

Board of Directors (in public)

Item 4.2

Subject: Updated SOF Proposal

Date of Meeting: Tuesday 7th February 2023

Presented by: Jonathan Mathews, Chief Operating Officer

Purpose of Report: For Approval

BAF Reference	Impact on BAF
BAF 1,2,3,4,6,7	BAF references are reported on using SOF Performance Report. An update to this format would impact on the monitoring of these risks.

Level of assurance (please tick one)					
To be used when the content of the report provides evidence of assurance					
<input checked="" type="checkbox"/>	Acceptable assurance	<input type="checkbox"/>	Partial assurance	<input type="checkbox"/>	Low assurance
	Controls are suitably designed, with evidence of them being consistently applied and effective in practice		Controls are still maturing – evidence shows that further action is required to improve their effectiveness		Evidence indicates poor effectiveness of controls

1. Executive Summary

The purpose of the paper is to provide an update on the development of a new SOF Performance Report. The paper has laid out the approach for the new report which includes the following:

- Four sections (Operational Reporting, Quality, Finance and People)
- Designated SRO for each section responsible for commentary
- New commentary section focussing on highlights, areas of concern and forward look
- SPC Charts for all metrics including Variation and Assurance icons
- Metrics split into Drive and Watch metrics, with drive metrics utilising additional metric specific commentary including technical analysis and actions
- Updated Metrics list
- New timetable for production

A new prototype of the report is available in the appendix which provides the look and feel of the new report which will be made available for dual running at board in February 2023.

The Board are asked to:

- Review and approve approach to new SOF Report
- Review and approve new timetable for monthly delivery

2. Background

Being data driven, with clear visual management of performance across all domains is essential to delivering all strategic objectives in the Trust annual plan and providing assurance to the Trust Board.

The purpose of the SOF Performance report is to assist the Board in assessing the Trust's performance and progress in delivery of key targets and indicators. It is a crucial public facing report that is discussed at every Board of Directors Meeting.

A paper entitled "Updated SOF Proposal" was presented at Board of Directors by the Chief Operating Officer in September. This paper outlined the current SOF Performance Report, Vision & Goals as well as the Initial Proposal and timelines.

3. Progress to Date

Following the approval of the development of an updated SOF Performance Report an Executive Design Group including the following people:

Job Title	Name
Chief Operating Officer	Jonathan Mathews
Chief Digital Information Officer	Kate Warriner
Director of Risk and Improvement	Karan Wheatcroft
Associate Director of Data & Analytics	Alex Garbett
Head of Analytics	Phil Johnston

Meetings were put in place to review metrics with the relevant executives:

Area	Who	Date of Meeting
Operational Reporting	Chief Operating Officer	22/11/2022
Clinical Quality	Director of Nursing Deputy Director of Nursing	05/12/2022
Finance	Chief Finance Officer	14/12/2022
People	Chief People Officer	05/12/2022

During these meetings an initial prototype was demonstrated and area specific metrics were discussed and initial metrics drafted for the new report. It was agreed within these meetings to split out "Organisational Health" into "Finance" and "People" to allow greater clarity on areas including alignment of commentary.

4. Proposal

It is proposed that the new SOF Performance report will continue to have distinct sections overseen by a Senior Responsible Officer (SRO):

Operational Performance – Chief Operating Officer
Quality of Care - Director of Nursing, Quality & Safety
Finance - Chief Finance Officer

People - Chief People Officer

All data will be displayed using SPC charts and each area will have the following sections:

- Commentary overseen by a SRO
- Drive Metrics with technical analysis and actions
- Watch Metrics
- Summary table with all data

4.1 SPC Charts + Icons

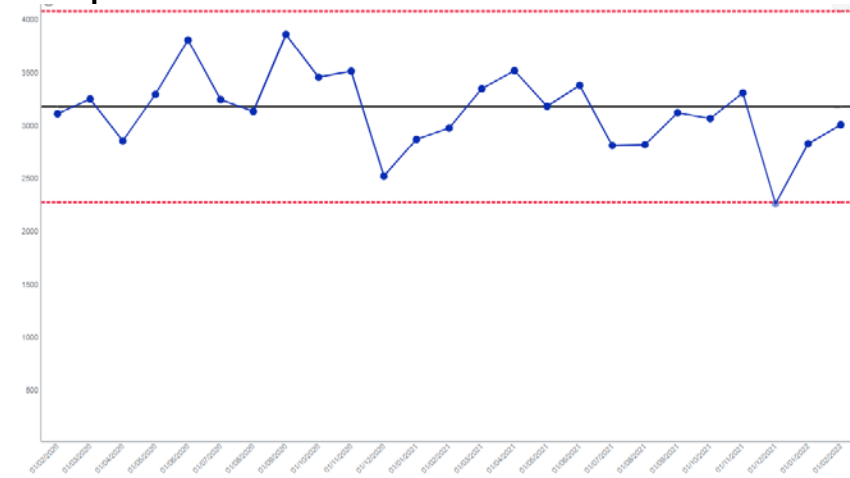
NHS Improvement has laid out the approach to moving from Red Amber Green (RAG) to Statistical Process Control (SPC) Charts in there [Making Data Count](#) Programme.

4.11 Constructing an SPC Chart

An SPC Chart is a time series line chart with three reference lines that help you appreciate variation in data:

- Centre Line (Mean or Median)
- Upper and Lower Lines (Control Limits)

Example SPC Chart



The control limits (seen in dashed red lines above) are calculated based on the data that is plotted. There are different approaches to doing this but we are using the guidance outlined by the Institute for Healthcare Improvement:

Centre Line = Mean

Upper Line* = Mean + (2.66 * Average of Moving Range)

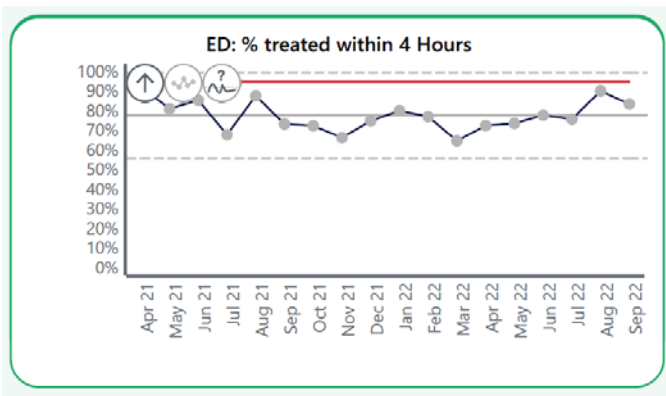
Lower Line* = Mean - (2.66 * Average of Moving Range)

* An additional step is put in place to remove any moving range values that are greater than 3.27* Average of Moving Range and then values are calculated again. This is completed to prevent the control limits being affected by special cause variation.

In a stable process you can expect that 99% of data points to fall within the control limits.

4.12 Natural Variation

Natural variation, or common cause variation, are the fluctuations in data over time that are as a result of the variables within a “system”. If we use an Emergency Department, 4 hour target as an example:



The SPC chart above demonstrates natural variation of a system. This means that the difference from one point to another is not an increase/decrease in performance but a natural variation of the current emergency department system. An example of variables associated in an ED department which can have an impact on performance are:

- Patient Speciality
- Patient Condition
- Severity of Condition
- Number of Patients
- Staff on Shift
- Local Events
- Weather
- Bed Occupancy

These variables will result in natural changes in performance values within your time period and should not be mistaken for improving or declining trend. To identify changes in performance we need to identify special cause variation.

4.13 Special Cause Variation

There are four rules we are using to identify special cause variation within the SPC charts, examples of which are shown in the appendix:

1. A point beyond the process limits
2. A run of points all above or all below the mean
3. A run of points all increasing or all decreasing
4. Two out of three points close to a process limit

When one of these rules is identified the relevant points will change colour to showcase that special cause variation has been observed and these should be investigated by the relevant teams to understand the data and cause.

4.14 Variation & Assurance Icons

In the move from RAG to SPC there was a clear gap in summarising performance at all levels in the organisation. To this end, NHS Improvement have developed a set of Variation and Assurance icons to help understand performance as demonstrated below.

Variation			Assurance		
Common cause – no significant change	Special cause of concerning nature or higher pressure due to (H)igher or (L)ower values	Special cause of improving nature or lower pressure due to (H)igher or (L)ower values	Variation indicates inconsistently passing and falling short of the target	Variation indicates consistently (P)assing the target	Variation indicates consistently (F)alling short of the target

Each SPC chart has an Assurance icon that indicates how the metric is performing against its target based on the assigned target and control limits. For the variation icon, the most recent data point is assessed, and relevant icon provided. Combining these icons together allows us to provide a combination definition that summarises performance:

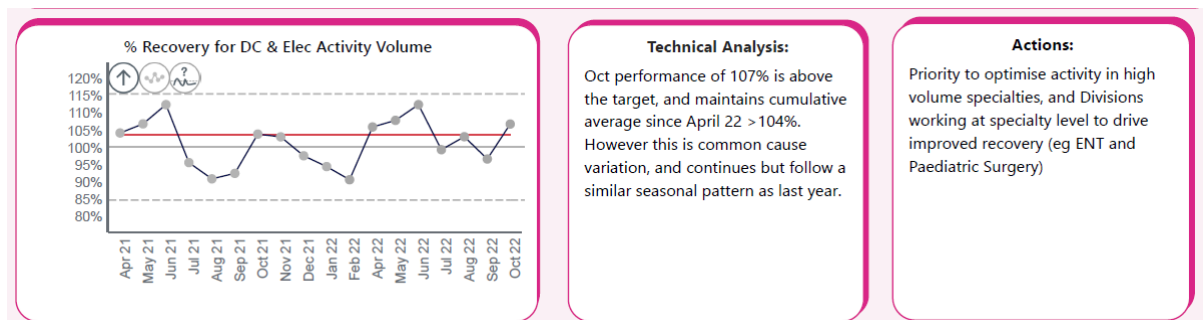
Assurance Combination	Variance	Icon	Combination Definition
			Achieving target with improving trend
			Achieving target with no significant change
			Achieving target with declining trend
			Inconsistently achieving target with improving trend
			Inconsistently achieving target with no significant change
			Inconsistently achieving target with declining trend
			Not achieving target with improving trend
			Not achieving target with no significant change
			Not achieving target with declining trend

Examples of these from Alder Hey are provided in the appendix. Using these icons and combinations we can put each metric into a performance metric and draw out organisational performance in summary format, a potential Performance Matrix is shown in the Appendix.

4.2 Drive and Watch Metrics

Drive metrics are defined as metrics that we are actively working on to “drive” improved performance. By nature these should be metrics that aren’t performing at an acceptable level to the organisation and would be part of a wider improvement programme that is aligned with the hospitals strategic priorities.

Drive metrics will have a technical analysis in the report which will highlight “what the data tells us” which will be completed by the Analytics team. There will also be an actions commentary box which will be completed by the relevant teams, overseen by the SRO. These will contain key actions for the next period which will facilitate improvement. An Example from Alder Hey is shown below:



Watch metrics are important metrics required to understand performance at the organisation. We will “watch” these metrics for adverse performance, at which point they could become a drive metric. Watch metrics won’t always be performing at a level that is acceptable to the organisation but they might not currently be a priority of the organisation due to other areas of focus. An example of a watch metric is RTT 18 weeks in aggregate – Incomplete Pathways, although this isn’t hitting it’s 92% target the current focus is on RTT – Incomplete Pathways 52+ weeks (Drive Metric) and we would expect to see progress in this metric and continue to monitor 18 weeks to not see decreasing performance.

Following meetings with Senior Responsible Officers for each section a draft list of metrics has been agreed and is found in the appendix.

4.3 Commentary

Each section of the SOF will have commentary provided by the SRO for this area of work. The commentary will be split into the following sections:

- **Highlights** – This section should be used to highlight areas of good performance which demonstrate both drive and watch metrics moving towards their desired goals. This could be a particular metric demonstrating special cause variation of an improving trend.
- **Areas of Concern** – This section should be used to comment on areas of concern which could include areas not making the progress expected or special cause variation with a declining trend.
- **Forward look (with actions)** – this section is the place to highlight future work expected between now and the next board including key actions.

It is important to note that the commentary should be used to comment on watch and drive metrics where relevant but not duplicate actions from drive metrics commentary.

An example commentary from Alder Hey November Board papers is shown below:

SRO : Adam Bateman, Chief Operating Officer	
Highlights:	<ul style="list-style-type: none"> • WNB rate <10% in Oct, whilst too soon to show statistical significance this does correlate with interventions using AI tool in 5 specialties to support "higher risk" patients to attend appointments • Although ED 4hr performance remains challenged, median triage time was 13min so we continue to achieve the 15min national standard
Areas of Concern:	<ul style="list-style-type: none"> • ED Performance against 4hr target (75%) and 12hr Time in Dept (19pts in Oct) remains challenged • % Virtual OP fallen again, in part due to reducing OPFU and prioritising F2F OPNew; revised mean still >25% national standard • 45 long stay patients with adverse impact on bed capacity • Clinical Letters backlog is reducing (Surgery cleared c.2000 letters in last 4 weeks) but still c.600 >4 weeks, 60% in Medicine
Forward Look (with actions)	<ul style="list-style-type: none"> • Continue ED@Best programme, overseeing actions to improve culture and performance. This includes ED Extension to open in Dec (subject to planning permission) • Continue use of AI tool to deliver sustained reduction in WNB rate and improve equity of access

5. Prototype of the new SOF

An extract from the new design, covering one organisational area are included in the Appendix. These are not completed final versions and the delivery group are still working on refining the details, however it does show the proposed structure, format, visual presentation and "look and feel" of the proposed SOF.

6. Monthly timetable for Producing SOF

The following timetable is proposed for production of the IPR on a Monthly basis

Working Day	Task	Who
1-4	Populate report with most recent month data, checking the quality and accuracy of data.	PJ
5-6	Technical Analysis / Insight comments completed for Drive metrics, and identify any special cause variation (inc watch metrics) for inclusion in exec narratives.	AG / PJ
7-8	Exec directors (or delegates) complete narrative sections and actions for Drive metrics. <i>If delegated, this requires Exec sign off by end of WD 8.</i>	Exec Directors
9	Consolidate each narrative section in full report.	PJ
10	Nominated exec signs off full report.	JM
11	Report available for circulation to the Exec Team, for their collective review prior to inclusion in Trust Board papers.	

7. Development Timeline

Timelines for proposed changes are detailed in the table below:

Date	Milestones
January 2023	<ul style="list-style-type: none">• Review approach with CEO (11/01/2023)• Paper Discussed at Execs (18/01/2023)• Review approach with Chair (20/01/2023)• Proposal SOF to Board (continuing with old SOF)
February 2023	<ul style="list-style-type: none">• Further Development following feedback• Further Engagement following feedback• Presentation at Strategy Day (28/02/2023)
March 2023	<ul style="list-style-type: none">• Final Development• Completion of SOF for April
April	<ul style="list-style-type: none">• New SOF report presented to Board

8. Conclusion

Following the Boards approval to redevelop the SOF Performance Report, excellent progress has been made on creating the new report. The paper has laid out the approach for the new report which includes the following:

- Four sections (Operational Reporting, Quality, Finance and People)
- Designated SRO for each section responsible for commentary
- New commentary section focussing on highlights, areas of concern and forward look
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A new prototype of the report is available in the appendix which provides the look and feel of the new report which will be made available for dual running at board in February 2023.

9. Recommendations

- Review and approve approach to new SOF Report
- Review and approve new timetable for monthly delivery

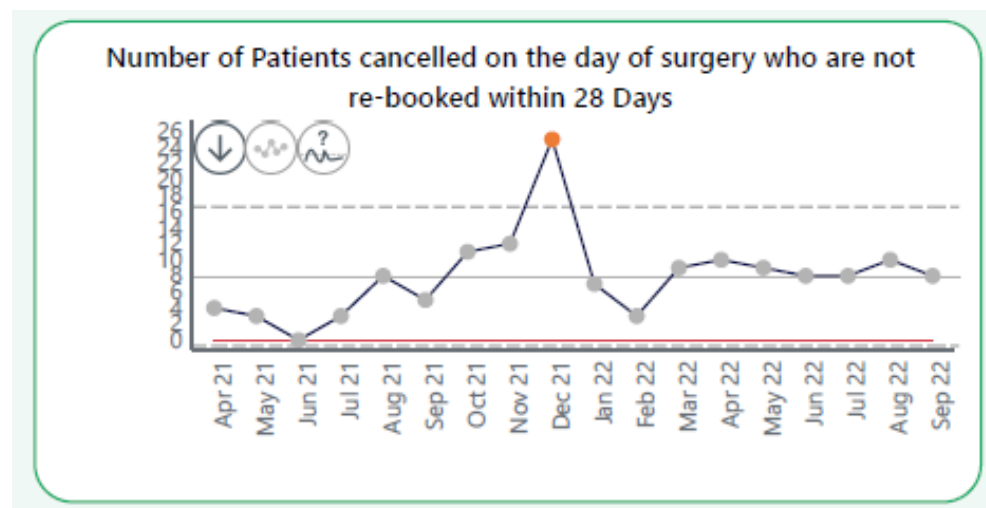
Appendix

List of Metrics

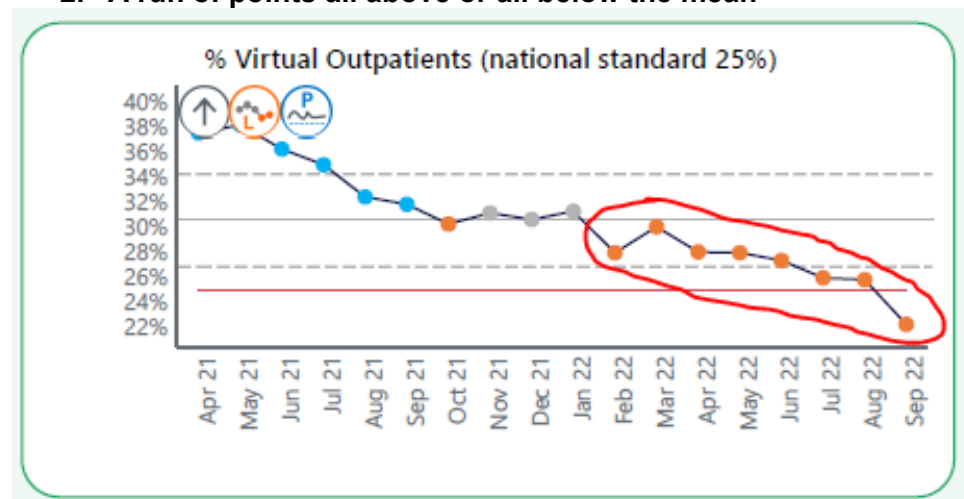
Area	Metric	Drive/Watch
Operational Reporting	Cancer: Faster Diagnosis	Drive
	PIFU	Drive
	Elective Activity Levels	Drive
	Referral to Treatment - Incomplete Pathways 52 + weeks	Drive
	RTT 18 weeks in aggregate - Incomplete Pathways	Watch
	Welsh Patients: 26 week referral to treatment waiting times	Watch
	Overall size of waiting list	Watch
	Outpatient activity delivered remotely	Watch
	Cancelled Operations for non-clinical reasons	Watch
	Maximum 6- week wait for diagnostic procedures	Watch
	Bed Occupancy	Watch
	Cancer: 2 WW	Watch
	Cancer: 31 day DTT to Tx	Watch
	Cancer: 31 day sub DTT to Tx	Watch
	Cancer - 62 day	Watch
	Cancer: 62 Day Consultant Upgrade	Watch
Quality	Number of Incidents rated Minor Harm and above	Drive
	Sepsis % Patients receiving antibiotics within 60mins inpatient	Drive
	Radiological Alerts with response % (SHM)	Drive
	Nutrition - High Risk	Drive
	Number of Complaints	Watch
	Complaints responded to within 25 working days	Watch
	Never Events	Watch
	Number of Falls	Watch
	Surgical Site Infections	Watch
	Cdiff	Watch
	MRSA	Watch
	MSSA	Watch
	Gram Negative	Watch
	Dementia - find	Watch
	Pressure Ulcers G2-G4	Watch
	Delayed Transfer of Care	Watch
	Number of Incidents No Harm and Near Miss	Watch
	Number of Serious incidents (Steis reported)	Watch
	FFT % recommend the trust	Watch
	Delirium, initial assessment and once a day	Watch
	Call to Balloon 150min	Watch
Finance	Recurrent CIP Identified	Drive
	Capital	Drive
	Liquidity	Watch
	I&E distance from target	Watch
	Better Payment Practice Code	Watch
People	Cash	Watch
	% Staff who recommended LHCH as a place to work	Drive
	Staff Turnover	Drive
	Total Sickness Absence	Drive
	Short Term Sickness	Watch
	Long Term Sickness	Watch
	Mandatory Training	Watch
	% PDRs completed since April	Watch
	Medical Appraisal	Watch

Special Cause Variation

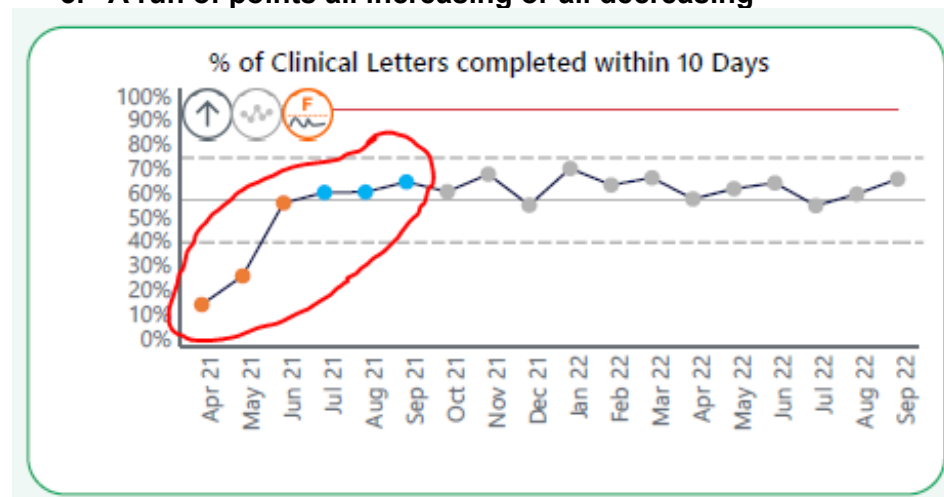
1. A point beyond the process limits



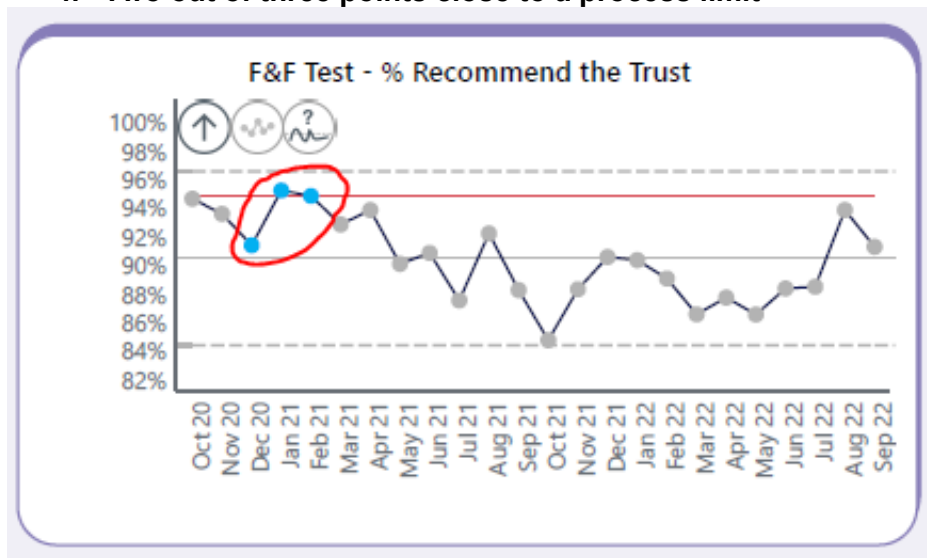
2. A run of points all above or all below the mean



3. A run of points all increasing or all decreasing



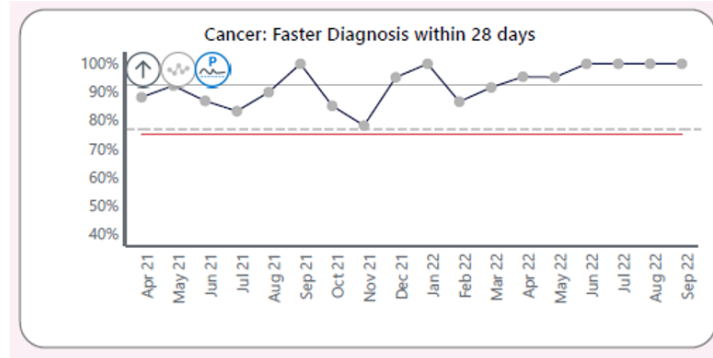
4. Two out of three points close to a process limit



Use of Icons – AH examples

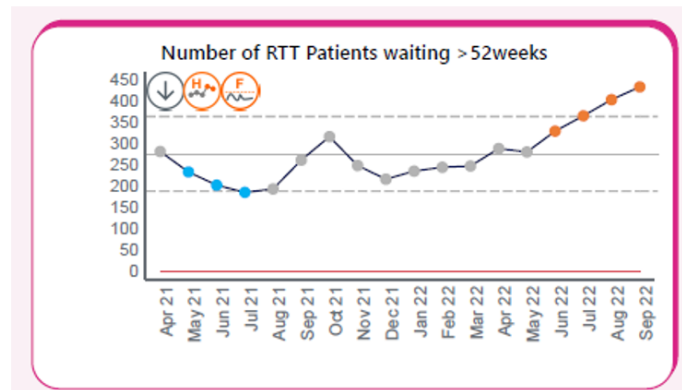
Variation			Assurance		
Common cause – no significant change	Special cause of concerning nature or higher pressure due to (H) higher or (L) lower values	Special cause of improving nature or lower pressure due to (H) higher or (L) lower values	Variation indicates inconsistently passing and failing short of the target	Variation indicates consistently passing the target	Variation indicates consistently failing short of the target

Consistently Passing Target with no significant change



Variation			Assurance		
Common cause – no significant change	Special cause of concerning nature or higher pressure due to (H) higher or (L) lower values	Special cause of improving nature or lower pressure due to (H) higher or (L) lower values	Variation indicates inconsistently passing and failing short of the target	Variation indicates consistently passing the target	Variation indicates consistently failing short of the target

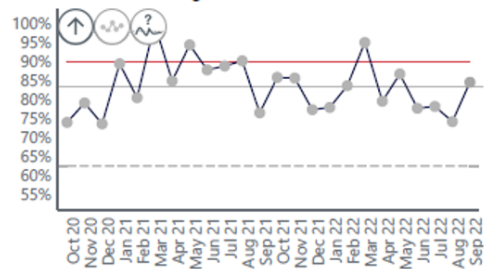
Consistently Failing Target with declining trend



Variation			Assurance		
Common cause – no significant change	Special cause of concerning nature or higher pressure due to (H) higher or (L) lower values	Special cause of improving nature or lower pressure due to (H) higher or (L) lower values	Variation indicates inconsistently passing and falling short of the target	Variation indicates consistently passing the target	Variation indicates consistently falling short of the target

Inconsistently Passing Target with no significant change

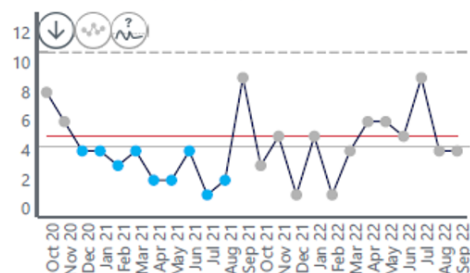
Sepsis % Patients receiving antibiotic within 60 mins for ED



Variation			Assurance		
Common cause – no significant change	Special cause of concerning nature or higher pressure due to (H) higher or (L) lower values	Special cause of improving nature or lower pressure due to (H) higher or (L) lower values	Variation indicates inconsistently passing and falling short of the target	Variation indicates consistently passing the target	Variation indicates consistently falling short of the target

Inconsistently Passing Target with no significant change

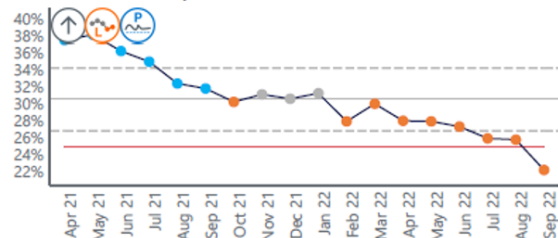
Pressure Ulcers G2-4



Variation			Assurance		
Common cause – no significant change	Special cause of concerning nature or higher pressure due to (H) higher or (L) lower values	Special cause of improving nature or lower pressure due to (H) higher or (L) lower values	Variation indicates inconsistently passing and falling short of the target	Variation indicates consistently passing the target	Variation indicates consistently falling short of the target

Consistently Passing Target with declining trend

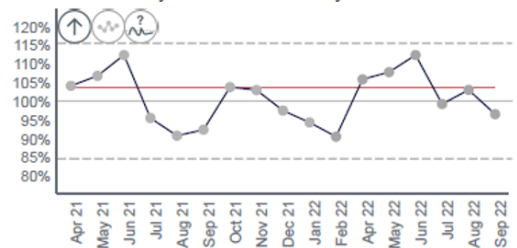
% Virtual Outpatients (national standard 25%)



Variation			Assurance		
Common cause – no significant change	Special cause of concerning nature or higher pressure due to (H) higher or (L) lower values	Special cause of improving nature or lower pressure due to (H) higher or (L) lower values	Variation indicates inconsistently passing and falling short of the target	Variation indicates consistently passing the target	Variation indicates consistently falling short of the target

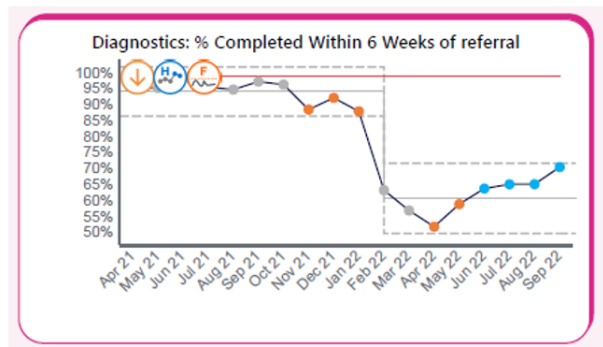
Inconsistently Passing Target with no significant change

% Recovery for DC & Elec Activity Volume



Variation			Assurance		
Common cause – no significant change	Special cause of concerning nature or higher pressure due to (Higher or Lower values	Special cause of improving nature or lower pressure due to (Higher or Lower values	Variation indicates inconsistently passing and failing short of the target	Variation indicates consistently (Passing the target	Variation indicates consistently (Failing short of the target

Consistently Failing Target with improving trend



Performance Matrix

		Assurance		
		Achieving Target	Inconsistently Achieving Target	Not Achieving Target
Variation	Special Cause - Improvement	Achieving target with improving trend	Inconsistently achieving target with improving trend	Not achieving target with improving trend
	Common Cause	Achieving target with no significant change	Inconsistently achieving target with no significant change	Not achieving target with no significant change
	Special Cause - Concern	Achieving target with declining trend	Inconsistently achieving target with declining trend	Not achieving target with declining trend