CHESTERFIELD ROYAL HOSPITAL NHS FOUNDATION TRUST

Board of Directors – APRIL 2016

Title of enclosure: **Safe Staffing levels for the adult in-patient wards, including Children's Services and the Women's Health Unit**

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Board action(s) required: (✓)							
Information	√	Discussion	√	Decision		Approval	

Summary briefing / key issues:

Every six months Trust boards are required to undertake an in-depth review of nurse staffing requirements, using a number of approaches from evidence-based acuity tools measuring patient's acuity/dependency, supported by professional judgement and benchmarking.

Section 1 - Nursing & Midwifery establishment review

A nationally recognised acuity tool is used across the adult wards, with the latest completed in January 2016. The average acuity data has identified that there are differences between the nursing acuity and the nursing establishments. Taking this into account if the nursing establishments were aligned to the acuity findings alone the cost would be circa £1,774m.

On the transitional care ward a different acuity tool is being utilised to better assess the patient needs. This will be completed by April 2016. Initial results demonstrate higher acuity against the nursing establishment.

The emphasis is on safe patient care and not the number of available staff per patient. There is national evidence of an increased risk of harm to patients associated with a ratio of 1 registered nurse to 8 (or more) patients during day hours. On the acute adult wards at CRHFT during the day shift all of the wards work with a ratio of less than 1:8 patients. The recommended skill mix ratio across adult in patient areas is 65:35 (qualified to unqualified), the majority of the adult in patient areas at CRHFT work at around a 60:40 qualified to unqualified split.

A benchmarking exercise completed with local hospitals using generic adult ward shows that comparable wards at CRHFT appear to be staffed with similar wte. Though, most of the other Trusts have a higher qualified to unqualified ratio with subsequent higher costing.

Quality outcomes measured alongside nurse staffing levels, outlines improvements during October 2015 to February 2016 against the same period the year before:

- Hospital acquired C. difficile infections per 1,000 bed days shows a 40% reduction
- Number of hospital acquired pressure ulcers (grade 2-4) shows a 72% reduction
- Number of falls overall shows a 20% reduction
- Medication incidents reporting 7% increase (IPR target is for a % increase), however medication incidents causing harm shows a 68% reduction
- FFT Inpatient/day-cases, % of patients who would recommend shows an increase of 1.8%

- Complaints/concerns increase in the proportion dealt with on the day with a 56% increase

However, feedback via Family and Friends Test (FFT), National Patient Survey and Your Voice around patient and staff experience has highlighted concerns regarding nurse staffing levels. There are a number of steps taken daily to manage the variances with nurse staffing levels to patient needs.

Section 2 - Key Findings across the Divisions

Medicine & Emergency Care Division - Eastwood ward (Stroke Unit), have had concerns raised via the Sentinel Stroke National Audit Programme and during the CQC inspection around the nurse staffing levels particularly relating to the night shift when a nurse attends Emergency Department (ED). Following a recent audit that reviewed the frequency and duration of time spent in ED, the Division are developing a plan to provide cover for when the qualified nurse is required in ED.

The Cardiology ward, ED and Emergency Care Unit (EMU) are reviewing/gathering additional information to support the development of the workforce model e.g. visiting vanguard sites, piloting different roles, analysing patient activity and pathways. Taking this into account there are no changes recommended at this point to the nursing establishment in the Medical & Emergency Care Division.

Surgical Division - reconfigured its services across the adult wards in December 2015. Since this period the wards have seen an increase in patient acuity and a high number of medical patients. This is adding pressure with long and short stay patients being managed across the wards, instead of the dedicated short stay ward. Following a review of the acuity, the nurse sensitive indicators and based on professional judgement, as the wards have only recently reconfigured no changes to the nursing establishment are recommended at this time.

Women's and Children's Division, Paediatrics - Neonatal Unit staffing levels are based on the British Association of Perinatal Medicine guideline 2011, to which CRHFT are broadly compliant. The only area of non-compliance relates to ensuring that the nurse in charge is supernumerary throughout a working shift; this is achieved on the morning shift but not routinely on the late and night shift.
Nightingale ward – is linked to the Royal College of Nursing (RCN) guidelines, the latest audit against RCN standards in February 2016 showing a improvement.

Midwifery - Birthrate Plus is a framework for workforce planning and decision making for midwifery services, which was used from December 2015 – February 2016. Early indications from the data analysis suggest there will be a variance between the current and Birthrate Plus recommended staffing levels, however, the final data has not yet been validated.

Enhanced Nursing Support Team is a dedicated team of HCA's that provide a level of increased supervision to adult patients. When looking at cost savings to date this is around £11.5k, full year effect of £46k. Early results indicate that the team is having a positive impact on the quality of care, following further evaluation; a plan will be developed to expand the team.

Section 3 – Going Forward

The Lord Carter, 2016 paper outlines that there will be national measures of nurse staffing - Care Hours Per Patient Day (CHPPD) which will measure care according to how much time nursing staff spend with patients. This will be presented alongside staffing measures, quality data and staff experience. The National Quality Board's, 2013 guidance is also being refreshed, which is expected to also strengthen patient and staff feedback relating to nurse staffing.

Conclusion

This paper focuses on safe nurse/midwifery staffing levels within adult inpatient, paediatric and midwifery services. This builds and links into the workforce strategy which is being led by the Director of People and Organisational Effectiveness.

When reviewing the average nursing acuity data (adult wards), the cost to align the establishments to meet the acuity findings is circa £1,774m. However, when reviewing nurse staffing levels it is not purely based on acuity, but on other factors, for example professional judgement, benchmarking, nurse sensitive indicators and qualitative information around patient and staff experience.

Due to the number of vacancies, maternity leave and sickness levels it remains challenging to determine if nurse staffing levels are appropriate. Taking this into consideration, the Director of Nursing and Patient Care is satisfied that the establishments are within acceptable levels; recognising that further work is currently being undertaken across four wards in the Emergency Care and Medical Division to review the nurse staffing levels and workforce requirements. In addition the final validated data from Birthrate Plus regarding maternity services will inform the model of service delivery in maternity. All of the above may impact on the recommended staffing levels and the workforce strategy.

Related strategic objective(s) and board assurance framework risks: (✓)

1 Giving high quality, safe and person centred care
2 Deliver sustainable, appropriate and high performing services
4 Support and develop our staff

✓	1	Provide high quality, safe and person-centred care
✓	2	Deliver sustainable, appropriate and high-performing services
	3	Developing existing and creating new partnerships for the benefit of patients
	4	Support and develop our staff
	5	Manage our money wisely, foster innovation and improve efficiency
✓	6	Provide an infrastructure to support delivery

Other specific risks relating to this item:

Maintaining safe, high quality and cost effective nursing staffing levels (ID No. 1507)

Link to the committee's terms of reference (committee papers only):

Financial impact:	Through better understanding of staff resourcing and allocation to assist in reducing the financial impact.
Equality impact:	
Environmental impact:	
Partnership working:	
Management assurance	

Report to the Board on the safe staffing levels for the adult in-patient wards, including children's services and the women's health unit

Introduction

This report presents the six monthly nursing establishment review. It outlines the approach that is taken to ensure that there is sufficient nursing capacity and capability across the in-patient areas to meet the needs of patients and children, and to maintain safe staffing.

The National Quality Board 2013 guidance was issued in November 2013, followed in March 2014 by the Hard Truths Commitments. This outlines the board's responsibilities to ensure a six monthly staffing review is undertaken, placing emphasis on openness and transparency about safe staffing and the responsibility of the Trust to ensure it operates with safe staffing levels.

In order to comply with these commitments the Trust uploads information to the national database on the number of planned nursing hours over the month versus the number of actual hours filled. This is available on the Trust website and reported on NHS choices. In addition a monthly report is submitted to the board providing details of the planned nursing hours versus the number of actual hours filled, triangulated against patient safety indicators.

This report is covered in three sections:

- Section 1 – Nursing and Midwifery establishment review
- Section 2 – Key findings across the Divisions
- Section 3 - Going Forward National Guidance

1. Section 1 - Nursing and Midwifery establishment review

1.1 Every six months Trust boards are required to undertake an in-depth review of nurse staffing requirements using evidence-based tools. It is recommended that a number of approaches are used from acuity based tools which measure patient's acuity/dependency, supported by professional judgement and benchmarking. This approach is also recommended by National Institute Clinical Excellence (NICE) guidance (2014).

1.2 A recognised and widely implemented tool is the Safer Nursing Care Tool (SNCT), which was introduced at Chesterfield Royal Hospital Foundation Trust (CRHFT) in June 2014. Initially, data was collated monthly between June 2014 and June 2015, and is now being completed every three months in line with national guidance. The latest data collection occurred in January 2016 and underwent a robust validation exercise.

1.3 **Acuity**

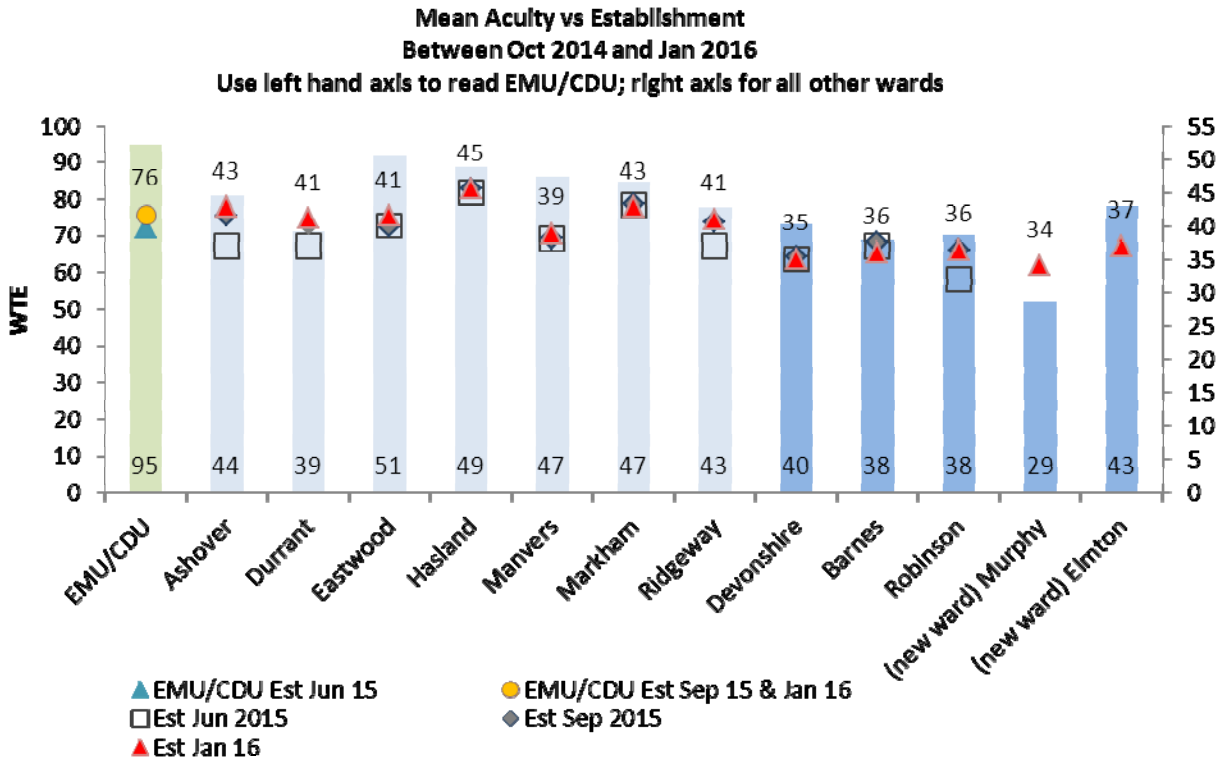
1.4 The acuity data using the SCNT tool (graph 1) below has identified that there are differences between the acuity and dependency of patients versus the agreed establishment across the

wards. Out of the 13 wards/departments: 85% (11 wards/departments) demonstrates that patient acuity and dependency exceeds the establishment; with the remaining 15% (2 wards) showing that the acuity and dependency is lower than the ward establishment, this being Durrant and Murphy ward.

Durrant ward is a 32 bedded acute frailty /care of the elderly area, which has a high patient turnover following rapid assessment interventions. Murphy ward was modeled in December 2015 as a short stay combined surgical and orthopaedic area which has a high patient turnover with an average length of stay of no more than 72 hours. The SCNT tool measures patient acuity but does not capture patient turnover, therefore the acuity data does not accurately reflect fully the nursing establishment requirements of such wards. In addition Murphy ward has recently been re-configured and requires additional acuity data before re-considering the workforce model.

1.5 Taking the above into account if the nursing establishments were aligned to the acuity findings alone the cost would be circa £1,774m. This is built on the current qualified to unqualified skill mix that is in place across the wards/departments.

Graph 1



Notes:

- The mean acuity for EMU and CDU is the green bar read from the left hand axis and the remaining bars, using the right hand axis, show the mean acuity for the surgical division in dark blue and medical division in light blue. WTE acuity represents the speciality activity by ward; the graph accounts for ward changes.
- The establishment for EMU/CDU in June 2015 is shown by the blue diamond (▲June 2015) and orange circle (● EMU/CUD Sept 2015 and January 2016)
- The establishment for all other wards valid in June 2015 (□ black square) and changes to the establishment in Sept 2015 (◆grey diamond) and Jan 2016 (▲red triangle).
- Mean acuity (value shown in **black** at bottom of the column for each ward) exceeds establishment (Jan 16) where column is above the establishment marker.
- The value for the current establishment (Jan 2016) is shown at the top of each column.

1.6 Elizabeth ward is a 16 bedded transitional care ward for patients who are medically fit for discharge but require complex discharge packages either in their own homes or in further healthcare settings. The ward expanded its bed base in December 2015 to 25 beds to support seasonal pressures, which remains the position in April 2016.

1.7 The SNCT acuity tool used across the other in-patient wards does not fit with the transitional care model, as rather than acutely unwell patients; the ward has highly dependent patients often with complex behavioral needs requiring increased levels of supervision. Therefore an acuity tool known as Northwick Park which is more suited to assessing the level of input required for patients on Elizabeth ward commenced in January 2016 and is running through to the end of April 2016. The acuity tool is based on an in-depth assessment of each patient which is completed once a week, hence the need to run this over a 4 month period.

Table 2 provides analysis of the first 6 weeks of acuity data for Elizabeth ward, which initially demonstrates higher acuity against the nursing establishment.

Table 2

Audit date	8/1/16	16/1/16	23/1/16	30/1/16	5/2/15	12/2/16	Average
WTE (25 beds)	*36.86	41.74	41.74	46.21	43.2	41.3	41.84
WTE (16 beds)	*23.59	26.71	26.71	29.57	27.69	26.44	26.78
Establishment WTE (16 beds)	*23.83	23.83	23.83	23.83	23.83	23.83	23.83

*WTE number includes both qualified and unqualified staff

Caution needs to be taken when reviewing the data due to the following reasons; there is an increase in bed numbers with the current case mix of patients not all requiring transitional care e.g. more short term patients who are being transferred earlier in the pathway with limited discharge planning in place and patients being transferred to facilitate beds becoming available within the acute wards.

As the acuity work is not concluded, the nursing workforce model cannot be determined at this stage; the plan therefore is for this to be confirmed and reported via the appropriate governance arrangements.

1.8 **Staff to Patient Ratio Review**

There is no single nurse staff-to-patient ratio that can be applied across all adult inpatient wards. The emphasis is on safe patient care and not the number of available staff per patient. However, there is evidence of an increased risk of harm to patients associated with a ratio of 1 registered nurse to 8 (or more) patients during day hours. There is no recommended staffing ratio for night duty, although the Royal College of Nursing (2009) noted that a ration of 1:11 would be reasonable, however, this has not been adopted by NICE.

On the adult wards at CRHFT during the day shift all of the wards work with a ratio of less than 1:8 patients. With the exception of the Elizabeth ward which is modelled on transitional care, this ward runs at 1:8 during the day shift ward.

In relation to the ratio of qualified to unqualified staff on the night shift please see points 1.15-1.19.

1.9 **Skill Mix Review**

1.10 The recommended skill mix ratio across adult in patient areas is 65:35 (qualified to unqualified), with this being higher in areas such as Intensive Care Units, Emergency Departments and Acute Assessment areas. At CRHFT the nursing skill mix varies with the majority of the adult in patient areas working at around a 60:40 qualified to unqualified split.

1.11 As part of the skill mix review an analysis was completed regarding the percentage of staff that have been qualified more than two years and those qualified less than two years. The results of this demonstrate a high level of staff that have been trained longer than 2 years. It is acknowledged that although it is beneficial to undertake this exercise, it is limited in relation to the amount of assurance that can be given. For example: you could have a staff member who has been qualified for a number of years but has not acquired the necessary clinical or managerial competencies.

1.12 A task and finish group was therefore established to produce a staff nurse developmental framework, to include managerial objectives with both specific and generic clinical skills and competencies, being implemented from the 1st April 2016. This provides clear identified levels of proficiency throughout the breadth of the staff nurse role with clear timescales involved for achieving levels of expertise and competence.

1.13 **Care Quality Commission**

1.14 Following the Care Quality Commission (CQC) inspection in April 2015 a regulatory recommendation was to ensure that the numbers of registered nurses meet national guidance and raised particular concerns around the night shift. A specific review was undertaken of the night staffing across specific wards in the Medical and Emergency Care and Surgical Division. Subsequently, the Trust Board approved an uplift in establishment in July 2015 to increase nurse staffing on these wards.

1.15 This addressed the concerns on Ridgeway and Robinson ward with an uplift in the qualified nurse establishment on the night shift.

1.16 The wards that have continued to have a qualified ratio of staffing on nights above 1:15 (qualified nurses to patients) are Durrant and Ashover ward (both medical wards), and the surgical wards.

1.17 The Surgical Division reviewed the clinical pathways and reconfigured the wards in December 2015. The wards have a qualified nurse on each day on a twilight shift covering 16.00 – 24.00hrs. This provides support in the evening where activity levels are high, for example; medication administration, discussions with relatives and post-operative care of patients. Between the hours of midnight to 07.00hrs wards are generally more settled and able to manage with the current night staffing levels.

Although this twilight shift has only been in place for 3 months, overall this has been received by staff in a positive manner.

1.18 The remaining two wards Durrant and Ashover (in July 2015) had an increase in establishment with an additional unqualified staff member on night duty; the wards subsequently ran with two qualified and three unqualified staff.

In June 2015 Durrant ward piloted a qualified staff member working a twilight shift. However, following the evaluation it was felt for the majority of time an unqualified staff member was required, as personal care, falls prevention and supervision is predominately needed overnight. The ward Matrons review the skill mix on nights against the patient acuity/dependency and if required switch the third unqualified staff for a qualified nurse. This decision is made in conjunction with the Senior Matron and Head Of Nursing (HON). This model was also adopted by Ashover ward. When reviewing in-patient falls data for Ashover and Durrant wards over the past five months there are no specific time periods identified where there was an increase in patient falls.

In addition to the above CQC highlighted that on Eastwood ward (Stroke Unit), that registered nurses from the ward may be required to attend the Emergency Department (ED), further depleting the qualified nursing resource on the ward during the night shift. This aspect is covered in section 2.2.

1.19 **Benchmarking**

1.20 A benchmarking exercise has been completed with local hospitals using generic adult in-patient wards in Medicine, Surgery and Orthopaedics (appendix 1 and 2). Benchmarking exercises need to be viewed with caution due to: differing speciality mix/demographics; patient numbers and ward layouts; infra-structures and support. For example; the Cardiology ward at University of Nottingham has a coronary care unit and the wards are also supported by a critical care outreach service.

Taking the above points into consideration the benchmarking exercise shows that comparable speciality wards at CRHFT appear to be staffed with similar wte. However; most of the other Trusts have a higher qualified to unqualified ratio with subsequent higher costings than CRHFT.

1.21 **Care Contact Time**

1.22 As part of the ongoing national work around Safer Nurse Staffing, NHS England published: A guide to Care Contact Time (2014), this is being introduced as a method to determine the percentage of time nurses, midwives and health care assistance (HCA's) spend delivering direct patient care. The purpose being to increase direct care time overall and understand how and where quality initiatives can be determined.

The Care Contact Time (CCT) methodology used by CRHFT was one recommended by NHS England. The tool provides nurses/midwifes with the opportunity to record activities for an entire shift at five minute intervals onto a paper 'Activity Clock'. The CCT tool was piloted in July 2015, and the data collection tool was subsequently amended. It was re-run in September 2015 and March 2016 over a 24-hour period across all in-patient wards including adults, paediatric and maternity services. This was validated throughout the period by senior nursing staff.

The results and actions taken from CCT in September 2015 were presented to the Hospital Leadership Team (HLT) in January 2016. A number of areas for improvement were identified at both an individual ward level and Trust wide for example:

- Reviewing and organising stock levels/storage of equipment.
- Improving the effectiveness and efficiency of Medical ward rounds and Allied Health Professionals (AHP) handovers and standardisation of nursing handover.
- Development of the unqualified nursing Assistant Practitioner (AP) role, specifically looking at duties/tasks that can be delivered by the unqualified workforce.

The data from CCT undertaken in March 2016 is currently being analysed. The 'Activity Clocks' have been adapted for use in ED and subsequently included in the March 2016 data collection. In addition, the 'Activity Clocks' have been modified for use in the out-patient areas which is linking into the Transformational Out-Patient programme 2016/17.

Going forward CCT will be completed twice a year minimum or if there are service changes, in line with national recommendations.

1.23 **Enhanced Nursing Support Team**

1.24 The Enhanced Nursing Support team (ENST) commenced working on the wards in December 2015 in a phased approach as the team was recruited to. This is a dedicated team of HCA's that provide a level of increased supervision to patients, predominately with severe dementia, cognitive problems, high risk of falls, and alcohol related withdrawals. The team have received specific training and reside in a virtual ward managed by the Older People's Matron; this provides a flexible workforce with staff being allocated on a shift by shift basis.

This followed a review of the model of care delivery for patients who required one to one care, which highlighted a heavy reliance on temporary staffing with considerable variation in practice and associated costs.

It is noted in the Lord Carter review *Operational Productivity and Performance in English NHS acute hospitals: unwarranted variations* (2016), that by October 2016 all Trusts should be implementing the guide on enhanced care which is currently being developed by NHS Improvement as an improvement priority. CRHFT have already made significant progress in implementing such a model, however once the guidance is produced from NHS Improvement this will need to be reviewed, considered and potentially modified.

1.25 There is a robust assessment criteria and the process for requesting, approval and daily review of patients requiring enhanced supervision by the Older Peoples team.

One of the benefits of the service is that some of the referrals made by the wards are deemed inappropriate by the Older Peoples team, who offer advice and alternative ways of managing the patients. Previously this would have resulted in one to one care being provided at an additional cost. When looking at cost savings based on this, the following assumptions have been made; average length of time ENST spent with patients from December 2015 to

February 2016, factored against the number of patients when reviewed by the ENST that did not require enhanced nursing support.

This has resulted in a saving of around £11.5k, with a potential full year effect of £46k. In addition as the Older Peoples team complete daily reviews of the patients de-escalation of care happens at an appropriate time which would otherwise have potentially continued.

1.26 Early results indicate that the team is having a positive impact both on the quality of care and patient experience, feedback specifically from patients/carers and staff has been positive.

Outlined in appendix 3 are three brief case study examples of how the ENST have supported patients in the clinical areas.

The demand for enhanced nursing support from the wards has exceeded capacity of the ENST; therefore it is recommended that the ENST is expanded.

1.27 **Outcome Monitoring**

1.28 There are a number of quality outcome measures that are monitored alongside nurse staffing levels, below outlines improvements made against these.

1.29 Outcome indicators comparing performance during October 2015 to February 2016 against the same period the year before shows:

- Hospital acquired C. difficile infections per 1,000 bed days shows a 40% reduction
- Number of hospital acquired pressure ulcers (grade 2-4) shows a 72% reduction
- Number of falls overall shows a 20% reduction
- Medication incidents reporting 7% increase (IPR target is for a % increase), however medication incidents causing harm shows a 68% reduction
- FFT Inpatient and day-cases, the % of patients who would recommend shows a 1.8% increase
- Complaints/concerns are showing a significant increase in the proportion of issues dealt with on the day with a 56% increase

However, the qualitative measures around patient and staff experience need to be taken into account.

Although we have positive feedback from our patients, a feedback theme from the Friends & Family Test (FFT) is around the wards/departments needing more staff. Also patients have reported via the national patient survey that they did not feel that there was enough staff on the wards.

In addition, from a staff perspective the FFT, Your Voice (2016) outline concerns about nurse staffing levels and the pressure felt by the high activity levels. A survey conducted with newly qualified nursing staff 2 – 3 months ago also highlighted issues: nurse staffing levels and vacancies; staff being moved to work on other wards and, wards being very busy sometimes affecting the support that they were provided with.

There are a number of steps taken on a daily basis to manage the variance in nurse staffing levels to patient needs which are highlighted below.

1.30 **Managing Staff Variance**

1.31 There are a number of ways that variances with nurse staffing levels are managed to ensure wards are staffed safely, these are:

- Utilisation of the Enhanced Nursing Support Team (ENST), section 1.23
- Use of additional temporary staff, both qualified and unqualified
- Matrons who are supervisory to the ward staffing numbers, working within the staffing establishment
- Moving staff across the trust (however, this is having a negative impact on staff experience)
- Reduction in staff education/training

2. Section 2 - Key Findings across the Divisions

2.1 Medicine & Emergency Care Division

2.2 Eastwood ward

Eastwood ward (Stroke Unit) is a 36 bedded stroke unit. The nursing acuity audit has identified a consistent shortfall in nursing, with an average acuity score of 51 wte against an establishment of 41.48 wte. The ward had an investment of £35k for an additional 1.65 wte unqualified staff in November 2015.

The SSNAP (Sentinel Stroke National Audit Programme) reported that the ward did not have enough trained staff on duty at 22.00hrs, identifying the ward as being under the median establishment for qualified nurses per beds. During the CQC inspection in April 2015, it was highlighted that if a qualified nurse is required (to provide a thrombolysis assessment service and carry out acute stroke interventions in ED), this depletes the qualified nursing resource.

Subsequently, an audit was undertaken over a fourteen week period reviewing the number of occasions and the duration that a qualified nurse was required to attend ED (table 3). The results highlight there is great variability for example; the maximum number of referrals from ED was 25 in one week, to a minimum of 4 in another week. The length of time the qualified nurse spent in ED also varied dependent on the intervention required. However, when looking specifically at the twilight shift (17.00hrs – 22.00hrs) and the night shift (22.00hrs – 08.00hrs) the average hours per week spent in ED was 1.9hrs and 2.5hrs retrospectively.

Table 3

Audit of number of times and duration that a qualified nurse attended ED

Oct 15 – Jan 16	0.800hrs – 17.00hrs	17.00hrs – 22.00hrs	22.00hrs – 08.00hrs
Number of referrals requiring Registered Nurse in ED	128	50	71
Total time spent in ED by Registered Nurse (from Eastwood ward)	54.55hrs	26.25hrs	36hrs

When reviewing the nurse sensitive indicators the ward has a high number of incidents reported each month, these are predominantly in-patient falls. When reviewing the times of the falls from December 2015 to February 2016 the lowest time period was between 18.00hrs – 12.00 midnight, with the highest period being from 12.00 midnight to 08.00hrs. The ward is working on a number of improvement initiatives as part of the Trust wide in-patient falls plan.

The ward has low incidents of pressure ulcers, and has received no complaints from September 2015 to February 2016. The Family, Friends Test (FFT) is consistently above 94% positive feedback.

It is acknowledged that from 17.00hrs – 24.00hrs, if a qualified nurse is required in ED it depletes the ward during one of its busiest periods. This potentially results in delays in treatment, medication administration and patients being settled for the night. This is currently being reviewed by the Division to establish a plan for when the qualified nurse is required in ED.

2.3 Manvers ward

Manvers ward is a 32 bedded Cardiology ward comprising of 10 coronary care beds and 22 cardiology beds. The multi-disciplinary team (MDT) are currently in the process of undertaking a benchmarking exercise against similar units, reviewing admission times to CCU and the amount of time nursing staff spend escorting patients to diagnostic testing and transferring patients to other hospitals. It is anticipated that the review will be completed by June 2016.

2.4 Emergency Department (ED)

There is no nationally recommended nursing acuity tool for ED, the Senior Matron and Head of Nursing are in the process of reviewing a number of acuity tools and have arranged visits to other Trusts including a Vanguard site.

The unit had a high number of qualified nurse vacancies in 2015, the situation has improved and from March 2016 there will be no qualified nurse vacancies, with three qualified staff on maternity leave. Due to the high number of newly appointed staff, there is a senior nurse who is providing additional support.

ED are currently trialing a ‘chaser role’, within their unqualified nursing establishment. The ‘chaser role’ has been able to undertake a variety of tasks that have allowed the ‘nurse in charge’ to work alongside the nursing team reviewing and managing patients. Initial feedback is positive, the Senior Matron is evaluating the role examining the amount of qualified nursing time released. It is anticipated that evaluation will be available by May 2016.

The CCT tool was adapted for ED and utilised in January 2016, which demonstrated a high percentage of direct patient care. ED participated in CCT in March 2016 along with the rest of the Trust, on this occasion the audit was split between majors and minors, which will hopefully provide more useful information. This data is currently being analysed.

There are a number of initiatives that the Senior Matron and HON are taking forward including: nursing escalation process (to support the unit at times of high activity); adapting and implementing a ‘Red Flag’ process and reviewing the Emergency Nurse Practitioner workforce.

2.5 Emergency Management Unit & Clinical Decisions Unit (EMU/CDU)

There is a working group being led by Consultants looking at patient flow, activity and pathways. This will provide an opportunity to model the nursing workforce around the patient pathway supported by the findings of the nurse staffing review.

The SNCT nursing acuity tool does not fully reflect the high turnover of patients that

EMU/CDU accommodates. However, as the patients that are currently being admitted to CDU are increasingly more dependent with high acuity scores, it was decided to run the nursing acuity tool specifically on CDU, which commenced in February 2016 for a 3 month period.

EMU/CDU have reported the highest number of 'Red Flags' between December 2015 to February 2016 this is mainly due to: high patient admissions overnight and at week-ends; ambulatory care routinely being opened out of hours to create additional bed capacity; high patient acuity and staff shortages.

The CCT audit in September 2015 highlighted the number of nurse escorts that are required over late afternoon and into the night and the proportion of patients with mental health problems requiring intensive resources. This will be considered when modeling the nursing workforce.

No further funding is being requested at this time; however the nursing workforce model is being developed alongside the new patient pathways and analysis of attendance patterns.

2.6 There are no changes recommended at this time to the nursing establishments in the Medical and Emergency Care Division. However, as highlighted above the following areas: Manvers, Elizabeth ward, ED and EMU/CDU nursing workforce models are being reviewed and developed.

2.7 **Surgical Division**

2.8 The Surgical Division reconfigured its services across the Surgical and Orthopaedic wards in December 2015. One of the aims of the reconfiguration was to facilitate surgical patients being manged more effectively whilst maximising bed capacity. The nurse staffing model for the reconfigured wards was based on professional judgement and previous patient acuity data.

However, since the reconfiguration the wards have seen an increase in patient acuity and a high number of medical patients which is subsequently altering the case mix. This is adding pressure with long and short stay patients being managed across all of the wards, instead of patients being managed on the dedicated short stay ward. This is having a negative impact on patient experience, patient cancellation rates and staff experience.

The Intensive Care Unit and High Dependency Unit are staffed to the Intensive Care Society guideline. The Unit has facilitated additional places on the critical care course to ensure that that the Unit achieves and maintains at least 50% of the staff having a specialist qualification.

2.9 Following a review of the acuity across the wards, professional judgement along with a review of the nurse sensitive indicators and given that the wards only recently reconfigured no changes to the nursing establishment are recommended at this time.

2.10 **Women's and Children's Division**

2.11 **Paediatrics**

2.12 **Neonatal Unit** (NNU) nurse staffing levels are based on the British Association of Perinatal Medicine (BAPM) 2011, which is consistent with the approach taken across neighbouring providers.

The nurse staffing levels on NNU are broadly compliant with the BAPM guidelines. The only area of non-compliance relates to ensuring that the nurse in charge is supernumerary throughout a working shift; this is achieved on the morning shift but not routinely on the late and night shift. The Head of Nursing has assured the Director of Nursing and Patient Care that this does not have an impact on patient safety.

CRHFT is part of the Yorkshire and Humber neonatal network and since January 2015 have been involved in collating figures through Badgernet (national IT system for recording neonatal clinical patient episodes). In July 2016 there is a regional peer review visit planned and a report indicating comparisons of organisational nurse staffing levels.

2.13 **Nightingale ward** (acute paediatrics) is linked to the Royal College of Nursing (RCN) guidelines *Defining Staffing Levels for Children and Young People's Services* (2013), which are age limited, and are used along with professional judgment. The RCN guidance indicates a required ratio of 1:3 nurses for all children under 2 years, 1:4 for those over 2 years and 1:2 for High Dependency care, this is over a 24hr period seven days per week.

The latest audit against RCN standards was completed in February 2016. The graph (table 4) below shows the mean compliance against the standards.

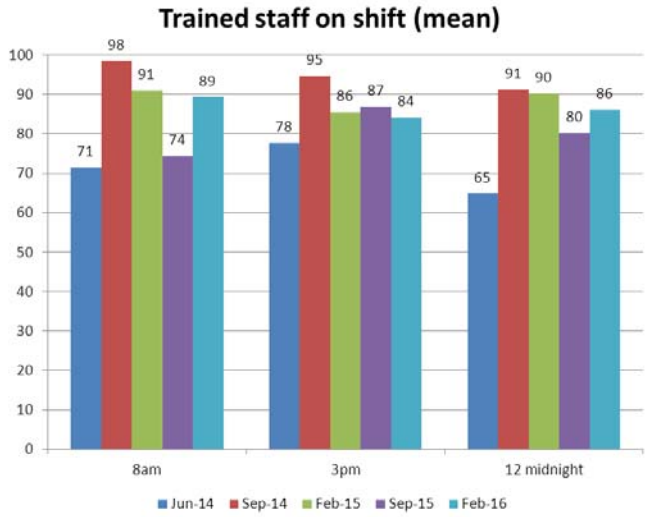


Table 4

2.14 The February 2016 data shows an improvement at 8am and at midnight and an almost comparable level at 3pm.

2.15 The reason for the non-compliance against the standard is vacancy levels and maternity leave which was 14% at the time of the audit. The vacancies have been successfully recruited to, with staff commencing in post in May 2016. If the audit had been undertaken with a compliant rota and a full nursing establishment the guidance would have been met.

2.16 The CQC, during the inspection in April 2015 were concerned with the number of senior paediatric nurses on duty covering the 24hr period. Therefore, a development programme has been implemented which will provide the staff with the skills and competencies to cover the senior nursing role; this is due for completion by Autumn 2016.

2.17 There are no changes recommended to the nursing establishment in Paediatrics.

2.18 **Midwifery**

2.19 Birthrate Plus is a framework for workforce planning and decision making for midwifery services. The methodology assesses the numbers of midwives required within a given service, based on the needs of women and their babies. The results are based on valid and reliable data collected over a period of time.

It would be a reasonable expectation to undertake a workforce planning review of a maternity service approximately every five years. Birthrate Plus was undertaken by the Trust in 2009, and therefore would have expected to be repeated in 2014/15. However, NICE 2014 indicated that a guideline related to staffing for maternity services was being produced.

In February 2015, the guidance was published, which described a method for assessing maternity care needs and calculating staffing requirements. A toolkit to enable data collection was not included or available. The Women and Children's Division therefore committed to repeat Birthrate Plus, which was completed during December, January and February 2015/16.

2.20 Early indications from the Birthrate Plus data analysis suggest there will be a variance between the current and Birthrate Plus recommended staffing levels for the maternity service. However, the final data has not yet been validated. The Head of Midwifery has advised the Director of Nursing and Patient Care that different models of service delivery will need to be considered. In particular, this relates to skill mix changes and the development of the midwifery assistant role, with the total number of midwifes remaining the same. This may impact on recommended staffing levels for the maternity service.

3. Section 3 – Going Forward National Guidance

3.1 The Lord Carter (2016) paper outlines that alongside the development of the model hospital there will be national measures of nurse staffing. This will include dashboards to support senior staff to understand and act on local data relevant to safe staffing, with Care Hours Per Patient Day (CHPPD) presented alongside staffing measures, quality data and staff experience.

Subsequently, NHS Improvement are developing and implementing measures for analyising worker deployment during 2016, which will include metrics such as Care Hours Per Patient Day (CHPPD).

CHPPD is used to describe both the staff required and staff available in relation to the number of patients. It is calculated by adding the hours of registered nurses to the hours of healthcare support workers and dividing the total number of inpatients. It is envisaged that this will provide a greater opportunity for comparisons to be used as dynamic resource e.g. wards with similar specialty, length of stay, layout and patient acuity and dependency.

It is recommended that from April 2016 the CHPPD becomes the principle measure of nursing deployment. The Trust is waiting for national guidance from NHS Improvement on how the data is collated and reported.

3.2 The National Quality Board's 2013 guidance is being refreshed. Early indications suggest that this will focus on developing new models of care, diverse teams with different types of staff with different skills and a reduced focus on nursing numbers and staff ratios. Whilst continuing to do a staffing review with evidence that is developed using a triangulated approach e.g. evidence based acuity tool, professional judgement, benchmarking and patient

outcomes. The report is expected to strengthen the need to ensure that patient, carer and staff feedback are reviewed monthly and not in isolation from each other.

The guidance update is expected imminently.

4. Next steps

4.1

- Implementation of the national guidance from NHS Improvement on CHPPD
- Strengthen the triangulated approach when reviewing and reporting nursing staffing levels with patient, carer and staff feedback
- Evaluate further the ENST, with a plan to expand the team

5. Conclusion

5.1 This paper focuses on safe staffing levels, which builds and links into the workforce strategy which is being led by the Director of People and Organisational Effectiveness.

5.2 The focus of this report has been on the review of nurse and midwifery staffing establishments within adult inpatient, paediatric and midwifery services. This has been undertaken in the adult areas by using the SNCT and Northwick Park acuity tool combined with professional judgement. Paediatric nurse staffing levels have been assessed against the BAPM and RCN guidelines and the midwifery staffing levels have recently been measured using the Birthrate Plus workforce planning tool.

5.3 When reviewing the nursing acuity on the adult wards to align the nursing establishments to the acuity findings alone the cost would be circa £1,774m. However, when reviewing nurse staffing levels it is not purely based on acuity and dependency, but on other factors, for example professional judgement, benchmarking, nurse sensitive indicators and ward layouts. It is also recognised that qualitative information around patient and staff experience needs to be considered.

5.4 Due to the number of vacancies, maternity leave and sickness levels it remains challenging to determine if nurse staffing levels are appropriate. Taking this into consideration, the Director of Nursing and Patient Care is satisfied that the establishments are within acceptable levels; recognising that further work is currently being undertaken across four wards in the Medical and Emergency Care Division to review the nurse staffing levels and workforce requirements. In addition, the final validated data from Birthrate Plus regarding maternity services will inform the model of service delivery in maternity. All of the above may impact on the recommended staffing levels.

6. Recommendations

6.1 The Board of Directors are asked to note the content of the report and the recommendation to maintain the current establishment levels. To note further work being undertaken to review workforce models within specific areas and actions being taken.

Bridget O'Hagan
Deputy Director of Nursing and Patient Care

Lynn Andrews
Director of Nursing and Patient Care

April 2016

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Benchmarking Nurse Staffing Establishments Medical Wards **Appendix 1**

Hospital Trust	Number of beds	Speciality	WTE qualified and unqualified	Split Qualified	Split Unqualified	Band 7 role supervisory
CRHFT						
Medical Ward (Ashover was pearson)	33	Acute medical with elderly	41.60 wte	21.92 wte	19.68 wte	Yes
Cardiology ward (Manvers)	31	Cardiology (CCU beds)	38.06 wte	23.45 wte	14.61 wte	Yes
Stroke Unit	36	Stroke	41.48 wte	26.87 wte	14.61 wte	Yes
Queens Hospital Burton						
Medical ward	27	Elderly medicine	30.69 wte	20.06 wte	10.63 wte	Yes
Stroke Unit	27	Stroke	43.4 wte	25.5 wte	17.9 wte	Yes
Royal Derby Hospital						
Medical ward	28	Elderly medicine	39.21 wte	23.38 wte	13.43 wte plus 2.4 wte nutritional assistance	Yes
Stroke unit	34	Stroke	57.76 wte	33.35 wte	24.41 wte	Yes
Nottingham University Hospitals						
Cardiology ward	26	Cardiology (no CCU beds)	33.81 wte	24.17 wte	9.64 wte	Yes
Gastroenterology	28	Gastroenterology	32.39 wte	22.14 wte	10.25 wte	yes
Medical/Dementia	24	Acute medical/dementia	37.40 wte	22 wte	13.40 wte plus 2.0 wte activity co-ordinators	yes
Stroke unit	18	stroke	26.11 wte	18.06 wte	8.05 wte	Yes

Benchmarking Nurse Staffing Establishments Surgical & Orthopaedic Wards **Appendix 2**

Hospital Trust	Number of beds	Speciality	WTE Qualified and Unqualified	Split Qualified	Split Unqualified	Band 7 role supervisory
CRHFT						
Reconfiguration Surgical ward	33	General Surgical	35.53 wte	21.40 wte	14.13 wte	Yes
Reconfiguration Orthopaedic ward	32	Combined elective and trauma	37.07wte	21.07 wte	16.00 wte	Yes
Queens Hospital Burton						
Surgical ward	26	General Surgical Ward	30.41 wte	19.8 wte	10.61 wte	Yes
Orthopaedic ward	28	Trauma	32.50 wte	21.3 wte	11.2 wte	Yes
Sherwood Forest Hospital						
Surgical ward	24	General Surgical	31.39 wte	19.04 wte	12.35 wte	Yes
Royal Derby Hospital						
Surgical ward	28	Vascular surgery	28.06 wte	18.30 wte	9.76 wte	Yes
Orthopaedic ward	28	Elective T&O	29.89 wte	20.45 wte	9.44 wte	Yes
Nottingham University Hospitals						
Surgical ward	28	General surgery	31.22 wte	23.32 wte	7.9 wte	Yes
Orthopaedic ward	28	Trauma	31.52 wte	22.04 wte	9.48 wte	Yes
Orthopaedic ward	26	Elective	29 wte	18 wte		Yes

Appendix 3

Enhanced Nursing Support Team – Case Studies

Case study 1

Patient history Mrs G was an 81 year old lady living independently at home and an insulin dependent diabetic, she had not been in hospital for over 25 years.
Reason for patient admission Increased confusion with unknown cause, diagnosed with a Hyperactive delirium due to urinary retention, this was not diagnosed until 24 hours post admission. Mrs G was verbally and physically aggressive and non-compliant with her care interventions and not allowing any diabetic care interventions.
Why did the patient require enhanced nursing support? Mrs G was referred by the matron on EMU for support and advice, at this time she was being physically and verbally aggressive. She needed to be restrained and have care administered in her best interests; this needed three male staff which demonstrates the severity of her behaviour. Due to her behaviour she was at high risk of falling and a behavioural risk to herself and other patients and staff. ENST interventions were to keep Mrs G, other patients and staff members safe, to aid a treatment plan to be delivered whilst the delirium subsided.
What support did the ENST provide? Person centred care, with detailed nursing documentation (behavioural charts) to aid the medical team/health care professionals to diagnose a urinary retention. Mrs G needed constant support and reassurance during the frightening delirious episode, her behaviour continued to be challenging with episodes of aggression both verbally and physically.
What difference did ENST make? Support was provided for 36 hours, after this Mrs G could recall memories of her delirium and described it, “as a tunnel closing in around her” she was very upset and embarrassed by her behaviour but thankful for, “the girls” who had helped her through the terrifying episode. She was discharged home without any care package 4 days post admission. ENST - Recognise stages of deliriums and are educating other staff on the wards.

Case study 2

Patient history Mrs S was a 64 year old Indian lady who spoke very little English, who lived with complex mental health diagnosis’s.
Reason for patient admission Increased confusion/challenging behaviour and diagnosed with a Hyperactive delirium, with a urinary sepsis.
Why did the patient require enhanced nursing support? Mrs S needed additional support due to being a risk of harm to herself and others and a high risk of falling. Mrs S had periods of physical aggression, crawling around the floor and throwing herself to the floor with little warning. Communication was very difficult and family support was minimal.
What support did the ENST provide? The team communicate with Mrs S with the use of pictures and playing games. The team discovered her religious beliefs and obtained her prayer mat for her to use, learnt about her likes and dislikes around nutrition. Mrs S’s behaviour improved slightly but remained challenging.
What difference did ENST make? The mental health liaison team assessed daily to advice and support and due to the comprehensive documentation could assess the ongoing mental health needs of Mrs S. The mental health Consultant praised the documentation stating it had a direct influence on the necessity of an urgent mental health assessment bed. Mrs S was transferred to a mental health bed after a 8 day hospital admission, 6 of which she was receiving treatment for an urinary sepsis. Mrs S subsequently spent 7 weeks receiving mental health treatment. The impact was a reduced length of stay at CRHFT and Mrs S being transferred to receive care in the most appropriate care setting. Provide a high level of personalised care.

Case study 3

Patient history Mrs R was a 71 year old lady who lived alone with family support. She had a diagnosis of Charles Bonnet syndrome and a mild Lewy body dementia. This syndrome had left Mrs R with 10% – 20% vision. She was receiving no social service support due to being fiercely independent.
Reason for patient admission She was admitted with hallucinations, increased confusion and struggling to cope at home. Diagnosis was a mixed delirium due to her worsening Charles Bonnet syndrome which was the cause of the cause of her hallucinations and subsequently the main reason for her behavioural change.
Why did the patient require enhanced nursing support? Mrs R was identified as a potential behavioural risk, with a high fall risk on EMU. Due to the different environment and ongoing hallucinations Mrs R was very afraid of all care interventions, she would often lash out or try to walk around the ward unaided, she was very upset and tearful and could only be reassured by family. The family were anxious about leaving Mrs R in our care due to her level of distress.
What support did the ENST provide? ENST provided continuity of care which helped Mrs R to form a relationship with the team. Mrs R relied heavily on voice recognition and needed constant reassurance and reorientation to the ward environment. Time was spent with the family, gathering information about her life to be able to personalise care interventions, which reinforced her trust and maximised her safety.
What difference did ENST make? Support was provided for 6 days, which included a transfer to another ward – this helped to orientate her to different environments. Mrs R's family felt able to leave her in our care and formed close relationships with the team, ENST support was gradually withdrawn. Mrs R was discharge home with a care package.