A close-up of a logo

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SPSP Paediatric Programme Deteriorating Child & Young Person Change Package

Reviewed July 2024: evidence, tools and resources updated





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**Published Month Year**

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# Introduction

Welcome to the deteriorating child and young person change package.

The aim of the deteriorating child and young person change package is to support teams to improve the recognition, response and review of the deteriorating child and young person. A change package consists of a number of measures supported by activities that, when tested and implemented, bring about improvement. It brings together what is known about best practices and processes based on evidence from literature, research, and the experiences of others.

Why have we developed this change package?

This change package is for paediatric teams participating in deteriorating child and young person improvement work. It will support teams to use quality improvement methods to improve the recognition, response and review of the deteriorating child and young person.

How was it developed?

This change package was co-designed with clinical and quality improvement experts from NHS boards. The clinical experts were from a range of disciplines. Expert Reference Groups (ERG) were convened in March 2023 with representation from across NHS Scotland.

# Contents and how to use the package

What is included in this change package?

* Driver diagram
* Change ideas
* Guides, tools and signposts to the supporting evidence and examples of good practice
* Guidance to support measurement

Guidance on using this change package

This change package is a resource to support NHS boards with improvement in the recognition, response and review of the deteriorating child and young person. It is not expected for teams to work simultaneously on all aspects of the driver diagram. It is designed to assist teams in identifying areas for improvement relevant to their local context. The change ideas and measures are not exhaustive, and it is expected that teams will develop their own to support their identified areas for improvement. We would encourage teams to seek support from their local quality improvement teams in the development of additional measures if required.

Using this package

This document outlines the primary and secondary drivers, including tools and resources relating to that driver. Use the contents page links to go directly to that particular primary or secondary driver.

# Project aim

Setting a project aim

All quality improvement projects should have an aim that is **S**pecific, **T**ime bound, **A**ligned to the NHS board’s objectives and **N**umeric (STAN).

The national aim for SPSP Paediatric Deteriorating Child & Young Person is:

To reduce harm from deterioration by improving the recognition, response and review of the deteriorating child and young person (1).

By [locally agreed %] by 31st March 2025.

# Core programme measures

To reduce harm from deterioration by improving the recognition, response and review of the deteriorating child and young person. Locally agreed measures should include:

* Use of correct age-related PEWS chart (1)
* Reliable use of PEWS observations (1)
* Reliable scoring of PEWS (1)
* Reliable response to children and young people who trigger PEWS (1)

(1) This data is already collected as part of an existing Excellence in Care measure.

# What is a driver diagram?

A driver diagram visually presents an organisation or team’s theory of how an improvement goal will be achieved. It articulates which parts of the system need to change in which way and includes ideas of how to make this happen. It is used to help plan improvement projects and ensure team engagement.

The primary drivers are the key components of the system that need to change to deliver the aim. The secondary drivers are the processes that influence the primary drivers. Changing the processes outlined in the secondary drivers should change the primary drivers and deliver the aim.

Change ideas

Change ideas are specific practical changes the project team can make to alter the processes in the secondary drivers.

The following pages provide change ideas to support improvement in the recognition, response and review of the deteriorating child and young person. They are grouped by the primary driver that they influence. Project teams should select change ideas to test. A range of change ideas will be needed to ensure there are changes to all primary drivers.

This change package does not contain an exhaustive list of change ideas. Project teams can also generate their own change ideas that will help drive change in the secondary drivers. One way to generate ideas is to ask, “How might we?” For example, “How might we engage with children and young people and their families to improve the experience of care when in hospital?”

# 2023 Deteriorating Child & Young Person

# Driver Diagram

What are we trying to achieve…

To reduce harm from deterioration by improving the recognition, response and review of the deteriorating child and young person referenced (1) & (2). By [locally agreed %] by 31st March 2025.

1. Essentials of Safe Care
2. Measurements may include existing Excellence in Care data

We need to ensure…

* Person-centred care (1)
* Recognition of acute deterioration
* Standardised, structured response and review
* Safe communication across care pathways (1)
* Leadership to support a culture of safety at all levels (1)

Which requires…

Person-centred care

* Patients, families and carers are listened to and included
* Person-centred care planning
* Anticipatory care planning & CYPADM
* Discussions with families are well managed

Recognition of acute deterioration

* Observations using PEWS (Scotland)
* Action on staff concern
* Action on patient, family and carer concern

Standardised, structured response and review

* Timely review by appropriate decision maker
* Assessment for causes of acute deterioration
* Escalation
* Regular review and assessment

Safe communication across care pathways (1)

* Interdisciplinary teamwork and collaboration (1)
* Use of standardised communication tools (1)
* Effective communication in different situations (1)

Leadership to support a culture of safety at all levels (1)

* Psychological safety for staff (1)
* Staff wellbeing (1)
* Safe Staffing (1)
* System for learning (1)

# Primary Driver: Person-centred care

## Secondary Driver: Patient, families and carers are listened to and included

Change ideas:

* Access to tools, resources and education to support compassionate care
* Use of ‘what matters to me?’
* Use of patient passports
* Principles of Trauma Informed Practice included in local education programmes
* Use of standardised tools to include the voice of the child/young person

Evidence and Guidelines:

* Heath G, Montgomery H, Eyre C, Cummins C, Pattison H, Shaw R. [Developing a Tool to Support Communication of Parental Concerns When a Child is in Hospital](https://pubmed.ncbi.nlm.nih.gov/27417597/) Healthcare (Basel). 2016 Jan 13;4(1):9.

Tools and Resources:

* Children with Exceptional Healthcare Needs (CEN) Managed Clinical Network [Communicating with Children: 2019](https://tinyurl.com/4n29t84b). Accessed 8 July 2024.
* Children with Exceptional Healthcare Needs (CEN) Managed Clinical Network [NHS Education for Scotland. eLearning Modules: 2023](https://learn.nes.nhs.scot/60619). Accessed 8 July 2024.
* Healthcare Improvement Scotland [What matters to you? 2023](https://www.whatmatterstoyou.scot/). Accessed 8 July 2024.
* NHS Education for Scotland [National trauma training programme 2023](https://learn.nes.nhs.scot/37896)[.](https://learn.nes.nhs.scot/37898.) Accessed 13 July 2023.
* Promoting a more inclusive society (PAMIS), promoting a more inclusive society [PAMIS Digital Passports 2023](https://pamis.org.uk/services/digital-passports/). Accessed 8 July 2024.
* Royal College of Paediatrics and Child Health [RCPCH & Us](https://www.rcpch.ac.uk/work-we-do/rcpch-and-us). Accessed 8 July 2024.
* The Highland Council Comhairle na Gàidhealtachd [Tools for gathering the views of children and young people. 2020](https://tinyurl.com/4tt9due7). Accessed 8 July 2024.

Primary Driver: Person-centred care

## Secondary Driver: Person-centred care planning

Change ideas:

* Local method for documenting unique physiological baseline
* Local mechanism to discuss environmental needs of the child/young person
* Use of specialist resources to support care-experienced young people

Evidence and Guidelines:

* Department of Health and Social Care [Equity in medical devices: independent review - final report. 2024](https://tinyurl.com/ytjanppy). Accessed 8 July 2024.
* Health Foundation [Person-Centred Care Made Simple. 2016](https://tinyurl.com/32wvwdk5). Accessed 8 July 2024.

Tools and Resources:

* Healthcare Improvement Scotland [National Paediatric Early Warning Score Chart Training Package. 2017](https://tinyurl.com/yp66eedv). Accessed 8 July 2024.
* NHS Education for Scotland  [PAMIS: promoting a more inclusive society. Your Posture Matters. 2023](https://learn.nes.nhs.scot/60811)[.](https://learn.nes.nhs.scot/60811.)  Accessed 8 July 2024.
* Who Cares? Scotland [Who Cares? Scotland Resource Library. 2022](https://tinyurl.com/yc8er3bp). Accessed 8 July 2024.

Primary Driver: Person-centred care

## Secondary Driver: Anticipatory care planning & CYPADM

Change ideas:

* Use of tools for anticipatory care planning e.g. ReSPECT, CHAS
* Use of tools & resources for setting and reviewing goals & treatment plans
* CYPADM and anticipatory care plans discussed in huddles and handovers

Evidence and Guidelines:

* National Library of Medicine. Harrop EJ, Boyce K. Beale T, et al. [Fifteen-minute consultation: developing an advance care plan in partnership with the child and family](https://ep.bmj.com/content/103/6/282). Arch Dis Child Educ Pract Ed. 2018;103:282-287.
* Social Care Institute for Excellence. Mental Capacity Act [Care Planning, Involvement and Person-centred Care 2017](https://tinyurl.com/579wbvsc). Accessed 8 July 2024.

Tools and Resources:

* CHAS: Children's Hospices Across Scotland [End of life care 2023](https://www.chas.org.uk/how-we-help/medical-care/end-of-life).  Accessed 8 July 2024.
* Healthcare Improvement Scotland [Anticipatory Care Planning toolkit 2021](https://tinyurl.com/muu6eyxz). Accessed 8 July 2024.
* NHS Education for Scotland [Anticipatory Care Planning [online](https://learn.nes.nhs.scot/60446)]. Accessed 8 July 2024
* NHS Inform [Anticipatory Care Planning [online]](https://tinyurl.com/4cuuzv25). Accessed 8 July 2024.
* Resuscitation Council UK [ReSPECT. 2023](https://www.resus.org.uk/respect)[.](https://www.resus.org.uk/respect.)  Accessed 8 July 2024.

Primary Driver: Person-centred care

## Secondary Driver: Discussions with families are well managed

Change ideas:

* Access to tools and resources to support difficult conversations
* Identified area to hold sensitive conversations
* Local process to help families identify key clinicians

Evidence and Guidelines:

* Linney M, Hain RDW, Wilkinson D, et al. [Achieving consensus advice for paediatricians and other health professionals: on prevention, recognition and management of conflict in paediatric practice](https://adc.bmj.com/content/104/5/413). Arch Dis Child. 2019;104:413-416.
* Martin AE, Beringer AJ. [Advanced care planning 5 years on: An observational study of multi-centred service development for children with life-limiting conditions](https://pubmed.ncbi.nlm.nih.gov/30693557/).Child Care Health Dev. 2019 Mar;45(2):234-240. PMID: 30693557.

Tools and Resources:

* NHS Education for Scotland, Dr Lara Mitchell. Difficult Conversations [Why we need to talk about dying 2023](https://tinyurl.com/38bb49x8). Accessed 8 July 2024.
* Royal College of Paediatrics and Child Health [Health Inequalities Tool 2: Develop Clinical Skills in Talking with Families [online]](https://tinyurl.com/3y3rfn8p). Accessed 8 July 2024.

Primary Driver: Recognition of acute deterioration

## Secondary Driver: Observations using PEWS (Scotland)

Change ideas:

* Reliable use of PEWS
* Consideration of digital PEWS or E-Obs
* Locally agreed education & training for PEWS

Evidence and Guidelines:

* Chong SL, Goh MSL, Ong GYK, Acworth J, Sultana R, Yao SHW, et al. [Do paediatric early warning systems reduce mortality and critical deterioration events among children? A systematic review and meta-analysis](https://pubmed.ncbi.nlm.nih.gov/35801231/). Resuscitation Plus. National Library of Medicine: 2022;11:100262.
* Kramer AA, Sebat F, Lissauer M. [A review of early warning systems for prompt detection of patients at risk for clinical decline](https://pubmed.ncbi.nlm.nih.gov/31246909/). J Trauma Acute Care Surg. 2019;87(Suppl 15):S67–S73.
* Tomasi JN, Hamilton MV, Fan M, Pinkney SJ, Middaugh KL, Parshuram CS, et al. [Assessing the electronic Bedside Paediatric Early Warning System: A simulation study on decision-making and usability](https://pubmed.ncbi.nlm.nih.gov/31765879/). International journal of medical informatics (Shannon, Ireland) 2020 Jan: 133:103969.

Tools and Resources:

* Healthcare Improvement Scotland [National Paediatric Early Warning Score Chart Training Package. 2017](https://tinyurl.com/yp66eedv). Accessed 8 July 2024.
* Healthcare Improvement Scotland [Paediatric Early Warning Score (PEWS) 2021](https://tinyurl.com/34hke4t4). Accessed 8 July 2024.
* Royal College of Nursing [Standards for Assessing, Measuring and Monitoring Vital Signs in Infants, Children and Young People](https://tinyurl.com/592febzm). Accessed 8 July 2024.

# Primary Driver: Recognition of acute deterioration

## Secondary Driver: Action on staff concern

Change ideas:

* Locally agreed escalation process that considers clinical judgment as well as PEWS

Evidence and Guidelines:

* Jensen CS, Lisby M, Kirkegaard H, Loft MI. [Signs and symptoms, apart from vital signs, that trigger nurses’ concerns about deteriorating conditions in hospitalised paediatric patients: A scoping review](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8685853/). Nursing O5pen 2021 -11-10;9(1):57.
* Velhuis LI, Ridderikhof ML, Bergsma L, et al. [Performance of early warning and risk stratification scores versus clinical judgement in the acute setting: a systematic review](https://pubmed.ncbi.nlm.nih.gov/35944968). EMJ. 2022; 39:918-923

Tools and Resources:

* Royal College of Paediatrics and Child Health. [Safe System Framework for Children at Risk of Deterioration. 2022](https://tinyurl.com/4ye8vub6). Accessed 8 July 2024.

Primary Driver: Recognition of acute deterioration

## Secondary Driver: Action on patient, family and carer concern

Change ideas:

* Discussions with families enable them to recognise and report deterioration
* Clear, structured system for families to escalate concerns
* Use of tools for children/young people with communication difficulties

Evidence and Guidelines:

* Albutt AK, O'Hara JK, Conner MT, et al. [Is there a role for patients and their relatives in escalating clinical deterioration in hospital? A systematic review](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5600219/). Health Expect. 2017;20:818–825.
* Albutt A, Roland D, Lawton R, Conner M, O'Hara J. [Capturing Parents' Perspectives of Child Wellness to Support Identification of Acutely Unwell Children in the Emergency Care](https://pubmed.ncbi.nlm.nih.gov/35948290/). J Patient Safe. 2022 Aug 1;18(5):410-414/.
* Allen D, Lloyd A, Edwards D, Grant A, Hood K, Huang C, et al. [Development, implementation and evaluation of an early warning system improvement programme for children in hospital: the PUMA mixed-methods study](https://www.ncbi.nlm.nih.gov/books/NBK577167/). Health and Social Care Delivery Research 2022 Jan;10(1):1-308.
* Gaskin KL, Smith L, Wray J. [An improved congenital heart assessment tool: a quality improvement outcome](https://www.cambridge.org/core/journals/cardiology-in-the-young/article/an-improved-congenital-heart-assessment-tool-a-quality-improvement-outcome/9F4E0B2FF01D23D7BEF8FD576E10A2AC). Cardiology in the young 2023 Apr 01,;33(4):551-556.
* Gill FJ, Leslie GD, Marshall AP. [Parent escalation of care for the deteriorating child in hospital: A health‐care improvement study](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6803393/). Health Expect 2019;22(5):1078.

Tools and Resources:

* Congenital Cardiac Nurses Association [Congenital Heart Assessment Tool E-Resource. 2022](http://www.ccn-a.co.uk/events/chat-tool.)  Accessed 8 July 2024.
* Hunter New England Local Health District [REACH - Patient and Family Activated Escalation. 2023](https://tinyurl.com/bdzabj9h). Accessed 8 July 2024.
* Institute of Child Health, Royal College of Nursing Institute [Paediatric Pain Profile](https://ppprofile.org.uk/)  Accessed 8 July 2024.
* Starship Child Health. 2019 [Kōrero Mai (Talk to me).](https://starship.org.nz/guidelines/korero-mai-talk-to-me/)   Accessed 8 July 2024.

# Primary Driver: Standardised, structured response & review

## Secondary Driver: Timely review by appropriate decision maker

Change ideas:

* Locally agreed process for timely review
* Education programmes to include trigger, escalation and response process
* Use of locally agreed watchers bundle
* Use of standardised structured ward rounds

Evidence and Guidelines:

* Allen D, Lloyd A, Edwards D, Grant A, Hood K, Huang C, et al. [Development, implementation and evaluation of an early warning system improvement programme for children in hospital: the PUMA mixed-methods study](https://www.ncbi.nlm.nih.gov/books/NBK577167/). Health and Social Care Delivery Research Jan 2022;10(1):1-308.
* National Institute for Health and Care Excellence [Chapter 28 Structured ward rounds. 2018](https://www.nice.org.uk/guidance/ng94/evidence/). Accessed 8 July 2024.

Tools and Resources:

* Royal College of Paediatrics and Child Health [Safe system framework for children at risk of deterioration. 2022](https://www.rcpch.ac.uk/resources/safe-system-framework-children-risk-deterioration).  Accessed 8 July 2024.

Primary Driver: Standardised, structured response & review

## Secondary Driver: Assessment for causes of acute deterioration

Change idea:

* Use of evidence-based tools e.g. Sepsis 6

Evidence and Guidelines:

* Academy of Medical Royal Colleges [Statement on the initial antimicrobial treatment of sepsis. 2022](https://www.aomrc.org.uk/reports-guidance/statement-on-the-initial-antimicrobial-treatment-of-sepsis-v2-0/). Accessed 8 July 2024.
* National Institute for Health and Care Excellence [Suspected sepsis: recognition, diagnosis and early management 2024](https://www.nice.org.uk/guidance).  Accessed 8 July 2024.

Tools and Resources:

* Resuscitation Council UK [Paediatric Advanced Life Support Guidelines 2021](https://www.resus.org.uk/library/2021-resuscitation-guidelines/paediatric-advanced-life-support-guidelines.%20Accessed%208%20July%202024). [Accessed 8 July 2024](https://www.resus.org.uk/library/2021-resuscitation-guidelines/paediatric-advanced-life-support-guidelines.%20Accessed%208%20July%202024).
* Royal College of Paediatrics and Child Health [Clinical Guideline Directory 2024](https://www.rcpch.ac.uk/resources/clinical-guideline-directory). Accessed 8 July 2024.

Primary Driver: Standardised, structured response & review

## Secondary Driver: Escalation

Change ideas:

* Locally agreed process for escalation
* Use of existing evidence based guidelines e.g. bronchiolitis
* Use of hospital huddles to escalate care
* Admission information includes how to use call system effectively

Evidence and Guidelines:

* National Institute for Health and Care Excellence [NICE Guidance Children and Young People 2023](https://www.nice.org.uk/Guidance/population-groups/children-and-young-people).  Accessed 8 July 2024.

Tools and Resources:

* Healthcare Improvement Scotland [Paediatric Early Warning Score (PEWS) 2021. Accessed 8 July 2024](https://tinyurl.com/34hke4t4.%20Accessed%208%20July%202024).
* Healthcare Improvement Scotland [Understanding the key components of effective morning Hospital Huddles. 2021](https://tinyurl.com/t7cadenp). Accessed 8 July 2024.
* Royal College of Paediatrics and Child Health [National guidance for the management of children in hospital with viral respiratory tract infections. 2023](https://tinyurl.com/3dsb8tab). Accessed 8 July 2024.

Primary Driver: Standardised, structured response & review

## Secondary Driver: Regular review and assessment

Change ideas:

* Local escalation process includes follow-up clinical review

# Primary Driver: Safe communication across care pathways

## Secondary Driver: Interdisciplinary teamwork and collaboration

Change ideas:

* Use of hospital huddles to improve situational awareness
* Use of MDT shared documentation
* Locally agreed system of communication between teams
* Scotstar watchers bundle

Evidence and Guidelines:

* Stocker M, Pilgrim SB, Burmester M, Allen ML, Gijselaers WH. [Interprofessional team management in pediatric critical care: some challenges and possible solutions. JMultidiscip Healthcare](https://pubmed.ncbi.nlm.nih.gov/26955279/). 2016 Feb 24;9:47-58.
* Theilen U, Leonard P, Jones P, Ardill R, Weitz J, Agrawal D, Simpson D. [Regular in situ simulation training of paediatric medical emergency team improves hospital response to deteriorating patients Resuscitation 2013](https://pubmed.ncbi.nlm.nih.gov/28359769/) . Feb;84(2):218-22.

Tools and Resources:

* Healthcare Improvement Scotland [Understanding the key components of effective morning Hospital Huddles 2021](https://tinyurl.com/t7cadenp). Accessed 8 July 2024.
* Institute for Healthcare Improvement (IHI) [Sustaining and Strengthening Safety Huddles 2018](https://tinyurl.com/47fs7uda). Accessed 8 July 2024.

Primary Driver: Safe communication across care pathways

## Secondary Driver: Use of standardised communication tools

Change idea:

* SBAR tool

Evidence and Guidelines:

* Royal College of Nursing. [Standards for Assessing, Measuring and Monitoring Vital Signs in Infants, Children and Young People 2](https://www.rcn.org.uk/professional-development/publications/pub-005942). 2017.

Tools and Resources:

* NHS Education for Scotland [Structured Handover Education Project](https://learn.nes.nhs.scot/704/patient-safety-zone/structured-handover-education-project.). Accessed 8 July 2024.
* NHS Education for Scotland [SBAR](https://learn.nes.nhs.scot/3408). Accessed 8th July 2024.

Primary Driver: Safe communication across care pathways

## Secondary Driver: Effective communication in different situations

Change ideas:

* MDT ward/unit safety huddles & briefs
* Procedures in place for communication between centres
* Mid-shift check ins

Evidence and Guidelines:

* Joseph MM, Mahajan P, Snow SK, Ku BC, Saidinejad M. [Optimising Paediatric Patient Safety in the Emergency Care Setting](https://publications.aap.org/pediatrics/article/150/5/e2022059674/189658/Optimizing-Pediatric-Patient-Safety-in-the?autologincheck=redirected). Journal of emergency nursing 2022 Nov;48(6):652-665

Tools and Resources:

* Healthcare Improvement Scotland. Critical Situations [Management of Communication in Different Situations [online]](https://tinyurl.com/mr27b7d3). Accessed 8 July 2024.
* Institute for Healthcare Improvement (IHI) [Patient Safety Essentials Toolkit [online]](https://tinyurl.com/3kmstzwz). Accessed 8 July 2024.
* NHS Education for Scotland [Leading for the Future: Communication Skills Resources [online]. 2018](https://tinyurl.com/yc4erx6b). Accessed 8 July 2024.
* NHS Scotland Workforce [Guide to Supportive and Difficult Conversations [online]](https://tinyurl.com/34nh9bzk). Accessed 8 July 2024.

# Primary Driver: Leadership to support a culture of safety

## Secondary Driver: Psychological safety for staff

Change ideas:

* Visible supportive leadership
* Create forums to allow workforce to generate improvement ideas
* Local mentoring system

Evidence and Guidelines:

* Edmondson A. [Psychological Safety and Learning Behaviour in Work Teams](https://www.researchgate.net/publication/243774322_Psychological_Safety_and_Learning_Behavior_in_Work_Teams). Administrative Science Quarterly. 1999 Jun;44(2):350-383.
* NHS Providers [Psychological Safety and Why It Matters [online] 2020](https://nhsproviders.org/news-blogs/blogs/psychological-safety-and-why-it-matters). Accessed 8 July 2024.

Tools and Resources:

* Healthcare Improvement Scotland [The Essentials of Safe Care: Psychological Safety. 2021](https://tinyurl.com/7awj9r2f).  Accessed 8 July 2024.
* NHS Education for Scotland. 2024 [Psychological Safety. [online].](https://learn.nes.nhs.scot/60999.%20Accessed%208%20July%202024) Accessed July 2024.
* NHS Education for Scotland [How Do You Create Psychological Safety at Work? [online] 2024](https://learn.nes.nhs.scot/61001). Accessed 8 July 2024.
* NHS Horizons [A practical guide to the art of psychological safety in the real world of health and care 2021](https://tinyurl.com/ytt836ts). Accessed 8 July 2024.

Primary Driver: Leadership to support a culture of safety

## Secondary Driver: Staff wellbeing

Change ideas:

* Use of standardised feedback tools e.g. iMatter
* Celebrate success
* Use of what matters to me
* Access to mental health first aiders
* Access to Peer Support
* Hot and cold debriefs

Evidence and Guidelines:

* The kings fund [The courage of compassion supporting nurses and midwives to deliver high-quality care. 2020](https://www.kingsfund.org.uk/publications/courage-compassion-supporting-nurses-midwives). Accessed 8 July 2024.

Tools and Resources:

* Healthcare Improvement Scotland [The Essentials of Safe Care: Staff Wellbeing 2021](https://tinyurl.com/8faerrv3). Accessed 8 July 2024.
* Healthcare Improvement Scotland [What matters to you? 2023](https://www.whatmatterstoyou.scot/).  Accessed 8 July 2024.
* NHS Education for Scotland [Psychological First Aid and Debriefing - COVID 19. 2020](https://learn.nes.nhs.scot/29206)[.](https://clinicaltoolkit.scot.nhs.uk/media/1243/summary-of-psychological-debriefing-final-1.pdf)  Accessed 8 July 2024.
* NHS Greater Glasgow & Clyde [Peer Support Network 2023](https://tinyurl.com/45uan3j4). Accessed 8 July 2024.
* Royal College of Paediatrics and Child Health [Wellbeing as paediatricians - Creating Environments Where We Can Thrive at Work 2023](https://www.rcpch.ac.uk/news-events/news/thrive-at-work-podcast).  Accessed 8 July 2024.

Primary Driver: Leadership to support a culture of safety

## Secondary Driver: Safe Staffing

Change ideas:

* Staff education & awareness about safe staffing act (2019)
* Effective rostering
* Real-time staff risk assessment
* Clinical supervision
* Mechanism to identify staff operating out with their usual area

Evidence and Guidelines:

* Burton CR, Rycroft-Malone J, Williams L, Davies S, McBride A, Hall B, et al. [NHS managers' use of nursing workforce planning and deployment technologies: a realist synthesis](https://www.ncbi.nlm.nih.gov/books/NBK533067/). Health Serv Deliv Res. 2018;6(36).
* Griffiths P, Recio-Saucedo A, Dall&#39;ora C, Briggs J, Maruotti A, Meredith P, et al. [The association between nurse staffing and omissions in nursing care: A systematic review](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6033178/). J Adv Nurs 2018 -04-23;74(7):1474.

Tools and Resources:

* Healthcare Improvement Scotland [Workforce Capacity and Capability [online] 2021](https://tinyurl.com/ywjpbcru). Accessed 8 July 2024.
* Healthcare Improvement Scotland [Inclusion and involvement. [online]. 2021](https://tinyurl.com/rahzm6nc). Accessed 8 July 2024.
* Healthcare Improvement Scotland [Staffing level (workload) tools and methodology. [online]](https://tinyurl.com/4f8rrsyj). Accessed 8 July 2024.
* NHS Education for Scotland [Clinical Supervision Resource](https://learn.nes.nhs.scot/3580/clinical-supervision) 2023.  Accessed 8 July 2024.
* NHS Education for Scotland [Health and Care Staffing in Scotland. [online]. 2019](https://learn.nes.nhs.scot/61827). Accessed 8 July 2024.

Primary Driver: Leadership to support a culture of safety

## Secondary Driver: System for learning

Change ideas:

* Use of tools and resources to support patient safety e.g. NES Safety Culture Cards
* Involvement of resuscitation teams in improvement work
* Local system for learning and support for complaints e.g. care opinion
* Local system to learn from adverse events e.g. M&M, SAER’s, Child Death Reviews
* Create opportunities to learn from excellence
* Use of simulation training

Evidence and Guidelines:

* Kolovos NS, Gill J, Michelson PH, Doctor A, Hartman ME. [Reduction in Mortality Following Paediatric Rapid Response Team Implementation](https://pubmed.ncbi.nlm.nih.gov/29528975/). Paediatric Critical Care Med. 2018 May:19(5):477-482.
* Theilen U, Fraser L, Jones P, Leonard P, Simpson D. [Regular in-situ simulation training of paediatric medical emergency team leads to sustained improvements in hospital response to deteriorating patients, improved outcomes in intensive care and financial savings Resuscitation. 2017](https://pubmed.ncbi.nlm.nih.gov/28359769/). Jun;115:61-67.

Tools and Resources:

* [Care Opinion 2023](https://www.careopinion.org.uk/).  Accessed 8 July 2024.
* Healthcare Improvement Scotland [Quality Management System. 2023](https://tinyurl.com/5nff793s) . Accessed 8 July 2024.
* Healthcare Improvement Scotland [Supporting parents, families and carers in Scotland with the child death review process 2023](https://tinyurl.com/atv3vjj). Accessed 8 July 2024.
* Healthcare Improvement Scotland.: Available from: [The Essentials of Safe Care: System for Learning. 2021](https://tinyurl.com/a4xdk7c7). Accessed 8 July 2024.
* NHS Education for Scotland [Safety Culture Discussion Cards 2023](https://tinyurl.com/4bsapcu8). Accessed 8 July 2024

# Measurement

Measurement is an essential part of improvement as it helps the project team understand if the changes they are making are leading to improved care. Below you will see an outline of three types of measures used in improvement and a link to the measurement framework.

Outcome measures

Outcome measures are used to understand if the changes are resulting in improvements towards the aim.

Process measures

Process measures demonstrate that change ideas are improving the underlying processes that contribute to the recognition of and response to deterioration.

Balancing measures

Balancing measures are used to determine if the changes are affecting things elsewhere in the system (unintended consequences).

More detailed information can be found in the measurement framework on the [SPSP Paediatric website](https://ihub.scot/improvement-programmes/scottish-patient-safety-programme-spsp/spsp-paediatric-programme/resources-to-support-paediatric-care/).

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Visit the [SPSP Paediatric Programme website](https://ihub.scot/improvement-programmes/scottish-patient-safety-programme-spsp/spsp-paediatric-programme/)

Visit the [Essentials of Safe Care website](https://ihub.scot/improvement-programmes/scottish-patient-safety-programme-spsp/spsp-essentials-of-safe-care/)

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