Great Ormond Street Hospital for Children
NHS Foundation Trust

L3: Deteriorating Patients: Improving Response in a Paediatric Setting

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After this session, participants will be able to:

- Contextualise designing a programme of work that incorporates drive, engagement and input of a wide variety of stakeholders, with a key focus on high quality patient outcomes and experiences
- Gain insight and learning from testing a variety of education, technological and environmental interventions
- Appreciate the sensitivities and value of co-design with patients and families
- Understand how Quality Improvement methodology and tools can be applied

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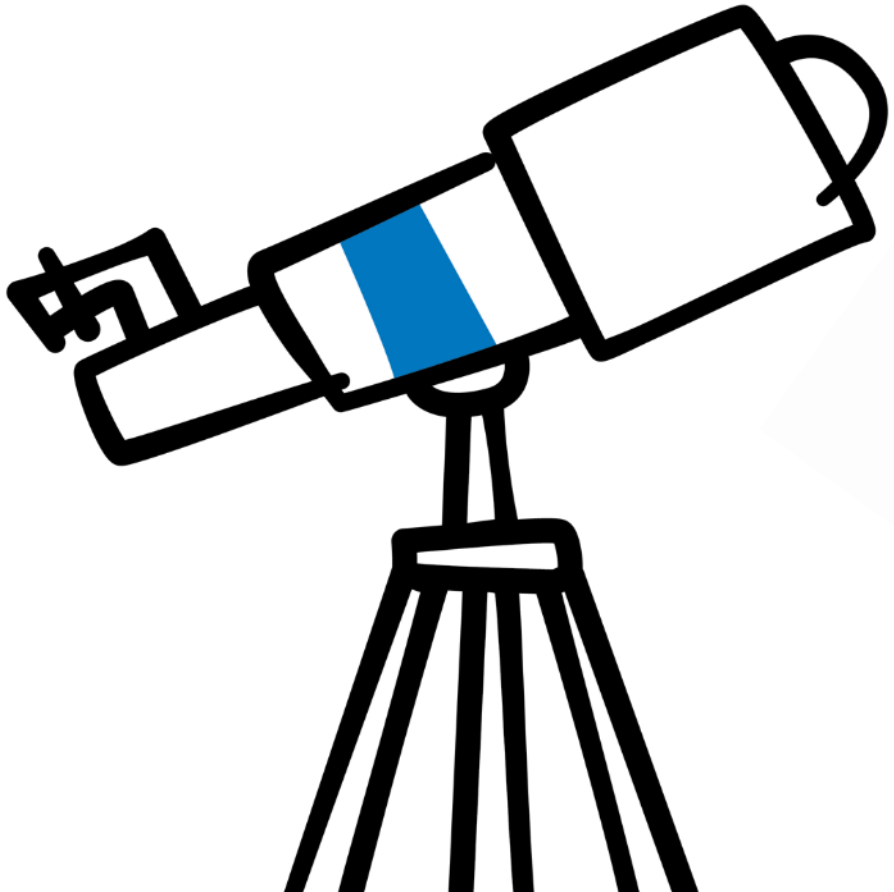
Application



Each of the interventions in the respective working groups can be considered replicable in not just acute specialist children’s hospitals, but to all inpatient paediatric hospital settings.

Brief history of Great Ormond Street Hospital, London

- Opened February 1852
- 20 general beds + 8 ‘fever beds’
- 1 Doctor
- 1 Matron
- 3 nurses but none ‘permanent’
- **Visiting time**: 3–4pm on Sundays, Mondays, Wednesdays, and Fridays, *“except by special leave from the Matron or House Surgeon”*

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Dr West's 3 Principle Ambitions

- The provision of healthcare to the children of the poor
- The encouragement of clinical research in paediatrics
- The training of paediatric nurses

Mrs Willey, First Matron at GOSH

Dr Charles West, founder and first Doctor at GOSH

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"It is not only because so many children die, that this Hospital was founded; but because so many are sick; because they languish in their homes; a burden to their parents who have no leisure to tend them, no means to minister to their wants. The one sick child weighs down the whole family; it keeps the father poor, the home wretched."

Dr C West, 1855

https://en.wikipedia.org/wiki/Charles_West_(physician)

https://wellcomeimages.org/indexplus/obf_images/0d/25/c02f86f964ae61a4a340d43cf2eb.jpg

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1880

- 1,047 in-patients
- 14,522 out-patients

1901

- 2,111 in-patients
- 24,670 out-patients

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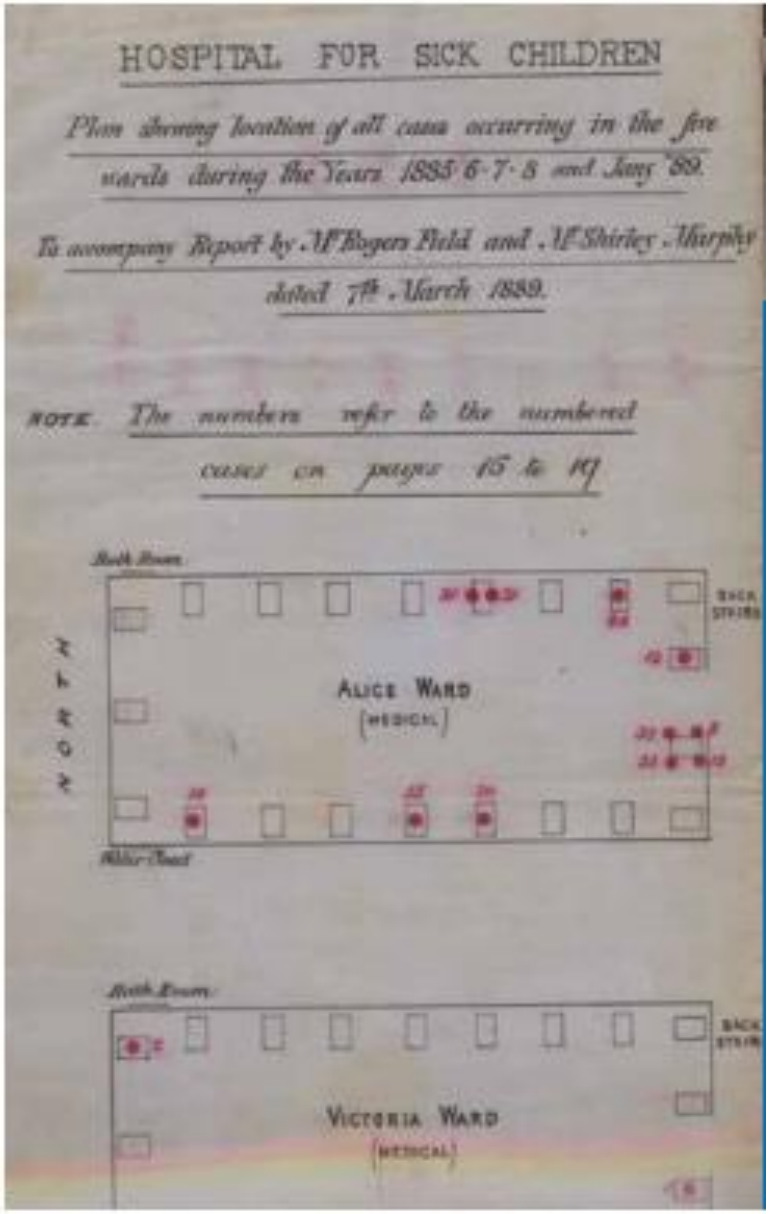
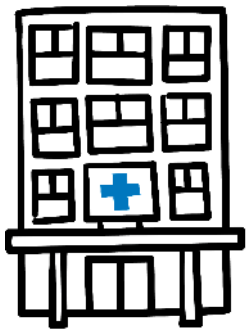
Using Data to Improve Patient Care



Diphtheria outbreak, 1889

GOSH worked with an external engineering company to advise on sanitation and wider infection control issues.



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Great Ormond Street Hospital for Children NHS Foundation Trust in the 2020s

Annually at GOSH:

- 221,379 visits to the Trust across inpatient and outpatient services.
- 438 beds
- > 1000 active research studies
- > 5000 staff
- 50 different specialist and sub-specialist paediatric services.

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External drivers for improvement opportunity

- 2015: 7% of patient safety incidents reported to the National Reporting and Learning System as death or severe harm: related to failure to recognise or act on deterioration. (NHS Improvement, 2016)

Classification: Official

NHS Improvement

Patient Safety Alert

Resources to support safer care of the deteriorating patient (adults and children)

12 July 2016

RCPCH Royal College of Paediatrics and Child Health
Leading the way in Children's Health

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Safe system framework for children at risk of deterioration

- 26% of preventable deaths were related to failures in clinical monitoring……failure to set up systems, …to respond to deterioration, failure to act on test results (Hogan et al, 2012)

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The Deteriorating Patient project at GOSH

Context:

- Identification of key themes: management of acutely deteriorating patients.
- Challenges to the sustainability of previous interventions
- Revised incident recording tools
- 2019, introduction of electronic records (EPR)

Initiation of the project:

- Project scoping, stakeholder engagement & additional, targeted workstream diagnostics

  >> concurrent testing

  >>> accelerating the pace of change

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Specific concerns

Upward trends identified across Serious Safety Incidents

Increase in complaints around clinical deterioration and communication

Specific Safety investigations

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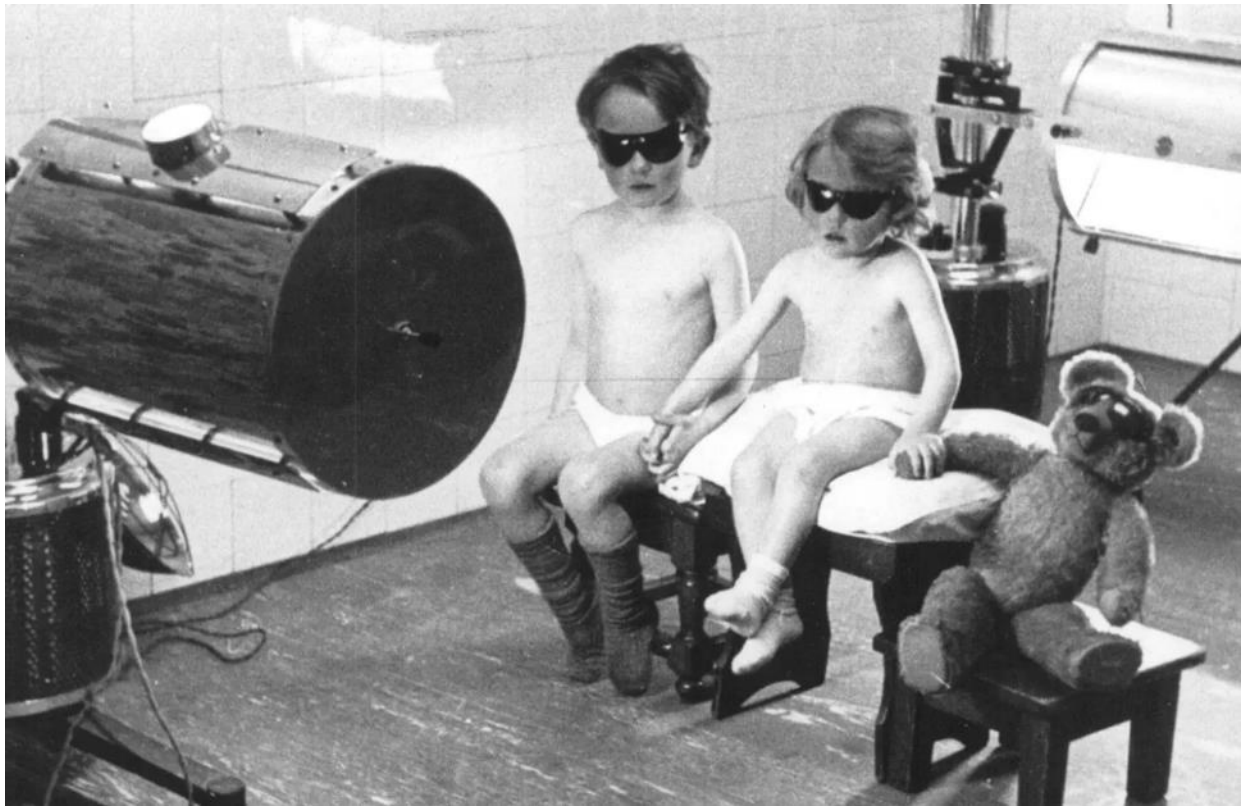
Our Approach



Reduce unwarranted variation and carefully capture warranted variation required through clinician/ professional decision making

To enhance patient, family and staff involvement.

To support staff in a complex environment to effectively manage care of their patients in a coordinated manner.

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Steering Group membership

- Executive sponsors : Associate Medical Directors for Safety & Improvement
- Resuscitation officers
- Clinical Site Practitioners
- Medical Consultants
- Senior nursing staff
- Clinical education
- Clinical simulation
- Infection control
- Quality Improvement & Data Analysis
- Electronic Patient Records experts

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Key Non-Clinical Stakeholders

- The Patient Experience and Engagement Lead: advocates for patients and families while sharing learning from complaints and feedback analysis.
- Electronic Patient Records Experts
- The Young People's Forum (YPF): contributes with scoping and ideas.

YPF YOUNG PEOPLE'S FORUM

Growing Up GUGI Gaining Independence

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Epic ...with the patient at the heart

Project Links

- Band 7 nursing development programme: all workstreams
- GOSH's Race Ethnicity and Cultural Heritage staff network to help direct and inform the Nursing Observations Workstream Group (skin tone)

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Deteriorating Patients QI Programme

Improving the identification and management of the deteriorating patient

Nursing Observations Working Group

*Improving timeliness of recording nursing observations on the electronic system
*Improving equity of visual observations for patients of different skin tones

Detection & Confirmation Working Group

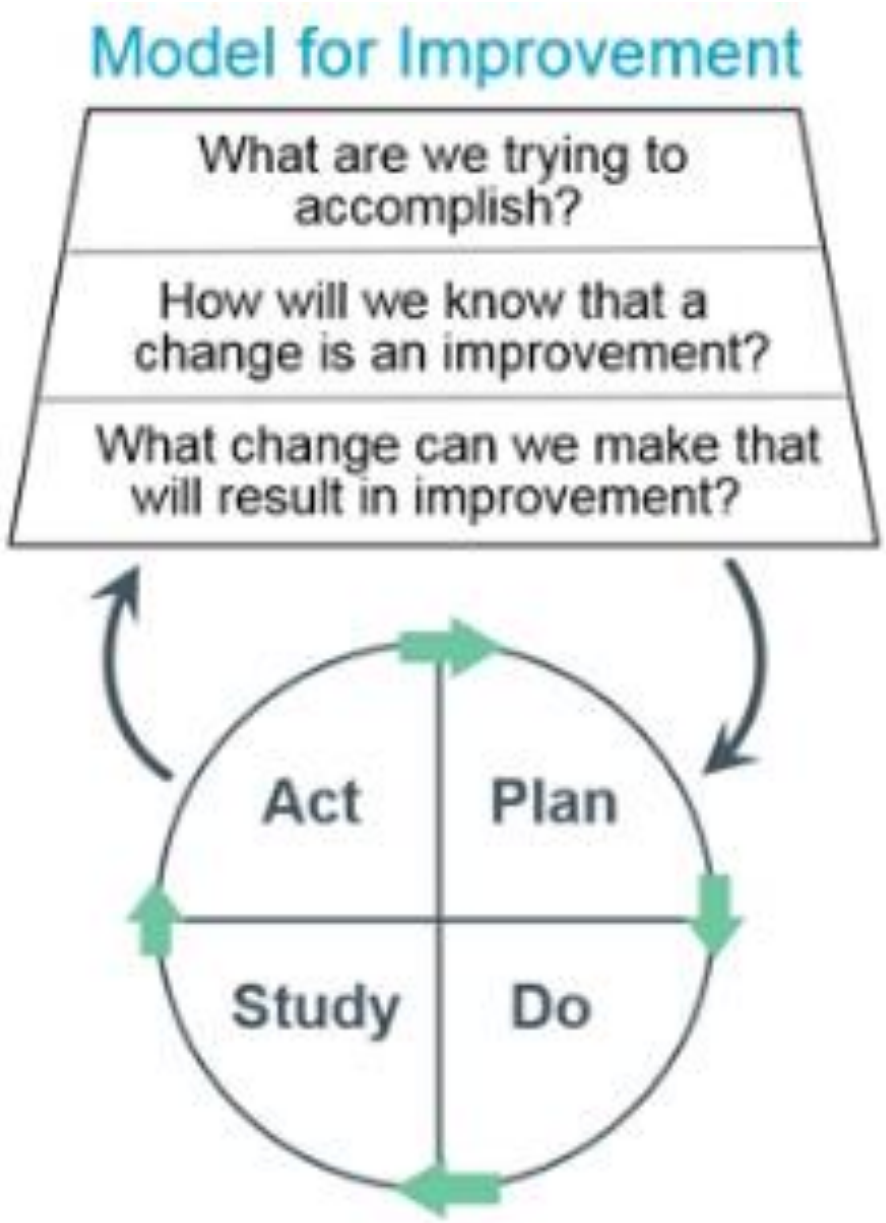
*Identification of risk of deterioration through a new risk categories tool as an additional safety net for the early warning scores. Captures staff and parental concerns.

ReACT Working Group Access, Communicate, Treat (and re-entry)

*Escalation pathway: combines early warning scores (PEWS) and risk categories to escalate care to a multidisciplinary support mechanism. This leads to a plan for escalated (or de-escalated) observations or care for patient.

Patient Stories Working Group: Continuous learning from events to inform work of all working groups

Our Approach



[How to Improve | IHI - Institute for Healthcare Improvement]

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Monitoring & Outcome Measures

Monitored via analysis of:

- Mortality Reviews
- Serious Incidents
- Datix Incidents

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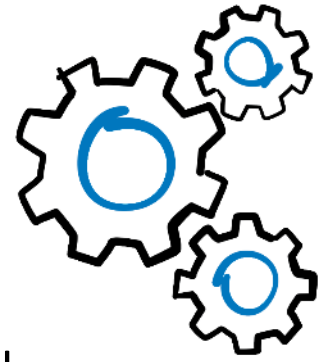
Process Measures



Quantitative Measures

- Nursing observations- timeliness of recording on EPR
- Parental concern recording on EPR
- Out of ICU cardiac +/- respiratory arrests
- Unplanned ICU admissions
- Staff usage of risk categories tool

Qualitative Measures

- Staff feedback of risk categories tool
- Staff usage and feedback: recording parental input of patient visual changes

Balancing Measures

Workload of clinicians responding to escalating pathway

Patient Story Template: Presentation at each Steering Group Meeting

Patient ward: Who/ what first raised the concern?	Date & Time when concern was raised: Date & Time when classified as deteriorating Date & Time when stepped down from deterioration

Summary of event:

Top 3 things that worked well:

1.
2.
3.

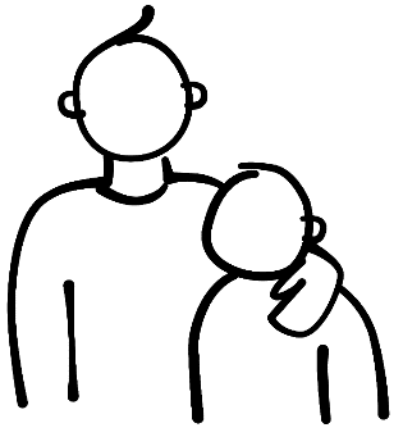
Top 3 things we could improve on:

1.
2.
3.

Considerations for Observations WG:

Considerations for Detection WG:

Considerations for Response WG:



Nursing Observations Workstream:

Timeliness of recording ensures an accurate picture of patients' observations over time thus improved situational awareness.

Early data: delayed input of nursing observations into patients' EPR

Action: combined technology and educational intervention

Outcome: Test ward A: showing 13.5% sustained improvement

Test ward B: 4% improvement (sustained since July 2022) (*slides 4-7*).

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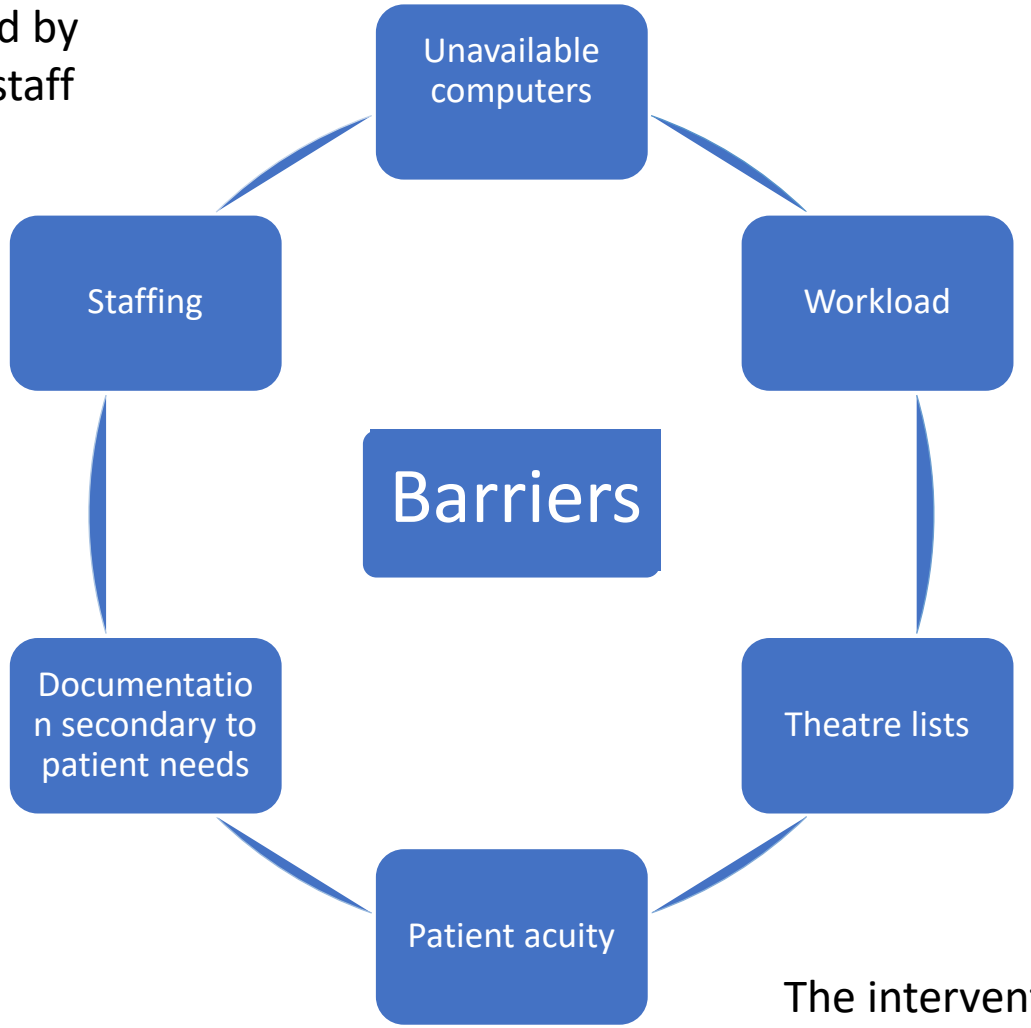
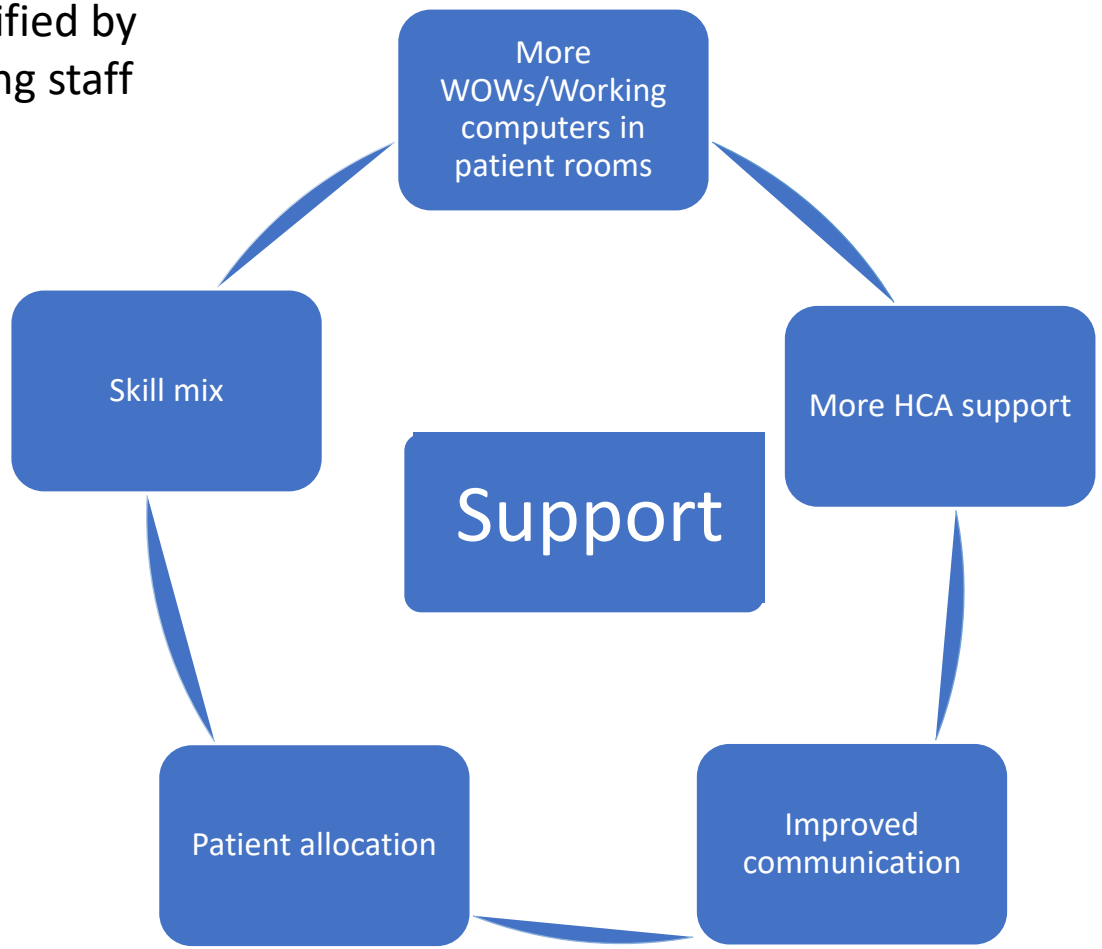
Barriers to timely recording of observations identified by nursing staff



Factors to overcome barriers identified by nursing staff



The intervention being tested looks at effective use of available technology to record observations combined with an education drive

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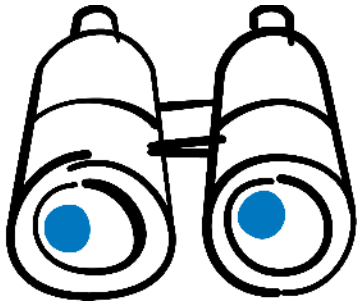
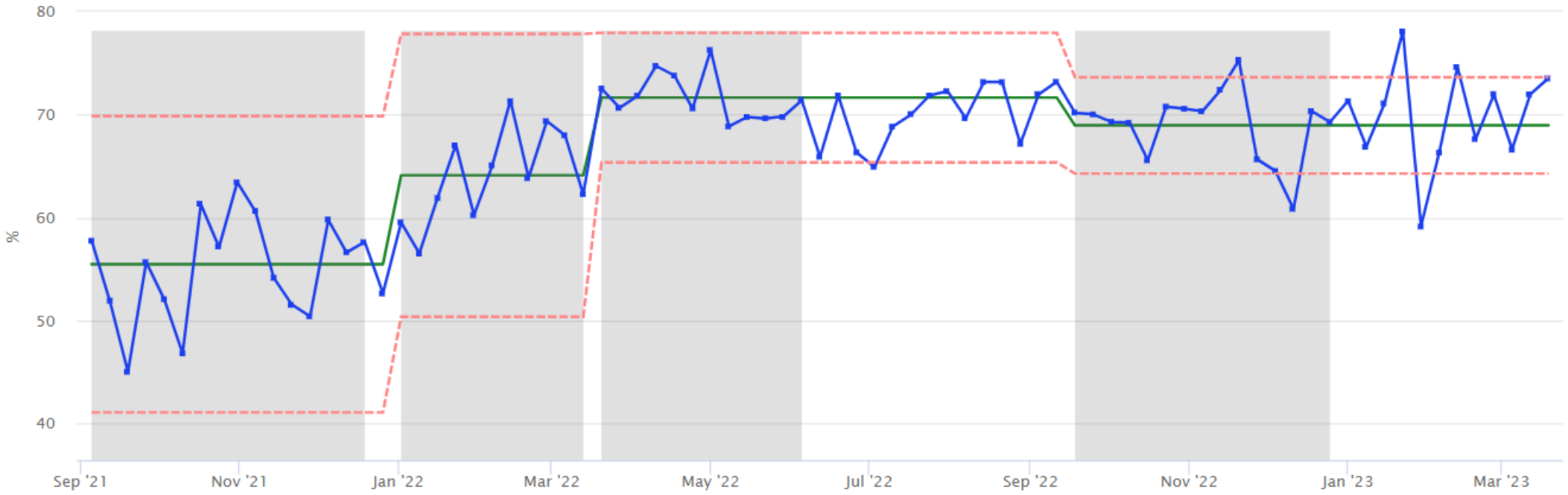


Percentage of Nursing Observations recorded within 30 minutes of stated chart time – respiratory ward



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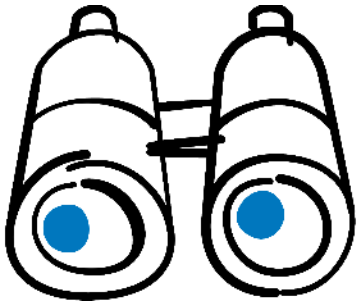
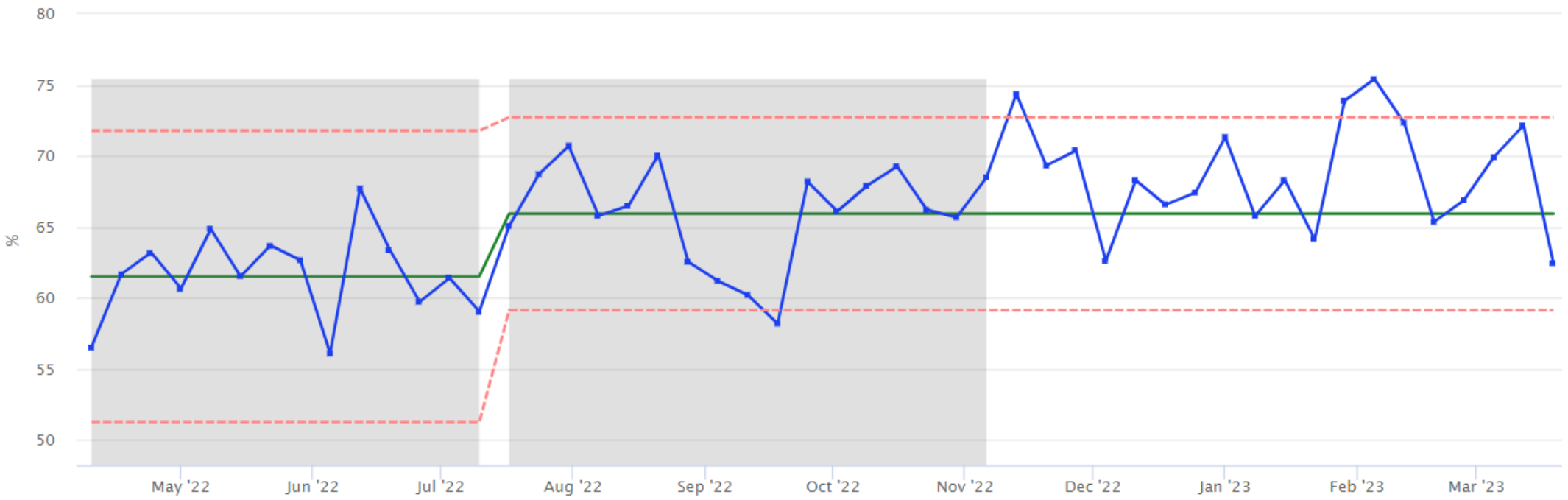


Percentage of Nursing Observations recorded within 30 minutes of stated chart time – Oncology Ward



Nursing Observations: Skin Tone

Aim: to improve capture of parental opinion of patient visual presentations and enable standardised recording in Epic

Test: ‘Does the parent or carer think the patient looks any different since they were last assessed’

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Initial ideas generated by the YPF

Patient Skin Tone
GOSH Young People's Forum

Monk Skin Tone Scale
tested by YPF

Outcome: didn't feel 'represented' by the examples, also difficult to apply in practice

YPF suggestion: ask parents/ carers to consider if there has been a change of the patient's appearance since the last assessment

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Detection of Acute Deterioration

Prompt: consider and record clinical concern about a patient (source: staff, parent/carer)

Action: employing a safety net that captures staff and parental concerns in addition to the patient's Paediatric Early Warning Score

Guidance: consider a variety of clinical risks to the patient before identifying the overall risk of acute clinical deterioration. Aims to help staff articulate their concern in a more standardised way

Usage: > 9,000 times to date, on 1541 patients, in 10 wards

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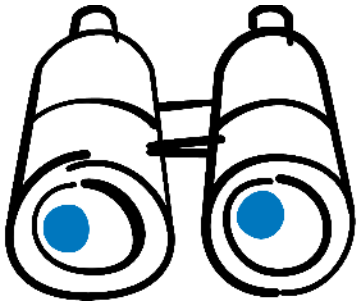
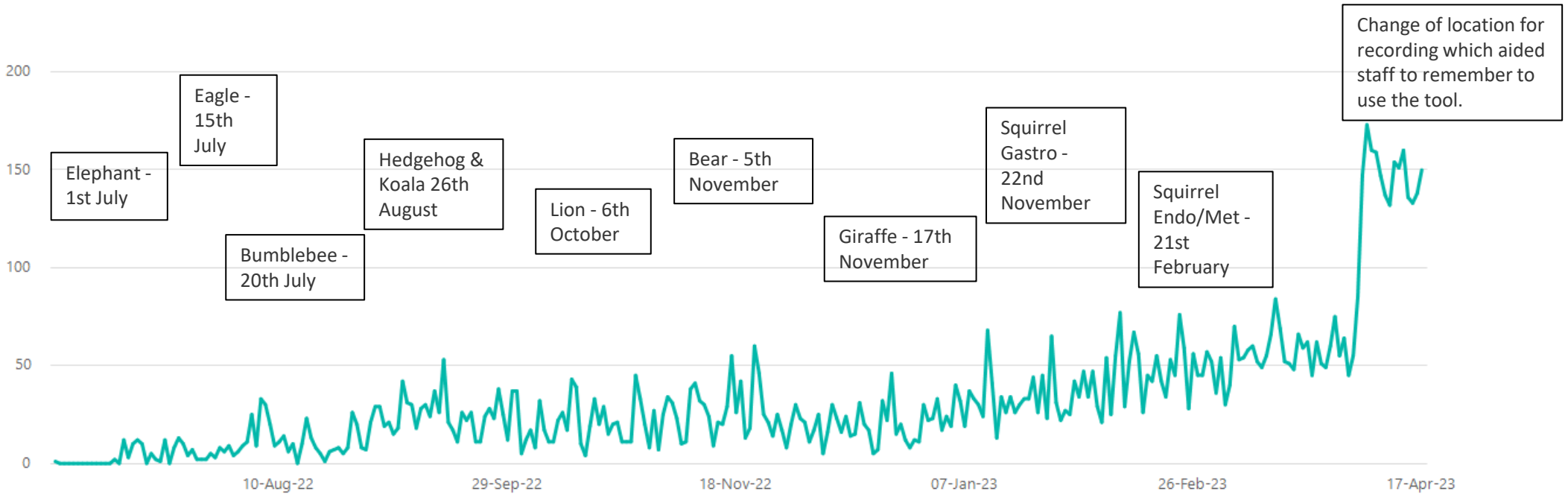


Risk Categories Tool – Records per day



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Feedback

"I think this is helpful for both senior and junior nurses. As a newly qualified nurse, this helps me consider all the different risks of the patient. The recent change that was done to move the tool up in the daily plan was a small change, but it has a big impact, I remember to do it easily now."

GMP, Staff Nurse

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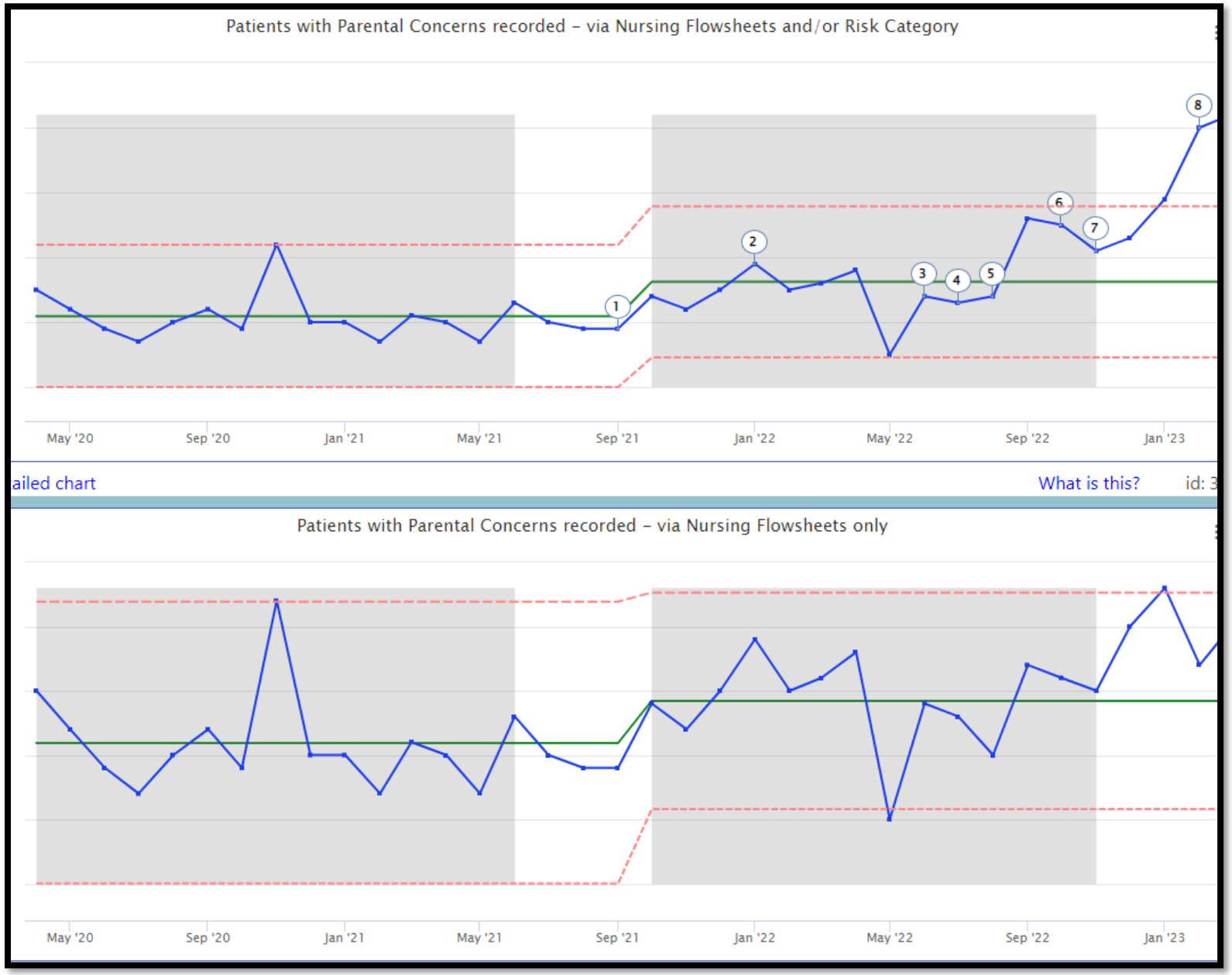

Embedding into practice:

Safety Huddles

Ward rounds

Multi-disciplinary support and input

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ReACT: Escalation Pathway

Aim: To reduce variability

Introduction of a coordinated escalation pathway requiring:

- Clinical Review(s)
- Updated medical plans
- De-escalation if indicated
- Clear documentation in the EPR

This is currently testing in one ward

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Response: Diagnostics Phase

Clinicians across the board struggle to articulate their concerns

Variable language & terminology used to escalate

Staff did not always feel that their concerns were ‘heard’

Q: From your own experience, what is the most challenging aspect of managing a deteriorating patient?

In your opinion what would aid you in the management of a deteriorating patient (*78 responses collated)*

"There should be a feeling that if a healthcare professional of any grade is concerned that a child is deteriorating, the supporting teams try to understand their concern." **Medical Fellow**

"I find the most challenging aspect of managing a deteriorating patient always feeling like your concerns are not being heard by other team members. I have had experiences of making teams aware of my concerns and I have been told the patient will be reviewed but they have not come. It is also difficult when a plan of care is not communicated to us as nursing staff. This leads to the potential of miscommunication between us and parents" **Staff Nurse**

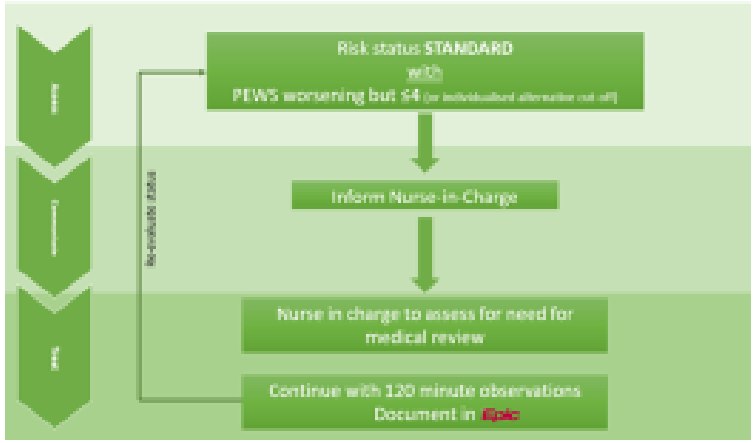
"Ensuring concerns are heard and action taken when flagged to more senior medical teams/getting patient reviewed in a timely manner" **Staff Nurse**

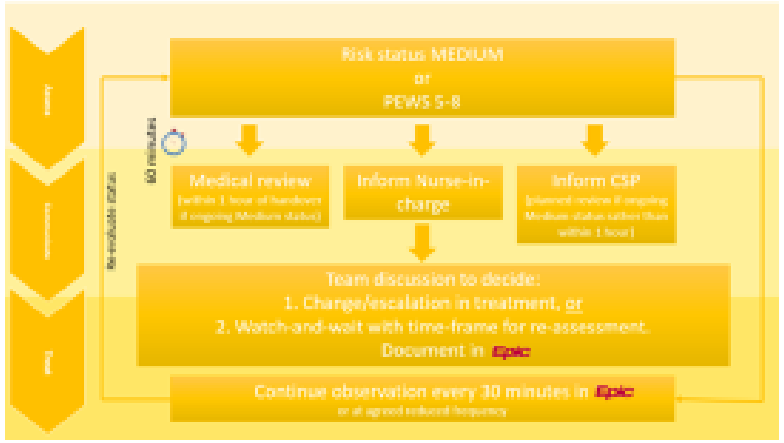
Detection and confirmation & Re-Act

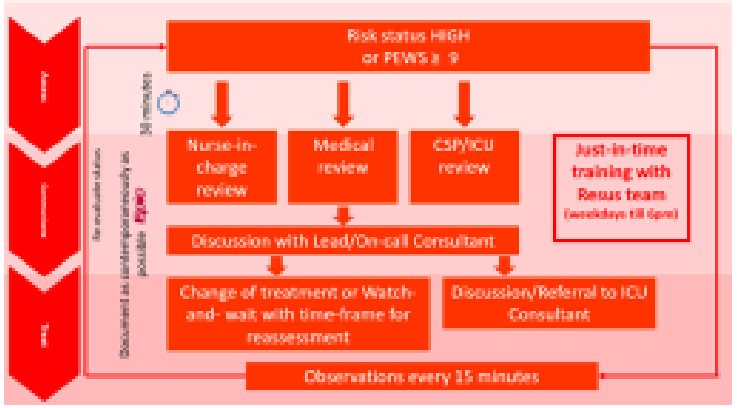
Standard - routine clinical care, a patient who has no increased needs and is on their regular ward for their specialty, not currently thought to be deteriorating or at risk of deterioration.

Medium - patient at increased risk of an adverse event or deterioration, this may be a patient with low-level clinician concern, parental concern, non-standard specialty for the ward they are on, mental health with RMN presence, etc.

High - patient at high risk of deterioration, or currently deteriorating clinically. These will be patients who meet pan-GOSH criteria and therefore CSP team will be aware and they may meet a number of (yet to be determined) criteria.







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DIRECTORATE PROGRESS





Body, Bones & Mind	Brain	Blood, Cells & Cancer	Heart & Lung	I+PC
Squirrel *(Gastro)*	Koala	Lion	Bear	Bumblebee
	Squirrel (Endo/ Met)	Giraffe	Leopard	Hedgehog
Eagle				
		Elephant		

Key:

- Detection Tool
- ReACT Pathway
- Nursing Observation
- Patient Skin Tone

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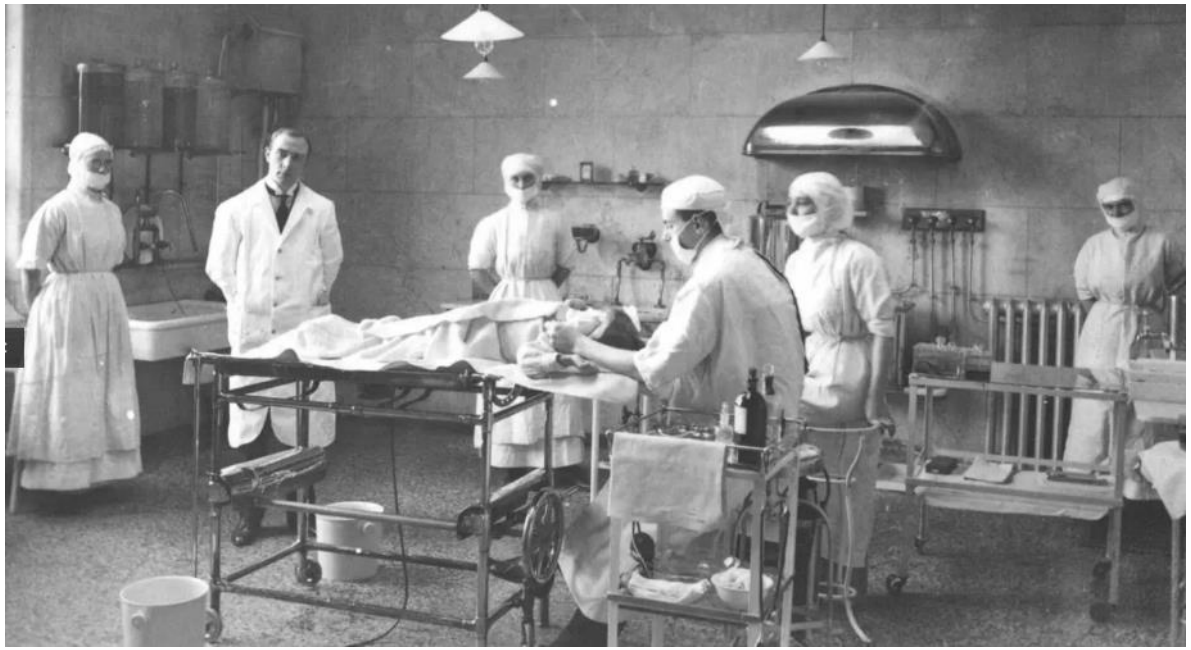
Reflections



QI is so much more sensitive to those immersed in ‘the doing’ through talking, exploring and working in collaboration with subject matter experts.

Understanding and working at the pace of trust helps build engagement. This is why collaboration with the Users is key.

Balancing the bigger picture with ‘small wins’ in clinical areas has made this possible.

Scope creep in projects can be challenging. Managing this is key to complete what has started.

Project structure and engagement plans which are sensitive to the influence, interest and involvement of stakeholders is helpful for long term engagement.

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Conclusion

Developed and successfully implemented a multi-faceted series of QI programmes focussed on the deteriorating patient.

Significant organisational and patient engagement

Success

Project lead engagement and effective QI team support

Expert QI leadership

Deliberate working group membership selection

Hands- on support of testing areas

On-going engagement of stakeholders

Small adjustments and ‘wins’

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Thank you

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Amy Sutton
Young People's Forum
REACH Network

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