



North Imaging Alliance

Safe Staffing Tool data collection/ analysis

User Guide

Procedure: SOP03a

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Safer Staffing – User Guide

Introduction:

The Safe Staffing tools have been developed to address requirements in the Health and Social Care (Staffing) (Scotland) Act 2019, which came into effect from 1st April 2024. Historically, workforce assessment tools have had a medical or nursing focus and a reliance on reporting based on caseload. This does not reflect ways of working within imaging services, or other clinical services where patient contact is transient as part of a diagnostic pathway.

The North Imaging Alliance, established in 2021 to offer a collaborative approach to delivery and development of imaging services across the 6 NHS boards in the North of Scotland, Grampian, Highland, Orkney, Shetland, Tayside and Western Isles, has developed a suite of workforce assessment tools based on the Health Improvement Scotland Safer Staffing tools for nursing workforce, to enable imaging and other AHP services to carry out a retrospective assessment of workforce using a comparison of professional judgement with actual staffing.

Background

The initial Safe Staffing and Indirect and Associated Workload tools were developed by Health Improvement Scotland to address compliance with the Common Staffing Model. Tayside had been approached to determine if these tools would be suitable for use within an imaging department. Claire Donaldson, superintendent radiographer in NHS Tayside, had led on this work and fed back that these tools would require adaptation of language and refinement of the questions asked to ensure they were appropriate for use within imaging. As lead radiographer with the North Imaging Alliance, Claire had then taken development of the tools forward, in collaboration with imaging teams in Tayside and Grampian.

The first version of the NIA tool was tested with the Tayside MRI team at Stracathro Hospital in June 2023, and the content and layout of data entry and associated reports refined based on feedback. The next iteration was tested in January 2024 with CT and General teams from NHS Grampian who applied the tools to their Inpatient, Outpatient and out of hours CT, and Inpatient, Outpatient ECC and A&E teams in General. This diverse group enabled us to test the tool in a variety of clinical settings and the final drafts were then shared with the Scottish Radiology Managers Group, one of the Scottish Clinical Imaging Network (SCIN)'s special interest groups, for final ratification.

The Society of Radiographers has expressed interested in including the tools as part of their suite of workforce tools, and so both SCIN and HIS have been approached to determine the most appropriate location to host the tools as a downloadable workforce resource available to imaging departments.

The tools

There are 2 tools included in the Safe Staffing suite, both using Excel to ensure these are easily accessible and do not require additional software;

- one to measure actual staffing levels on any given day and compare this with retrospective professional judgement and agreed minimum safe staffing levels
- the other to record a snapshot of indirect and associated workloads over a defined period, to allow a review of non patient-facing time as a percentage of a working week.

Each of these tools is designed for data collection over a 2-week reference period, with a report automatically generated within each tool. Supervisors are then invited to add analysis of their area based on the results from the tool.

NOTE: Where you have a requirement to staff an area of your service at all times, in which the complexity of the patient does not affect the number of staff allocated, for example theatre or screening, we would recommend completion of the Indirect and Associated Workloads tool for all groups, and focussing the use of the Safe Staffing tool on those areas of your service that have a varying requirement of staffing depending on patient complexity.

Support

The Indirect and Associated Workload and Safe Staffing tools are designed to be standalone with no training required, and do not require any external support to complete or to generate reports. The outputs of the integrated reports are dependent on the data entered on each of the “set up” and “data input” pages as detailed in this guide. However, should the reports “break” and a fresh download of the tools does not solve the problem, support can be requested by emailing tay.nospgproject@nhs.scot.

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Data collection

Tool 1 – Indirect and Associated Workloads

The purpose of this tool is to identify the amount of time staff have spent within the 2-week period undertaking Indirect and Associated work. The tool has been developed within Excel to allow accessibility for a number of user groups, and to make this as user-friendly as possible.

Before starting the data collection, please agree the following information;

- Team/Specialty
- Location/ Department
- Reporter/ Team Lead
- Start Date
- End Date (2 weeks after Start Date)
- Current Service Specification

There are tabs at the bottom of each page of the tool, these are;



- Introduction (white), where you will find descriptions of each of the sections of the tool.
- Set-up (yellow), where you will enter the information discussed in the list above
- Weekly record (green), where you will describe each of the indirect categories
- Unregistered staff (blue), where you will enter time taken, per day, against each of the categories, for Unregistered staff
- Registered staff (blue), where you will enter time taken, per day, against each of the categories, for Registered staff
- Experienced staff (blue), where you will enter time taken, per day, against each of the categories, for Experienced staff
- Report (dark blue), which will be generated based on the data entered in the tool

Step 1: Team information, start and end dates, service specification



Complete the team/ location/ reporter/ start and end dates and current service specification in the green boxes on the “Set-up” tab.

	Team/Specialty			
	Location/ Department			
	Reporter/ Team Lead			
	Start Date		End date	
	Current Service Specification			

- Step 1**
 - Complete the team/ location/ reporter/ start and end dates and current service specification in the green boxes above
- Step 2**
 - Discuss as a team and agree the categories of indirect and associated work for unregistered, registered and experienced registered staff
- Step 3**
 - Record this in the (green) weekly record tab under "INDIRECT CARE UNREGISTERED STAFF" (Cells A6 to A17), "ADDITIONAL WORKLOAD UNREGISTERED STAFF" (A19 to A28), "INDIRECT CARE REGISTERED & EXPERIENCED REGISTERED STAFF" (A30 to A41) & "ADDITIONAL WORKLOAD REGISTERED AND EXPERIENCED REGISTERED STAFF" (A43 to A55).

Step 2: Categories of indirect workload

Discuss as a team and agree the categories of indirect and associated work for unregistered, registered and experienced registered staff. There are enough rows for a maximum of 12 categories.

Step 8: Summary analysis



Once all data has been input into the tool the summary will be available for analysis in the report (dark blue tab).

Safe Staffing - Indirect and Associated workloads




This report summarises the amount of time staff have spent within a 2-week period undertaking Indirect and Associated work and can be printed and shared with colleagues.

Team/Specialty	
Location/ Department	
Reporter/ Team Lead	
Start Date	
End Date	

Service Specification

Indirect and Associated workloads

It is acknowledged that a service delivery is made up of more than direct clinical care. Direct clinical care is reflected in the recorded activity on the RIS system, however time spent doing indirect care and associated work is less easily recorded and can often be overlooked when workforce planning. To help better reflect the actual day to day work of clinical and support staff in the team they were asked to complete a spread sheet to estimate of how much time within their working day they spend on indirect and associated workload. The categories of work were discussed and pre agreed with the different staff groups prior to the start of the data collection. The staff were then asked to reflect at the end of each shift how much time, in minutes, they had spent on each category of work.

Step 9: Assessment and Recommendations

Use the data generated within the report, particularly the % time spent on non-patient-facing activities, to complete the Assessment and Recommendations in the orange box at the bottom of the report.

Assessments and Recommendations



Step 10: Share outcomes

Share the outcomes of the report with your team. If you are going to print the report (from the dark blue “report” page) it will cover 5 pages.

If you need help or support with the tool, please contact tay.nospgproject@nhs.scot

Tool 2 – Safe Staffing tool

The purpose of this tool is to analyse the Actual staffing within the team against the locally agreed Minimum Safe Staffing levels over the 2-week reference period. This tool has also been developed within Excel to allow accessibility for a number of user groups, and to make this as user-friendly as possible.

NOTE: Where you have a requirement to staff an area of your service at all times, in which the complexity of the patient does not affect the number of staff allocated, for example theatre or screening, we would recommend focussing the use of this tool on those areas of your service that have a varying requirement of staffing depending on patient complexity.

If you have any staff that are additional to those counted in the tool (for example theatres or screening where the complexity of the patient does not affect the number of staff allocated) please note this in your “assessment of current situation” at the end of the report.

Prior to the agreed data collection period you will need to know:

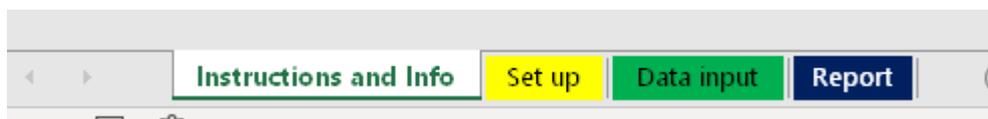
- The current funded establishment for your team
- Your current vacancy rate
- The number of staff on long term absence

Within your team discuss and agree:

- The staff within the team that fit into each category (Unregistered, Registered & Experienced Registered)
- The definition of the levels of complexity for your service (low, moderate & high)
- The shift patterns to be included within the data collection

Ensure that all those staff who will be collating the data have an understanding of these prior to commencing.

There are tabs at the bottom of each page of the tool. These are;



- Instructions and Info (white), where you will find descriptions of each of the sections of the tool.
- Set-up (yellow), where you will enter the information discussed in the lists above
- Data input (green), where you will record the data for each shift
- Report (dark blue), which will be generated based on the data entered in the tool

Step 1: Team information, start and end dates, shift pattern



Complete the team/ location/ reporter/ start and end dates and shift pattern on the “Set-up” tab.

Name of Team/Specialty	
Location of team	
Name of reporter	
Start Date	
End date	

Shift pattern/ hours	Day (in hours)	
	Back (in hours)	
	Night (out of hours)	

Step 2: Define staffing groups

For each group (Unregistered, Registered and Experienced) enter the definitions applicable to your service.

Staff Key	
Generic group	Staff titles and/or bandings for your service
Unregistered	
Registered	
Experienced Registered	

Step 3: Define patient complexity

Enter the definitions of levels of patient complexity for your service. “Other” includes theatre, screening rooms, mobiles, etc.

Patient complexity Key	
Complexity level	General definition for your service
Low complexity	
Moderate complexity	
High complexity	
Other	

Step 4: Enter staffing numbers (WTE)

Enter the staffing information listed above into Set-up under “Current staffing” as whole time equivalents.

Current staffing											
Total staffing (Funded Establishment)			Vacancies (WTE)			Long term absences (WTE)			Current available staffing (WTE) (calculated)		
Unregistered Staff	Registered Staff	Experienced Registered	Unregistered Staff	Registered Staff	Experienced Registered	Unregistered Staff	Registered Staff	Experienced Registered	Unregistered Staff	Registered Staff	Experienced Registered
									0	0	0

Step 5: Enter staffing against each complexity

Enter the numbers of staff assessed as being the baseline level to ensure safe staffing, for each level of complexity of care. “Other” may include theatre, screening rooms, mobiles, etc. Consider these as the minimum number of staff required if the whole department was to run at each level of complexity (e.g. if all low complexity patients, consider your requirements for unregistered, registered, experienced registered, same for moderate and high).

Agreed safe staff required to deliver various complexities of care (baseline (minimum) levels)											
<i>Consider these as the minimum number of staff required if the whole department was to run at each level of complexity</i>											
Low Complexity			Moderate complexity			High complexity			Other		
Unregistered staff	Registered	Experienced Registered	Unregistered staff	Registered	Experienced Registered	Unregistered staff	Registered	Experienced Registered	Unregistered staff	Registered	Experienced Registered

Step 6: Enter data for each shift



The data input tab is where you will enter all the data per shift for the data collection period;

- Date – please input in the format dd/mm/yy, eg 23/02/24
- Shift (hours), this is linked to the definition on the set-up tab
- Shift pattern (in hours, out of hours)
- Number of pre booked appointments at the start of the day
- Number of additional patients seen during the shift
- Number of patients unable to be scanned due to internal staffing factors
- Number of patients unable to be scanned due to external factors e.g. patient cancellation, Hospital Transport, portering, etc
- The spread of complexity of care required for the patients scanned during the shift (Low, Moderate, High) – input how many patients were in each category. The “other” column will automatically calculate based on the following;
 - Number of patients booked PLUS number of additional patients (column D + column E) to give the total number of expected patients. Then MINUS the number of patients who could not be seen for staffing or external reason (columns F and G) MINUS the number of patients in each of the low/moderate/ high complexity categories (columns H, I, J)

D	E	F	G	H	I	J
Activity						
Booked appointments	Additional patients	Patients unable to be seen during shift due to radiology staffing	Patients unable to be seen during shift due to external factors	Low	Moderate	High

- For example, 35 booked appointments PLUS 7 additional patients, $35 + 7 = 42$ expected patients. MINUS any that could not be seen for staffing or external reasons (in this example 0), $42 - 0 = 42$. MINUS 6 low complexity, 14 moderate complexity, 3 high complexity (total 23 patients), $42 - 23 = 19$ patients categorised as “other”.

D	E	F	G	H	I	J	K
Activity				Patient complex			
Booked appointments	Additional patients	Patients unable to be seen during shift due to radiology staffing	Patients unable to be seen during shift due to external factors	Low	Moderate	High	Other (calculated)
35	7			6	14	3	19

- The time in minutes undertaking “other” activity, as defined on the set-up page (e.g. 40, 120, etc)
- The number of staff on the rota for the day
- The actual number of staff present on the shift i.e. minus any short notice absences
- The number of staff required for the shift using retrospective professional judgement
- The comments and mitigations taken during the shift pertinent to staffing

Step 7: Review report – check definitions



All data entered on the Set-up tab (yellow) should appear at the top of the report (dark blue tab) for the Team details, start and end date and Definitions for staff groups and patient complexity. If there are blanks where you would expect to see information, please check and, if necessary, update, the “Set up” page.

Step 8: Review report data

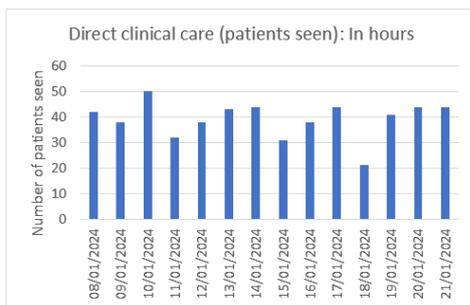


Review all the data on the Report, if necessary, go back to check the “set up” and “data input” tabs to make sure all data has been entered correctly.

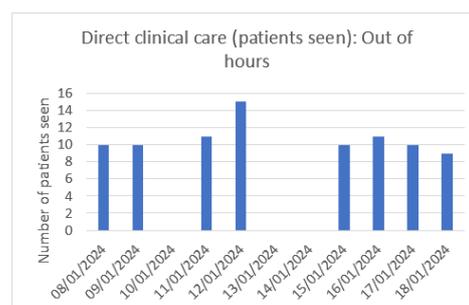
On the report tab (dark blue), you will now see summary charts based the data entered on the “Data input” page. The first charts show the numbers of patients seen on each of the dates entered.

- In-hours calculates the total number of patients seen during the Day shift and the Back shift, as defined on the “Set up” tab (Step 1 above).
- Out of hours calculates the total number of patients seen during Night shift.

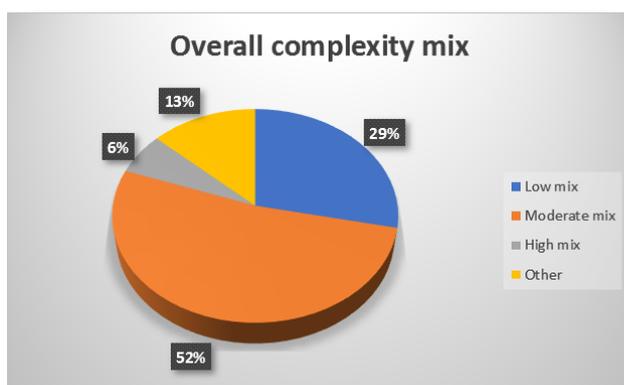
Direct clinical care activity



"In hours" includes day and back shifts



Overall complexity



This chart shows the proportion of low/moderate/high and "other" complexities of patients seen over the data collection period, as defined on the "set up" page.

NB: "Other" is determined from the total number of patients (booked + additional) minus the number of low/moderate/high complexity patients and the number of patients who could not be seen due to staffing or external factors.

It should therefore not be a negative number.

% of working day spent doing “other” tasks

In hours			
Date	"Other" complexity	Minutes	% of day
08/01/24	19	0	0%
09/01/24	5	0	0%
10/01/24	3	0	0%
11/01/24	26	0	0%
12/01/24	0	0	0%
13/01/24	0	0	0%
14/01/24	6	0	0%
15/01/24	0	0	0%
16/01/24	5	0	0%
17/01/24	6	0	0%
18/01/24	2	0	0%
19/01/24	0	0	0%
20/01/24	0	0	0%
21/01/24	7	0	0%

Out of hours			
Date	"Other" complexity	Minutes	% of day
08/01/24	1	0	0%
09/01/24	0	0	0%
11/01/24	0	0	0%
12/01/24	0	0	0%
15/01/24	1	0	0%
16/01/24	1	0	0%
17/01/24	0	0	0%
18/01/24	2	0	0%

These charts also combine the total number of patients classed as “other” for in-hours or out of hours for each day.

- The % of the working day column is based on the number of minutes entered on the "Data input" sheet for that day. If you have any patients classed as “other” please enter the minutes spent doing “other” complexity activities. Similarly, if you don’t have any “other” patients then this table should show zeros for each day.

Workforce

The skill mix of your workforce and current available staffing is populated from the “Set up” page.

- The next tables are populated from the “Data entry” page and show;
 - the number of staff on the rota for each day and for each shift
 - the number of staff who were actual working for each day and each shift

Agreed safe staffing levels for each type of patient complexity are populated from the “Set up” page.

- Agreed Safe Staffing per day uses a calculation based on the proportions of patients in each complexity level MULTIPLIED by the number of staff agreed by the team that would be required to deliver a safe level of staffing, then ADDING the values for each level together.

been required to make up the agreed level for that day, based on the numbers and levels of complexity of patients.

GREEN shows where there is potential flexibility in the system to allow staff training, CPD, etc

Step 10: Professional Judgement v minimum Safe Staffing

In hours - Day	4.Unregistered staff	4.Registered Staff	4.Experienced Registered
08/01/2024	0	3	2
09/01/2024	0	-1	-2
10/01/2024	0	-1	-3
11/01/2024	0	-2	-1
12/01/2024	0	-1	-3
15/01/2024	0	0	-3
16/01/2024	0	-1	-2
17/01/2024	0	0	-2
18/01/2024	0	0	-2
19/01/2024	0	-1	-4

Review the calculations of Professional Judgement v assessed Safe Staffing. Again, the table is split into “In hours - Day”, “In hours – Back” and “Out of hours” based on the information entered on the “set up” and “data input” tabs.

Any values that are RED show where the agreed minimum SAFE STAFFING level was BELOW the assessment of safe staffing using PROFESSIONAL JUDGEMENT, and the number of staff that would

have been required to make up the agreed level for that day, based on the numbers and levels of complexity of patients.

GREEN shows where there was potential flexibility for staff movement, training, etc.

Step 11: Professional Judgement v Actual Staffing

In hours - Day	5.Unregistered staff	5.Registered Staff	5.Experienced Registered
08/01/2024	0	1	-0.5
09/01/2024	0	0.5	-0.5
10/01/2024	0	0	-0.5
11/01/2024	0	0	1
12/01/2024	0	0	0
13/01/2024	0	0	0
14/01/2024	0	0	0
15/01/2024	0	0	0
16/01/2024	0	0	0
17/01/2024	0	0	0
18/01/2024	0	0	0
19/01/2024	0	0	0

Review the calculations of Professional Judgement v Actual Staffing. Again, the table is split into “In hours - Day”, “In hours – Back” and “Out of hours” based on the information entered on the “set up” and “data input” tabs.

Any values that are RED show where the ACTUAL STAFFING level was BELOW the assessment of safe staffing using PROFESSIONAL JUDGEMENT, and the number of staff that would have been required to make up the agreed level for that day, based on the numbers and levels of

complexity of patients.

GREEN shows where there was potential flexibility for staff movement, training, etc.

NOTE – the examples in Steps 9 – 11 above are from different datasets.

Step 12: Staff wellbeing, engagement and feedback

This data is populated from the “Comments, reflections and mitigating actions” section on the “Data input” page and again is split into “In hours – Day”, “In hours – Back” and “Out of hours”.

Staff Wellbeing, engagement and feedback

In hours - Day

Date	Comments, reflections & mitigating actions
08/01/2024	3 booked procedures. Staffing just ok, but very little post on ortho which can requires 2x rads in general room. Only 1 was

Step 13: Complete assessment of report

There are 3 assessment boxes at the end of the report. Once you have reviewed the data in the report, record your findings in these boxes.

Assessment of Current Situation: Please describe your current staffing situation, and using the data from this report consider how the data supports (or doesn't support) your assumptions. If you have any staff that are additional to those counted in the tool (for example theatres or screening where the complexity of the patient does not affect the number of staff allocated) please note this in your assessment.

Service Quality: Please describe any factors that affect the outputs noted in this report - for example Datix raised, CPD missed, training required, etc.

Recommendations: What recommendations can you make, based on the data input into this tool, and the analysis provided by this report? You may decide to include, or refer to, findings from the "indirect and associated workload" tool in your summary.

Assessment of Current Situation

Service quality

Recommendations

Step 14: Share outcomes

Save the report, then share and discuss with your team. If you are going to print the report (from the dark blue “Report” page), it will cover 12 pages.

If you need help or support with the tool, please contact tay.nospgproject@nhs.scot

Acknowledgements

Many thanks are due to all imaging staff who participated in the trials for both Tayside and Grampian.

We are grateful to the Scottish Clinical Imaging Network and the Society of Radiographers for agreeing to host these downloadable tools on their websites, to ensure availability of these resources across NHS Scotland.

Name	Role	Organisation
Imaging teams	MRI	NHS Tayside
Wendy Milne	Lead MRI Radiographer	NHS Tayside
Mike Conroy	Imaging Manager	NHS Tayside
Emma Kennedy	Superintendent radiographer	NHS Tayside
James Muir	Deputy lead MRI radiographer	NHS Tayside
Imaging teams	CT	NHS Grampian
Imaging teams	General	NHS Grampian
Lorna Main		NHS Grampian
Kelly Burns		NHS Grampian
Lisa Smith		NHS Grampian
Claire Napier		NHS Grampian
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Document history

Version number	Changes/ amendments	Author	Date
0.1	First draft	Lorna Pennycook	26/02/24
1.0	<p>Updated Safe Staffing guide section (text and images) from Step 8 onwards based on updated Safe Staffing tool_Rev_4.0.</p> <p>Included updated screenshots from pilot data entered into the revised template.</p> <p>Added description of calculation for “agreed safe staffing levels”.</p>	Lorna Pennycook	12/03/24
1.1	<p>Updated based on feedback from Grampian clinical teams at meeting on 13/03/24 and subsequently updated Safe Staffing tool_Rev_5.0</p> <p>Added further detail to “Agreed safe staff...” title on “Set up” page on data collection tool and reflected this in the text.</p> <p>Added “minimum” throughout text to clarify safe staffing levels to be entered on the “set up” page of the Safe Staffing tool.</p> <p>Added “professional judgement v actual staffing” as Step 11 and renumbered following steps.</p>	Lorna Pennycook	13/03/24
1.2	Added “Background”, “Support” and “Acknowledgements” sections following discussion with SCIN	Lorna Pennycook	25/03/24
2.0 (THIS VERSION)	Updated Introduction and Acknowledgements sections. All tracked changes accepted.	Lorna Pennycook	27/05/24

