay band 5	95%	1%	11%	70%
Pay band 6	4%	59%	43%	19%
Pay band 7	-	40%	28%	10%
Other pay bands	1%	-	18%	1%
Base N= (100%)	*2155*	*721*	*65*	*2941*

Source: KCL RN4CAST Survey 2012

There is some variation in the proportion of nurses responding from each trust who indicated that they are employed as staff nurses or on Band 5. 70% of all respondents are on Band 5 but in eight trusts more than 75% are on Band 5 with three trusts having more than 80% on Band 5. Conversely, in four trusts fewer than 60% of respondents were employed on Band 5 and in two of these fewer than 50% were employed on Band 5.

Across all respondents 73% are employed as staff nurses and there is less variation here between trusts. In five trusts more than 80% indicated they were staff nurses while in only one trust there were fewer than 60% staff nurses. 59% of ward sisters/charge nurses responding are on band 6 with 40% on band 7 or above. But Trusts varied in the proportion of ward sisters on Band 6 from around 40% in six trusts to more than 80% in four trusts, with 100% on Band 6 in one trust.

Comparing the respondent profile from the RN4CAST survey to that of the 2009 RCN Employment Survey[4] there is a high degree of consistency (Table 3.2). Only respondents to the RCN Employment Survey working in adult general (medical and surgical) NHS hospital wards have been included in the comparison but this does include perhaps more atypical respondents such as clinical nurse specialists, nurse practitioners, senior nurses and managers. This would explain the slightly higher grade profile of nurses covered by the RCN Employment Survey and the higher numbers working part-time.

[4] Ball J & Pike G (2009) *'Past imperfect, future tense. Results from the RCN Employment Survey'* RCN London.

Table 3.2 Respondent profile: RN4CAST vs. RCN Employment Survey 2009 (NHS, med/surg wards)

Characteristics	RCN 2009	RN4Cast	*N= (RN4Cast)*
Mean Age	40	40	*2859*
Under 25 years (<25)	6%	8%	*223*
25-34	27%	25%	*729*
35-44	34%	34%	*962*
45-54	25%	25%	*721*
55 and over (55+)	8%	8%	*231*
Gender			
Female	92%	92%	*2734*
Male	8%	8%	*237*
UK trained	86%	84%	*2477*
Holds a bachelor's degree in nursing	30%	28%	*812*
Working hours			
Full time	69%	78%	*2273*
Part-time	31%	22%	*652*
Last shift worked (and reported on)			
Day	76%	59%	*1681*
Afternoon/evening	-	14%	*402*
Night	24%	27%	*778*
Length of service (years)			
Nursing career	14.4	13.9	*2771*
Current hospital	9.6	9.5	*2772*
Current specialty	-	7.8	*2603*
Current ward	5.1	5.8	*2692*
Job title			
Staff nurse	70%	73%	*2171*
Sister/charge nurse	14%	24%	*723*
Other	16%	2%	*66*
Ward/Unit (as described by nurse)[1]			
Medical		39%	*1160*
Surgical		30%	*899*
Medical/surgical		5%	*133*
Gynaecology		6%	*180*
Orthopaedics		18%	*546*
Elderly		11%	*336*
Renal		2%	*70*
Other		11%	*312*
Pay band			
1-4	2%	1%	*19*
5	65%	70%	*2061*
6	17%	18%	*543*
7	13%	10%	*307*
8/9	3%	<1%	*13*

Source: KCL RN4CAST Survey 2012 [1] *Respondents could specify more than one description for their ward/unit*

There is significant difference between the trusts participating in the survey in all the demographic and employment related variables. Tables A1, and A2 in the appendix, show the employment and demographic profiles of each trust. These data are important for considering trust differences in response to the main substantive elements of the questionnaire. Key differences to note are in job title and type of ward as these variables correlate with some of the key substantive questions in the survey.

4. Staffing levels and workload

The survey asked nurses about nurse staffing and patient numbers on their most recent shift worked. For most respondents the last shift worked was an early shift (58%); 14% worked a late shift, and 27% reported that the last shift they worked was a night. Early and late shifts are combined as 'daytime' in subsequent analyses.

Staffing levels

In relation to the last shift they worked, nurses were asked: *"Counting yourself, how many registered nurses in total provided direct patient care on your unit/ward?"*

Using responses to the patient and staff numbers questions, the ratio of the number of patients per nurse providing direct care (i.e. possibly excluding the nurse in charge), and per member of nursing staff can be calculated, plus the percentage of nursing staff on duty who were registered nurses. These data are presented in Table 4.1.

Table 4.1: Staffing and patient data by shift (mean averages)

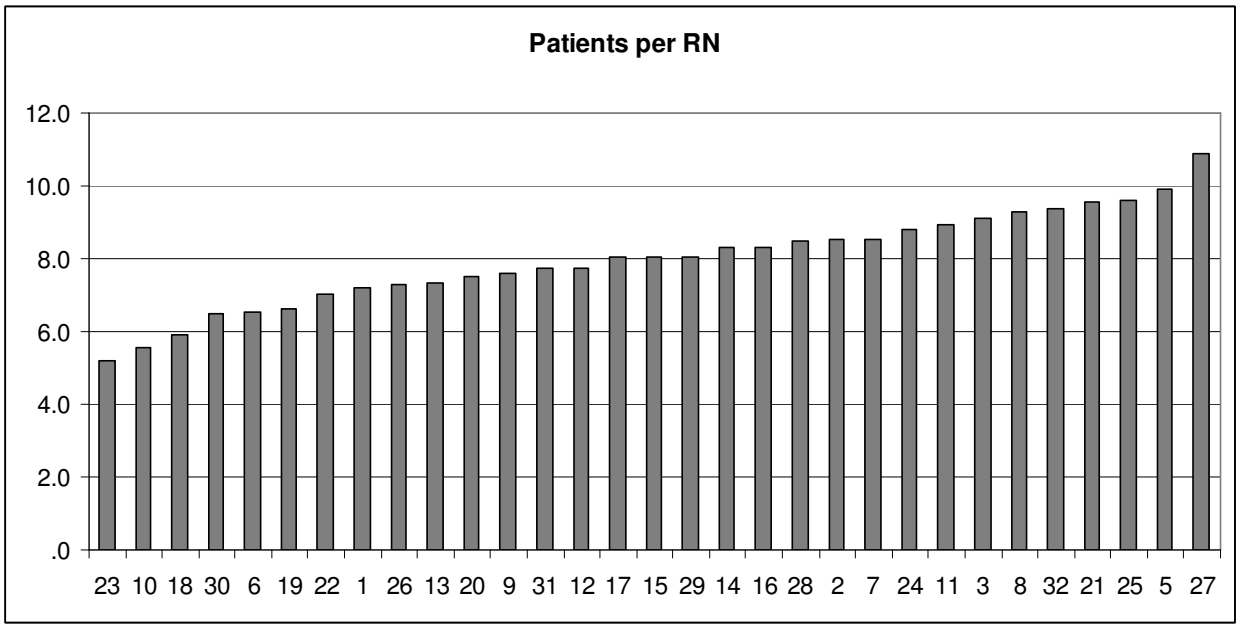
	Daytime	Night
a. Total number of patients	25.4	24.4
b. Number of registered nurses	3.5	2.5
c. Number of HCAs/auxiliaries	2.9	1.8
d. Total staff on duty (RNs + HCAs)	6.4	4.3
e. RNs as % of all nursing staff	56%	61%
f. Patients per registered nurse (mean across all RNs)	8.0	10.8
g. Patients per member of nursing staff (mean across total staff)	4.3	6.3
Base N=	*2030*	*769*

Source: KCL RN4CAST Survey 2012

Wards typically cared for a total of 25 patients, and had between six and seven nursing staff on duty during the day, and four or five at night. Daytime typically consists of three or four registered nurses and three health care support workers or nursing assistants – with the average skill-mix being 56%. This equates to an average of 8.0 patients per registered nurse in the day, and 10.8 at night.

However, the mean averages mask substantial variation between trusts in the average nurse patient ratios. On a day shift, ratios varied from an average of 5.2 patients per registered nurse in the trust with highest staffing to 10.9 in that with the lowest (see Figure 4.1).

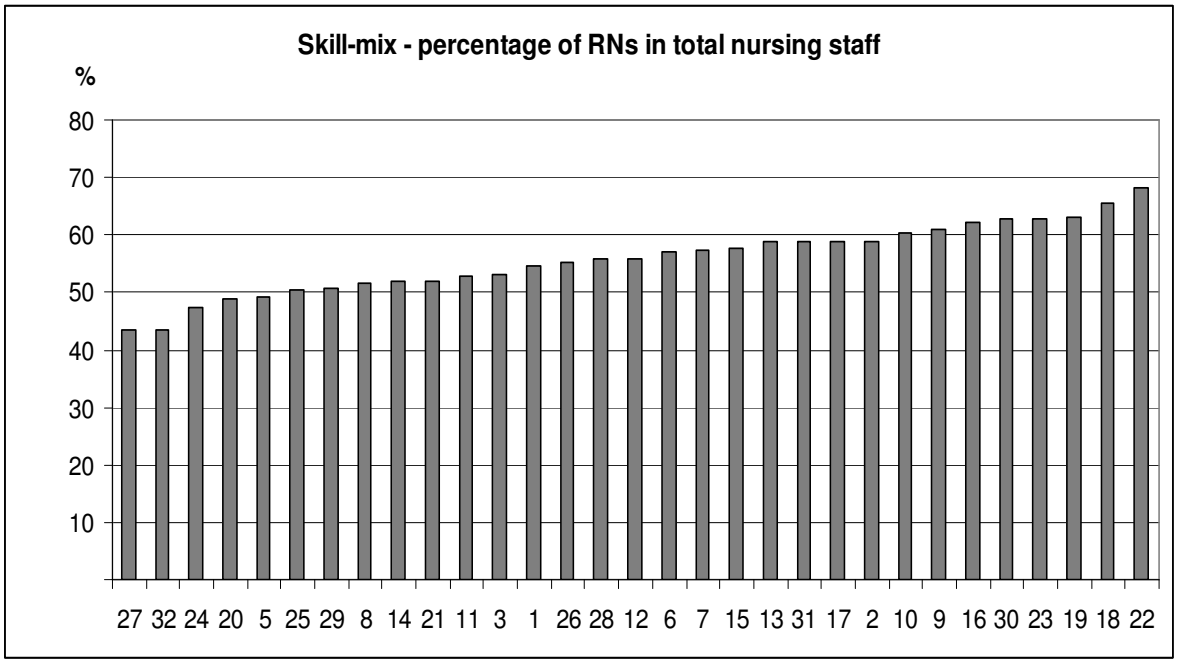
Figure 4.1: Average patients per RN on duty (day) – variation by Trust



Source: KCL RN4CAST Survey 2012

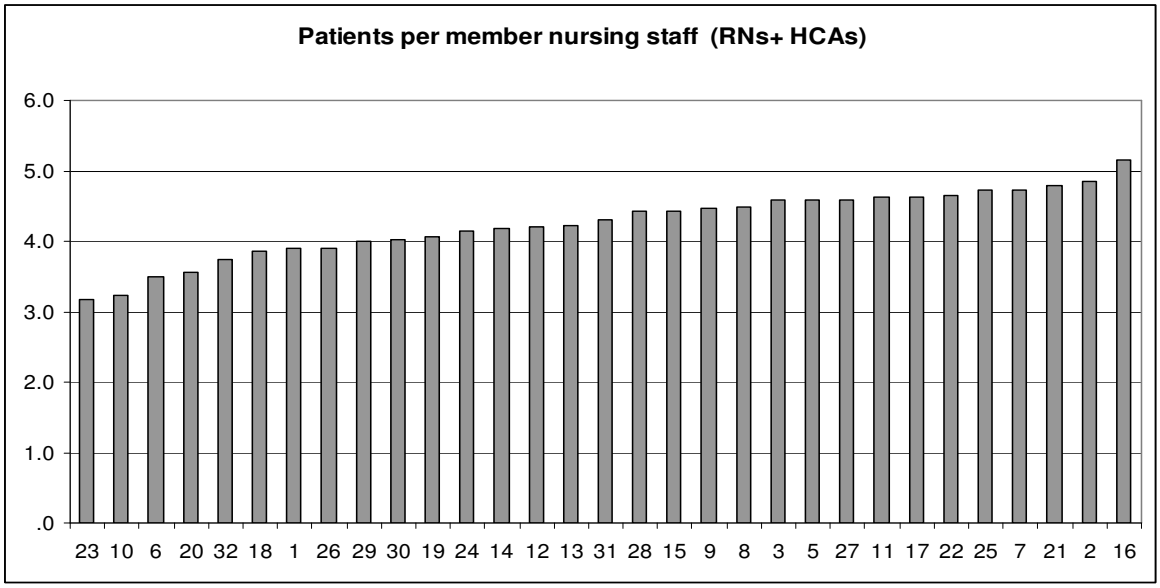
There was also considerable variation in the skill-mix recorded between trusts – from 43% RNs (daytime) to 68%, with an average of 56% (Figure 4.2). Hence whilst there is a more than two-fold variation in the patient to registered nurse ratio, the total size of the nursing team relative to number of patients varied less. The average number of patients per member of the total nurse staff team (registered nurses + health care assistant) ranged from 3.2 through to 5.2 on a day shift, with a mean average of 4.3 (Figure 4.3). On night shifts, the average was 6.3 patients per member of nursing staff (RNs and HCAs).

Figure 4.2: Skill-mix of nursing staff on duty (day) – variation by Trust



Source: KCL RN4CAST Survey 2012

Figure 4.3: Average patients per nursing staff on duty (day) – variation by Trust



Source: KCL RN4CAST Survey 2012

Although the wards selected to be part of the sample were 'general medical or surgical', in reality many nurses classified the ward where they worked less generically. Using this classification, we found some variation in patient to RN and nursing staff numbers by type of ward (Table 4.2).

Table 4.2: Average staffing and patient data – ward (day shift only)

	Patients per RN	Patients per total nursing staff	*Base N=*
Medical	8.6	4.4	*768*
Surgical	7.3	4.2	*588*
Medical/surgical	7.7	4.4	*79*
Gynaecology	6.8	4.1	*104*
Orthopaedics	7.9	4.2	*352*
Elderly	9.1	4.3	*217*
Renal	6.8	4.1	*45*
Other	7.2	4.1	*217*

Source: KCL RN4CAST Survey 2011

For example, the number of patients per RN ranges from 6.8 in gynaecology and renal wards, up to 9.1 in older people's care. On average general medical wards had 8.6 patients per RN, compared with 7.3 on surgical wards. However there is no significant variation in ratios of patients per total nursing staff – reflecting that most of the variation stems from differences in the skill mix of the nursing team in different areas.

Staffing levels (as measured by patients per RN) are correlated to a number of patient care measures – such as care left undone, patient safety and views of the quality of care – as well as with nurse outcome variables (such as job satisfaction, burnout and intention to leave). These relationships are described in the relevant sections of the report.

Individual patient load and patient mix

As well as aggregate staffing numbers, respondents were also asked to indicate the number of patients they were directly responsible for and the care needs of their patients: the numbers requiring assistance with all activities of daily living (ADL), and the number requiring hourly or more frequent monitoring or treatment. Again there was some difference between medical and surgical wards (Table 4.3).

On average, nurses report having 13-14 patients for whose care they were directly responsible. Nurses on medical wards typically cared for two patients more than on surgical wards, and had a larger average number (8.8 vs 5.3) and proportion (61% vs 43%) of patients requiring assistance with all ADLs. The same number in each setting require hourly care/treatment.

Table 4.3: Individual patient load – by ward (means)

	Medical	Surgical	All
Patients directly responsible for on most recent shift	14.4	12.4	13.5
Number of patients that required assistance with all activities of daily living	8.8	5.3	7.4
Number of patients that required hourly or more frequent monitoring or treatments	3.6	3.6	3.6
I provided most of the care myself	32%	43%	36%
I supervised the care by others and provided some myself	54%	46%	51%
I provided limited care and most care was provided by others	14%	11%	13%
Base N=	*1137*	*875*	*2900*

Source: KCL RN4CAST Survey 2011

There are also differences by setting in the role of the nurse responding in terms of providing care directly, as opposed to numbers supervising care. Perhaps reflecting the difference in staffing and skill-mix, RNs on medical wards were less likely to report that they provided most of the care for their patients themselves (32% vs 43% on surgical wards).

Views of staffing levels

Three of the attitude items in the Practice Environment Scales (see section 5) concern adequacy of resources/staffing. Looking across all the responses, relatively few nurses consider that there are enough staff to get the work done (24%, with 76% disagreeing or strongly disagreeing), or that there are enough registered nurses to provide quality patient care (27%). Nurses' views of the adequacy of staffing where they worked were associated with differences in the typical patients to registered nurses ratios reported (Table 4.5). Nurses who considered that there were not enough staff to get work done are working in environments with two more patients per RN than those who were most positive on this item.

Table 4.5: Mean patients per RN (day shift) by views of adequacy of staffing

	strongly disagree	somewhat disagree	somewhat agree	strongly agree
A1.9 Enough registered nurses on staff to provide quality patient care	9.0	7.8	6.8	6.8
A1.12 Enough staff to get the work done	8.9	7.8	6.8	6.6

Source: KCL RN4CAST Survey 2012

Hours worked

On average staff nurses worked 12.8 hours on their last shift and sisters/charge nurses 11.2 hours. Overall a half (51%) of all respondents worked more than their contracted hours on their last shift but again there is a significant difference between staff nurses and sisters/charge nurses. Just under half (46%) of staff nurses worked beyond their contracted hours on their most recent shift, compared to two thirds (66%) of sisters/charge nurses. The difference in the average hours worked on the last shift may reflect a higher proportion of staff nurses working 12 hour shifts, compared with sisters. There is no difference by type of ward in the working hours of nurses.

5. Practice environment and job satisfaction

Nurses were asked to indicate the extent to which they agreed or disagreed (on a 4 point scale) with 32 statements relating to the environment in which they work[5]. Table 5.1 overleaf summarises the responses to these items.

The most striking issue that is immediately apparent is that nearly all respondents (94%) agreed (34% somewhat and 60% strongly) that *high standards of care are expected by management* (more nurses agreed with this statement than any other) but just one in four agreed that there were *enough staff to get the work done* (24%) or *enough registered nurses on staff to provide quality care* (27%), with these two statements having the lowest level of nurse agreement. This discrepancy in what is expected of nurses and what is perceived to be done to support the delivery of care is a clear stress point in the working environment.

More than three quarters of nurses agreed with the following items:

- Doctors and nurses have good working relationships (89%)
- Working with nurses who are clinically competent (84%)
- A preceptor program for newly hired nurses (83%)
- Nursing care is based on a nursing rather than a medical model (82%)
- Doctors value nurses' observations and judgments (81%)
- Collaboration between nurses and doctors (80%)
- Doctors respect nurses as professionals (78%)
- Doctors recognise nurses' contributions to patient care (77%)
- A nurse manager who backs up the nursing staff in decision making, even if the conflict is with a doctor (77%)
- A lot of team work between nurses and doctors (77%)
- A nurse manager who is a good manager and leader (76%)

However, at the lower end of the scale fewer than 50% of respondents agreed with the following items:

- Praise and recognition for a job well done (47%)
- Registered nurses are involved in the internal governance of the hospital (e.g. practice and policy committees) (47%)
- Opportunity for registered nurses to participate in policy decisions (36%)
- Adequate support services allow me to spend time with my patients (36%)
- A chief nursing officer who is highly visible and accessible to staff (34%).

[5] A list of the items used in the RN4Cast survey and in the previous IHOS study in 1999, is given in the Appendix.

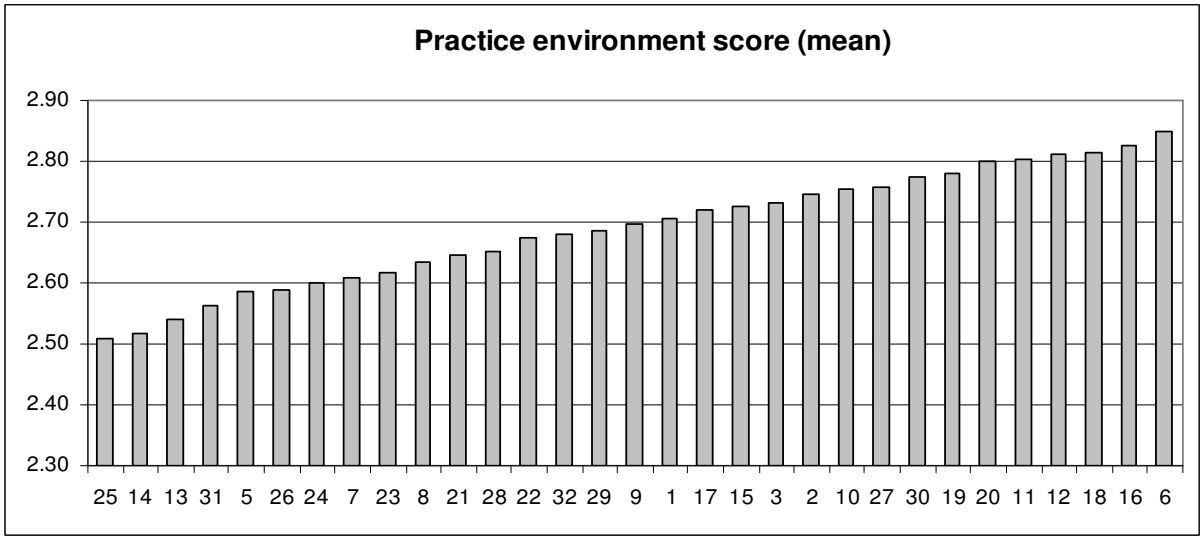
Table 5.1 Nurses views of their working environment (percentages)

	** denotes item that ward sisters are more positive*	strongly disagree	somewhat disagree	somewhat agree	strongly agree	*N=*
1	Adequate support services allow me to spend time with my patients.	24	40	32	4	*2954*
2	* Doctors and nurses have good working relationships.	1	10	65	24	*2967*
3	A supervisory staff that is supportive of nurses.	9	27	52	12	*2901*
4	* Active staff development or continuing education programs for nurses.	7	19	52	22	*2954*
5	* Career development/clinical ladder opportunity.	11	29	48	12	*2945*
6	* Opportunity for registered nurses to participate in policy decisions.	23	41	31	5	*2953*
7	Doctors value nurses' observations and judgments.	4	16	61	19	*2955*
8	Enough time and opportunity to discuss patient care with other nurses.	11	34	46	9	*2967*
9	Enough registered nurses on staff to provide quality patient care.	38	35	22	5	*2968*
10	* A nurse manager who is a good manager and leader.	8	16	41	35	*2943*
11	* A chief nursing officer who is highly visible and accessible to staff.	31	35	27	7	*2950*
12	Enough staff to get the work done.	40	36	20	4	*2956*
13	Doctors recognise nurses' contributions to patient care.	4	19	60	17	*2959*
14	* Praise and recognition for a job well done.	20	33	38	9	*2956*
15	High standards of nursing care are expected by the management.	2	4	34	60	*2961*
16	* A chief nursing officer is equal in power and authority to other top level hospital executives.	7	24	52	17	*2797*
17	A lot of team work between nurses and doctors.	3	20	60	17	*2965*
18	* Opportunities for advancement.	12	32	48	8	*2954*
19	A clear philosophy of nursing that pervades patient care environment.	5	22	58	15	*2936*
20	Working with nurses who are clinically competent.	3	12	57	28	*2966*
21	Doctors respect nurses as professionals.	4	19	60	17	*2952*
22	* A nurse manager who backs up the nursing staff in decision making, even if the conflict is with a doctor.	8	15	45	32	*2953*
23	Management that listens and responds to employee concerns.	18	31	37	14	*2958*
24	* An active quality assurance program.	7	24	57	12	*2888*
25	* Registered nurses are involved in the internal governance of the hospital (e.g. practice and policy committees).	17	36	41	6	*2922*
26	Collaboration between nurses and doctors.	3	17	67	13	*2948*
27	* A preceptor program for newly hired nurses.	6	11	45	38	*2949*
28	* Nursing care is based on a nursing rather than a medical model.	4	14	57	25	*2936*
29	* RNs have the opportunity to serve on hospital and nursing committees.	10	31	49	10	*2894*
30	Doctors hold nurses in high esteem.	9	38	46	7	*2956*
31	Written, up-to-date care plans for all patients.	8	20	47	25	*2957*
32	Patient care assignments that foster continuity of care (i.e. the same nurse care for the same patient from one day to the next).	13	26	46	15	*2964*

Source: KCL RN4CAST Survey 2012

To analyse responses to the working environment as a whole (the Practice Environment Scale PES), responses were averaged across all items. The overall mean score to this combined variable is 2.69[6] from 2979 cases standard deviation 0.45). Variation between Trusts is shown in Figure 5.1.

Figure 5.1: Average Practice Environment Score – variation by Trust



Source: KCL RN4CAST Survey 2012

Looking at the employment and demographic variables staff nurses respond more negatively about their working environment than sisters/charge nurses (2.58 compared to 2.71 among sisters/charge nurses). Of all the demographic and employment related variables job title is most strongly correlated with overall response to the working environment. However, nurses who are dissatisfied with their choice of nursing as a career are more likely to respond negatively about their current working environment (2.38 compared to 2.58 among those moderately satisfied and 2.78 among those very satisfied). This correlation is stronger than the demographic/employment related characteristics.

Comparing results to individual items by job title, sisters/charge nurses are significantly more likely than staff nurses *($p<0.001$)* to respond positively to items related to Trust policies and procedures, management, nursing leadership, career opportunities and relationships with doctors (specific items are highlighted in Table 5.1).

[6] The PES scale was generated by taking the mean value across all items. This same approach was also adopted for the three key factors presented below.

Developing working environment themes

The statements covering nurses' working environment are a relatively large collection of variables, with responses ranging from 1 'strongly disagree' to 4 'strongly agree'. These can be used as they are, i.e. a list of items which may or may not be related to each other item in some way, or factor analysis can be used to break the list down into groups of related variables. This procedure identifies variables where responses to items are similar between individuals and brings them together as 'themes'.

In analysing the survey data this way using only the responses to the views of working environment questions, three discrete themes (or factors) emerged from the data set[7] (see Table 5.2).

Table 5.2: Factors emerging from analysis of the Practice Environment Scale

Scale/Factor:	Support	Doctors	Staffing
	Career, development, support, role of nursing, management and engagement	Relationships with doctors	Staffing levels
No. of items	13	7	3
Alpha reliability	0.89	0.89	0.83
Valid cases N=	2,959	2,960	2,960
Mean Score (range)	2.62 (1-4)	2.89 (1-4)	1.99 (1-4)

Source: KCL RN4CAST Survey 2012

To check the internal consistency of the scales, reliability analyses were performed on each scale. Table 5.3 shows the composition of each factor, and the 'alpha reliability[8] of each is in Table 5.2. In all three cases the alpha reliability score is high; we can be confident of their congruence and reliability as scales.

[7] Only high loading variables (correlation of 0.5 or higher) were included in each factor. This ensures a high degree of reliability between variables, and validity in the factor.

[8] Alpha reliability is a measure of the internal consistency of the factor. This ranges between 0 and 1 with figures over 0.7 considered high.

Table 5.3: Items in each factor

	Factor 1: Support
4	Active staff development or continuing education programs for nurses.
5	Career development/clinical ladder opportunity.
6	Opportunity for registered nurses to participate in policy decisions.
10	A nurse manager who is a good manager and leader.
11	A chief nursing officer who is highly visible and accessible to staff.
16	A chief nursing officer is equal in power and authority to other top level hospital executives.
18	Opportunities for advancement.
19	A clear philosophy of nursing that pervades patient care environment.
22	A nurse manager who backs up the nursing staff in decision making, even if the conflict is with a doctor.
23	Management that listens and responds to employee concerns.
24	An active quality assurance program.
25	Registered nurses are involved in the internal governance of the hospital (e.g. practice and policy committees).
29	RNs have the opportunity to serve on hospital and nursing committees.
	Factor 2: Relationships with doctors
2	Doctors and nurses have good working relationships.
7	Doctors value nurses' observations and judgments.
13	Doctors recognise nurses' contributions to patient care.
17	A lot of team work between nurses and doctors.
21	Doctors respect nurses as professionals.
26	Collaboration between nurses and doctors.
30	Doctors hold nurses in high esteem.
	Factor 3: Staffing
1	Adequate support services allow me to spend time with my patients.
9	Enough registered nurses on staff to provide quality patient care.
12	Enough staff to get the work done.

Source: KCL RN4CAST Survey 2012

Factor 1 contains a variety of items related to nursing support, both individually in terms of career development and training (e.g. items 4, 5 and 18); management support, at all levels within the nursing hierarchy (e.g. items 10, 11, 22); the nursing support infrastructure in relation to the philosophy of nursing care, care quality assurance and nurse involvement in decision making (e.g. 19, 23, 24, 25 and 29).

Factor 2 relates unambiguously to the relationships between nurses and doctors, in terms of communication, working relationships, collaboration and the degree to which doctors are perceived to value the nursing contribution.

Factor 3 contains three items relating specifically to staffing levels (nursing, non-nursing and support more generally). This factor contains the items with lowest levels of agreement.

The following sections look at each of the three factors and differences between groups of nurses in their scores on each scale (the mean of all the non-missing items grouped under a particular factor).

Staff nurses respond more negatively on each of the working environment scales than ward sisters/charge nurses but especially so in relation to support, training, development, leadership and management, as measured in Factor 1. The differences in views concerning 'relationships with doctors' and 'staffing levels', although statistically significant, are not large.

Table 5.4: Factor mean scores by job title

Job title	Factor 1	Factor 2	Factor 3	*Base N= (max)*
Staff nurses	2.57	2.89	1.96	*2165*
Ward sisters/charge nurses	2.78	2.92	2.07	*720*
All respondents	**2.62**	**2.89**	**1.99**	***2895***

Source: KCL RN4CAST Survey 2012

Although there is some difference in views between nurses on Band 5 and those on higher pay bands most of this variation is accounted for by job title variation. There is also little difference in views of the working environment between those working day and night shifts.

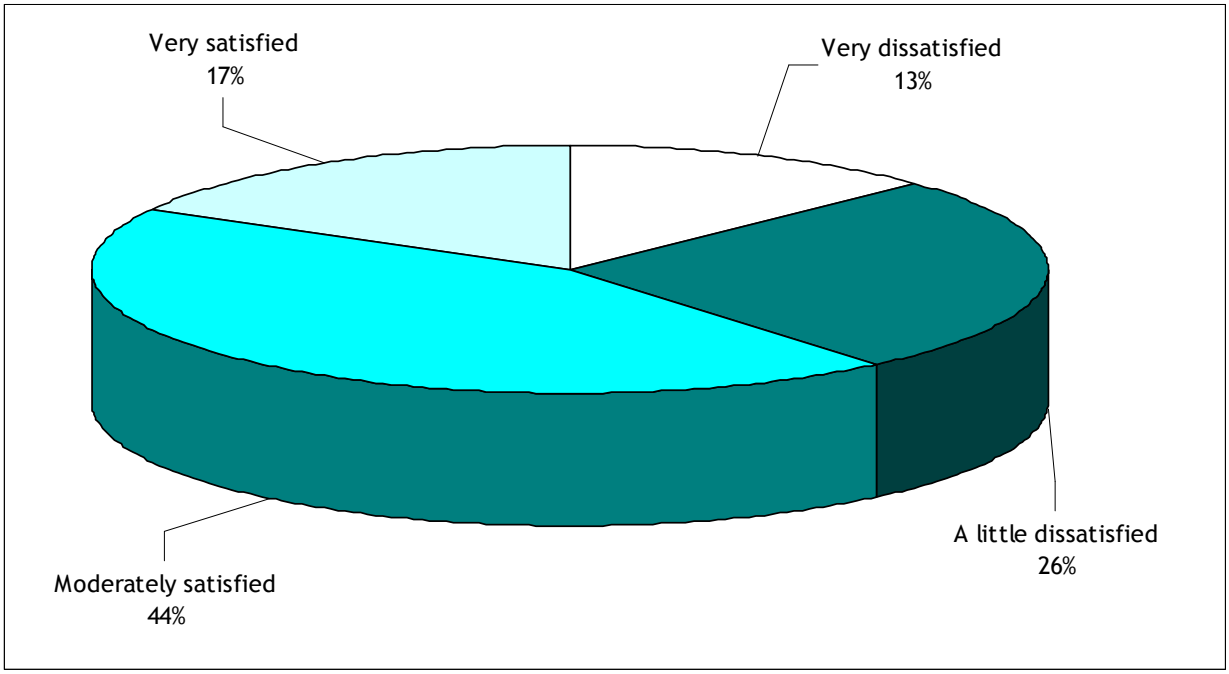
There is also some correlation between type of ward and the three work environment factors. Nurses working on medical wards (as defined by the nurse) are more likely to respond negatively on the staffing and support services factor (mean=1.91) than others and especially when compared to nurses working on surgical wards (2.10). Nurses working on surgical wards also respond more positively in relation to training, development and leadership issues.

Differences by Trust are presented in the appendix.

Satisfaction with current job and working environment

Six in ten respondents to the RN4CAST survey (61%) said they were satisfied with their current job (44% moderately satisfied and 17% very satisfied – see Figure 5.2). Four in ten though said they were dissatisfied (13% very dissatisfied and 26% a little dissatisfied). Satisfaction with current job is strongly correlated with all the nursing environment items and themes. The staffing (factor 3) and support (factor 1) themes were most strongly correlated with current job satisfaction, relationships with doctors relatively less so, although still statistically significant.

Figure 5.2: Satisfaction with current job (percentages)



Source: KCL RN4CAST Survey 2012

There is a significant association between overall job satisfaction/dissatisfaction and patient to RN ratios. Those who are most satisfied are on wards with an average of 7.1 patients per RN on day shifts, compared with 7.8 (moderately satisfied), 8.4 for those who are a little dissatisfied and 8.8 for those who are very dissatisfied.

Looking at the demographic and employment related variables, age is most strongly correlated with satisfaction with current job (see Table 5.5). Older nurses are more likely to report that they are dissatisfied with their current job (44% of those aged 45 plus compared to 39% of those aged 35-44, 34% of those aged 25-34 and 28% of nurses aged under 25). Nurses who qualified in the UK are also less likely to report being satisfied with their current job than those who first qualified overseas (59% compared to 73%).

Table 5.5: Satisfaction with current job by age band

	Under 25	25-34	35-44	45-54	55 plus	All respondents
Very dissatisfied	6%	10%	12%	16%	18%	12%
A little dissatisfied	22%	24%	27%	28%	27%	26%
Moderately satisfied	45%	48%	45%	40%	40%	44%
Very satisfied	27%	18%	16%	16%	15%	17%
Base N=100%	*222*	*725*	*960*	*719*	*228*	*2854*

Source: KCL RN4CAST Survey 2012

When asked to rate their working environment 15% said it was 'poor', 41% said it was 'fair', 36% 'good' and 8% 'excellent'. Where nurses view their working environment as 'poor' or 'fair' more tend to be

dissatisfied with their current job, half (51%) of those who indicated their working environment was poor said they were very dissatisfied with their current job while 70% of those who said their working environment was excellent said they were very satisfied with their current job.

Views of their working environment are linked to staffing levels (Table 5.6). Where respondents viewed their working environment as 'poor' day time staffing levels were on average (mean) 8.9 patients per registered nurse compared to 6.9 patients per RN in cases where nurses viewed their working environment as 'excellent'.

Table 5.6: Work environment: mean scores on each factor by overall rating of work environment

	Factor 1: Training, development, leadership, engagement	Factor 2: Nurse - Doctor relationships	Factor 3: Staffing/Support Services	Practice environment (PES average)	Patients per RN (day)
Poor	2.07	2.60	1.32	2.20	8.9
Fair	2.51	2.82	1.81	2.58	8.3
Good	2.87	3.01	2.31	2.91	7.5
Excellent	3.18	3.25	2.80	3.22	6.9
All	**2.62**	**2.89**	**1.99**	**2.69**	**8.0**

Source: KCL RN4CAST Survey 2012

Leaving current job or nursing due to dissatisfaction

Across all respondents, 44% say they would leave their current job due to job dissatisfaction if they could. Staff nurses are more likely to respond this way (46% compared to 37% of sisters/charge nurses). Similarly Band 5 nurses are more likely to indicate they would leave their current job due to job satisfaction if they could (46%). Other than these differences there was little variation by age or length of service. Of those that would leave if they could, 47% said they would leave for nursing in another hospital, 30% would carry on nursing but not in a hospital and 23% would leave nursing altogether.

In addition, nurses working in surgical wards are more likely to respond positively on this indicator than nurses on medical wards. For example, a half (50%) of nurses on surgical wards say that their work environment is either 'excellent' or 'good' compared to 42% of nurses working on medical wards.

There is significant correlation between where nurses would like to move to and their level of dissatisfaction. The more dissatisfied, the more likely are they to leave nursing altogether. For example, of those who would like to carry on nursing in a different hospital 57% are dissatisfied with their current job compared to 65% of those who want to carry on nursing but not in a hospital and 75% of those who do not want to carry on nursing at all. There is a similar difference in how they rate their working environment between those wanting to carry on nursing (in hospital and elsewhere) and stop nursing altogether.

More than half thought it would be difficult (42% fairly difficult and 12% very difficult) to find an acceptable job in nursing if they left their current position. Age is the key factor differentiating nurses responses with 59% of 45-54 year old and 66% of those aged 55 plus saying it would be difficult finding

another acceptable job in nursing compared to 40% of those aged under 25 and 49% of 25-34 year olds.

Table 5.7 presents responses to different aspects of nurses' jobs and overall satisfaction with their current job. The strongest associations between overall satisfaction in current job and specific aspects, are with professional status (0.47), independence at work (0.44) and opportunities for advancement (0.43) while the weakest correlations are with annual leave (0.25), sick leave (0.27) and wages (0.27).

Table 5.7: Overall current job satisfaction and satisfaction with features of job

	Very dissatisfied	Little dissatisfied	Moderately satisfied	Very satisfied	*Base N=*
Overall satisfaction with current job	13	39	44	17	*2975*
Work schedule flexibility	7	17	47	29	*2967*
Opportunities for advancement	13	26	49	13	*2960*
Independence at work	4	13	59	25	*2956*
Professional status	4	14	57	25	*2953*
Wages	18	29	45	9	*2971*
Educational opportunities	9	24	50	17	*2967*
Annual leave	4	9	51	37	*2973*
Sick leave	7	12	51	31	*2944*
Study leave	15	24	43	18	*2965*

Source: KCL RN4CAST Survey 2012

Again, sisters/charge nurses are more likely to respond positively *($p<0.001$)* on all these aspects of their work – in particular opportunities for advancement, where three quarters (75%) say they are satisfied with their opportunities compared to 57% of staff nurses.

Respondents were asked two questions about their views of the hospital overall, firstly as a place to work – would you recommend your hospital to a nurse colleague as a good place to work and secondly would you recommend your hospital to friends and family if they needed hospital care? Just over a quarter (27%) would definitely or probably not recommend their hospital as a place to work to a colleague while a smaller number (16%) might not recommend it to family or friends in need of care (Table 5.8).

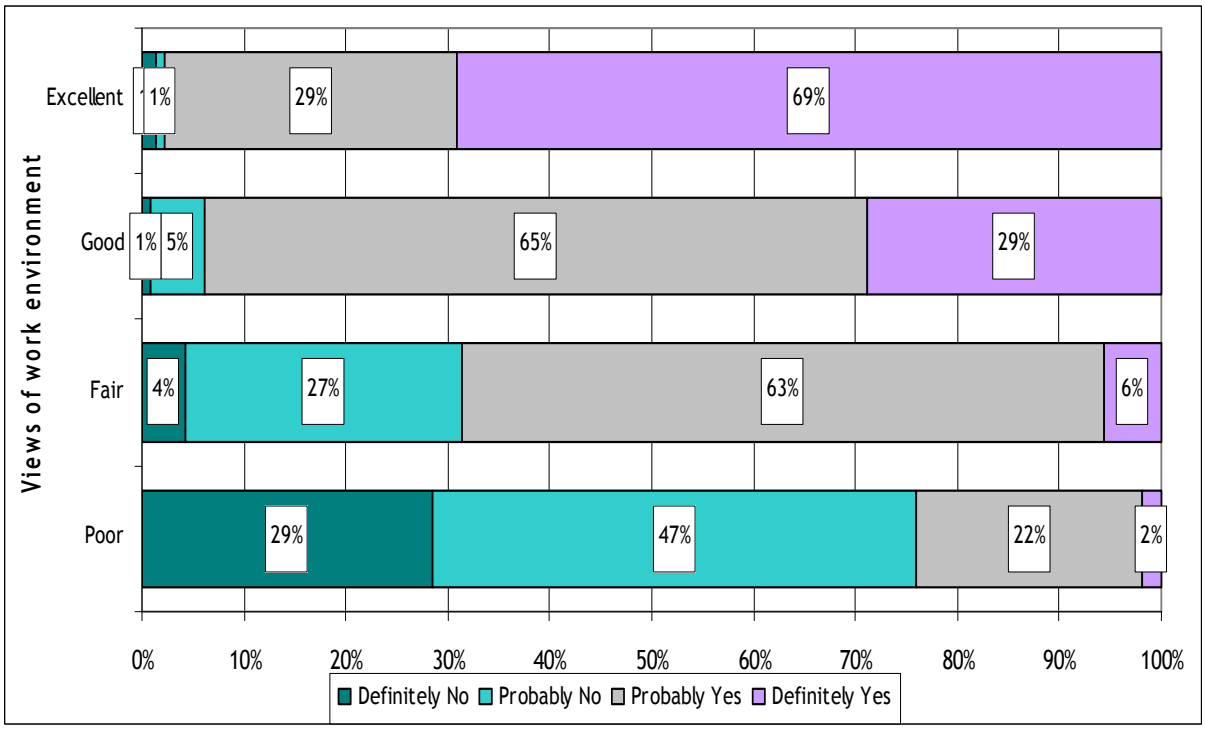
Table 5.8: Would you recommend your hospital?

	To a nurse colleague as a good place to work	To friends/family if they needed hospital care
Definitely no	7%	4%
Probably no	20%	12%
Probably yes	55%	57%
Definitely yes	18%	27%
Base N=100%	*2965*	*2970*

Source: KCL RN4CAST Survey 2012

Whether or not nurses would recommend their hospital as a good place to work or for friends and family if they needed a hospital depends very much on their current job satisfaction and ratings of the hospital in terms of support etc. But even where nurses rate the working environment as poor, one in four (24%) say they would probably or definitely recommend the hospital as a place to work. However, most of these responses were 'probably' which might imply that they would recommend other areas of the hospital, rather than the ward they work on (Figure 5.3).

Figure 5.3: Would you recommend your hospital to a nursing colleague as place to work by views of working environment (percentages)



Source: KCL RN4CAST Survey 2012

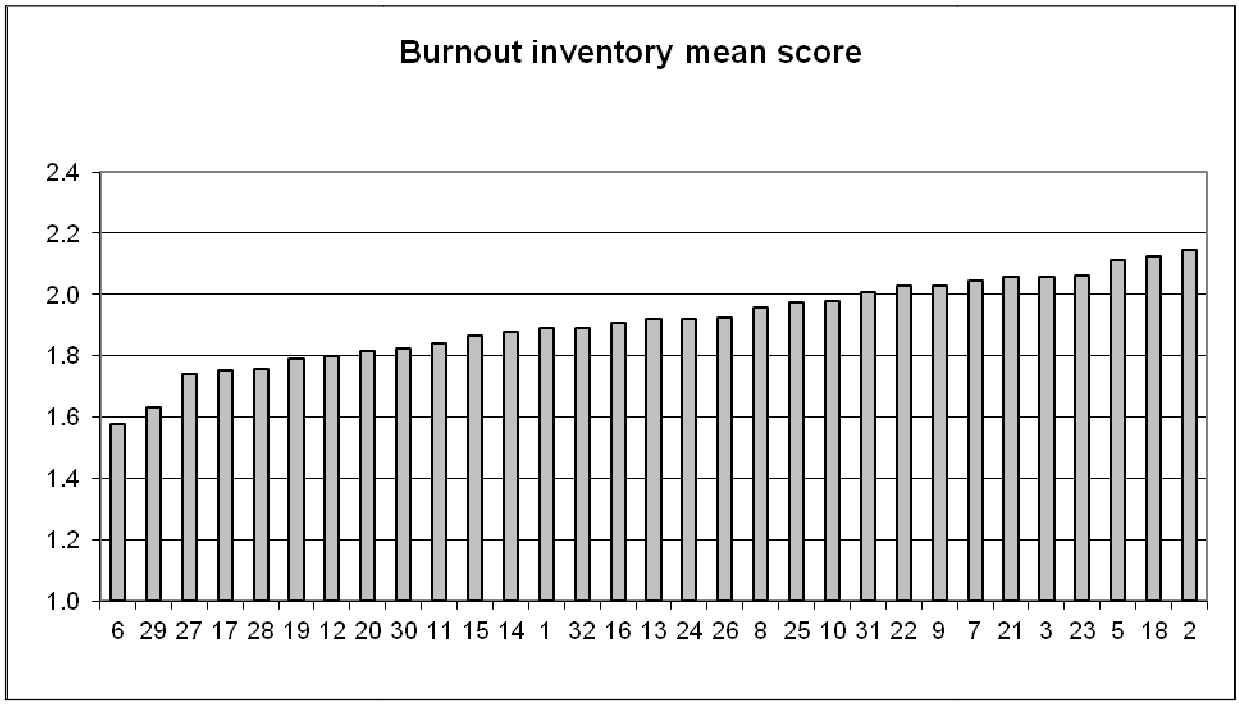
The association with recommending the hospital to provide care for a family member/friend is also statistically significant. Where the working environment is poor, more than half of respondents (54%) would still recommend the hospital as a place to care for a family member/friend.

Nurses working on surgical wards are much more likely to recommend their hospital to friends and family if they needed hospital care (32% saying definitely yes) compared to 23% of those working on medical wards. Although there remains a statistically significant difference by type of ward in the proportion recommending their hospital as a place of work to a nursing colleague the gap is not so large (71% of those on medical wards saying yes compared to 76% of those on surgical wards).

6. Burnout – emotional exhaustion

The Maslach Burnout Inventory (emotional exhaustion subscale) was used to provide an indicator of work related stress and burnout. An aggregate scale was produced, with a minimum score of 0 (low burnout) and maximum of 6 (high burnout); the mean average across all respondents was 1.9 (with standard deviation of 0.85). Variation in the mean scores by Trust is shown in Figure 6.1.

Figure 6.1: Nurse burnout score – variation by trust



Source: KCL RN4CAST Survey 2012

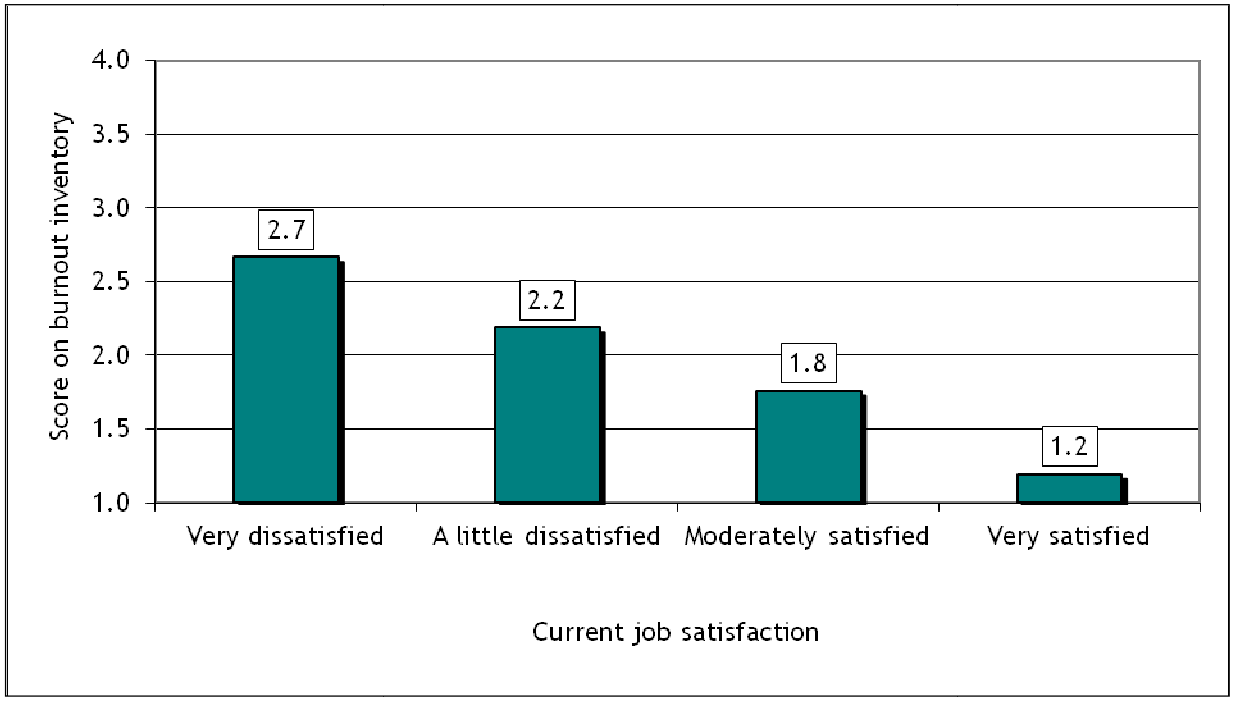
Overall, 42% of the nurses surveyed in England are classified as suffering from emotional exhaustion (or 'burnout' as its termed).

Taking the burnout inventory as a whole[9] the only demographic variable that shows a statistically significant correlation is between male and female nurses with men scoring lower, suggesting they are showing more signs of burnout than female nurses.

However, there is a significant association between the aggregate burnout inventory and aspects of current working environment and job satisfaction. The strongest correlation is with current job satisfaction (0.515), stronger than any other of the working environment scales and indicators. Figure 6.2 highlights the relationship between burnout and current job satisfaction.

[9] Note scores for positive items were reversed so that all items are in the same direction. A high score on the composite variable represents higher levels of burnout.

Figure 6.2: Nurse burnout score by current job satisfaction



Source: KCL RN4CAST Survey 2012

7. Patient safety/quality

This section of the report looks at quality and safety issues on wards. First we consider views of the quality of nursing care and how this has changed over the previous year. Nurses are also asked to give their ward/unit an overall grade on patient safety and indicate confidence in patients' ability to manage their care when discharged and confidence that hospital management will act to resolve problems in patient care raised by nurses.

Overall, just under a third (31%) of respondents indicate that the quality of nursing care delivered on their ward is excellent. A half (51%) said it was 'good' but 16% said it was 'fair' and 2% said it was 'poor'. Nurses describing the care negatively are likely to be working in an environment where the staffing is poorer, with more patients per registered nurse (Table 7.1).

Table 7.1: In general, how would you describe the quality of nursing care delivered to patients on your ward/unit?

	Frequency (n= 2970)	Pts/RN (day)
Poor	2%	9.1
Fair	16%	8.9
Good	51%	8.1
Excellent	31%	7.3

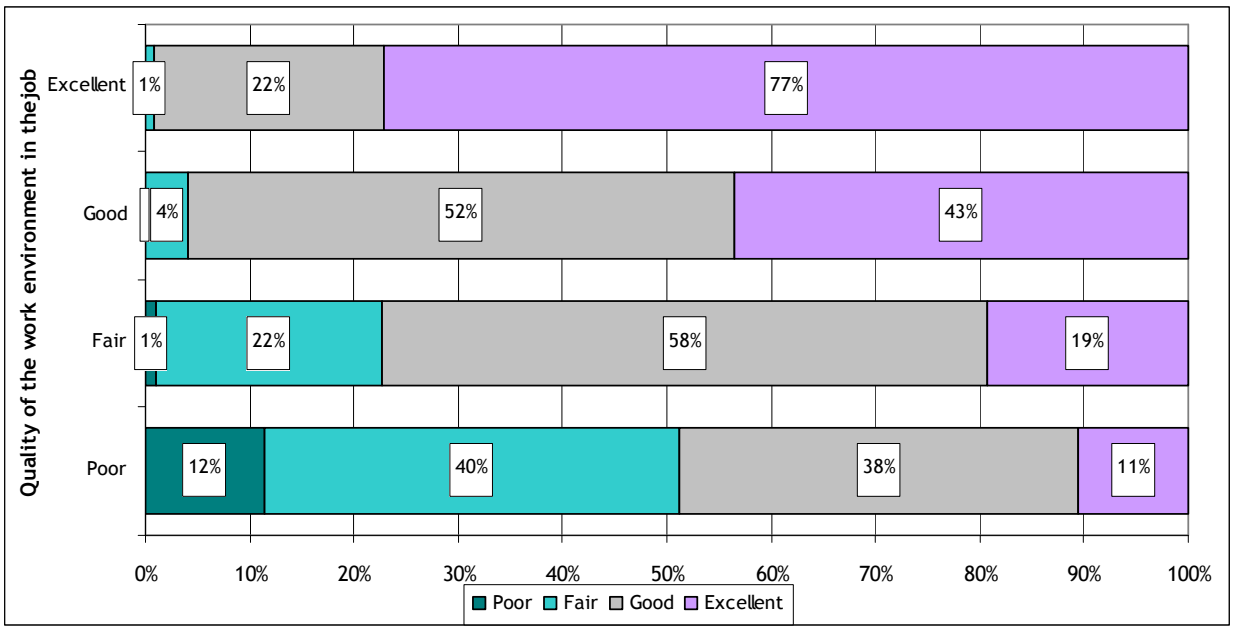
Source: KCL RN4CAST Survey 2012

Views of the quality of care are strongly associated with job satisfaction in general, and specifically with the quality of the work environment. Where the quality of the work environment is viewed as 'excellent' three quarters say the quality of patient care is 'excellent' but conversely where the working environment is reported as 'poor' just 11% say the quality of care is 'excellent' (Figure 7.1).

Views of quality of care varied by the pay band of the respondent, with 79% of band 5s reporting care to be 'good/excellent' compared to 83% of band 6s and 92% of band 7-9s.

Nurses working in surgical wards are more likely to respond positively on all the quality and safety indicators and those on medical wards less likely to do so – on all items these differences are statistically significant. For example, the quality of nursing care delivered on surgical wards is described as 'excellent' by 39% of nurses compared to 28% of nurses working on medical wards.

Figure 7.1: Quality of nursing care delivered to patients by quality of working environment (percentages)



Source: KCL RN4CAST Survey 2012

Looking at how nurses view the quality of patient care at the time of the survey compared to a year previously, 42% said it had remained about the same, 22% said it had deteriorated and 36% said it had improved. Again, there is significant correlation with nurses' ratings of their work environment and job satisfaction. Where their work environment is reported as 'excellent' 63% say that patient care has improved in the previous year, compared to just 11% of those who say their working environment is 'poor'.

Views of patient safety

One in five (18%) considered that patient safety was 'excellent', 46% 'very good', 31% 'acceptable' and just 5% 'poor' and 2% 'failing'. There is significant association between views of safety, and working environment, job satisfaction and staffing levels.

Nurses reporting lower patient numbers per RN are also more likely to describe that patient safety (as well as quality of patient care) are excellent or good. Where patient safety is reported as excellent, there are an average of seven patients per RN compared to more than nine where patient safety is 'poor' or 'failing' (Table 7.2 and Figure 7.2).

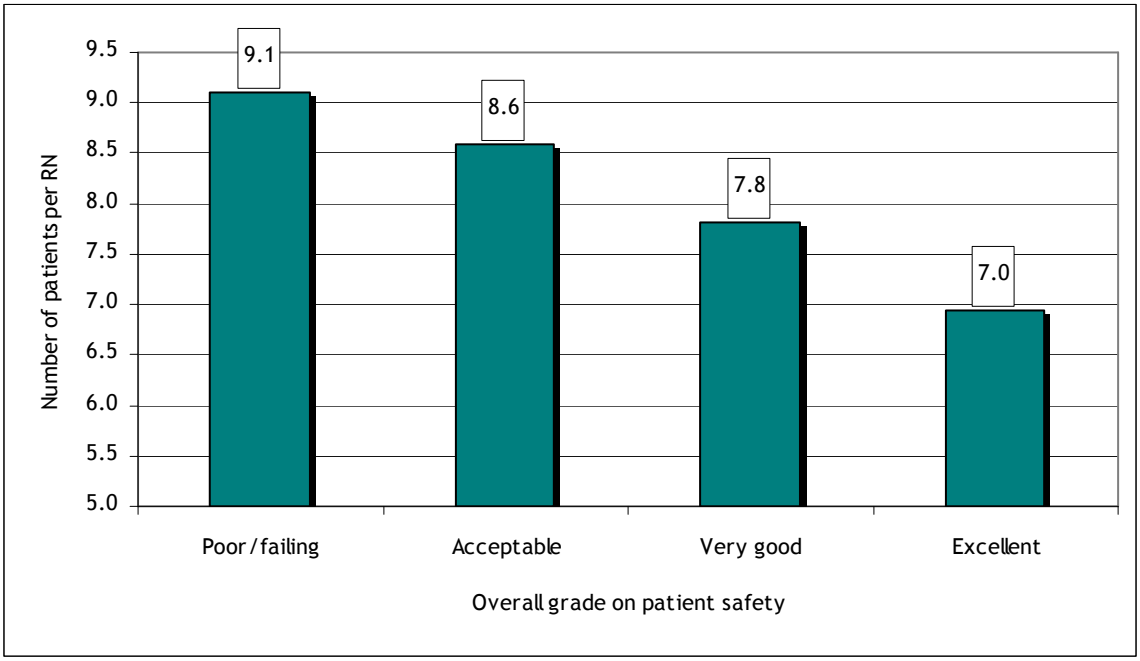
Nurses working on surgical wards (where patient : nurse ratios are lower, and fewer patients require assistance with all ADLs) are much more likely to describe patient safety on their ward as 'very good' or 'excellent' (72%) than nurses working on medical wards (59%).

Table 7.2: Patient safety ratings for ward/unit (n=2966)

	Frequency	Pts/RN (day)
Failing	2%	8.4
Poor	5%	9.4
Acceptable	31%	8.6
Very good	46%	7.8
Excellent	18%	7.0

Source: KCL RN4CAST Survey 2012

Figure 7.2: Patient to nurse ratios by views of patient safety (mean Pts / RN)

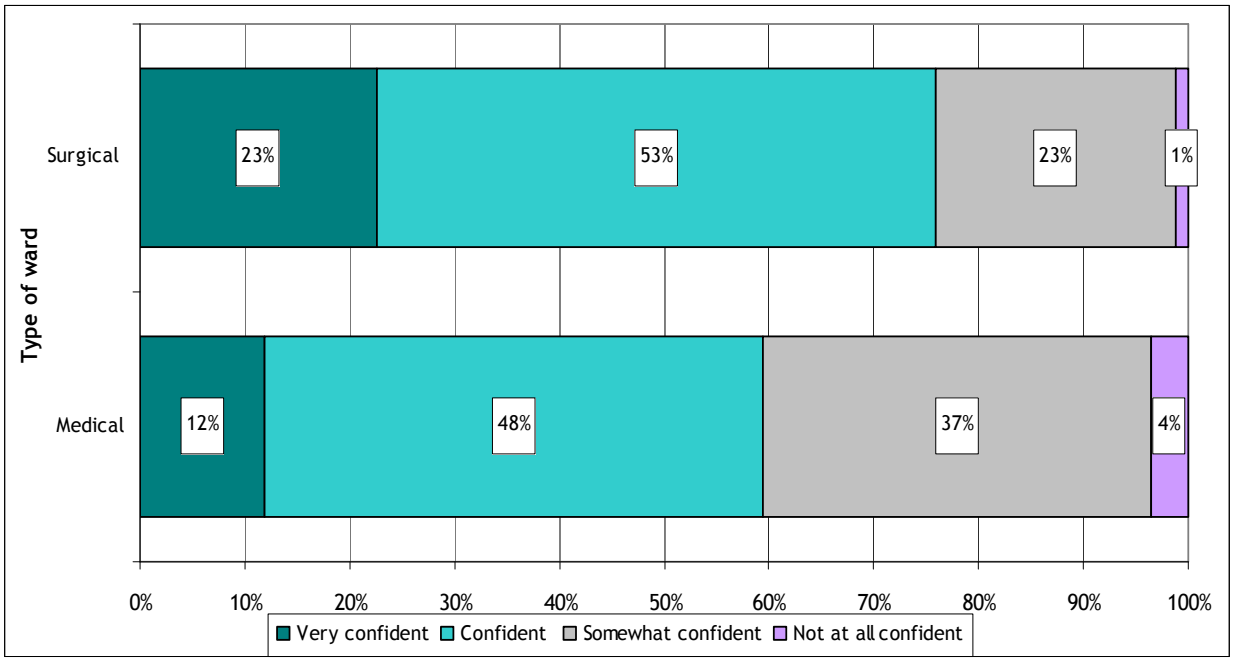


Source: KCL RN4CAST Survey 2012

Overall, 16% of nurses are 'very confident', and 50% 'confident' that patients will be able to manage their care when discharged, but 23% are only 'somewhat confident' and 3% 'not at all confident'. This varies substantially by type of ward; 23% of nurses on surgical wards are 'very confident' compared to 12% of those on medical ward (Figure 7.3).

Across all nurses, just 8% are 'very confident', 28% 'confident', 42% 'somewhat confident' and one in five (22%) are 'not at all confident' that any problems in patient care they raise will be acted on by hospital management. There is no difference here by job title or type of ward respondents work on.

Figure 7.3: Confidence that patients are able to manage their care when discharged



Source: KCL RN4CAST Survey 2012

Finally in this section, nurses were asked to provide a view of the prevailing culture in relation to patient safety. They were asked to consider a range of statements related to organisational culture in patient safety and respond by indicating the extent to which they agreed or disagreed with each. (Table 7.3).

Table 7.3: Prevailing culture re patient safety (percentages)

	strongly disagree	disagree	neither	agree	strongly agree	*N=*
1. Staff feel like their mistakes are held against them	8	24	26	32	10	*2953*
2. Important patient care information is often lost during shift changes	10	37	17	31	5	*2959*
3. Things fall between the cracks when transferring patients from one unit to another	5	21	18	46	10	*2957*
4. Staff feel free to question the decisions or actions of those in authority	9	27	20	39	5	*2957*
5. In this unit we discuss ways to prevent errors from happening again	3	8	11	59	19	*2962*
6. We are given feedback about changes put into place on event reports	7	16	17	48	12	*2964*
7. The actions of hospital management show that patient safety is a top priority	8	14	23	38	17	*2967*

Source: KCL RN4CAST Survey 2011

Four in ten respondents (42%) reported that they feel their mistakes are held against them. More than a third (36%) agreed that important patient care information is often lost during shift changes and (56%) said that things fall between the cracks when transferring patients from one unit to another. More than a third (36%) feel unable to question the decisions or actions of those in authority.

Here there are significant differences in response between staff nurses and sisters/charge nurses. For example, 88% of ward sisters/charge nurses say that in their unit they discuss ways to prevent errors happening again, compared to 75% of staff nurses. There is little or no difference between nurses working on medical and surgical wards in their responses to specific patient safety issues. There is however a significant association between views of the safety culture and views of their working environment and current job satisfaction.

Respondents were asked to indicate which of a list of incidents involving nurses and patients had occurred in their workplace (Table 7.4).

Table 7.4: How often each of the following incidents occur between nurses and patients (percentages) [10]

	Never	Once a month or less often	Few times a month or more often	*Base N=*	*Missing cases*
1. Patient received wrong medication, time, or dose	67	26	7	*2269*	*721*
2. Pressure ulcers after admission	69	28	3	*2509*	*481*
3. Patient falls with injury	52	40	8	*2718*	*272*
4. Healthcare-associated infection:					
a) Urinary tract infections	45	45	10	*2639*	*351*
b) Bloodstream infections	76	21	3	*2125*	*865*
c) Pneumonia	59	36	5	*2350*	*640*
5. Complaints from patients or their families	43	45	12	*2688*	*302*
6. Verbal abuse toward nurses					
a) By patients and/or families	31	41	28	*2846*	*144*
b) By staff	64	27	9	*1831*	*1159*
7. Physical abuse toward nurses					
a) By patients and/or families	58	28	14	*2129*	*861*
b) By staff	80	14	6	*393*	*2597*
8. Work related physical injuries to nurses	77	19	4	*2269*	*721*

Source: KCL RN4CAST Survey 2012

[10] Note large numbers of missing data on some items in this question which will need consideration in future analyses. Non-response could reflect the event not occurring, or the respondent not having sufficient information to answer the question, or some combination of the two.

The most frequent types of incident impacting on nurses' working lives is verbal abuse from patients and/or their families: 28% reported this occurred at least a few times a month. One in ten report verbal abuse from other staff, at least a few times a month.

There is an association between patient to registered nurse ratios and reported harm – to both patients (e.g. pressure ulcers, UTIs, healthcare associated pneumonia) and nurses (e.g. verbal abuse). For example, greater frequency of patient/family complaints are associated with lower staffing levels (i.e. more patients per RN). (See Table 7.5).

Table 7.5: Patient to RN ratios (day) by frequency of incidents/harm

	Never	Once a month or less often	Few times a month or more often	*p*=
1. Patient received wrong medication, time, or dose	8.0	8.0	8.6	*0.114*
2. Pressure ulcers after admission	8.0	8.5	8.6	*0.002*
3. Patient falls with injury	7.6	8.4	9.2	*<0.001*
4. Healthcare-associated infection:				
a) Urinary tract infections	7.7	8.3	8.6	*<0.001*
b) Bloodstream infections	8.1	8.2	8.2	*0.717*
c) Pneumonia	7.9	8.4	9.0	*<0.001*
5. Complaints from patients or their families	7.5	8.2	9.1	*<0.001*
6. Verbal abuse toward nurses				
a) By patients and/or families	7.3	8.0	9.0	*<0.001*
b) By staff	8.0	8.2	8.4	*0.255*
7. Physical abuse toward nurses				
a) By patients and/or families	7.9	8.5	9.3	*<0.001*
b) By staff	7.8	8.5	7.3	*0.376*
8. Work related physical injuries to nurses	8.0	8.4	9.0	*0.011* *

Source: KCL RN4CAST Survey 2012

Nurses on medical wards report higher frequencies of these incidents, in particular in relation to physical and verbal abuse toward nurses by patients and/or families and patient falls with injury. (Table 7.6 - higher scores indicate higher frequency').

Table 7.6: Mean frequency of incidents/harm by type of ward (1=never 7= every day)

	Medical	Surgical	All
1. Patient received wrong medication, time, or dose	1.26	1.13	1.25
2. Pressure ulcers after admission	1.29	1.12	1.24
3. Patient falls with injury	1.99	1.36	1.71
4. Healthcare-associated infection:	1.83	1.63	1.81
a) Urinary tract infections	1.09	0.91	1.00
b) Bloodstream infections	1.62	1.06	1.35
c) Pneumonia	2.07	1.85	2.00
5. Complaints from patients or their families	2.85	2.30	2.62
6. Verbal abuse toward nurses	1.10	1.09	1.09
a) By patients and/or families	1.72	0.95	1.39
b) By staff	0.21	0.19	0.19
7. Physical abuse toward nurses	1.19	1.04	1.11
a) By patients and/or families	1.26	1.13	1.25
b) By staff	1.29	1.12	1.24
8. Work related physical injuries to nurses	1.99	1.36	1.71

Source: KCL RN4CAST Survey 2012

8. Activities done and left undone

As well as seeking information on the numbers of patients cared for by respondents, data was also sought on the frequency with which certain tasks that can potentially be performed by support staff, were performed (Table 8.1).

Table 8.1: How often performed each of the following tasks (percentages)

		Never	Sometimes	Often	*Base N=*
1	Delivering and retrieving food trays	32.8	44.7	22.5	*2932*
2	Performing non-nursing care	4.1	47.4	48.5	*2935*
3	Arranging discharge referrals and transportation (including to long term care)	16.8	29.5	53.7	*2932*
4	Routine phlebotomy/blood draw for tests	45.4	30.8	23.8	*2933*
5	Transporting of patients within hospital	39.0	43.0	18.0	*2932*
6	Cleaning patient rooms and equipment	9.9	49.9	40.2	*2937*
7	Filling in for non-nursing services not available on off-hours	36.6	43.8	19.6	*2896*
8	Obtaining supplies or equipment	14.6	55.7	29.7	*2938*
9	Answering phones, clerical duties	0.3	14.4	85.3	*2947*

Source: KCL RN4CAST Survey 2012

There was little difference by type of ward in the frequency of nurses undertaking each of these tasks although fewer nurses on surgical wards say they have to deliver food trays than is the case on medical wards or have to perform non-nursing care. However, sisters/charge nurses are more likely to indicate that they 'often' have to perform non-nursing care, arrange discharge referrals and fill-in for non-nursing services not available on off-hours.

Across all respondents, 86% said that at least one necessary activity was left undone on their last shift due to lack of time (Table 8.2).

Table 8.2: Necessary activities left undone because of lack of time to complete tasks

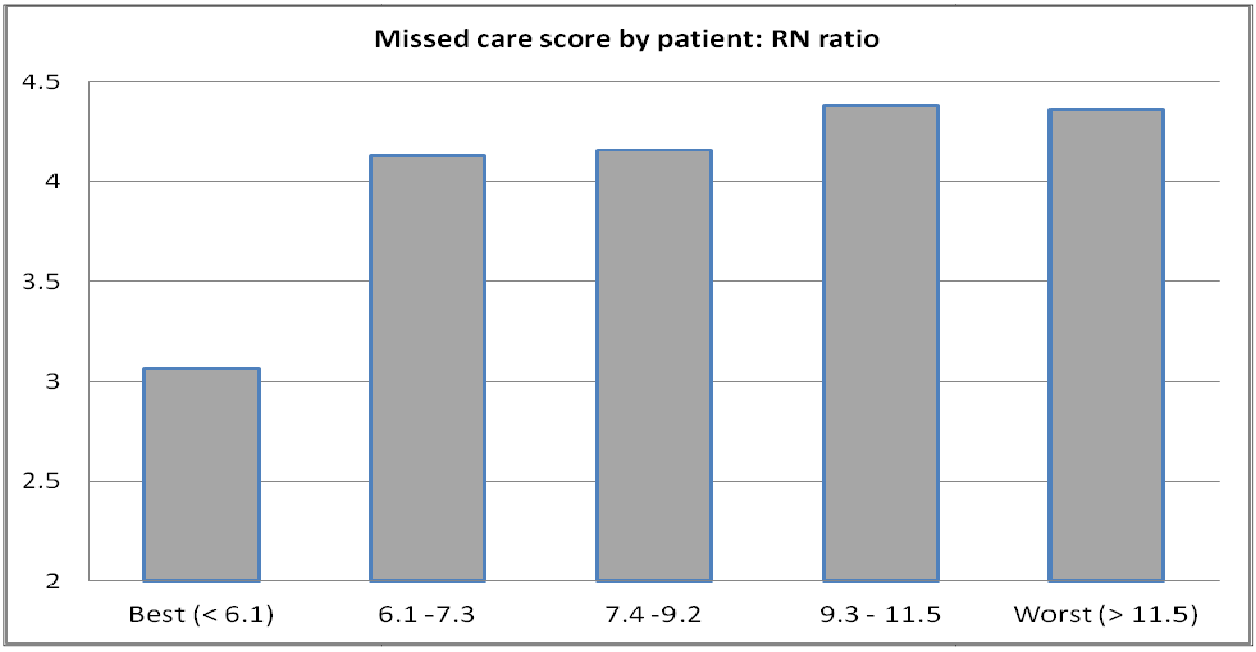
		Pts/RN (day)		% of those who left at least one task undone
	% left undone (all cases)	Left undone (all)	Not left undone (all)	
5. Comfort/talk with patients	66	8.3	7.3	76
6. Educating patients and family	52	8.3	7.5	61
11. Develop or update nursing care plans/care pathways	46	8.3	7.7	54
1. Adequate patient surveillance	34	8.7	7.6	40
10. Adequately document nursing care	33	8.5	7.7	39
3. Oral hygiene	28	8.4	7.8	33
13. Frequent changing of patient position	28	8.2	7.9	33
12. Planning care	27	8.5	7.8	32
8. Administer medications on time	22	8.3	7.9	26
2. Skin care	21	8.7	7.8	24
9. Prepare patients and families for discharge	20	8.3	7.9	23
7. Treatments and procedures	11	8.6	7.9	13
4. Pain management	7	8.2	8.0	8

Source: KCL RN4CAST Survey 2012

Talking to and comforting patients is the activity more likely to be left undone and one of the activities undertaken that is most strongly correlated with staffing levels. The degree and nature of care not completed on a shift is significantly related to the patient to RN ratio on that shift. For example, nurses reporting talking and comforting patients was neglected on their last shift due to lack of time, were on wards with poorer staffing levels, with one more patient per RN than was the case on wards where this activity had been completed. Similar differences in staffing are noticeable for most of the activities in relation to whether or not they were left undone. However, the widest difference between staffing levels and activities left undone was in 'patient surveillance'. A third of nurses (34%) said this activity had been left undone and where this was the last there was, on average, just over one patient per nurse more (8.7) than was the case on wards where the task had been completed (7.6).

An overall score was computed, that reflects the total number of items of care (from 0 to 13) left undone on the last shift due to lack of time, and this was related to the patient to nurse ratio on that same shift. (Figure 8.1). Nurses working on better staffed environments (6-7 patients per RN) on average reported 1.4 fewer items of care left undone, compared to those working in more poorly staffed areas (average of 9 or more patients per RN). Once staffing levels drop below a certain point (> 8 patients per RN), the level of compromised care score remains static at around 4.2-4.4 items of care.

Figure 8.1: Mean number of necessary activities left undone by patients per RN



Source: KCL RN4CAST Survey 2012

9. Discussion and next steps

This report has presented findings from the RN4Cast registered nurse survey in England. It provides us with an overview of nurses' working lives in 'typical' wards of acute hospitals. Trusts were sampled randomly in the first instance, with stratification to ensure different trust types (size, teaching status) regions were represented. Contrasting the profile of the respondents with that of similar data sets, we can be confident that the sample is representative of ward based nurses in England in general.

In summary:

- Hospital nurses are typically 40 years of age and 92% are women
- They have been working in nursing for 14 years, and on their current ward for 6
- 28% have a degree in nursing
- 61% are satisfied with their jobs; 39% are not
- 44% would leave their job if they could – and this correlates with job dissatisfaction
- 42% of nurses surveyed are suffering from emotional exhaustion and are 'burnt-out'
- Nurses with higher levels of emotional exhaustion (burnout) are more likely to be dissatisfied with their jobs
- 73% would recommend their hospital as a good place to work, and 84% would recommend it to friends and family if they needed care
- They work on wards with an average of 25 patients, with 6 nursing staff (RNs and HCAs) in the day and 4 at night
- On average there are 8 patients per registered nurse during the day (56% of staff on duty are registered nurses)
- 76% say there are not sufficient staff to get the work done
- 86% report that at least one aspect of care was left undone on their last shift due to lack of time
- Nurses who consider the quality of care where they work to excellent (31%) report better staffing levels where they work (7 patients per RN compared with 9 on wards with 'poor' care)

But these aggregate findings mask variations between Trusts on many of work-life features examined. Some of this Trust variation is presented in the Tables and Figures (Trusts taking part can use their participation ID to see identify their own results relative to other Trusts). However our analysis has found that in most cases there is more variation within Trusts than between them – an issue that we will be exploring in further publications.

Whilst the survey results present a good overview and point to some interesting associations between nursing inputs (in terms of staffing level for example) and nursing reported outcomes (such as quality of care, care left undone or burnout), the key purpose of the survey is to generate nurse level data that can be related to objective measures of patient outcome – primarily mortality rates and failure- to-rescue as identified through the hospital episode statistics. We are currently undertaking the multilevel and multivariate analyses needed to explore these relationships, taking into account other characteristics such as medical staffing, and hospital size and type, and will be reporting on the results of these analyses later in the year.

Finally, a reminder that this work has been undertaken as part of a wider EU/International piece of work, that aims to inform workforce planning by having greater insight into the quality of care and outcomes associated with different nursing inputs. A first cut of the international data was published in the BMJ in March 2012[11], and policy implications of the study were presented at an EU conference in Brussels in December 2011.

[11] Aiken et al (2012) Patient safety, satisfaction, and quality of hospital care: cross sectional surveys of nurses and patients in 12 countries in Europe and the United States. BMJ. 2012; 344: e1717.

Appendix A

Table A1: Trust profile - pay band distribution, job title, type of ward (percentages)

Trust	% 5	% 6	% 7	% Staffnurse	% Ward sister/Charge nurse	% Medical	% Surgical	*Base N=*
1	65.7	28.4	6.0	65.7	32.8	28.4	38.8	*67*
2	66.7	18.1	15.3	65.3	33.3	28.8	24.7	*72*
3	74.3	15.7	10.0	77.1	22.9	46.5	32.4	*70*
5	65.3	29.2	4.2	72.6	23.3	38.4	43.8	*72*
6	69.8	20.8	9.4	72.4	25.7	38.7	18.9	*106*
7	70.4	14.8	13.9	71.3	25.9	37.3	31.8	*108*
8	69.0	18.1	11.6	69.2	29.5	38.7	21.3	*155*
9	65.6	21.5	12.9	66.1	32.3	44.1	29.6	*186*
10	63.4	23.2	9.8	66.3	31.3	34.9	31.3	*82*
11	62.9	24.3	11.4	68.1	26.4	40.3	34.7	*70*
12	76.0	14.0	9.9	76.4	23.6	33.1	23.4	*121*
13	53.7	26.8	17.1	53.7	41.5	28.6	23.8	*41*
14	45.8	40.7	10.2	85.0	11.7	40.0	26.7	*59*
15	71.0	15.5	12.5	73.3	26.2	36.0	27.6	*200*
16	79.7	12.5	7.8	79.7	20.3	33.3	48.5	*64*
17	76.4	14.6	7.9	77.5	21.3	29.2	33.7	*89*
18	42.0	47.8	7.2	76.8	17.4	29.0	47.8	*69*
19	70.2	19.2	10.6	69.2	28.8	33.7	42.3	*104*
20	66.9	13.4	18.1	68.8	30.5	46.9	25.8	*127*
21	68.9	23.0	6.6	67.2	31.1	41.0	31.1	*61*
22	84.0	8.6	4.9	84.0	12.3	15.0	31.3	*81*

Trust	% 5	% 6	% 7	% Staff nurse	% Ward sister/ Charge nurse	% Medical	% Surgical	*Base N=*
23	60.0	18.2	20.0	61.4	31.6	47.4	36.8	*55*
24	77.1	14.6	6.3	77.1	20.8	27.1	18.8	*48*
25	82.4	14.9	1.4	83.6	15.1	55.4	25.7	*74*
26	70.7	13.8	14.7	73.3	25.9	43.1	37.9	*116*
27	74.2	12.9	10.8	77.7	21.3	56.4	25.5	*93*
28	82.9	8.0	8.6	84.1	14.2	57.4	25.6	*175*
29	69.9	21.5	6.5	71.6	26.3	40.0	26.3	*93*
30	78.9	16.9	4.2	87.7	6.8	25.7	37.8	*71*
31	71.6	15.7	11.9	73.9	20.9	37.3	32.8	*134*
32	67.9	22.6	9.4	77.4	18.9	43.4	24.5	*53*
All respondents	**70.0**	**18.5**	**10.4**	**73.3**	**24.4**	**39.1**	**30.3**	*2943*

Table A2: Trust profile – Gender, training, degree, mode of working, satisfaction, age and length of career (percentages/means)

Trust	% Female	Mean age	Mean length of career	% trained in UK	% nursing degree	% full-time	% satisfied with nursing as a career	*Base N=*
1	83.6	37.0	11.4	68.7	31.8	83.3	84.8	*67*
2	86.3	39.4	12.8	94.4	26.8	90.3	62.5	*72*
3	91.5	37.9	10.8	94.4	21.4	82.9	78.6	*70*
5	90.5	39.4	14.1	98.6	24.3	78.1	67.6	*72*
6	97.2	39.7	13.2	90.6	10.5	69.5	86.9	*106*
7	93.5	42.5	16.6	97.2	24.8	69.2	63.3	*108*
8	90.3	39.1	14.5	76.0	37.5	82.5	81.6	*155*
9	93.6	38.8	14.5	79.8	26.3	78.4	77.8	*186*
10	96.4	40.4	14.6	64.2	22.8	91.1	81.5	*82*

Trust	% Female	Mean age	Mean length of career	% trained in UK	% with nursing degree	% Work Full-time	% satisfied nursing as career	*Base N=*

11	90.5	39.8	12.5	95.9	23.6	74.3	75.0	*70*
12	86.3	34.9	10.7	73.6	43.8	86.1	82.5	*121*
13	85.7	42.9	17.0	90.5	36.6	81.0	65.9	*41*
14	96.7	41.4	16.0	76.3	44.1	80.0	63.3	*59*
15	93.6	40.2	14.0	86.7	19.9	77.5	77.3	*200*
16	90.8	36.0	8.7	92.4	23.1	78.1	73.8	*64*
17	95.5	42.1	14.6	95.5	27.0	68.2	62.9	*89*
18	77.9	35.7	9.9	68.1	54.0	93.9	76.1	*69*
19	95.2	37.7	12.1	91.3	33.7	87.3	83.5	*104*
20	93.8	39.6	13.7	78.7	26.6	79.2	79.4	*127*
21	93.4	41.3	15.7	78.7	32.2	71.2	78.3	*61*
22	98.8	37.9	13.1	82.7	21.3	72.5	75.0	*81*
23	82.5	37.9	13.2	64.3	50.0	98.1	83.6	*55*
24	85.4	46.3	19.1	47.9	21.7	80.9	91.5	*48*
25	95.9	36.5	9.6	95.9	26.0	73.2	66.2	*74*
26	91.4	41.5	13.4	74.4	27.7	85.2	73.7	*116*
27	94.7	40.0	14.7	80.6	22.6	67.7	82.8	*93*
28	93.2	43.9	18.3	96.6	12.6	62.1	70.3	*175*
29	95.8	42.4	14.5	95.8	26.6	64.5	79.8	*93*
30	86.3	37.2	13.6	63.0	42.9	81.9	76.4	*71*
31	94.8	39.8	15.1	82.8	27.3	74.2	70.7	*134*
32	96.3	38.7	13.0	90.7	40.7	77.8	79.6	*53*
All respondents	**92.0**	**39.7**	**13.9**	**83.5**	**27.9**	**77.7**	**75.9**	***2943***

Table A.2: Factor mean scores by trust

ID	Trust	Factor 1	Factor 2	Factor 3	PES	*Base N=*
1		2.67	3.02	1.77	2.71	*67*
2		2.73	2.83	2.13	2.75	*73*
3		2.69	3.00	1.80	2.73	*71*
5		2.49	2.86	1.70	2.59	*73*
6		2.80	2.91	2.32	2.85	*107*
7		2.51	2.91	1.78	2.61	*111*
8		2.58	2.92	1.84	2.63	*156*
9		2.68	2.84	2.00	2.70	*189*
10		2.62	2.85	2.28	2.75	*81*
11		2.71	3.02	2.13	2.80	*74*
12		2.76	2.98	2.16	2.81	*125*
13		2.45	2.88	1.87	2.54	*42*
14		2.34	2.78	1.80	2.52	*60*
15		2.71	2.91	1.94	2.73	*203*
16		2.81	2.94	1.97	2.82	*66*
17		2.64	3.02	1.88	2.72	*89*
18		2.77	2.97	2.15	2.81	*69*
19		2.70	2.94	2.23	2.78	*104*
20		2.79	2.88	2.23	2.80	*128*
21		2.57	2.83	1.83	2.65	*59*
22		2.61	2.83	2.05	2.67	*81*
23		2.55	2.75	2.14	2.62	*58*
24		2.50	2.92	1.87	2.60	*47*
25		2.45	2.62	1.63	2.51	*74*
26		2.45	2.82	1.90	2.59	*117*
27		2.76	2.92	2.00	2.76	*94*
28		2.55	2.83	1.99	2.65	*176*
29		2.57	2.98	2.10	2.68	*96*
30		2.64	3.02	2.20	2.78	*73*
31		2.45	2.78	1.88	2.56	*135*
32		2.57	2.96	1.98	2.68	*54*
99	Trust not known	2.36	2.62	1.83	2.47	*27*
	All respondents	**2.62**	**2.89**	**1.99**	**2.69**	***2979***

Source: KCL RN4CAST Survey 2011

Appendix B

Practice environment items

Team	Aut	Con	Dr	Uk1	Uk2	RN4CAST no.	IHOS item/NEW
11	5	7	2	13	8		
		C			U2	A1	1. Adequate support services allow me to spend time with my patients.
T			D		U2	A2	2. Doctors and nurses have good working relationships.
							3. A good induction programme for newly employed nurses.
T	~~A~~			U1		A3	4. ~~Ward management~~ SUPERVISORY STAFF that is supportive of nurses.
							5. A satisfactory salary.
	A						6. Nursing controls its own practice.
				U1		A4	7. Active staff development/continuing education programmes available for nurses.
				U1		A5	8. Career development/clinical ladder opportunity.
				U1		A6	9. Opportunity for ~~Staff Nurses~~ RNs to participate in policy decisions.
						A7	DCOTORS VALUE NURRSES' ONBSERVATINS AND JUDGEMENTS
	A			U1			10. Support for new and innovative ideas about patient care.
		C			U2	A8	11. Enough time and opportunity to discuss patient care problems with other nurses.
		C			U2	A9	12. Enough registered nurses on staff to provide quality patient care.
T		C		U1		A10	13. A ~~Ward Manager/Sister~~ NURSE MANAGER who is a good manager and leader.
						A11	14. A Director of Nursing who is highly visible and accessible to staff.
							15. Flexible or modified shift patterns are available.
		C			U2	A12	16. Enough staff to get work done.
						A13	DOCTORS RECOGNISE NURSES CONTRIBUTIONS TO PATIENT CARE
	A						17. Freedom to make important patient care and work decisions.
				U1		A14	18. Praise and recognition for ~~doing a good job~~ A JOB WELL DONE.
T	~~(A)~~[12]						19. The opportunity for Staff Nurses to consult with Clinical Nurse Specialists or expert nurse clinicians.
T							20. Good working relationships with other hospital

[12] This item was not included in either the English or Scottish Autonomy scales (as they were computed originally) but it is noted that it appears in the autonomy scale as used by Eileen Lake.

							departments.
	A						21. Not being placed in a position of having to do things that are against my nursing judgement.
						A15	22. High standards of nursing care are expected by the ~~Trust.~~ MANAGEMENT
						A16	23. A Director of Nursing equal in power and authority to other ~~executives on the Trust board.~~ TOP LEVEL HOPSITAL EXECUTIVES
T			D		U2	A17	24. A lot of team work between nurses and doctors.
T					U2		25. Doctors give high quality medical care.
				U1		A18	26. There are opportunities for ~~promotion.~~ ADVANCEMENT
				U1			27. Nursing staff are supported in pursuing degrees in nursing.
						A19	28. A clear philosophy of nursing ~~throughout the~~ THAT PERVADES THE patient care environment.
							29. Nurses actively participate in efforts to control costs.
						A20	30. Working with nurses who are clinically competent.
							31. The nursing staff participates in selecting new equipment.
						A21	DOCTORS RESPECT NURSES AS PORFESSIONALS
T	~~A~~			U1		A22	32. A ~~Ward Manager/Sister~~ NURSE MANAGER who backs up nursing staff in decision making, even if the conflict is with a ~~doctor.~~ PHYSICIAN
				U1		A23	33. ~~Senior~~ management that listens and responds to employee concerns.
						A24	34. An active quality assurance/~~clinical audit~~ programme
	A			(U1)		A25	35. ~~Staff nurses~~ REGISTERED NURSES ARE involved in the internal governance of the hospital (e.g. practice and policy committees).
T					U2	A26	36. Collaboration between nurses and doctors.
						A27	37. A preceptor programme for newly ~~qualified~~ HIRED NURSS ~~RGNs~~.
						A28	38. Nursing care is based on a nursing rather than a medical model.
						A29	39. REGISTERED NURSES ~~Staff nurses~~ have the opportunity to serve on HOSPITAL AND NURSING ~~Trust~~ Committees.
						A30	DOCTORS HOLD NURSES IN HIGH ESTEEM
							40. The management of the Trust recognises the contributions of nurses in its reports and other public statements.
T				U1			41. Ward Managers/Sisters consult with staff on daily problems and procedures.
							42. A physical work environment that is pleasant, attractive and comfortable.
		C					43. Opportunity to work on a highly specialised patient care ward.
						A31	44. Written, up-to-date ~~nursing~~ care plans for all patients.

		C				A32	45. Patient care assignments that foster continuity of care (i.e. the same nurse cares for the patient from one day to the next).
							46. Staff Nurses do not have to provide cover/work on wards that are not their own.
							47. Staff Nurses actively participate in planning their own off-duty schedules (i.e. what days they work, days off etc.)
							48. Each ward decides its own policies and procedures.
							49. Working with experienced nurses who 'know' the hospital system.
T							50. Registered Nurses and Health Care Assistants/Auxiliaries have good working relationships.

Shaded cells indicate items that were in one of the scales in IHOS that are not included in RN4CAST.

Appendix C:

Scales/reliability from IHOS study 1999

Scale	Aut_5	Con	Dr	Burnout	Uk1	Uk2
	Autonomy	Control over resources	Relationship with Doctors	Burnout	Support and development	Resources
Items	5	7	2	9	12	8
Alpha reliability	0.7002	0.7876	0.7143	0.8921	0.8842	0.8097
Range	5-20	7-28	2-8	0-54	12-48	8-32
Mean Score	17.2	13.7	5.9	22.9	30.7	20.2

Further copies of this report can be obtained from:

National Nursing Research Unit
Florence Nightingale School of Nursing and Midwifery
King's College London
James Clerk Maxwell Building
57 Waterloo Road
London SE1 8WA

Email: nnru@kcl.ac.uk

NNRU website: http://www.kcl.ac.uk/nursing/research/nnru/index.aspx