

Neonatal Nursing Workforce Tool (2020)

1. Introduction

The Neonatal Nursing Workforce Tool (2020) has been adapted from the CRG Workforce Calculator (Dinning) Tool (2013) and has been developed with the National Lead Nurses Group. It is intended to support neonatal nurse managers and their colleagues by providing a consistent method for the calculation of nursing establishment requirements which meet national standards i.e. NHSI (2018); NHSE Neonatal Service Specification e08 (2015); DH (2009); BAPM (2010); NICE (2010).

2. Definitions

- Declared Cots:** The number of cots, by care level, which a unit are operating.
- Required Cots:** The number of cots, by HRG, required to deliver the activity undertaken in the reporting period at an average occupancy of 80%.
- HRG 1 / IC:** Intensive Care as per HRG 2016
- HRG 2 / HD:** High Dependency as per HRG 2016
- HRG 3-5 / SC :** Special Care, and any other care HRG 3-5 that takes place on NNU, as per HRG 2016
- WTE:** Whole time equivalent. This will differ from headcount according to the number of staff working part time.

3. Using the Calculator

3.1. Inputs

Yellow boxes are for the input of local Trust / unit level data.

3.1.1. Unit details:

- Enter local unit details for reference.
- The designation of unit should be selected from the drop down box.

3.1.2. Activity:

- Activity data for a full year (365 days) should be used but can be for a calendar or financial year. (This data may be provided from the Neonatal ODN).
- Intensive Care is HRG 1, High Dependency Care is HRG 2 and Special care is any activity which takes place on NNU HRGs 3-5.

- Data for Transitional Care activity should be excluded as the calculations are for the neonatal unit only.
- The calculator can be used to model workforce requirements for service developments or changes. For example, use activity data which includes 'lost' activity to model cot-base requirements, or subtract activity from NNU where that activity will be delivered on a Transitional Care Unit.

3.1.3. Staffing Numbers:

- Enter numbers of WTE funded establishment and WTE actually in post by qualification i.e. Nurse/Midwife with QIS, Nurse/Midwife without QIS and Nursing Associates/Non-registered staff.
- The WTE numbers should be for nursing workforce providing **direct patient care only**. Time allocated for additional roles, such as management, education, outreach etc. should be excluded.
- A supernumerary nurse in charge will be included in the calculations for all units.
- Transitional Care staffing numbers should not be included.

4. Outputs

Once all yellow boxes have been filled the calculator will generate figures for the following:

4.1. Activity

- The number of cots required (by HRG) to deliver the activity undertaken in the reporting period declared at an average of 80% occupancy.
- Where the cot requirements include a decimal fraction it is assumed that cots can be flexed down to a lower level of care but not up i.e. a cot designated for Intensive Care can be used to provide High Dependency care but a cot designated for High Dependency cannot be used to provide Intensive Care. Therefore the number of critical care cots required is rounded up to the higher level of care. For Special Care the number is rounded to the next whole number. For example:

HRG	Level of Care	No. of cots to deliver activity	Rounded to
1	Intensive care	1.3	2
2	High dependency	4.4	4
3-5	Special care/other care	12.7	13
Critical Care	TOTAL	5.7	6
ALL	TOTAL	18.8	19

4.2. Nursing Workforce

- The total number of WTE staff required to staff the declared cots will be shown in the Nursing Workforce output table.
- The total number of WTE QIS required to staff the declared cots will be shown in the Nursing Workforce output table.

- A multiplier of 6.07 WTE has been used to provide 1 nurse per shift:

Calculation of multiplier									
	No. weeks	No. days	No. hours	Uplift for shift handover & supervision @ 2 hrs / day	Total No. hours required	No. hours 1 WTE will provide	No. WTE reqd to cover all hours i.e.9490/1955	Uplift for leave @25%*	Total WTE establishment required to give 1 nurse per shift
per day			24						
per week		7	168			37.5			
per year	52.14	365	8760	730	9490	1955	4.85	1.21	6.07

- In line with the recommendations in the DH Toolkit for Neonatal Care (2009) the multiplier includes an uplift of 25% for annual leave, study leave, maternity/paternity leave and sick leave.
- The multiplier is based on a 26 hour day to include two hours per day for shift handover and supervision (such as appraisals).
- Nursing workforce requirements are calculated to meet BAPM nurse: baby ratios i.e. HRG 1 (IC) 1:1. HRG 2 (HD) 1:2, HRG 3 – 5 (SC/TC) 1:4
- The calculator will give the actual WTE staff requirements based on the number of cots needed to deliver the activity for each level of care, at an **average** of 80% occupancy across the year.
- Calculations are made for an average of 80% occupancy because evidence shows that outcomes, mortality and morbidity are not as good when occupancy exceeds this level.
- Unit nurse staffing should be established to 100% to ensure that peaks in activity can be managed without an adverse effect on outcomes, mortality and morbidity.
- In all units, at least 70% of Registered Nurse/Midwifery staff should hold a post registration qualification in neonatal care i.e. Qualified in Specialty (QIS). This does not include nurses in training for QIS (NHSi, 2018)
- All intensive and high dependency care should be provided by QIS staff, so where a unit has a high proportion of critical care activity , the percentage of QIS staff required will be greater than the 70% minimum.
- A minimum of 2 registered nurses are required per shift to meet National Toolkit standards. Therefore the minimum number of registered nurses required per shift is 12.14 WTE (6.07 x 2). The calculator allows for this.

5. Limitations

The calculator cannot accommodate every variation within local nursing workforce provision. However it can be used to provide a standardised method for calculating nursing workforce requirements which can then be supplemented with local detail and any additional requirements. For example:

- The calculator does not allow for services which require more than one supernumerary nurse in charge per shift, for example those that are delivered across separate sites. However the multiplier

of 6.07 can be used to calculate the number of extra nurses needed and this can be added into the calculations at individual service level.

- The calculator does not allow for units where there are multiple small rooms which may “...necessitate staffing above the minimum recommendation to ensure that no room and no babies are left unsupervised at any time” (NQB 2018).
- The calculator does not include recommendations for nursing workforce requirements for non-direct patient care roles. This will be added to the calculator when available.

6. References

- **Department of Health (2009)** Toolkit for High-Quality Neonatal Services. Available at: https://webarchive.nationalarchives.gov.uk/20130123200735/http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_107845
- **National Institute for Health and Care Excellence (2010)**. Specialist Neonatal Care Quality Standard. Available at: <http://publications.nice.org.uk/specialist-neonatal-care-quality-standard-qs4>
- **NHS Improvement (2018)** Safe, Sustainable and Productive Staffing. An Improvement Resource for Neonatal Care. Available at: https://improvement.nhs.uk/documents/2978/Safe_Staffing_Neonatal_FINAL_PROOF_27_June_2018.pdf
- **NHS England Neonatal Service specification [e08] (2015)**. Available at: <https://www.england.nhs.uk/commissioning/wp-content/uploads/sites/12/2015/01/e08-serv-spec-neonatal-critical.pdf>

7. Further information

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