Healthcare Improvement Scotland

Staffing Level Tool Developments:

- Community Children's & Children's Specialist Nurse Staffing Level Tool
- Clinical Nurse Specialist Staffing Level Tool
- Community Nurse Staffing Level Tool

12IR HIS: Monitoring and Development of Staffing Tools

(REF:12IR/2024/002)

October 2024

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Contents

1.0 Introduction

1.1 The Healthcare Staffing Programme (HSP) sits within Healthcare Improvement Scotland (HIS). We were commissioned by the Chief Nursing Officers Directorate (CNOD) to further develop the following staffing level tools for use in specific types of healthcare:

Table 1

Staffing Level Tool Name	Type of health care where the tool applies
Community Nurse Staffing Level Tool	Community nursing provision by registered nurses *
Clinical Nurse Specialist Staffing Level Tool	Clinical nurse specialist provision (for adults) by registered nurses who work as clinical nurse specialists in hospitals or in community settings *
Community Children's and Children's Specialist Nurse Staffing Level Tool	Community children's nursing provision by registered nurses * and Clinical nurse specialist provision (for children) by registered nurses who work as clinical nurse specialists in hospitals or in community settings

(*includes other staff working under the supervision or delegation by a registered nurse)

The changes to the tools will include the addition of a recommended staffing level output to be utilised as part of the Common Staffing Method.

1.2 The work on the development of the 'multiplier' to inform a recommended staffing level has been undertaken between August 2022 to September 2024. We intend to recommend to Scottish Ministers the replacement of the tools with the revised tools that include this enhanced functionality. We will do this in October 2024.

2.0 Background

2.1 HIS has a requirement under section 12IR of the Health and Care (Staffing) (Scotland) Act 2019 to monitor the effectiveness of any staffing level tool or Professional Judgement tool which has been prescribed by the Scottish Ministers under section 12IJ (see table 2). HIS can recommend to Scottish Ministers to revoke or replace the tools. This is to ensure they remain contemporary and provide meaningful outputs that inform appropriate staffing when used as part of the Common Staffing Method.

Table 2

Type of health care	Location	Employees
Adult inpatient provision	Hospital wards with 17 occupied beds or more on average	Registered nurses
Clinical nurse specialist provision	**Hospitals**	**Registered nurses who work as clinical nurse specialists**
	Community settings	
Community nursing provision	**Community settings**	**Registered nurses**
Community children's nursing provision	**Community settings**	**Registered nurses**
Emergency care provision	Emergency departments in hospitals	Registered nurses
		Medical practitioners
Maternity provision	Hospitals	Registered midwives
	Community settings	
Mental health and learning disability provision	Mental health units in hospitals	Registered nurses
	Learning disability units in hospitals	
Neonatal provision	Neonatal units in hospitals	Registered midwives
		Registered nurses
Paediatric inpatient provision	Paediatric wards in hospitals	Registered nurses
Small ward provision	Hospital wards with 16 occupied beds or fewer on average	Registered nurses

2.2 All the specialty specific staffing level tools named in section 12IJ (see table 2) provide a recommended appropriate staffing level or Whole Time Equivalent (WTE). This is based on workload and patient acuity.

This is except for the staffing level tools (highlighted in bold) for:

- 'Community Nursing'
- 'Community Children's and Children's Specialist Nurse'
- 'Clinical Nurse Specialist'

2.3 The 'Community Nursing'; 'Community Children's and Children's Specialist Nurse'; and 'Clinical Nurse Specialist' (3C) tools capture workload data. Individual staff members within a team enters information on their workload activity into the tool daily. The tool collects workload information on:

- direct interventions
- indirect interventions
- clinics
- associated workload
- travel
- exceptions

This information provides a workload profile via the Business Objects XI (BOXI) reporting module.

2.4 The information on BOXI provides meaningful workload and workforce information. This information is to be used as part of the Common Staffing Methodology but does not provide a recommend staffing level or WTE.

2.5 Since the development of the 3C tools in 2015, the quality of the data input when applying the tools has been inconsistent and sometimes incomplete. This has resulted in the inability to finalise and test a 'multiplier' to inform a recommended staffing level or WTE.

2.6 Previous coordinated 'national runs' of the tools were undertaken in 2019. However, the quality of the data and resulting sample size was deemed too small to reliably develop a validated 'multiplier' to provide a recommended WTE. Work was subsequently put on hold due to the COVID-19 Pandemic.

3.0 Aim

3.1 Utilising methodology, developed by Dr Keith Hurst, data collected through 'national runs' will be utilised to inform the development of validated 'multipliers' that will generate a recommended WTE to inform Clinical Nurse Specialist, Community Nursing and Community Children's Nursing establishment setting as part of the Common Staffing Methodology.

4.0 Methodology

4.1 National runs

4.1.1 To develop a validated 'multiplier' within the tools that would generate a recommended WTE there requires sufficient and consistent data to be collected from across NHS Scotland.

4.1.2 To generate a robust dataset, Scotland wide 'national runs' of the 3C tools were required across every Scottish health board. This ensured data was comparable nationally. It also considers variation in local context e.g. workforce models, geography, patient demographics etc.

4.1.3 The proposal to undertake national runs of the 3C tools was endorsed by the Scottish Executive Nurse Directors (SEND) in August 2022.

4.1.4 A schedule of national runs was developed. It was coordinated as a collaborative approach between the HSP and the board workforce leads.

4.1.5 A 3C Task and Finish Group was established in February 2023. It had representation from health boards and the HSP team. This ensured a collaborative and coordinated approach to this national work.

4.1.6 The HSP provided training to ensure consistent and accurate data entry. National runs were undertaken twice within the 2023-24 calendar year. These runs were supported by the HSP and board workforce leads. This ensured a robust data capture that also mitigated against seasonal variation.

4.1.7 All staff working in these specialties entered workload data into the staffing tool hosted on the SSTS platform. This was entered over a two-week period. Workload data is captured under six categories of activity (see 2.3). Staff record the amount of time spent on each activity. Furthermore, direct and indirect interventions enable the complexity of the intervention to be recorded. These interventions are recorded under four predefined levels of care/complexity. These levels were previously agreed by the working group when these tools were developed. A review of the levels of care was out with the scope of this tool revision.

4.1.8 In addition to staff recording their workload information in the appropriate 3C staffing level tool there is a requirement for the completion of the Professional Judgement Tool and Quality Tool. Both tools should be run alongside the staffing level tool for the two-week period. Further information on completing a successful tool run can be found within the appropriate Staffing Workload Toolkits.

4.1.9 The Board participation in the national runs ensured that sufficient data was captured from across NHS Scotland as follows: (see table 3-5):

Table 3

Community Nursing National Run				
Board	Roster Participation	Rosters Included - Avg 2-Week QT Score >= 70%	Rosters Included - Weekly QT Score >= 70%	Sample Rosters - Weekly QT Score >= 70%
Ayrshire And Arran Health Board	35	16	17	7
Borders Health Board	21	6	9	6
Dumfries and Galloway NHS Board	38	10	15	12
Fife Health Board	50	21	23	5
Forth Valley Health Board	55	6	15	6
Grampian NHS Board	69	31	35	7
Greater Glasgow Health Board	129	39	56	16
Highland Health Board	60	10	15	7
NHS Lanarkshire	50	14	21	5
NHS Lothian	83	2	10	6
Orkney Health Board	5	0	1	1
Shetland Health Board	6	2	4	4
Tayside NHS Board	46	17	20	8
Western Isles Health Board	6	0	2	2

Table 4

CCSN National Run				
Board	Roster Participation	Rosters Included - Avg 2-Week QT Score >= 70%	Rosters Included - Weekly QT Score >= 70%	Sample Rosters - Weekly QT Score >= 70%
Ayrshire And Arran Health Board	4	3	3	3
Borders Health Board	2	0	0	0
Dumfries and Galloway NHS Board	1	1	1	1
Fife Health Board	7	5	5	5
Forth Valley Health Board	3	0	0	0
Grampian NHS Board	3	1	1	1
Greater Glasgow Health Board	9	7	7	6
Highland Health Board	5	4	4	4
NHS Lanarkshire	1	1	1	1
NHS Lothian	5	3	3	3
Shetland Health Board	1	0	0	0
Tayside NHS Board	5	3	3	3

Table 5

CNS National Run				
Board	Roster Participation	Rosters Included - Avg 2-Week QT Score >= 70%	Rosters Included - Weekly QT Score >= 70%	Sample Rosters - Weekly QT Score >= 70%
Ayrshire And Arran Health Board	32	12	15	3
Borders Health Board	23	4	11	4
Dumfries and Galloway NHS Board	24	1	5	2
Fife Health Board	46	12	23	3
Forth Valley Health Board	36	10	16	3
Grampian NHS Board	48	22	27	3
Greater Glasgow Health Board	157	20	45	6
Highland Health Board	42	2	11	2
NHS Lanarkshire	29	8	13	3
Orkney Health Board	5	1	3	3
Shetland Health Board	7	0	0	0
Tayside NHS Board	40	9	12	2
Western Isles Health Board	4	0	1	1

4.2 Development of the Multiplier

4.2.1 A report within Business Objects XI (BOXI) reporting module was created to obtain the raw data from the tool runs at a daily level for each member of staff that participated in the tool run. This incorporated their rosters, specialties and health boards.

4.2.2 Professional Judgement and Quality Tool outputs are carried out on a team/roster level for each week of the tool run. A separate report within BOXI was run to provide this data, as well as the Funded Establishment data that's held within the SSTS platform.

4.2.3 Work was done to align the Professional Judgement Tool outputs, Quality Tool score and Funded Establishment to the appropriate rosters, dates and specialties.

4.2.4 Only data from teams that met the 70% or above threshold on the Quality Tool (see table 3-5) would be included in the dataset used to develop the 'multiplier'. To ensure as much of the data could be used the HSP included data based on a score of 70% or more for any one-week period. This was a change from the previous methodology that only included data where the average of the two-week period scored 70% or more. This increased the amount of usable data by approximately 29% (see table 6).

Table 6

Specialty	Records using Avg 2-Week QT Score (>= 70%)	Records using Weekly QT Score (>= 70%)	Percentage increase when using Weekly QT Score
CN	17,405	22,495	29%
CCSN	1,283	1,646	28%
CNS	4,139	5,348	29%

To inform this revised approach the HSP consulted with Dr Keith Hurst and the 3C Task and Finish Group for their endorsement.

4.2.5 The HSP quality assured data and calculated the average amount of time taken to provide care at each of the defined levels of direct and indirect care. This was analysed along with the proportion of time taken for each of the other workload activities (see 2.3).

4.2.6 To ensure the 'usable data' was representative of NHS Scotland, probability sampling was carried out.

- CN was sampled based on board, board size, and specialty
- CCSN & CNS were sampled based on board and board size

Based of Dr Keith Hurst's sampling methodology 33 service units were required to ensure it was representative of the whole service (see Appendix 1).

4.2.7 Routine Clinics were included as part of direct care interventions for 'Community Nursing' following consultation with the 3C Task and Finish Group. This was a change from being captured under 'other clinics'. The consensus of the group was that as a routine clinic has a level of care associated with it, this workload should be recorded as an intervention. This brought the 'Community Nursing' tool in line with the 'Community Children's and Children's Specialist Nurse'; and 'Clinical Nurse Specialist' tools.

4.2.8 The methodology for calculating a recommended WTE for a community-based service is based on a workload driver. There are four tried and tested methods for consideration, all described below:

- Direct Care & Associated Workload are the main drivers. All other workload activities are calculated as a percentage of the total workload and then added on to the calculation.
- Indirect Care & Associated Workload are the main drivers. All other workload activities are calculated as a percentage of the total workload and then added on to the calculation.

- Direct Care & Indirect Care are the main drivers. All other workload activities are calculated as a percentage of the total workload and then added on to the calculation.
- Direct Care & Indirect Care are the main drivers. The average time per day for AWL, Clinics, Travel & Exceptions is added on to the calculation.

These categories can be used as drivers for Dr Keith Hurst's workload index calculation.

5.0 Validation and testing

5.1 To allow robust testing, the HSP used the four different combinations of workload drivers (see 4.2.8) to calculate workload index values. These values were then applied to the actual workload recorded for the rosters of four test boards to generate recommended WTEs:

- NHS Ayrshire & Arran
- NHS Forth Valley
- NHS Orkney
- NHS Tayside

5.2 The HSP provided each of the test boards and the 3Cs Task and Finish group with the following findings:

- The four test Boards recorded workload data at roster level
- The four test Boards funded establishment
- The four test Boards Professional Judgement recommended WTE
- The four test Boards four different recommended WTE, informed by the different combination of workload drivers (see 4.2.8)

The workload drivers behind the recommended WTE were not shared with the test Boards or the 3CsTask & Finish group. This was to prevent any bias in the outcomes. The test boards representative took the data back to their teams to deliberate. They advised the HSP which output, in their professional opinion, was the most appropriate given their knowledge of the service. This was recorded on the file by the representative and brought back to a further meeting of the 3C Task & Finish group for discussion and deliberation regarding the preferred methodology.

5.3 Alongside the small-scale testing outlined in 5.2 the HSP carried out retrospective variation analysis between the Professional Judgement Tool value and each of the calculated recommended WTE values for each of the four combination of workload drivers (see Appendix 2). This used the Data from the 'national runs'. The best fit method was the one where variation around the median was minimised. This differed between the 'Community Nursing'; 'Community Children's and Children's Specialist Nurse'; and 'Clinical Nurse Specialist' Tools and the sub-specialties (see table 7).

Table 7

Specialty Tool	Sub- specialty
'Community Nursing'	District Nursing
	Health Visiting
	School Nursing
'Community Children's and Children's Specialist Nurse'	N/A
'Clinical Nurse Specialist'	N/A

5.4 The qualitative information provided by the four test boards was triangulated with the quantitative variation and correlation analysis. This was undertaken by the HSP to inform the 'best fit' in terms of workforce driver multipliers.

5.5 The 3C multiplier development and recommended multipliers were presented to the HSP 'Community Nursing'; 'Community Children's and Children's Specialist Nurse'; and 'Clinical Nurse Specialist' expert working groups in September 2024. The expert working groups gave their endorsement to recommend the multipliers to Scottish Ministers in October 2024.

5.6 In addition a qualitative survey was circulated to clinical teams who had undertaken a run of the 'Community Nursing'; 'Community Children's and Children's Specialist Nurse'; or 'Clinical Nurse Specialist' tools since April 2024 to seek further feedback.

5.7 At the time of writing, there has only been 10 responses (4%) to the evaluation survey, 50% (n=5) of respondents would support the decision to apply the rWTE calculation. Of the 50% who would not, 60% attributed this to their lack of confidence in their tool run data.

5.8 All new staffing tools will be subject to an annual review period. This will enable Boards to utilise the new or revised staffing level tool as part of their duty to follow the Common Staffing Method (12IJ) and provide meaningful feedback in terms of the tool's effectiveness. The review will form part of HIS's duty to monitor the effectiveness of the staffing tools prescribed by the Scottish Ministers (including any new or revised tools) (12IR). This will be informed by both qualitative, in the form of an evaluation survey, and quantitative, in the form of variation and correlation analysis, information. The monitoring and evaluation of the 'Community Nursing'; 'Community Children's and Children's Specialist Nurse'; and 'Clinical Nurse Specialist' staffing level tools will be performed on contemporary data from the tool runs for the 2025-26 reporting period.

6.0 Collaboration and governance

6.1 HIS may develop and recommend to the Scottish Ministers new or revised staffing level tools. However, in developing such tools, we must collaborate with:

- Scottish Ministers
- Social Care and Social Work Improvement Scotland
- every Health Board
- every relevant special health board
- every integration authority
- the Agency
- trade unions and professional bodies HIS considers to be representative of employees
- professional regulatory bodies for employees as HIS considers appropriate
- other providers of health care as HIS considers to have relevant experience of using staffing level tools and professional judgement tools
- other persons as HIS considers appropriate.

6.2 HIS was commissioned by the Chief Nursing Officers Directorate (CNOD) and the Health and Care (Staffing) (Act) implementation team on behalf of Scottish Minister to further develop the 'Community Nursing'; 'Community Children's and Children's Specialist Nurse'; and 'Clinical Nurse Specialist' tools in 2022. Scottish Government have been kept abreast of the work through the HSP Governance Groups and through formal commissioning and sponsorship meetings.

6.3 The HSP sought the endorsement of the Scottish Executive Nurse Directors (SEND) as the professional leads within every Health Board, Integrated Joint Board (IJB) and Agency for the Types of Healthcare and employees named under section 12IJ to where these tools apply.

6.4 The HSP collaborated with Dr Keith Hurst to ensure the evidence-based methodology for the development of the staffing tools was adhered to and any improvements were done in collaboration with him.

6.5 The HSP also collaborated with the Safe Staffing Faculty within the Chief Nursing Officer's Directorate (England) who have led on similar work across NHS England, in partnership with Dr Keith Hurst and the Shelford Group, in the development of the Safer Nursing Care Tools. This promotes cross border shared learning and best practice.

6.6 The HSP collaborated with all boards and IJBs through their Board Workforce Lead which ensured significant engagement in the national runs.

6.7 To promote a collaborative approach to this work a '3C Task and Finish Group' was established with the first meeting taking place on 1st February 2023. Membership consisted of HSP representatives and volunteers from the Scottish Workforce Leads collaborative.

6.8 Until April 2024 the work was overseen by the HSP Staffing Level Tools and Real Time Staffing Oversight Group. They reported to the HSP Programme Board, which promoted

external involvement in the work of HIS. This included representatives from Scottish Government, the Care Inspectorate, relevant professional bodies and trade unions.

6.9 From April 2024 the governance groups under 6.8 have been replaced by the HSP External Advisory Group but continues to have widespread representation. This includes the above representatives and an extended invite to include professional regulators.

6.10 This forms part of a new governance structure (see Figure 1) for the HSP in recognition of the roles and responsibilities of HIS outlined in the Health and Care (Staffing) (Scotland) Act 2019.

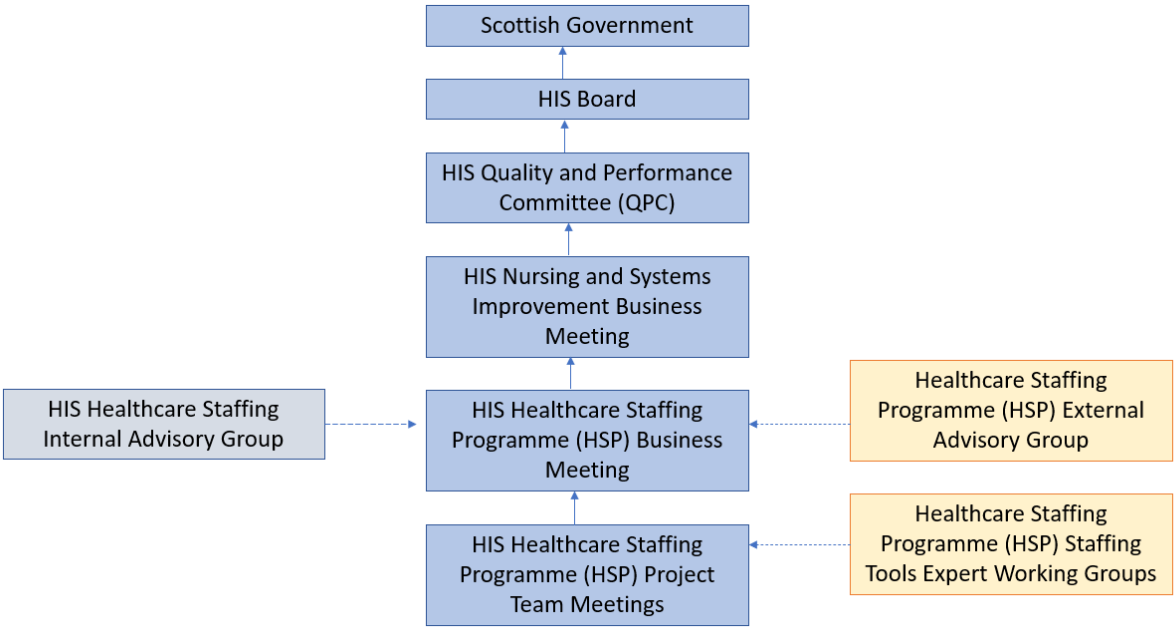

Figure 1: HIS HSP Governance Structure

6.11 In addition, new HSP 'Community Nursing'; 'Community Children's and Children's Specialist Nurse'; and 'Clinical Nurse Specialist' Tools, expert working groups have been established to review the current tools. All boards, IJBs and the agency have been written to and invited to provide representation. Relevant professional bodies, trade unions and professional regulators have also been written to and invited to provide representation.

6.12 The 'Community Nursing'; 'Community Children's and Children's Specialist Nurse'; and 'Clinical Nurse Specialist' expert working groups met for the first time week commencing 2nd September 2024. The first ask of the group was to consider the work on the development of the 'multipliers' to inform a recommended WTE and the level of confidence to recommend this enhancement as a revision to the existing tool to Scottish Ministers in October 2024.

6.13 The 'Community Nursing'; 'Community Children's and Children's Specialist Nurse'; and 'Clinical Nurse Specialist' expert working groups have advised they are content that the HSP make the recommendation to Scottish Ministers to include the recommended staffing level/ WTE within the Business Objects XI (BOXI) reporting module as part of the revision to the staffing level tools.

6.14 The revised tools will therefore be recommended by HIS to Scottish Ministers in October 2024. This will then be laid before parliament in February 2025 and if agreed will be the revised tools prescribed under section 12IJ from the 1st April 2025.

7.0 Recommendations

7.1 It is the intention of the HSP to make a recommendation to Scottish Ministers in October 2024 for the revision to the 'Community Nursing'; 'Community Children's and Children's Specialist Nurse'; and 'Clinical Nurse Specialist' staffing level tools.

7.2 These revised tools will continue to be hosted on the SSTS platform and will be assigned the version numbers as follows:

- 'Community Nursing Staffing level Tool Version 3'
- 'Community Children's and Children's Specialist Nurse Staffing level Tool Version 3'
- 'Clinical Nurse Specialist Staffing level Tool Version 3'

7.3 The inclusion of the recommended WTE will not be evident on the front-end application on SSTS as this will be developed on the BOXI report (see example below-Figure 1).

Figure 1

Roster/Team Name

Specialty

Specialty	Period covering	rWTE	Funded Estblish mnt	Prof. Jdgeme nt WTE	Avg no. Interven tions	Int. Level 1 (%)	Int. Level 2 (%)	Int. Level 3 (%)	Int. Level 4 (%)	Entry details
				-	-	-	-	-	-	

7.4 Monitoring of the effectiveness of these revised tools will be undertaken in line with HIS Duty 12IR with a review date of April 2026.

8.0 Appendices

Appendix 1: Sampling Strategy

Appendix 2: Retrospective Variation Analysis

October 2024

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