

Nursing & Midwifery Biannual Skill Mix Review – Adult Inpatient

13 May 2019



Agenda Item No: 10.1

Trust Board Report

Meeting Date:	13 th May 2019
Title:	Biannual skill mix review – Adult inpatient
Executive Summary:	This paper details the outcome of phase 1 of the biannual adult inpatient skill mix review. The content will support the board in fulfilling their responsibilities to monitor staffing capacity and capability as per NQB guidance ‘How to ensure the right people, with the right skills, are in the right place at the right time’; the Government’s commitment set out in ‘Hard Truth’s’ and Developing Workforce Safeguards – NHSI. The report has been to Trust Management Committee
Action requested:	Receive and note
Assure	The Trust has undertaken a skill mix review of adult inpatient wards utilising Safer Nursing Care Tool, which is evidence based acuity/dependency tool. The review also used the triangulation approach as recommended by NHSI Developing Workforce Safeguards document
Author + Contact Details:	Rose Baker – Associate Chief Nurse Tel 01902 307999 ext. 6974 Email rosebaker@nhs.net
Links to Trust Strategic Objectives	<ol style="list-style-type: none"> 1. Create a culture of compassion, safety and quality 2. Proactively seek opportunities to develop our services 3. To have an effective and well integrated local health and care system that operates efficiently 4. Attract, retain and develop our staff, and improve employee engagement 5. Maintain financial health – Appropriate investment to patient services 6. Be in the top 25% of all key performance indicators
Resource Implications:	<p>Revenue: none at present</p> <p>Capital: none</p> <p>Workforce: revised workforce numbers will require recruitment</p> <p>Funding Source: none</p>
CQC Domains	<p>Safe: patients, staff and the public are protected from abuse and avoidable harm.</p> <p>Effective: care, treatment and support achieves good outcomes, helping people maintain quality of life and is based on the best available evidence.</p> <p>Caring: staff involve and treat everyone with compassion, kindness, dignity and respect.</p> <p>Responsive: services are organised so that they meet people’s needs.</p> <p>Well-led: the leadership, management and governance of the organisation make sure it's providing high-quality care that's based around individual needs, that it encourages learning and innovation, and that it promotes an open and fair culture.</p>
Public or Private	Public
Other formal bodies involved:	Trust Management Committee
References	<ol style="list-style-type: none"> a. ‘Hard Truths’ Commitments NHS England http://www.england.nhs.uk/2014/04/01/hard-truths/ April 2014 b. Supporting NHS providers to deliver the right staff, with the right skills, in the right place at the right time - Safe sustainable and productive staffing.

	<p>National Quality Board, July 2016 http://www.england.nhs.uk</p> <p>c. Griffiths P, Ball J, Murrells T, Jones S, Rafferty AM (2016b) Registered nurse, health care support worker, medical staffing levels and mortality in English hospital Trusts a cross sectional study. BMJ open 5:e008751</p> <p>d. NHS England (2014) Five Year Forward http://www.england.nhs.uk/ourwork/futurenhs</p> <p>e. NHS England (2016) Leading Change, Adding value: A framework for nursing, midwifery and care staff http://www.england.nhs.uk/ourwork/leading-change</p> <p>f. NICE (2013) Safe staffing for nursing in adult inpatient wards in acute hospitals. http://www.nice.org.uk/guidance/SG1</p> <p>g. NQB (2016) 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 http://www.england.nhs.uk/ourwork/part-rel/nqb</p> <p>h. The Safer Nursing Care Tool The Shelford Group – 2013 http://shelfordgroup.org/resource/chief-nurses/safer-nursing-care-tool http://shelfordgroup.org/library/documents/SNCT A4 pdf</p> <p>i. Developing Workforce Safeguards – 2018 NHSI</p>
NHS Constitution	<p>In determining this matter, the Board should have regard to the Core principles contained in the Constitution of:</p> <ul style="list-style-type: none"> • Equality of treatment and access to services • High standards of excellence and professionalism • Service user preferences • Cross community working • Best Value • Accountability through local influence and scrutiny

1. Introduction

To deliver safe quality patient care it is essential wards have optimal nurse staffing levels. It has been acknowledged that one of the contributory factors linking failures in care and patient safety were inadequate staffing levels (Francis 2013). In July 2016 the National Quality Board published 'Supporting NHS providers to deliver the right staff with the right skills, in the right place at the right time: Safe, sustainable and productive staffing. This safe staffing improvement resource provided updated expectations for nursing and midwifery care staffing.

To demonstrate the Trust's commitment to the above requirement a twice yearly adult and paediatric inpatient skill mix review is completed. The procedure for completing the review is aligned to Commitment 9 of Leading Change, Adding Value: a framework for nursing, midwifery and care staff (2016).

The Royal Wolverhampton NHS Trust (RWT) uses the 'Safer Nursing Care Tool' (SNCT). The SNCT is a simple-to-use, evidence based digital tool that calculates nurse staffing requirements based on the acuity and dependency of the patients on a ward and it is linked to nurse sensitive outcome indicators.

The SNCT, which was developed by Professor Dame Hilary Chapman and Katherine Fenton OBE, has been rigorously validated using a substantial database over a number of years and is now widely used by NHS trusts. The development of the SNCT has been supported and endorsed for use by NHS England and NHS Improvement. The SNCT now includes staff multipliers for acute assessment units, acute inpatient and children and young people's wards, and will be shortly releasing one for emergency departments.

This tool enables the measurement of both acuity and dependency which can be applied to patients whose care can be delivered within acute adult, paediatric or acute assessment units (appendix 1). A multiplier for calculating establishments will suggest nursing whole time equivalents (WTE) required to provide a safe and appropriate standard of care for each of the five levels of acuity and dependency identified by SNCT. Also measured are Nurse Sensitive Indicators (NSIs); these are quality indicators, can be influenced by nursing establishments and skill mix (appendix 2).

Acuity and dependency data is collected twice a year (January and June) for one month from:

- Twenty nine adult inpatient ward areas

2. Results

2.1 Occupancy, acuity and dependency

In January the Trust experienced capacity pressures resulting in problems around patient flow and additional adhoc capacity was required. A situation mirrored nationally in other acute Trusts.

The data in Table 1 below summarises that 19,407 acuity scores were attributed at 3pm daily. 30% of patients were scored 0 or 1a and the highest proportion of patients 63.7% were scored as level 1b (stable but have a higher dependency on nursing support).

In comparison to June 2018 it can be seen that there were a higher number of scores captured in January, this was because there was missing data in June 2018 and additional training on how to use the SNCT has been provided to Senior Sister/Charge Nurse and at least two other appointed registered nurses per ward in preparation for the January 2019 data capture.

Compared to June 2018 the number of level 0 patients have reduced to 12.4% with a consequent increase in the number of level 1a, 1b and 2 patients. This mirrors the national trend of patients that have a higher dependency on nursing support being admitted to acute Trusts across England throughout January.

	Jan 2018	June 2018	January 2019
Bed occupancy	91.2%	79.2%	89.6%
No of scores	16,675	17,148	19,407
Level 0	9.45%	15.5%	12.4%
Level 1a	12.29%	16.85	17.8%
Level 1b	71.75%	62.5%	63.7%
Level 2	6.49%	4.9	5.5%
Level 3	0.02%	0.2%	0.56%

Table 1. RWT wards: patient dependency and acuity and occupancy

Chart 1 below shows the changes in patient acuity over time

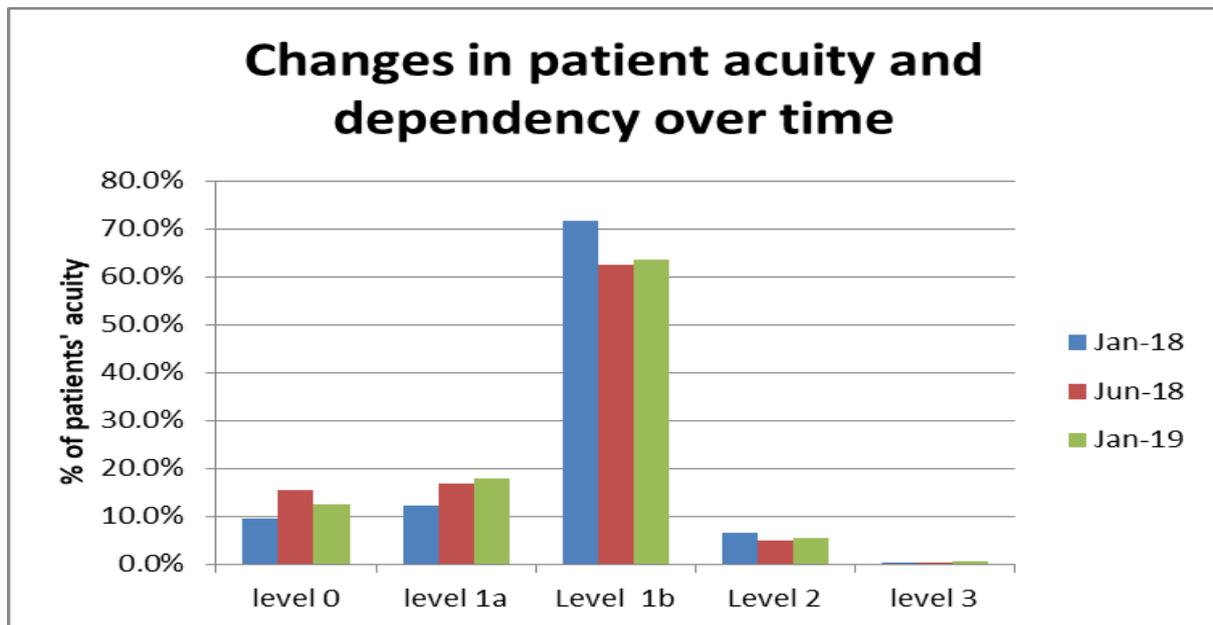


Chart 1.

2.2 Establishments

Applying the multipliers to the data collected the differential between funded establishments and suggested establishments are calculated. This model is based on establishment and not actual nurses in post. These are presented graphically to demonstrate the overall pattern of 'over' and

'under' established wards as whole time equivalents (w.t.e) and percentages (%). Charts 2 (w.t.e) and Chart 3 (%) demonstrate the difference between funded and suggested establishments using the SNCT. It is however accepted that being within 10% of the SNCT multiplier suggested w.t.e is within limits.

Chart 2

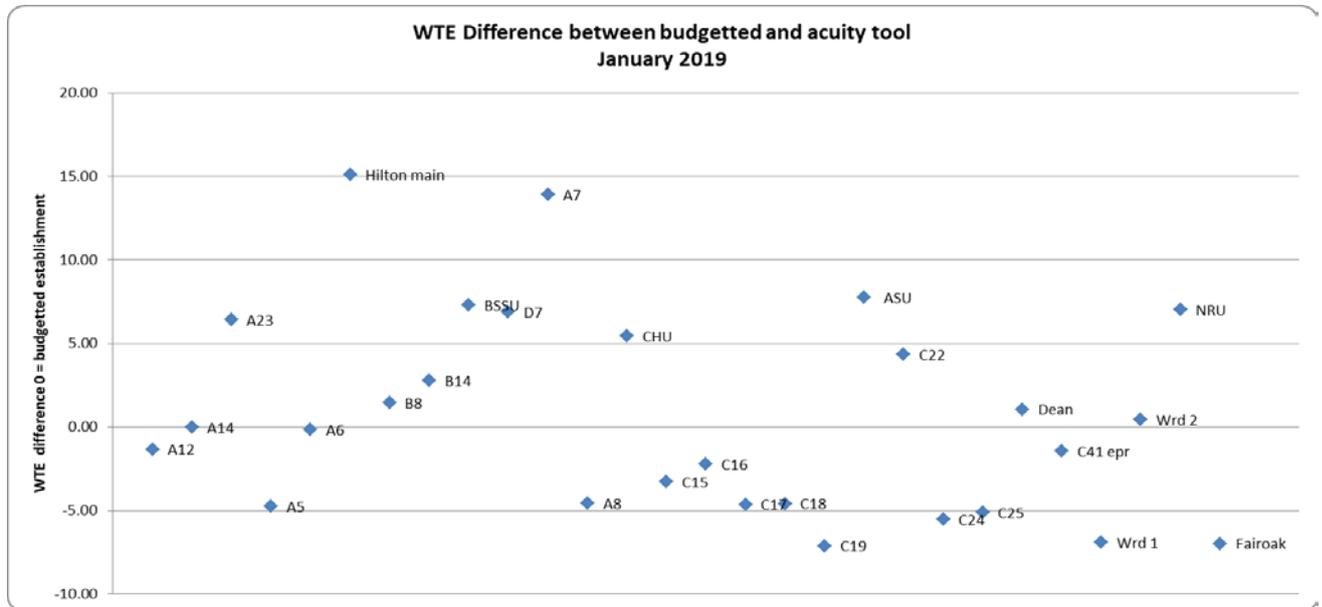
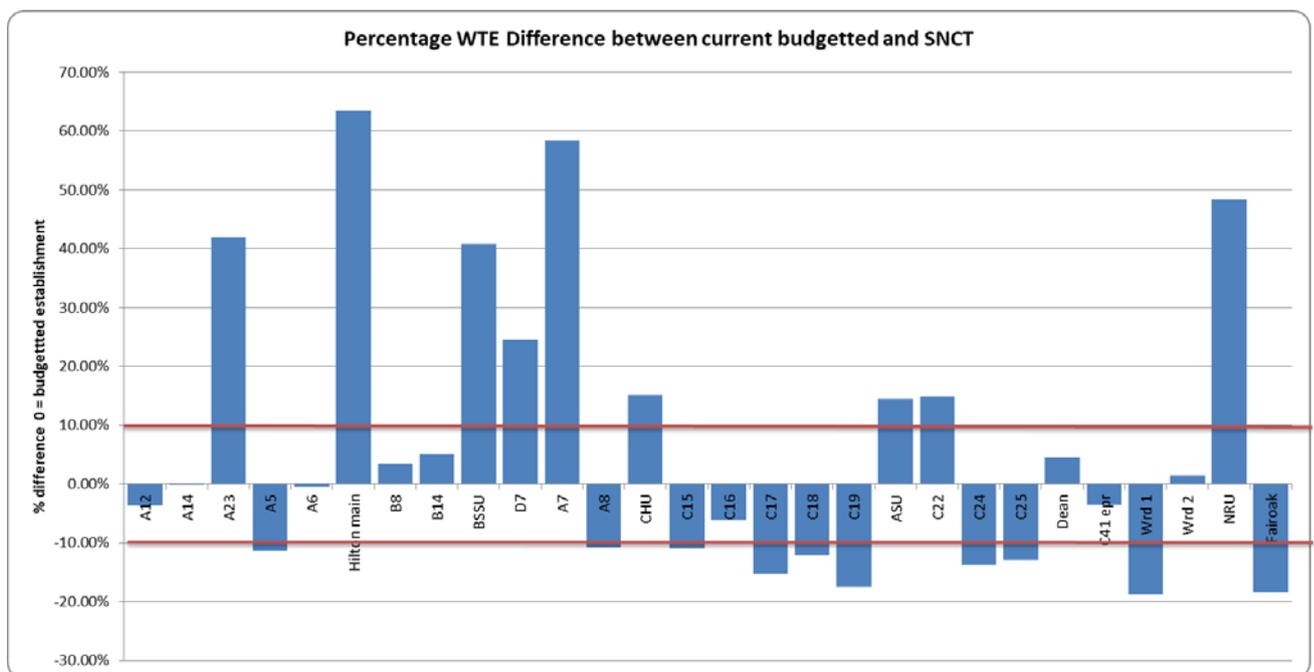


Chart 3



In undertaking a skill mix review it is essential that the acuity/dependency data is triangulated against professional judgement and nurse sensitive indicators.

The application of professional judgement ensures specific local needs are included:

- Ward layout/facilities: the configuration of wards and facilities affect the nursing time available to deliver care to patients, and this can be reflected in staffing establishments through professional judgement. For example, wards with a high proportion of single rooms might make adequate surveillance of vulnerable patients more difficult
- Escort duties: consideration needs to be given if this role is likely to affect the numbers of staff required. A local data collection and analysis exercise is undertaken to determine a percentage to be added to the establishment to ensure staffing remains responsive to daily patient care needs if this is considered to have a significant impact on the ward activity
- Shift patterns: the type of shift patterns (long day versus short day) in use may affect the overall establishment required to ensure shift-to-shift staffing levels. These are monitored to understand the impact and effect on staff and patients

Chart 4 (w.t.e) and Chart 5 (%) demonstrates the difference between funded and suggested establishment using professional judgement

Chart 4

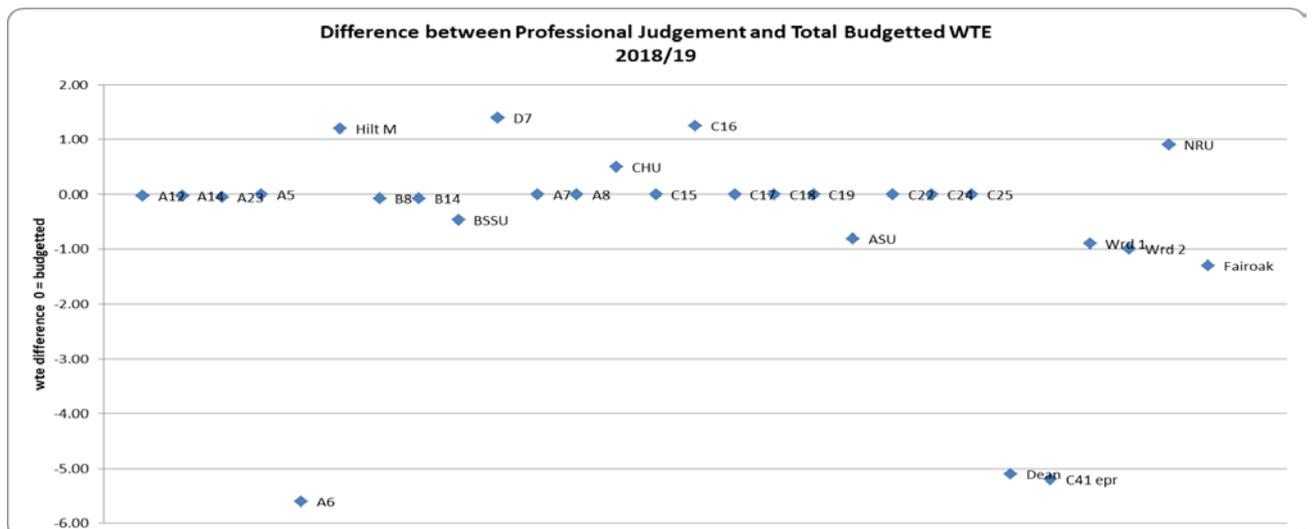


Chart 5

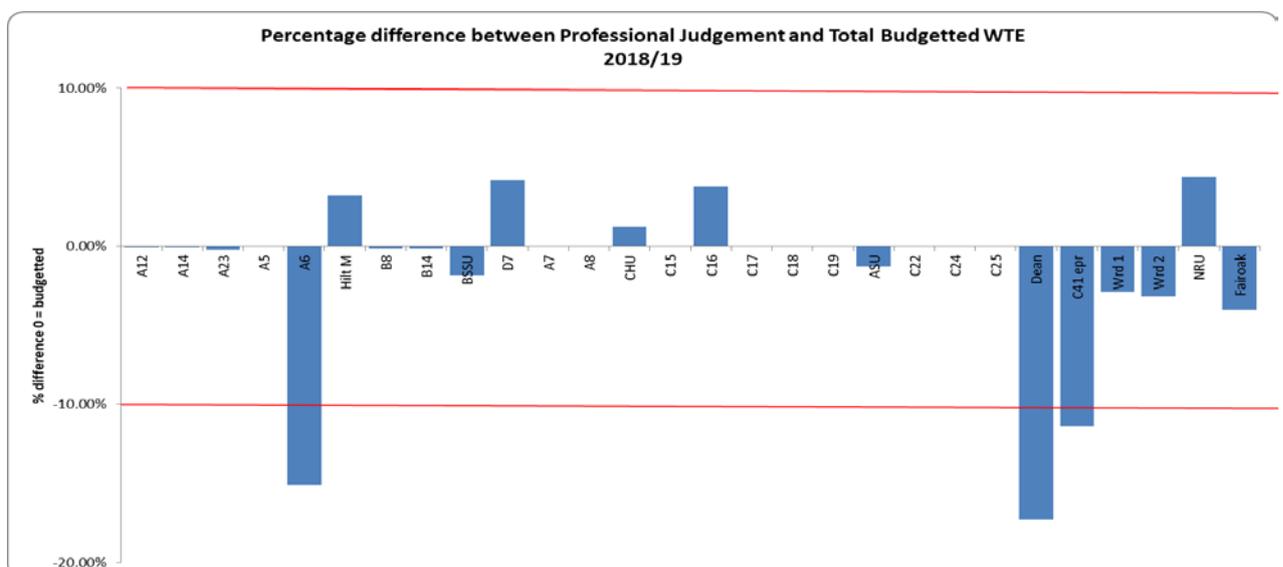
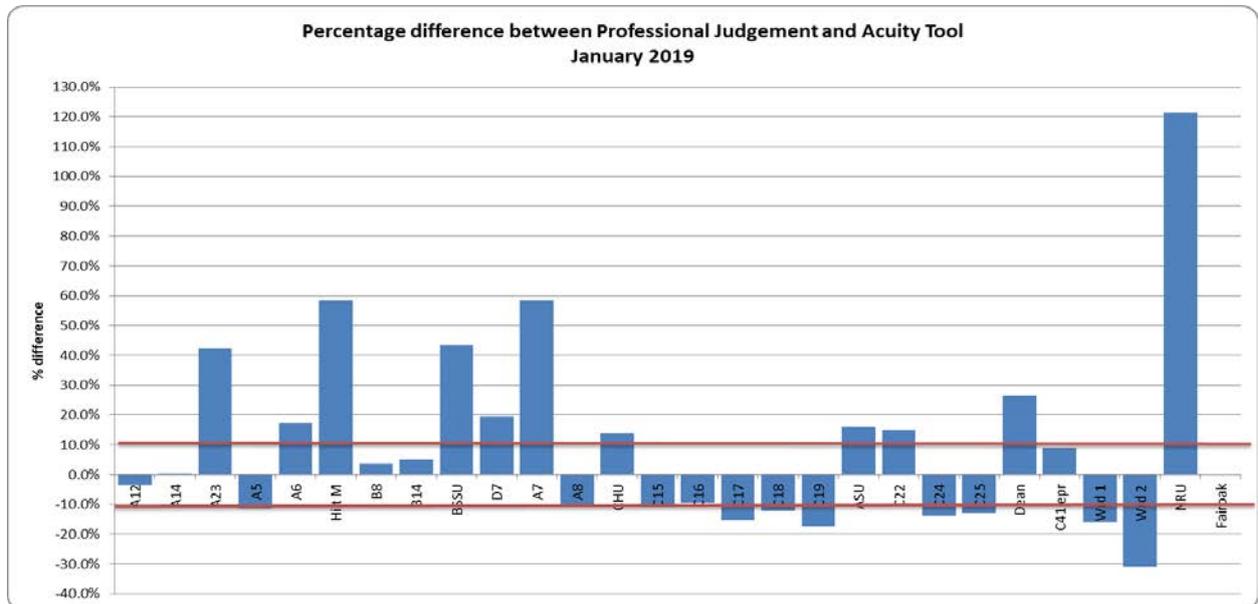


Chart 6 (%) demonstrates the percentage difference between professional judgement suggested establishment and SNCT suggested establishment

Chart 6



Analysis

It is essential that decisions to change to staffing requirements is based on an over time with thematic analysis rather than a one point measure unless that one measure is significant and supported by triangulation evidence.

In Chart 3 it can be seen there are 9 wards considered ‘over’ established or above 10% of the SNCT suggested w.t.e.

Those wards considered to be ‘over’ established or above 10% of the SNCT suggested w.t.e are:

- A23, Hilton Main, BSSU, D7, A7, CHU, ASU, C22 and NRU

But when comparing professional judgement to the budgeted establishment (chart 5) there are only 2 of these wards who appear to be over established:

- Hilton Main and NRU

Hilton Main (elective orthopaedics – Cannock)

In reviewing the nursing requirement for Hilton Main the Head of Nursing for Division 1 proposes to reduce the establishment by 4.4 w.t.e and redeploy these staff to support the opening of an additional 6 beds on A6. The ward will be able to support this change as the bed occupancy on Hilton Main particularly at weekends is low and the Matron and Head of Nursing is confident that even with the focus to increase elective activity at Cannock Hospital the ward will be able to operate with safe staffing levels. The nurse sensitive indicators results are: **Falls** - 1 in month and 2.53/1000

occupied bed days (obd) which is lower than Trust average of 3.84. **Pressure ulcers – 0; Medication incidents -0.** The change in establishment is supported by the Chief Nurse

A6 (Trauma/Orthopaedics – NX)

The review of the SNCT data (chart 3) shows no variance between the SNCT required establishment and the current budgeted establishment, in comparison there is a significant variance between the professional judgement and current establishment (chart 5). The Matron and Head of Nursing for Division 1 have included an increase in the number of beds from 22 to 27 in their professional judgement calculations and to support this, it is proposed to increase the budgeted establishment by 5.6 w.t.e (0.8 band 6, 1.8 band 5 and 3.0 band 2). The funding of these posts will be offset by realigning 4.4 w.t.e from Hilton Main and 1.2 w.t.e from other wards within the Division. The increase in the Sister (band 6) hours will allow for more senior nursing cover being available across the 7 days as this role is essential to providing support to junior staff and the delivery of quality care. The nurse sensitive indicator results are: **Falls – 1** in month and 1.2/1000obd; **Pressure ulcer – 1** in month and 1.24/1000obd which is lower than Trust average of 1.67/1000obd; **Medication errors – 0.** The Chief Nurse supports the proposed increase in budgeted establishment to support the opening of an additional 6 beds on A6. These beds can only open once the redeployment of staff from Hilton Main and any additional recruitment has taken place. The Head of Nursing for Division 1 has confirmed that there will be no cost implications

Beynon Short Stay ward (short stay general surgery – NX)

Reviewing the acuity data captured at 15.00 daily (chart 3) a potential ‘over’ establishment is demonstrated. However, the professional judgement undertaken by Senior Sister and Matron (chart 5) does not reflect an ‘over’ establishment. The Senior Sister, Matron and Head of Nursing whilst completing the professional judgement have taken into account that at 15.00 there are consistently a number of empty beds which are booked for patients still in theatre but that there is a peak in activity early morning and late afternoon which is not necessarily reflected in the acuity data capture and also by the nature of ward speciality the nurses are off ward for a considerable time to escort patients to and from theatre. Nurse sensitive indicator results are: **Falls – 2** in month and 4.51/1000obd which is higher than Trust average; **Pressure ulcers – 0; Medication errors – 0.** The Head of Nursing proposes to reduce registered nurse by 1.56wte and increase health care assistant by 2.06wte, the change does not require financial investment. This change to establishment is supported by the Chief Nurse.

A5 (Trauma/Orthopaedics –NX)

The acuity data capture for this ward (chart 3) suggests that it is ‘under’ established, however the professional judgement (chart 5) agrees with the current establishment total. The Matron and Head of Nursing propose a slight change to the skill mix of the current funded establishment, in order to have better senior nursing cover across the 7 days an increase of 0.8wte sister (band 6) is recommended this will be funded by a reduction in the staff nurse (band 5) of 0.8 w.t.e and reduction in healthcare assistant band 2 by 0.6wte. Nurse sensitive indicator results are: **Falls – 1** in month and 1.16/1000obd; **Pressure ulcer - 0; Medication errors – 1.16/1000obd** which is lower than the Trust average of 2.7/1000obd. The Chief Nurse supports this change in skill mix.

A23 (Head and Neck – NX)

In chart 2 this ward is showing as over established this is based purely on the acuity data captured on the inpatients, however in comparison the professional judgement toolkit (chart 5) the ward is not showing as over established. The professional judgement has taken into account both, the 2 procedure rooms which are housed within the ward, these rooms accommodates emergency attendances and the requirement for registered nurses to escort patients with tracheostomies to off ward investigations and in January this accounted for 22.4 registered nurse hours. The nurse sensitive indicators are: **Falls** – 1 in month and 4.48/1000obd which is higher than the Trust average of 3.84; **Pressure ulcer** -0 in month; **Medication error** – 0 in month. The Matron and Head of Nursing are proposing only minor change to the skill mix and establishment; the change is a net increase of 0.36 band 2 healthcare assistant. The Care hours per patient day will be 6.94 which compares to the Trust average of 7.1. The Chief Nurse supports the change to establishment.

D7 (Gynaecology – NX)

In reviewing the acuity data (chart3) it would suggest that the ward is 'over' established, however the acuity data is based on 26 beds, it does not include the emergency gynaecology patients that attend this ward out of hours and overnight, as it then also provides 4 additional beds for the assessment of these patients. The professional judgement completed by the Matron and Head of Midwifery find the ward establishment and skill mix to be acceptable for the 26 inpatient beds, the issue is the overnight emergency assessment beds, there is further work currently in progress by the Directorate to decide where and how these patients are best cared for. Once this decision has been made a revised skill mix will be proposed. The Chief Nurse agrees the establishment and skill mix for the 26 inpatient beds is correct but that the Division and Directorate need to decide where and how these emergency patients are assessed and cared for before a final nursing establishment can be agreed.

NRU (Neuro Rehabilitation – West Park)

Both the SNCT and professional judgement review (charts 3 and 5) suggest that NRU is potentially over established. The nurse sensitive indicators are: **Falls** -0, **Pressure ulcers** -0; **Medication incidents** -0. The Matron and Head of Nursing for Division 2 propose to reduce the establishment by 0.9 w.t.e of which 0.8wte is band 2 health care assistant hours. This revision to NRU still ensures that there are sufficient registered nurses available 24/7. The change in establishment is supported by the Chief Nurse.

C17 (Renal – NX), C19 (Respiratory – NX), Fair oak (Rehabilitation – Cannock Chase) and Ward 1 (Rehabilitation –West Park)

The SNCT data on these 4 wards (chart 3) shows them to be 'under' established as they are over the 10% tolerance, therefore suggesting that an increase in establishment may be required. The professional judgement completed by Senior Sister and Matron (chart 5) shows them to be within 10% tolerance, therefore suggesting that the current establishment is correct. The Head of Nursing proposes that no alteration is made in phase 1 of the biannual skill mix review to C17, C19 or Ward 1, further work is in progress in regards to Fair oak ward as there is a concern re the number of registered nurses on a night which is resulting in a 1 registered nurse: 13 patient ratio and the

number of falls (5 and 6.8/1000obd) they have had in January. The Chief Nurse has requested a decision be made by the Directorate and Division in regards to Fair oak ward skill mix/establishment and any cost implications.

Deanesly (Oncology – NX)

The professional judgement review (chart 5) suggests that additional staff are required, the ratio of registered nurse to neutropenic patient is required at a 1:2 this is to ensure the administration of antibiotics are timely, the ward has also seen an increase in the number of controlled drug administration required due to the nature of the patients. The other element of change which support the increase in unregistered staff is that there has been an increase in patients that require 4 staff to safely log roll, the inability to do this may result in irreversible spinal cord damage. The nurse sensitive indicators are: **Falls** – 4 in month and 8.99/1000obd which is higher than the Trust average of 3.84/1000obd; **Pressure ulcers** – 1 in month and 2.25/1000obd which is higher than the Trust average of 1.67; **Medication incidents** – 2.25/1000occpd which is slightly lower than the Trust average of 2.7/1000obd. The Matron and Head of Nursing propose an increase of 0.9 registered and 2.6 unregistered nurses, there will be no cost pressure as other changes to skill mix within Division 2 will provide the funding. This change in establishment is supported by the Chief Nurse.

C16 (Diabetes -NX), C24 and C25 (Renal –NX)

The professional judgement for these wards agreed that the establishment numbers were correct but they have been particularly challenged by the number of band 5 vacancies and the consistent difficulty to recruit to these posts. Retention of staff nurses on these wards is also providing a challenge. To ensure availability of senior nursing staff across the 7 days the Matron and Head of Nursing propose to increase the Sister (band 6) by 1.0 w.t.e to 4.0wte. This will support the more junior registered nurses and provide a continuity of senior nurse cover. The nurse sensitive indicators can be seen in table 2 below.

Table 2

Ward	Falls (average 3.84/1000obd)	Pressure Ulcer (average 1.67/1000obd)	Medication error (average 2.7/1000obd)
C16	4 in month, 5.08/1000obd	0	5.08/1000obd
C24	1 in month, 1.19/1000obd	2 in month, 2.38/1000obd	1.119/1000obd
C25	0	2 in month, 2.05/1000obd	1.02/1000obd

This change in skill mix will be funded by a reduction of 1.0wte band 5 staff nurse and 0.2wte of band 2 health care assistant per ward. The change to the skill mix is supported by the Chief Nurse.

A7 (Care of elderly – NX)

The acuity data capture (chart3) demonstrates that this ward is potentially ‘over’ staffed, however chart 5 demonstrates that the professional judgement completed by Senior Sister and Matron would

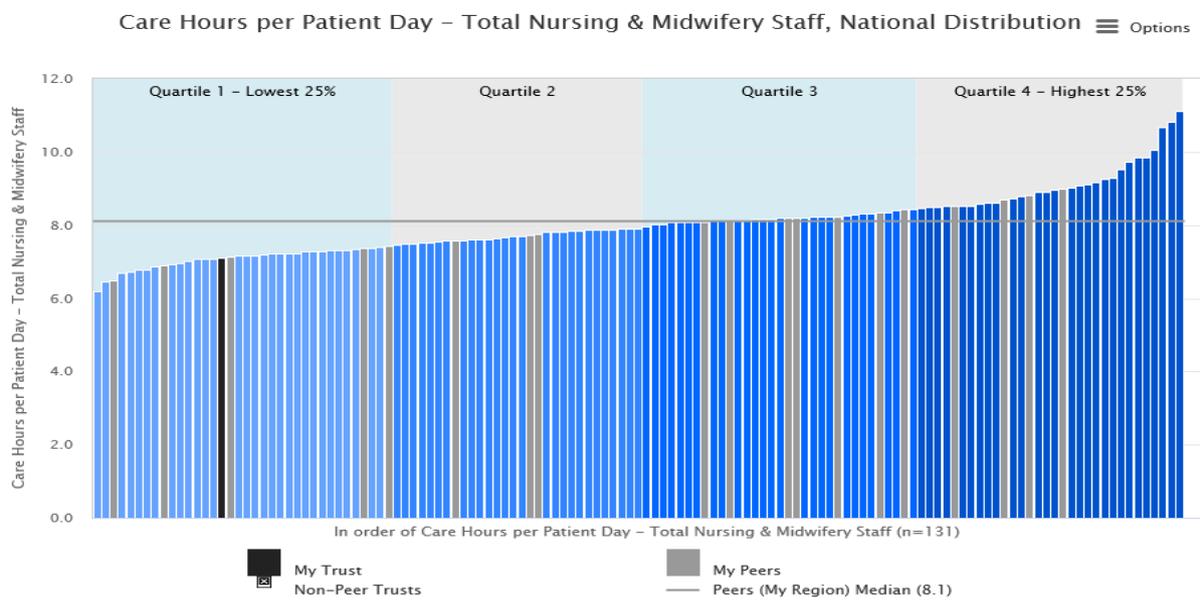
agree with the current funded establishment. The nurse sensitive indicators are: **Falls** – 3 in month and 3.02/1000obd which is just under the Trust average; **Pressure ulcer** -2 in month and 1.10/1000obd; **Medication errors** – 1.01/1000obd. The Head of Nursing recommends that the establishment and skill mix remain as current. The Chief Nurse supports the decision.

Nurse Sensitive indicators and Care Hours per Patient Day (CHPPD).

An additional part of the skill mix review has been to use data available on the Model hospital to benchmark the Trust position with CHPPD (chart 7) and nurse sensitive indicators (chart 8 and 9).

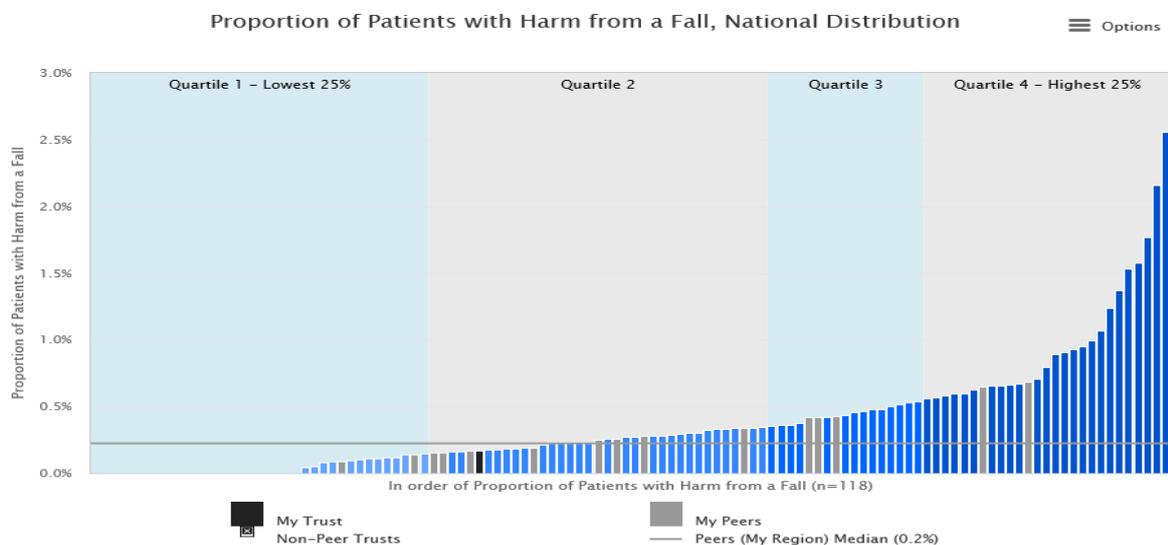
Chart 7 shows the position of the Trust CHPPD with peers, the Trust value is 7.1 against a national value of 7.9

Chart 7



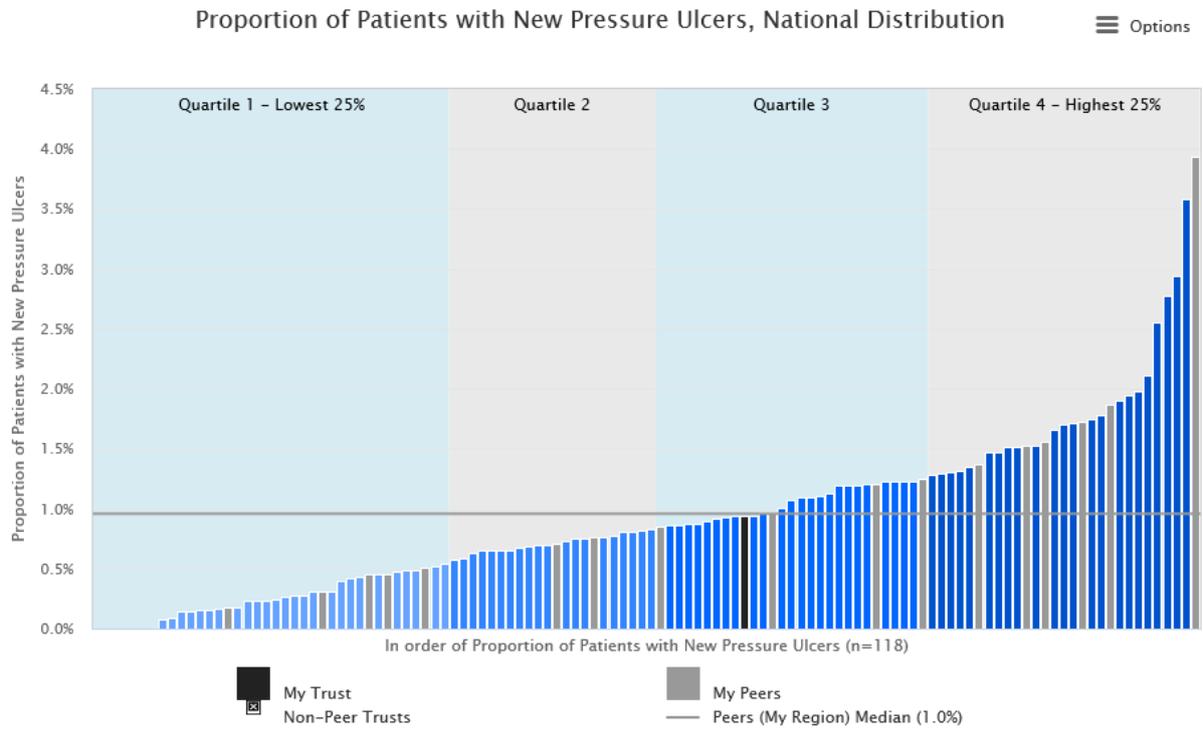
Falls with harm the Trust value is 0.2% against a national value of 0.3%

Chart 8



New Pressure Ulcer - the Trust value is 0.9% against a national median of 0.8%

Chart 9



Appendix 1

Levels of acuity and dependency

Level 0: Patient requires hospitalisation. Needs met by provision of normal ward cares.

- 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 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

Level 1a: Acutely ill patients requiring intervention or those who are UNSTABLE with a GREATER POTENTIAL to deteriorate

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

Level 1b: Patients who are in a STABLE condition but are dependent on nursing care to meet most or all of the activities of daily living.

- 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)
- Patient and / or carers requiring enhanced psychological support owing to poor disease prognosis or clinical outcome
- Patients on 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

Level 2: 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 /

- 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:
 - Greater than 50% oxygen continuously
 - Continuous cardiac monitoring and invasive pressure monitoring
 - Drug Infusions requiring more intensive 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 unit

Level 3: Patients needing advanced respiratory support and / or therapeutic support of multiple organs.

- 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

Appendix 2

Nurse Sensitive Indicators

Formal complaints

Registered complaints about nursing/midwifery care/staff in the following three areas:

- Communication
- Clinical care
- Attitude

Medication Errors

Actual medication errors where nursing was the primary cause

Infection

Incidence rates of MRSA bacteraemia and Clostridium Difficile

Slips, trips and falls

Number of slips, trips and falls

Pressure Ulcers

Prevalence of pressure ulcers developed in hospital