

Meeting / Committee:	Board of Directors	Meeting Date:	29 July 2014
-----------------------------	--------------------	----------------------	--------------

This paper is for:	Action/Decision	Assurance	Information
	X	X	X

Title:	Nurse Staffing Review
---------------	-----------------------

Purpose:	To provide the Board of Directors with the results of the patient acuity and dependency data collected in May / June 2014 on both the acute and PCH sites.
-----------------	--

Summary:	<p>The requirement to ensure staffing levels are safe and sufficient to meet patient need is an imperative, with a very clear expectation that evidence-based, patient need-driven staffing levels in all care settings should be established.</p> <p>Guidance was produced by the National Quality Board (NQB) in November 2013 with NHS England making explicit their expectations in relation to Board ownership and publically available data in relation to nursing and midwifery staffing levels (March, 2014).</p> <p>This report summarises:</p> <ul style="list-style-type: none"> • The national context • Results of the patient acuity and dependency data collected in May / June 2014, the results have been presented alongside ward specific quality metrics • Application of the Safer Nursing Care Tool Multiplier which produces recommended staffing levels
-----------------	--

Prepared By:	Gill Hunt, Tony Roberts, Joanne Pugh	Presented By:	Ruth Holt, Director of Nursing and Quality Assurance
---------------------	--------------------------------------	----------------------	--

Recommendation:	The Board of Directors is asked to note the content of the report and accept the recommendations for future work.
------------------------	---

Implications (mark with x in appropriate column(s))	Legal	Financial	Clinical	Strategic	Risk & Assurance
		x	x	x	x

Nurse Staffing Review

Gill Hunt – Deputy Director of Nursing
Tony Roberts – Deputy Director, Clinical
Effectiveness
Joanne Pugh – Lead Nurse E-Roster
July 2014

1. Purpose

The purpose of this report is to share the results of the patient acuity and dependency data collected between 12 May – 8 June 2014 in adult inpatient areas for both the acute and community hospital sites, to discuss the findings and make recommendations.

2. Background

The requirement to ensure nurse staffing levels are safe and sufficient to meet patient need is clearly an imperative. The Francis enquiry (2013) and subsequent government response 'Hard Truths' (2014) have emphasised the need to get staffing levels right, with recent seminal papers from Keogh (2013) and Berwick (2013) clearly linking nurse staffing levels to patient safety, outcome and experience. Inadequate nurse staffing has been a recurring theme in organisations where patient care has been found to be substandard.

Board ownership is very clear with the National Quality Board (2013) setting out explicit expectations in terms of Board ownership and public visibility advocating a twice yearly public Board level discussion to ratify and agree nurse staffing levels.

This is about much more than numbers however with skill mix, capacity and competence being critical in terms of establishing appropriate staffing levels. The impact of the both the number and qualification of the nurse has recently been suggested with reduced mortality found when care is delivered by graduate nurses caring for fewer patients (Aiken et al, 2014). Consultation closed in June 2014 in respect of the draft NICE guidance 'Safe staffing for nursing in adult inpatient wards in acute hospitals'. Published in July 2014 the guidance does not mandate minimum staffing levels but clearly states that registered nurses caring for more than 8 patients during the day on a regular basis carries an increases risk of harm and action is required.

Ensuring we have the right staff, with the right skills in the right place is Action Area 5 within Compassion in Practice (2012). The document clearly set out the expectation that evidence-based, patient need-driven staffing levels in all care settings should be established.

The Safer Nursing Care Tool (Shelford Group, 2013) is currently the most commonly used method (previously known as the AUKUH Acuity and Dependency Measurement Tool)

The Safer Nursing Care Tool (SNCT) is:

- An evidence based tool which allows nurses to assess patient acuity and dependency. The data is collected and matched with preset staffing multipliers to ensure that nursing establishments reflect patient needs in acuity / dependency terms. The recommended number of staff following analysis is in whole time equivalent only (i.e. registered and unregistered staff and includes 22% uplift (holiday, sickness, study leave etc.). There is no reference to skill mix, allocation for a supervisory ward co-coordinator (if appropriate) or supervisory ward leader. The staffing numbers recommended are to provide patient care only.

- It must be noted recommended staffing levels are based on an analysis of the actual patients on the ward at the time of data collection. Therefore the ward may be a 30 bedded ward but if the average number of patients on the ward at the time was 25 then the proposed staffing levels reflect this actual number. This is one of the reasons why a number of cycles are recommended before firm conclusions are reached.
- The tool is appropriate for use in any acute hospital. The existing tool has not been validated for areas of high throughput (e.g. AMU's). Whilst the multiplier to allow for admissions / discharges has not yet been published we have been able to access the formula to test on this data set (accepting the caveats that it has not yet been published). The multiplier was applied to Wards 1 and 15 JCUH and CDU at the FHN. Work is also on-going to develop tools for use in the areas of A&E, paediatric wards and older people's wards.

No national workforce tool can incorporate all factors and therefore triangulation is absolutely essential to arrive at optimal staffing levels. The role of professional judgement and local intelligence should not be underestimated and should be applied to increase confidence in recommended staffing levels and provide balanced assurance. Clearly variables in terms of ward layout and number of side rooms have an impact on the number of nurses required but this is not reflected in the SNCT. There are also a minimum number of nurses required to deliver safe care regardless of ward size, 11.5 Wte Registered Nurses (RN's) are required to provide 2 nurses 24/7. The SNCT may indicate that smaller wards are over established however the reality is reductions in staffing levels would be inappropriate. Therefore caution is advised when interpreting results from smaller areas.

3. Methodology

- The SNCT (Shelford Group) Acuity and Dependency Measurement Tool was used
- Data collection for 4 weeks from Monday 12 May 2014 – Sunday 8 June 2104 (inc.)
- Data was collected at 15.00 hours daily using the SNCT monitoring form and referring to the SNCT Levels of Care Criteria (appendix 1.)
- Senior Sister / Charge Nurse or nominated deputy entered data onto the data entry tool via survey monkey (<http://www.surveymonkey.com/s/STeesAcuityMonitoring>)
- In 24 hour period the highest level of acuity was recorded (for example a patient was admitted during the day shift and was assessed as level 1 they deteriorated overnight and trigger at level 2 – then for the 24 hour period they were recorded as level 2).
- Numbers of Register and Unregistered staff were collected for early, late, day shifts and night shifts.
- Number of patients admitted, discharged, transferred or died was also recorded.

4. Results

Figure 1.

This table details:

- funded bed base
- average number of patients on the ward during data collection
- average staffing levels on a shift by shift basis
- average ratio of RN's to patients
- percentage sickness rate
- number of red / green indicators on the ward quality metrics

The RN to patient ratio has been considered in respect of a minimum 1:8 (day time) and variance has been highlighted in red. Day time ratios are generally positive against this minimum ratio. Ratio's overnight which are greater than 1 RN to 12 patients have also been highlighted and there are some areas which require attention.

Figure 2.

Pie charts illustrating the actual percentage of beds in each acuity score by clinical centre and by ward during the time of data collection.

Figure 3.

This table details average acuity by weekday and weekend and demonstrates that acuity is not markedly different between weekdays and weekends for most wards.

Figure 4.

This table shows the number of beds occupied for each day during data collection.

Figure 5.

This chart shows patient flow, specifically the average number of admissions, discharges, transfers, escorts off the ward and deaths. The standard SNCT multipliers take no account for this activity however clearly this information needs to be considered in terms of overall context.

Figure 6.

This table provides analysis using the SNCT multipliers. The variance column provides a figure of whether the funded establishment is considered appropriate, over or under resourced to meet the acuity and dependency needs of the patients at the time of data collection. There is also a column where contracted staff (Wte) and NHSP usage (Wte) relating to the period of data collection is shown.

The stated required establishment is to provide patient care only and does not take into account the need for a ward co-ordinator. If wards require a supernumerary co-ordinator (day time hours) an additional 2.9 Wte is required to fulfil this role (12 hours per day 7 days per week). For the purpose of the exercise 1.0 Wte has been subtracted to allow for a supervisory ward sister / charge nurse. There are a number of points to note:

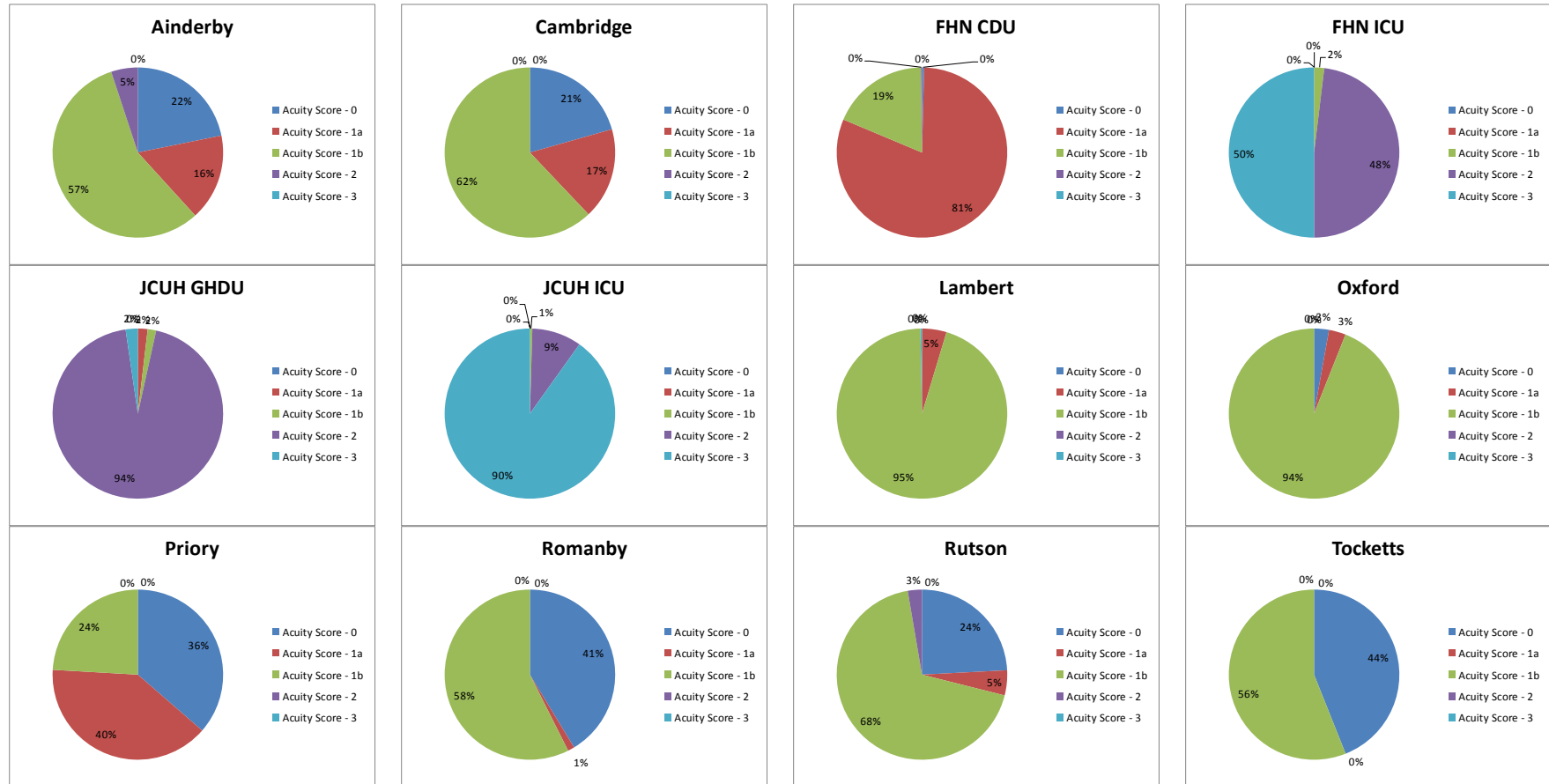
- The Head of Nursing for surgery does not feel the acuity categories applied on ward 35 were truly reflective and will ensure validation of data collection during the next review
- Bed occupancy in the PCH's was generally considerably lower than on the acute sites
- Spinal Injuries staffing levels are set against national standards and the SNCT does not reflect the specialist nature of this patient group
- It must be noted that the inpatient care in speciality medicine was being reconfigured during data collection and consequently data collection for ward 33 was not robust
- Whilst some work has been undertaken to re-align roster templates following the paper presented in May 2014, further focus is required in relation to the number of RN's on night shift in a number of areas. This will be an agenda item during Clinical Standards meetings in July which the Managing Director have been invited to attend with Heads of Nursing.

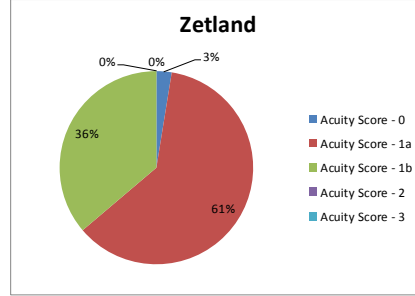
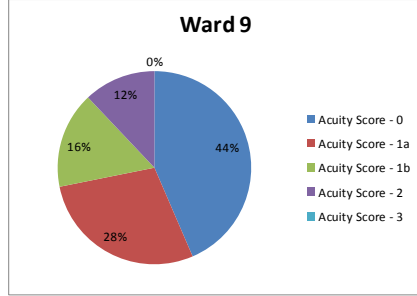
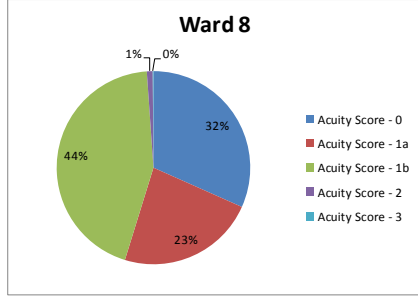
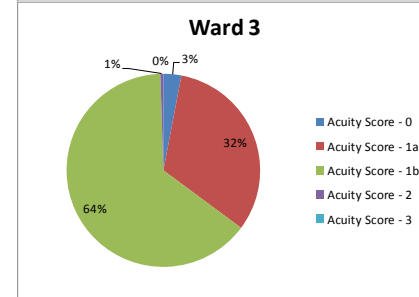
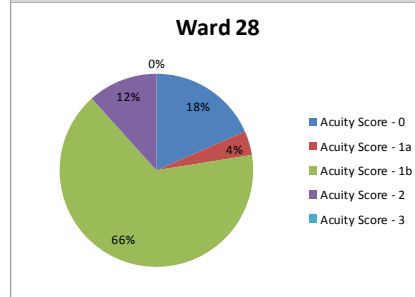
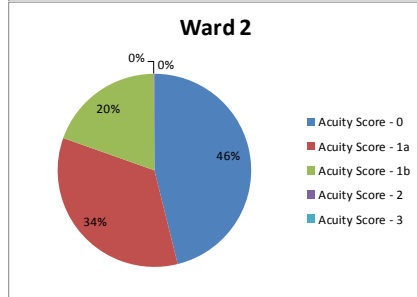
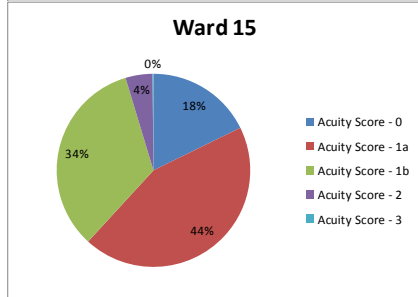
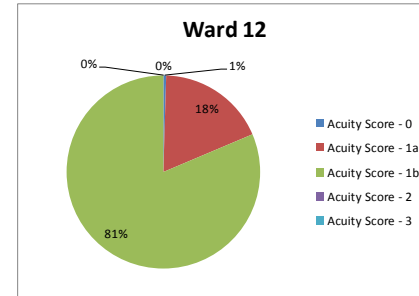
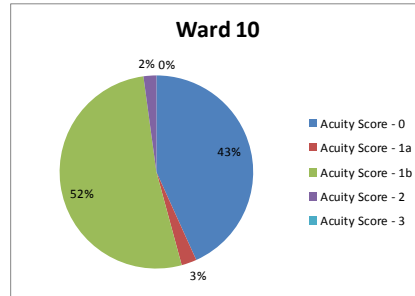
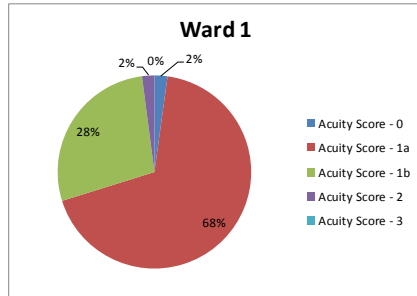
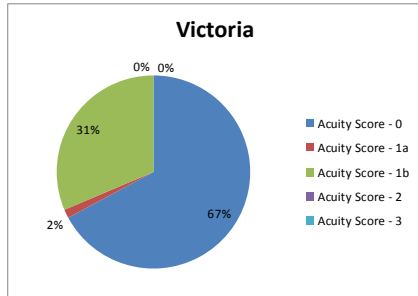
Figure 1.

Centre	Ward Name/Number	Data													Ward dashboards	
		Funded Bed base	Average of Beds	Average of E - Total RNs	Average of E - Total HCAs	Average of L - Total RNs	Average of L - Total HCAs	Average of N - Total RNs	Average of N - Total HCAs	Average of E - Ratio Beds to RNs	Average of L - Ratio Beds to RN's	Average of N - Ratio Beds to RNs	Sickness Rate May 14	No of RED / GREEN Indicators		
Integ Med	Alderby	27	25	4.8	2.6	4.8	2.4	1.9	1.9	5.5	5.5	12.7	1.6%	4	26	
	Cambridge	22	13	2.0	2.8	2.0	2.6	1.3	2.0	5.9	6.2	8.4	5.9%	2	23	
	FHN CDU	21	18	4.7	2.8	4.6	2.8	3.1	1.6	3.9	4.0	5.9	7.3%	5	25	
	FHN ICU	4	4	3.1	0.5	3.1	0.2	3.1	0.1	1.3	1.3	1.3	4.3%	4	24	
	JCUH GHDU	16	16	8.6	2.8	8.6	2.8	8.3	1.9	1.7	1.8	1.8	as per GITU	3	19	
	JCUH ICU	16	16	16.2	2.6	16.3	2.6	15.4	0.2	1.0	1.0	1.0	4.3%			
	Lambert	14	12	2.5	2.0	2.5	0.9	2.5	0.9	5.9	6.1	5.9		0	22	
	Oxford	22	19	2.5	3.2	2.5	2.7	2.0	1.4	7.7	7.9	9.4	as per Cambridge	3	14	
	Priory	26	21	3.3	3.0	2.3	1.9	1.9	2.5	6.8	9.5	10.1	9.8%	1	23	
	Romanby	26	25	4.3	2.7	4.0	1.6	2.0	2.3	5.9	6.4	12.7	7.5%	7	20	
	Rutson	19	18	3.8	3.4	3.5	3.4	1.6	0.9	5.4	5.9	9.3	4.5%	3	23	
	Tocketts	30	16	2.4	2.4	2.3	1.8	2.0	1.4	6.5	6.7	7.7	3.4%	1	18	
	Victoria	18	15	2.3	2.9	1.8	0.3	2.1	1.1	6.7	8.8	7.2	0.0%	2	22	
	Ward 1	28	27	5.5	2.8	5.4	2.7	4.0	2.9	5.4	5.7	7.4	3.4%	4	24	
	Ward 10	27	27	6.6	3.2	6.3	2.8	2.0	2.1	4.4	4.6	13.1	8.8%	6	24	
	Ward 12	32	30	5.6	4.0	4.9	3.8	1.9	2.1	5.8	6.3	15.1	9.4%	4	26	
	Ward 15	24	24	5.4	3.0	5.5	3.0	3.9	1.9	4.5	4.5	6.3	4.8%	5	23	
	Ward 2	27	27	4.5	3.3	4.5	3.1	2.1	2.0	6.2	6.2	13.8	6.8%	3	27	
	Ward 28	30	25	7.3	2.4	7.0	2.2	3.2	2.0	3.5	3.6	8.0	3.4%	5	25	
	Ward 3	29	29	5.2	3.6	5.1	3.6	2.1	2.2	5.6	5.6	13.8	9.2%	4	26	
	Ward 8	32	30	5.2	3.6	5.2	3.6	2.0	2.2	5.9	5.9	15.1	6.9%	6	21	
	Ward 9	30	28	4.9	3.0	4.9	3.0	2.9	1.9	5.8	5.8	10.0	5.4%	5	25	
	Zetland	31	28	4.0	5.9	4.0	5.5	3.0	3.9	7.1	7.1	9.5	9.0%	4	13	
Spec Med	Ward 14	23	22	5.3	3.7	5.1	2.2	3.0	2.3	4.4	4.6	7.6	7.5%	11	19	
	Ward 33	19	18	4.5	2.9	4.5	2.5	2.8	1.8	3.9	3.9	6.2	4.2%	3	18	
	Ward 4	24	23	4.3	2.7	4.2	2.7	2.9	1.8	5.4	8.1	10.1%	6	24		
Surgical	Allerton	26	24	3.9	2.7	3.9	2.6	1.9	1.6	6.2	6.8	11.8	4.7%	8	22	
	Ward 35	26	24	4.8	3.7	4.5	3.3	2.3	5.2	5.5	11.0	7.8%	6	24		
	Ward 5	31	27	5.3	6.0	5.0	4.1	1.9	2.0	5.7	5.9	14.1	9.0%	7	23	
	Ward 6	31	30	4.9	4.6	4.9	4.4	3.0	2.0	6.3	6.5	10.2	6.7%	8	22	
	Ward 7	35	35	5.9	4.7	5.8	4.3	3.0	2.9	6.1	6.2	11.7	8.1%	6	24	
Tertiary	Cardio HDU	10	7	4.8	0.4	4.8	0.4	3.9	0.3	1.8	1.8	2.5	as per ward 32			
	Cardio ICU	12	10	8.9	1.6	9.0	0.4	8.5	0.4	1.0	1.0	1.1	8.3%	6	24	
	CCU	14	11	6.4	1.0	6.5	0.9	5.7	0.1	1.8	1.7	2.0	7%			
	Neuro HDU	8	6	3.3	0.9	3.4	0.9	3.2	0.8	2.0	1.9	2.1	as per ward 24			
	Ward 24	23	21	3.9	3.9	3.9	3.9	3.0	3.3	4.9	4.9	6.4	6.3%	4	26	
	Ward 25	20	19	3.0	4.7	3.0	4.6	2.1	4.9	6.5	6.6	9.2	5.7%	8	22	
	Ward 26	18	17	2.2	4.0	2.2	3.3	2.0	2.2	8.1	8.1	8.8	3.4%	4	16	
	Ward 29	27	23	3.7	2.9	3.5	2.9	2.9	1.0	7.8	8.0	9.7	5.5%	4	26	
	Ward 29 MB	9	7	2.2	1.1	2.2	1.1	1.7	0.1	3.6	3.6	3.7	19.4%			
	Ward 30	13	12	1.9	1.6	1.8	1.6	1.8	0.3	6.0	6.1	6.1	1.5%	4	26	
	Ward 31	21	19	2.9	2.2	2.9	1.7	1.9	0.9	6.3	6.3	9.5	7.2%	4	26	
	Ward 32	23	19	3.0	3.1	2.9	2.3	2.0	0.9	6.4	6.5	9.5	5.5%	4	26	
Trauma	Gara	21	19	2.9	2.6	2.8	2.4	1.9	0.6	6.6	7.8	9.5	4.8%	6	24	
	Spinal HDU	4	3	2.0	0.4	1.9	0.4	1.6	0.1	2.2	2.1	2.1	5.9%			
	Spinal Rehab	20	18	4.3	4.0	3.9	3.7	1.1	2.1	3.4	3.8	14.6	as per spinal HDU	5	23	
	Ward 34	34	29	4.3	4.8	4.0	3.6	2.2	2.5	6.0	6.4	12.4	11.2%	5	25	
	Ward 36	34	29	5.2	3.4	5.1	3.1	2.2	2.4	5.8	5.9	13.6	2.2%	5	25	
W&C	Ward 37	30	25	4.8	2.8	4.4	2.5	2.0	1.8	5.1	5.4	12.1	5.7%	5	23	
	Ward 19	15	14	3.2	2.2	3.0	2.1	2.0	0.7	5.6	6.0	8.6	5.3%	5	14	

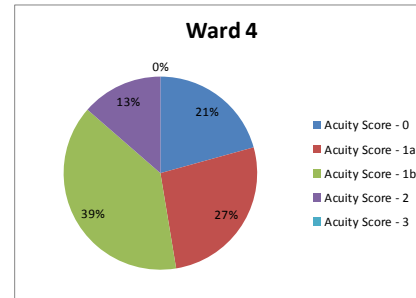
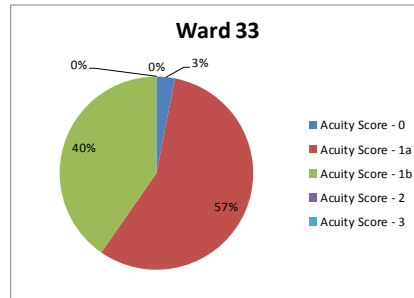
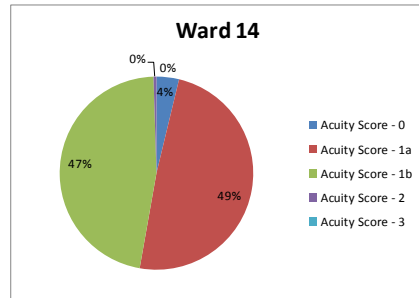
Figure 2.

Integrated Medicine: Percentage of beds with each Acuity Score

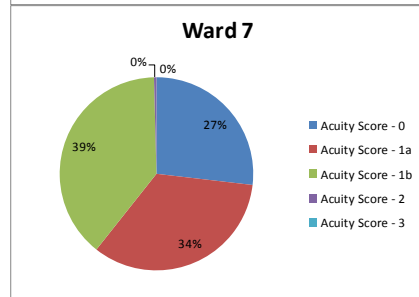
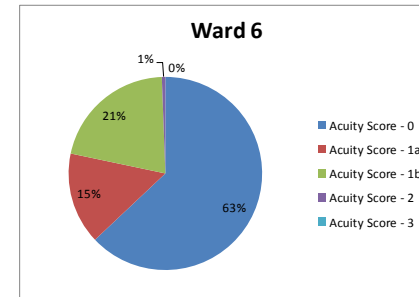
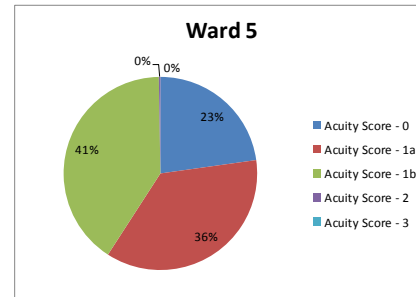
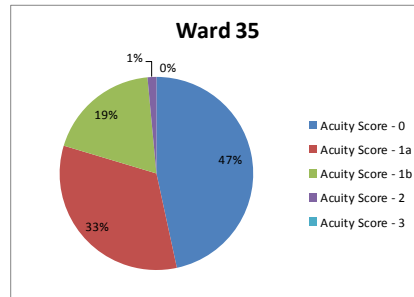
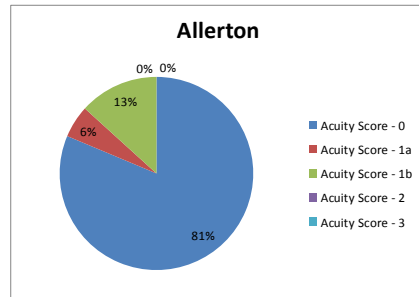




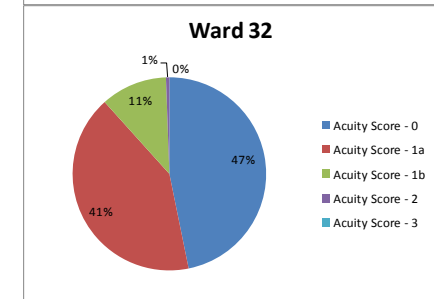
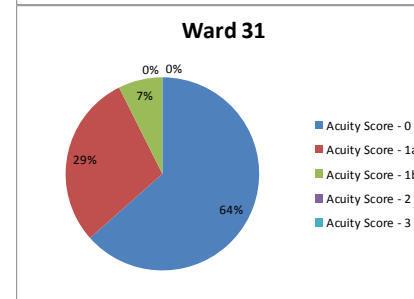
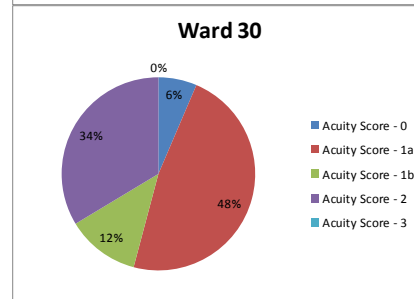
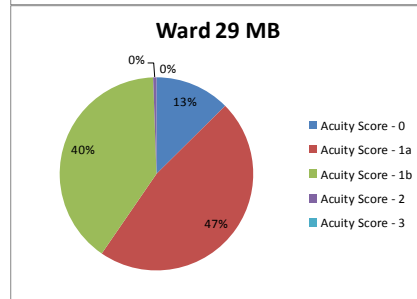
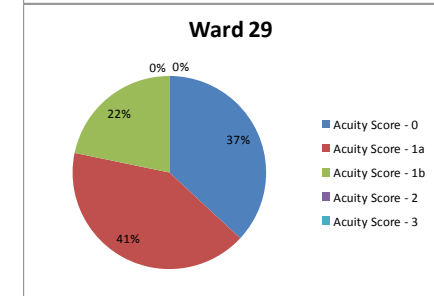
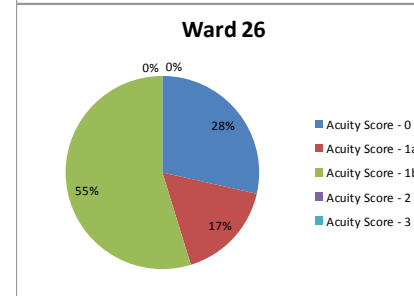
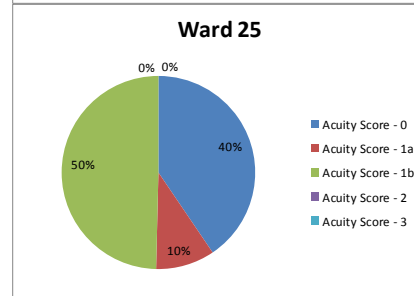
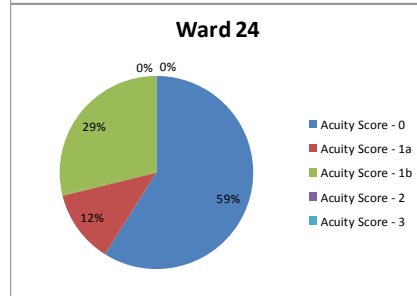
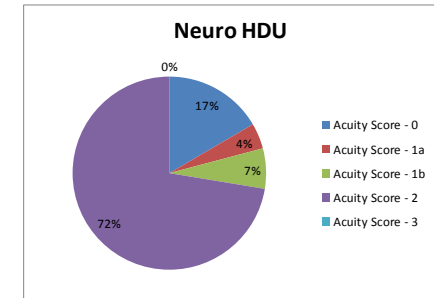
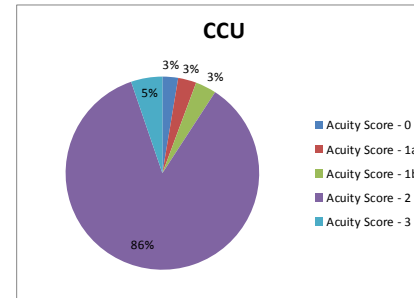
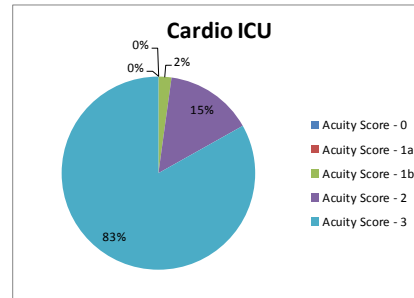
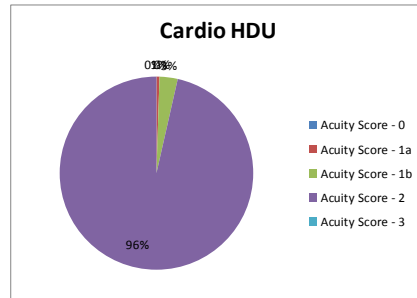
Specialty Medicine: Percentage of beds with each Acuity Score



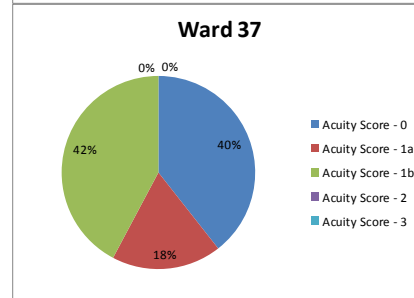
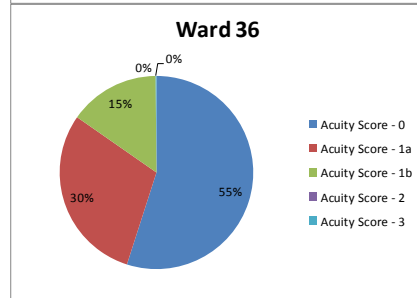
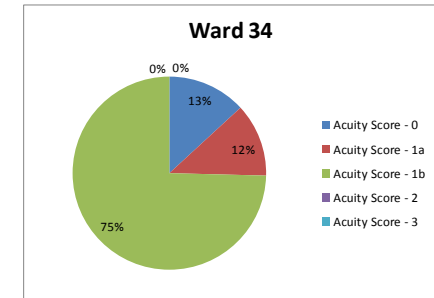
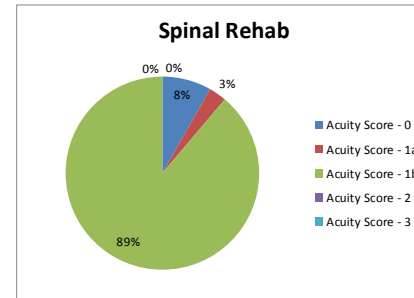
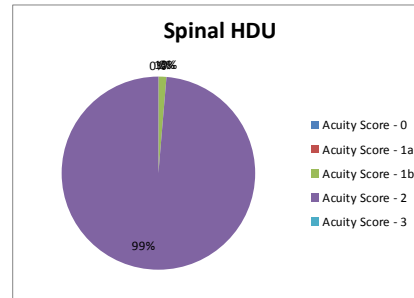
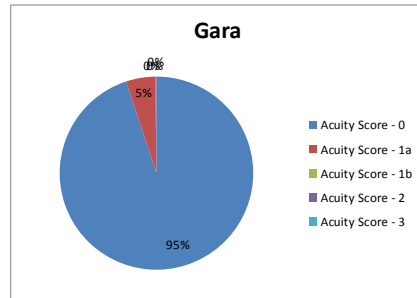
Surgical: Percentage of beds with each Acuity Score



Tertiary Services: Percentage of beds with each Acuity Score



Trauma: Percentage of beds with each Acuity Score



Women and Children: Percentage of beds with each Acuity Score

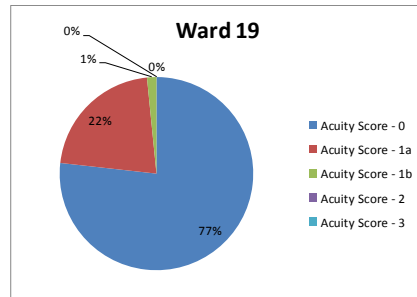


Figure 3.

Average acuity by weekday and weekend. The table shows the percentage of beds with higher acuity (i.e. not category 0) for weekdays and weekends. The table shows that acuity is not markedly different between weekdays and weekends for most wards. Differences greater than $\pm 10\%$ are shown in darker colours.

Average of Higher Acuity Beds (%)		Weekday-weekend		
Centre	Ward Name/Number	Weekday	Weekend	Difference
Integ Med	Ainderby	80%	75%	-5%
	Cambridge	77%	75%	-3%
	FHN CDU	100%	99%	-1%
	FHN ICU	100%	100%	0%
	JCUH GHDU	100%	96%	-4%
	JCUH ICU	100%	100%	0%
	Lambert	100%	100%	0%
	Oxford	97%	97%	0%
	Priory	63%	67%	4%
	Romanby	58%	62%	4%
	Rutson	75%	80%	5%
	Tocketts	56%	62%	6%
	Victoria	35%	30%	-5%
	Ward 1	97%	100%	3%
	Ward 10	53%	65%	12%
	Ward 12	99%	100%	1%
	Ward 15	81%	85%	3%
	Ward 2	54%	54%	0%
	Ward 28	82%	82%	0%
	Ward 3	97%	99%	2%
Ward 8	66%	71%	5%	
Ward 9	53%	65%	12%	
Zetland	97%	98%	1%	
Spec Med	Ward 14	96%	95%	-1%
	Ward 33	97%	94%	-3%
Surgical	Ward 4	79%	82%	3%
	Allerton	20%	15%	-4%
	Ward 35	56%	48%	-8%
	Ward 5	76%	79%	3%
Tertiary	Ward 6	40%	31%	-9%
	Ward 7	74%	71%	-3%
	Cardio HDU	100%	100%	0%
	Cardio ICU	100%	100%	0%
	CCU	96%	100%	4%
	Neuro HDU	81%	100%	19%
	Ward 24	40%	41%	1%
Trauma	Ward 25	58%	62%	4%
	Ward 26	73%	68%	-5%
	Ward 29	57%	53%	-4%
	Ward 29 MB	87%	89%	2%
	Ward 30	92%	100%	8%
	Ward 31	38%	33%	-6%
	Ward 32	53%	57%	4%
	Gara	5%	3%	-2%
	Spinal HDU	100%	100%	0%
	Spinal Rehab	92%	91%	-1%
W&C	Ward 34	84%	96%	13%
	Ward 36	43%	50%	7%
	Ward 37	64%	54%	-10%
Ward 19	25%	20%	-5%	
Grand Total		73%	73%	1%

Figure 4. Number of occupied beds

Sum of	Date																														
Centre	Ward Name/Number	12/05/2014	13/05/2014	14/05/2014	15/05/2014	16/05/2014	17/05/2014	18/05/2014	19/05/2014	20/05/2014	21/05/2014	22/05/2014	23/05/2014	24/05/2014	25/05/2014	26/05/2014	27/05/2014	28/05/2014	29/05/2014	30/05/2014	31/05/2014	01/06/2014	02/06/2014	03/06/2014	04/06/2014	05/06/2014	06/06/2014	07/06/2014	08/06/2014		
Integ Med	Ainderby	27	27	25	26	23	25	25	25	27	27	27	26	22	21	24	25	26	27	26	27	27	26	27	27	26	27	26	23	23	
	Cambridge		5	8	8	8	8	8	9	10	10	11	12	12	12	12	10	13	9	12	11	13	13	17	19	21	23	23	23		
	FHN CDU	21	21	16	15	19	20	15	18	21	20	16	8	15	16	21	18	21	19	17	19	20	21	19	13	20	16	13	15		
	FHN ICU	5	6	5	5	4	4	3	4	3	3	4	4	4	4	3	5	4	4	2	2	2	2	4	5	4	4	3	2		
	JCUH GHDU	16	16	16	16	16	16	16	14	15	16	16	16	16	13	14	13	14	16	16	16	16	16	16	16	16	16	16	16	15	
	JCUH ICU	16	16	16	15	15	16	16	16	16	16	16	16	16	16	16	16	14	13	12	16	16	16	16	16	16	16	16	15	16	
	Lambert	14	14	14	15	14	14	13	13	11	12	11	10	12	11	11	10	10	10	10	12	13	13	13	12	13	13	13	13	13	
	Oxford	19	19	18	17	19	20	19	19	20	20	19	20	20	20	20	20	20	18	17	19	19	19	18	20	19	18	18	18		
	Priory	23	22	23	24	23	25	25	24	25	25	24	24	24	24	21	20	19	20	18	18	18	19	17	17	16	13	13	13	13	
	Romanby	26	26	24	25	25	26	26	25	26	25	26	21	23	24	25	26	26	25	25	26	26	26	26	26	26	26	26	26	26	
	Rutson	18	18	19	17	18	19	15	18	19	18	19	17	17	16	18	17	19	17	19	19	19	19	18	19	19	19	19	17	16	16
	Tocketts	19	20	19	18	18	18	18	18	18	18	15	16	16	16	15	15	13	15	13	15	14	14	13	14	13	14	13	13	12	
	Victoria	17	15	16	16	16	17	17	16	15	15	17	16	15	15	9	10	12	13	14	13	13	11	16	16	16	17	16	16	16	
	Ward 1	28	27	25	24	24	28	28	28	28	28	28	28	28	26	28	28	28	28	28	28	28	24	28	28	28	28	27	28	26	
	Ward 10	27	27	27	27	26	27	27	27	27	22	27	27	27	26	26	27	27	27	27	26	27	27	27	27	27	27	27	27	27	
	Ward 12	32	32	32	32	32	32	31	32	32	32	32	29	31	31	31	32	31	32	32	31	32	32	2	31	30	32	32	31	32	
	Ward 15	24	24	24	23	24	24	24	24	24	24	24	24	24	18	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	
	Ward 2	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	
	Ward 28	27	27	29	28	28	27	27	26	25	25	25	25	22	22	24	21	25	27	25	21	19	18	25	25	28	24	26	24	25	
	Ward 3	29	28	29	29	29	29	29	29	29	26	29	28	28	28	29	29	29	27	29	29	29	29	29	28	29	29	29	29	29	
Ward 8		31	28	32	28	28	28	32	31	31	32	29	29	26	27	32	27	30	30	29	32	32	32	32	32	32	32	32	32		
Ward 9	29	29	28	28	28	28	28	30	29	27	29	28	27	29	27	27	27	27	29	28	27	28	27	29	27	28	25	28	28		
Zetland	27	27	27	26	28	28	28	28	27	28	29	31	29	28	27	27	28	28	29	30	29	28	31	29	29	26	26	28	29		
Spec Med	Ward 14	23	23	23	23	23	23	22	23	23	23	23	23	23	22	23	22	23	22	23	23	22	23	20	12	23	16	18	17		
	Ward 33							19	19	19	19	19	17			20	19	19	19	17	17	17	14	17							
Surgical	Ward 4	22	23	24	24	24	21	21	24	24	24	20	21	21	18	21	23	22	24	21	24	22	24	22	24	24	24	24	23		
	Allerton	26	26	26	26	26	21	22	26	26	23	24	23	16	20	21	20	23	25	26	20	24	26	26	26	26	26	23	19		
	Ward 35	26	26	26	26	24	26	26	25	25	23	25	25	17	25	26	25	26	22	25	24	25	25	25	23	20	21	22	24		
	Ward 5	28	28	28	24	29	26	26	27	27	29	28	30	26	28	24	27	28	28	28	31	26	27	28	29	27	28	25	25		
	Ward 6	31	31	31	31	31	31	31	31	31	31	27	31	31	31	30	31	31	29	31	31	30	31	31	29	28	30	29	31		
Tertiary	Ward 7	35	35	35	35	35	35	34	35	35	34	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35		
	Cardio HDU	9	9	10	10	8	6	8	8	8	8	7	8	8	8	3	6	8	6	3	4	3	5	5	7	8	8	9	8		
	Cardio ICU	12	12	12	12	7	11	7									6						6	9	10	9	10	12	10	8	
	CCU								11	13	13	12	12	13	9	11	11	13	14	10	8	11	11	7	6	11	9	13	11		
	Neuro HDU	8	8	8	8	8	8	4	4	6	5	5	7	3	3	4	6	7	8	7	4	2	6	5	6	6	7	6	4		
	Ward 24	23	23	20	23	20	18	18	18	23	22	20	17	22	19	19	15	23	22	22	19	17	23	23	23	23	22	22	18		
	Ward 25	20	19	20	19	19	19	19	20	19	20	19	20	18	18	18	20	18	19	18	15	15	20	20	20	20	19	17	19		
	Ward 26	15	18	17			18	17	17	18	17	16	18	16	17	17	18	18	18	18	17	17	17	17	17						
	Ward 29	24	26	24	26	26	22	26	27	27	22	20	26	18	19	19	26	26	24	23	21	22	22	24	27	23	21	20	20		
	Ward 29 MB	9	9	8	9	9	9	9	8	8	8	6	4	6	5	5	5	5	7	6	5	5	5	6	3	6	7	5	6		
	Ward 30	13	13	13	13	13	10	11	13	13	13	13	13	13	11	12	13	13	13	12	12	7	9	8	8	12	12	9	13		
	Ward 31	20	21	21	21	20	15	19	20	21	21	15	18	16	15	21	21	21	16	17	16	18	19	20	21	21	19	16	19		
	Ward 32	22	22	22	22	22	20	16	21	22	21	21	22	17	15	20	21	20	18	19	15	17	14	16	15	18	13	19	22		
Trauma	Gara	21	21	21	21	20	21	20	21	21	19	19	19	20	16	15	15	21	21	16	17	18	19	19	15	20	20	21	14		
	Spinal HDU	3	3	3	2	3	3	3	3	3	3	3	3	3	3	2	3	2	2	2	2	2	2	3	2	2	2	2	2		
	Spinal Rehab	19	19	20	19	19	19	19	20	18	18	18	16	16	17	16	15	19		16	18	19	20	20	18	19	19	19	19		
	Ward 34	30	30	31	32	32	26	27	27	31	25	25	31	30	28	28	28	33	26	29	27	21	25	28	28	32	29	29	31		
	Ward 36	31	32	34	34	34	31	27	29	33		29	34	30	27	22	25	34	32	27	19	18		22	20	29	34		32		
W&C	Ward 37	26	29	28	29	29	26	23	24	27	24	24	24	24	24	25	26	24	24	23	21	24	21	16	25	25		28	29		
	Ward 19	15	15	15	15	15	12	12	15	15	12	15	15	15	11	12	15	15	13	14	12	15	12	11	11	15	14	12	13		
Grand Total		982	1025	1015	997	1006	982	960	1018	1039	972	992	991	948	922	934	978	1009	976	980	938	943	917	959	967	963	942	900	949		

Figure 5. Average admissions, discharges, transfers and deaths by ward per day.

Centre	Ward Name/Number	Average of Admissions	Average of Discharges	Average of Transfers In	Average of Transfers Out	Average of Ward Attenders	Average of Deaths	Average of Escorts for on ward >2 hours	Average of Escorts for off ward >2 hours
Integ Med	Ainderby	0.1	1.2	1.0	0.4	0.0	0.1	0.8	0.0
	Cambridge	0.3	0.0	0.5	0.0	0.0	0.0	0.0	0.2
	FHN CDU	13.5	7.3	0.1	5.9	0.2	0.0	0.1	0.0
	FHN ICU	0.1	0.2	0.5	0.4	0.0	0.0	0.4	0.1
	JCUH GHDU	0.5	0.3	3.9	3.8	0.0	0.3	0.0	0.0
	JCUH ICU	1.8	1.2	0.1	0.1	0.0	0.4	0.1	0.0
	Lambert	0.4	0.4	0.1	0.0	0.0	0.0	0.0	0.0
	Oxford	0.1	0.4	0.2	0.0	0.0	0.1	0.0	0.3
	Priory	0.4	0.7	0.1	0.2	0.0	0.1	0.1	0.1
	Romanby	0.1	1.8	2.3	0.5	0.0	0.1	0.4	0.2
	Rutson	0.7	0.5	0.1	0.0	0.2	0.1	0.2	0.0
	Tocketts	0.4	0.5	0.0	0.2	0.0	0.1	0.0	0.0
	Victoria	0.1	0.5	0.5	0.1	1.4	0.1	0.0	0.2
	Ward 1	29.4	14.5	0.5	15.5	0.0	0.3	0.0	0.0
	Ward 10	0.2	1.8	2.4	0.5	0.0	0.3	0.2	0.0
	Ward 12	2.3	2.1	0.0	0.0	0.0	0.4	2.1	0.0
	Ward 15	27.3	10.9	1.6	13.9	0.0	0.3	0.0	0.0
	Ward 2	0.3	7.4	7.9	0.7	0.0	0.0	0.0	0.0
	Ward 28	3.4	2.8	0.7	0.9	0.7	0.3	0.0	0.0
	Ward 3	3.1	3.1	0.2	0.4	0.0	0.1	0.0	0.0
	Ward 8	0.9	4.6	4.4	0.6	0.3	0.2	0.0	0.0
Ward 9	2.3	2.2	0.0	0.1	0.0	0.1	0.0	0.0	
Zetland	0.4	0.6	0.8	0.2	0.0	0.3	0.0	0.0	
Spec Med	Ward 14	3.6	4.1	1.3	0.8	2.1	0.3	0.2	0.0
	Ward 33	0.9	1.3	0.3	0.1	0.3	0.1	0.1	0.0
	Ward 4	2.1	1.9	0.4	0.4	1.3	0.1	0.4	0.0
Surgical	Allerton	6.3	4.1	0.7	1.1	0.2	0.0	1.7	0.3
	Ward 35	4.1	6.3	2.8	1.2	0.0	0.0	0.0	0.0
	Ward 5	3.4	5.1	3.0	1.0	1.6	0.0	0.0	0.0
	Ward 6	3.4	3.7	1.6	1.1	0.0	0.1	0.0	0.0
	Ward 7	1.9	4.9	4.4	1.1	0.0	0.0	0.1	0.0
Tertiary	Cardio HDU	0.0	0.0	3.4	3.5	0.0	0.0	0.0	0.0
	Cardio ICU	0.3	0.3	3.6	2.6	0.0	0.1	0.4	0.1
	CCU	3.2	2.1	0.9	1.1	0.0	0.1	3.7	0.0
	Neuro HDU	1.7	0.9	0.6	0.9	0.0	0.0	0.0	0.0
	Ward 24	3.4	3.0	0.5	0.6	1.2	0.1	0.1	0.0
	Ward 25	1.4	1.4	0.4	0.3	0.1	0.1	0.0	0.0
	Ward 26	0.2	0.6	0.4	0.2	0.0	0.0	0.0	0.0
	Ward 29	6.4	7.6	2.1	0.4	0.0	0.0	0.0	0.0
	Ward 29 MB	1.1	1.1	0.1	0.3	0.0	0.0	0.0	0.0
	Ward 30	0.1	2.2	2.5	0.5	0.0	0.0	0.1	0.0
	Ward 31	3.3	2.9	1.8	1.6	0.2	0.0	0.0	0.0
Ward 32	1.9	3.5	1.9	0.9	2.1	0.0	0.0	0.0	
Trauma	Gara	3.7	3.8	1.2	0.1	0.1	0.0	0.0	0.1
	Spinal HDU	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.1
	Spinal Rehab	0.7	0.4	0.1	0.1	0.0	0.0	0.1	0.1
	Ward 34	2.3	2.4	0.5	0.5	0.0	0.1	0.0	0.0
	Ward 36	3.3	5.0	2.4	0.4	0.1	0.0	0.0	0.0
	Ward 37	7.1	4.8	0.3	1.9	1.4	0.0	0.1	0.0
W&C	Ward 19	2.8	3.9	1.5	0.2	2.3	0.0	0.0	0.0
Grand Total		3.2	2.9	1.3	1.4	0.3	0.1	0.2	0.0

Figure 6. SNCT Analysis

Centre	Ward Name/Number	Average of Beds	Average of WTE nurses recommended using multipliers	Funded Wte	Variance	Variance minus supervisory ward sister / charge nurse	Contracted staff Wte	NHSP used	Comments
Integ Med	Ainderby	25	39	33.87	-5.13	-6.13	33.8	1.9	
	Cambridge	13	18	see Oxford	see Oxford			5.5	
	FHN CDU	18	33	37.27	4.27	3.27	35.5	1.6	
	Lambert	12	23	22.78	-0.22	-1.22	19.8		
	Oxford	19	32	52.83	2.83	1.83	52.4		Includes Cambridge
	Priory	21	28	31.53	3.53	2.53	29.6	7.5	
	Romanby	25	35	34.40	-0.6	-1.6	35.7	0.9	
	Rutson	18	28	27.18	0.82	-0.18	26.9	0.5	
	Tocketts	16	22	26.65	4.65	3.65	30.5	2	
	Victoria	15	18	26.65	8.65	7.65	24.3		
	Ward 1	27	56	43.82	-12.18	-13.18	42.7	0.2	
	Ward 10	27	38	37.80	0.2	-0.8	44		
	Ward 12	30	50	42.00	-8	-9	45.4	0.3	
	Ward 15	24	45	40.16	-4.84	-5.84	49.5	0.5	
	Ward 2	27	36	36.00	0		38.7	0.2	
	Ward 28	25	40	47.02	7.02	6.02	45.5		
	Ward 3	29	45	38.03	-6.97	-7.97	44.3	1.1	
	Ward 8	30	43	39.73	-3.27	-4.37	44.5		
Ward 9	28	38	40.06	2.06	1.06	40.3	0.6		
Zetland	28	42	42.47	0.47	-0.53	43.5	8.1		
Spec Med	Ward 14	22	34	37.86	3.86	2.86	40.8	5.9	
	Ward 33	18	28				42.2	2	newly established ward, staff also run assessment area. Data collection not robust
Surgical	Ward 4	23	34	33.39	-0.61	-1.61	34	1.3	
	Allerton	24	27	31.91	4.91	3.91	31.6	1.7	
	Ward 35	24	31	40.33	9.33	8.33		0.1	Queries in relation to data collection
	Ward 5	27	39	43.86	4.86	3.86	43.2	1	28 beds open (3 closed) due to staffing
	Ward 6	30	37	42.33	5.33	4.33	46	1.4	
	Ward 7	35	48	51.56	3.56	2.56	53.1	0.6	
	Ward 24	21	24	33.47	9.47	8.47	58.1	8.3	
Trauma	Ward 25	19	26	30.30	4.3	3.3	30.7	12.5	
	Ward 26	17	26	22.03	-4.03	-5.03	24.4	4.7	
	Ward 29	23	37	30.34	-6.66	-7.66	31.4	1.3	
	Ward 29 MB	7	12	15.39	3.39	2.39	15.2		
	Ward 30	12	18	16.21	-2.21	-3.21	12	0.2	
	Ward 31	19	22	22.84	0.84	0.16	23.1	0.3	
	Ward 32	19	23	21.46	-1.54	-2.54	58	1.6	
	Gara	19	20	28.40	8.4	7.4	26.1		
	Spinal Rehab	18	25	39.74	14.74	13.74	51.6		
	Ward 34	29	41	40.90	0.01	-1.01	41.2	4.1	
W&C	Ward 36	29	39	40.24	1.24	0.24	38.9	0.7	
	Ward 37	25	31	35.74	4.74	3.74	34.9	0.2	
	Ward 19	14	21	19.14	-1.86	-2.86	23.7	1.6	

5. Establishment Review Recommendations

1. To accept the results as part of the regular quarterly review cycle
2. For Heads of Nursing to ensure that data and analysis is shared widely in the centres and safe staffing discussions become embedded in centre business
3. Director of Nursing to meet with Heads of Nursing and Managing Directors to review results and agree action where required (particular consideration to night shift RN numbers)
4. Developments with the SNCT (i.e. tools for A&E, paediatric and older people's areas) to be incorporated into future reports (Deputy Director of Nursing)
5. Explore tools for use in community services (Head of Nursing/Deputy Director of Nursing)
6. Funded establishment, contracted establishment and actual fill rate needs to be closely monitored via the monthly fill rate report (Heads of Nursing/Managing Directors)

References

Aiken L.H. et al (2014) **Nurse staffing and education and hospital mortality in nine European countries: a retrospective observational study**, Lancet online publication.

[http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(13\)62631-8/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(13)62631-8/fulltext)

Berwick D. (2013) **A Promise to Learn – a Commitment to Act: Improving the Safety of Patients in England**. London : Crown

Department of Health (2012) **Compassion in Practice: Nursing, Midwifery and Care Staff, Our Vision and Strategy**. London : Crown

Department of Health (2014) **Hard Truths – The Journey to Putting Patients First**. London : Crown

Francis R. (2013) **Report of the Mid Staffordshire NHS Foundation Trust Public Enquiry**. London : TSO

Keogh B. (2013) **Review into the Quality of Care and Treatment Provided by 14 Hospital Trusts in England : Overview report**. London : Crown

National Quality Board (2013) **How to ensure the right people, with the right skills are in the right place at the right time. A guide to nursing, midwifery and care staffing capacity and capability**. London

The Shelford Group (2013) **The Safer Nursing Care Tool**.

<http://shelfordgroup.org/resource/chief-nurses/safety-nursing-care-tool>

Appendix 1. Safer Nursing Care Tool Levels of Care Criteria

Levels of Care	Descriptor
<p>Level 0</p> <p>Patient requires hospitalisation.</p> <p>Needs met through normal Ward care.</p>	<p>Care requirements may include the following</p> <ul style="list-style-type: none"> • Elective medical or surgical admission • May have underlying medical condition requiring on-going treatment • Patients awaiting discharge • Post-operative/post-procedure care – observations recorded half hourly initially then 4-hourly • Regular observations 2 – 4 hourly • Early Warning Score is within the normal threshold • ECG monitoring • Fluid management • Oxygen therapy less than 35% • Patient controlled analgesia • Nerve block • Single chest drain • Confused patients not at risk • Patients requiring assistance with some activities of daily living, require the assistance of one person to mobilise, or experiences occasional incontinence
<p>Level 1a</p> <p>Acutely ill patients requiring intervention or those who are UNSTABLE with a GREATER POTENTIAL to deteriorate.</p>	<p>Care requirements may include the following</p> <ul style="list-style-type: none"> • Increased level of observations and therapeutic interventions • Early Warning Score – trigger point reached and requiring escalation • Post-operative care following complex surgery • Emergency admissions requiring immediate therapeutic intervention • Instability requiring continual observation/invasive monitoring • Oxygen therapy greater than 35% +/- chest physiotherapy 2 – 6 hourly • Arterial blood gas analysis – intermittent • Post 24 hours following insertion of tracheostomy, central lines, epidural or multiple chest or extra ventricular drains • Severe infection or sepsis
<p>Level 1b</p> <p>Patients who are in a STABLE condition but are dependent on nursing care to meet most or all of the activities of daily living.</p>	<p>Care requirements may include the following</p> <ul style="list-style-type: none"> • Complex wound management requiring more than one nurse or takes more than one hour to complete • VAC therapy where ward-based nurses undertake the treatment • Patients with Spinal Instability/Spinal Cord Injury • Mobility or repositioning difficulties requiring the assistance of two people • Complex Intravenous Drug Regimes – (including those requiring prolonged preparatory/administration/post/administration care) • Patients and/or carers requiring enhanced psychological support owing to poor disease prognosis or clinical outcome • Patient son the End of Life Care Pathway • Confused patients who are at risk or requiring constant supervision • Requires assistance with most or all activities of daily living • Potential for self-harm and requires constant observation • Facilitating a complex discharge where this is the responsibility of the ward-based nurse
<p>Level 2</p> <p>May be managed within clearly identified, designated beds, resources with the required expertise and staffing level OR may require transfer to a dedicated Level 2 facility/unit</p>	<ul style="list-style-type: none"> • Deteriorating/compromised single organ system • Post operative optimisation (pre-op invasive monitoring)/extended post-op care • Patients requiring non-invasive ventilation/respiratory support; CPAP/BiPAP in acute respiratory failure • First 24 hours following tracheostomy insertion • Requires a range of therapeutic interventions including: <ul style="list-style-type: none"> • Greater than 50% oxygen continuously • Continuous cardiac monitoring and invasive pressure monitoring • Drug Infusions requiring more invasive monitoring e.g. vasoactive drugs (amiodarone, inotropes, gtn) or potassium, magnesium • Pain management – intrathecal analgesia • CNS depression of airway and protective reflexes • Invasive neurological monitoring
<p>Level 3</p> <p>Patients needing advanced respiratory support and/or therapeutic support of multiple organs</p>	<ul style="list-style-type: none"> • Monitoring and supportive therapy for compromised/collapse of two or more organ/systems • Respiratory or CNS depression/compromise requires mechanical/invasive ventilation • Invasive monitoring, vasoactive drugs, treatment of hypovolaemia/haemorrhage/sepsis or neuro protection

