SPSP Acute Adult Programme Sepsis Change Package 2023

Extended version with resources

Introduction

Background

The Scottish Patient Safety Programme (SPSP) Deteriorating Patient Programme includes a focus on adult sepsis in acute hospitals.

This publication is the latest version of the SPSP sepsis change package, first published in 2012, and last updated in 2018.

The change package provides an evidence-informed resource to support teams to improve outcomes for adults with sepsis.

Overview

The main driver diagram page includes a **National aim**, **Primary Drivers** and **Secondary Drivers.**

Each primary driver is broken down to include **secondary drivers** and associated **change ideas**.

Evidence, guidelines, tools, and resources are included for each secondary driver.

Additional resources available on our website:

- Shorter version without tools and resources
- Accessible version with tools and resources
- Measurement framework

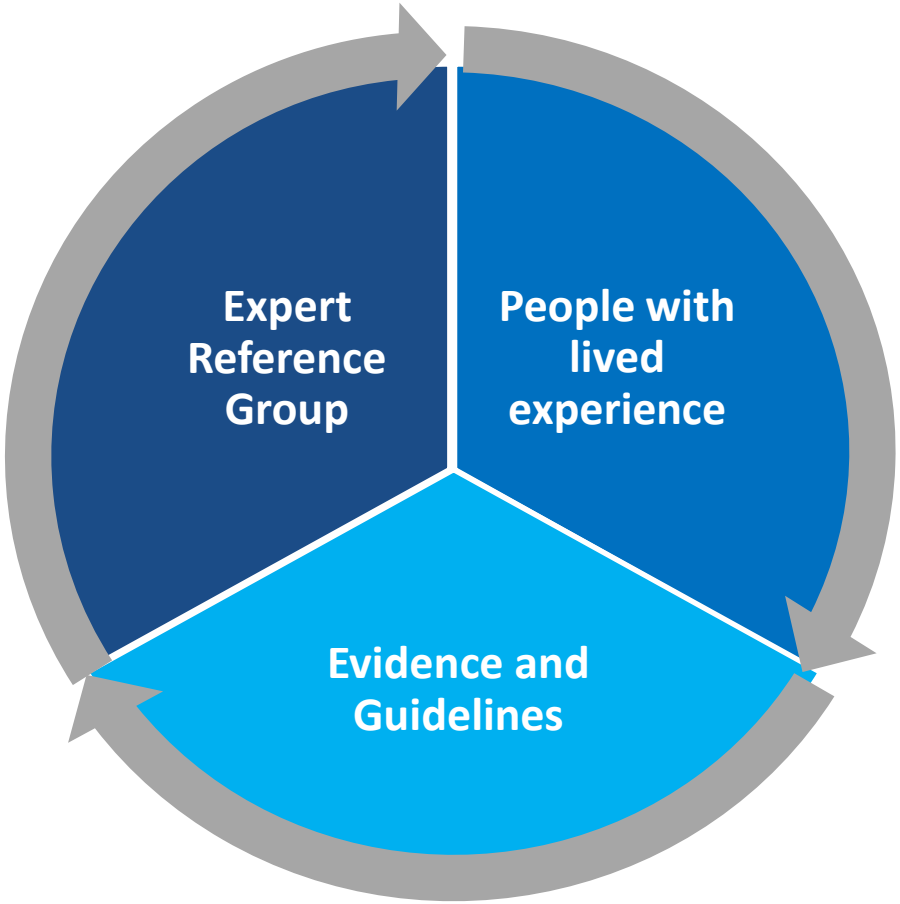
This is an interactive document.

Clicking the **home icon**  will return you to the main driver diagram.

Clicking the **arrow icon**  will return you to the primary driver associated with that section.

How the change package was developed

An **Expert Reference Group (ERG)** was formed as part of the co-design process. The ERG included clinical and quality improvement colleagues from across NHS Scotland.



With support from Sepsis Research (FEAT), **people with lived experience of sepsis** were invited to contribute to the driver diagram by sharing their perspectives using discovery conversations.

The update has been informed by the latest **evidence and guidance**, including publications from the Academy of Medical Royal Colleges (AoMRC) (2022), the Surviving Sepsis Campaign Adult Guidelines (2021) and SIGN 167 Care of Deteriorating Patients guideline (2023).

Sepsis Driver Diagram 2023

Healthcare Improvement Scotland | Scottish Patient Safety Programme

What are we trying to achieve…	We need to ensure…	Which requires…
Improve outcomes for people with sepsis by reducing infection-related mortality by 10%	Early recognition of sepsis	Recognition of suspected infection and new organ dysfunction Regular reassessment for worsening physiology or clinical concern Recognition and escalation of patient, family and carer concern Escalation of clinical concern
	Timely structured response to sepsis	A structured response to deterioration Sepsis Six and source control informed by illness severity and likelihood of infection Effective antimicrobial stewardship Senior clinical decision maker review
	Safe communication*	Person and family centred care planning* Effective multidisciplinary and multiagency team working Psychological safety to support escalation of concerns
	Leadership* to support a culture of high quality care and patient safety	Visible leadership at all levels Safe staffing* and resources to enable delivery of safe care System for learning* to support continuous improvement Staff wellbeing*

*SPSP Essentials of Safe Care

Primary Driver
Early recognition of sepsis

Secondary drivers	Change ideas			
Recognition of infection and new organ dysfunction	Use of NEWS2 to identify deterioration and organ dysfunction	Process to determine likelihood of infection, e.g. AoMRC decision making framework	Use of electronic observations to support clinical decision making	Process to identify variation in presentation, e.g. considerations of ethnicity in pulse oximetry, deterioration in optimal posture
Regular reassessment for worsening physiology or clinical concern	NEWS2 charting allows documentation of clinical judgement that may alter frequency of observations	Patients, families, and carers are given advice to support identification of further deterioration	Local process to proactively identify and reassess people at higher risk of deterioration, e.g. neutropenia	Patient, family and carer view of illness and concerns consistently sought e.g. asking 'how well are you feeling compared to the last time we asked you?'
Recognition and escalation of patient, family and carer concern	Provision of accessible information to patients, families, and carers to support early recognition and access to treatment in sepsis	Process for patients, families, and carers to raise concerns about acute deterioration	Locally agreed process for staff to document and escalate concerns raised by patients, families and carers	Process to reliably provide feedback to the person who raised concern
Escalation of clinical concern	Locally agreed escalation framework that incorporates clinical concern	Reliable notification of deterioration to consultant in charge of patient's care	Reliable timely triage of people with sepsis including in transition from NHS24, primary care, and SAS	Consider system-wide escalation mechanisms e.g. outreach team, electronic NEWS2 and decision support

Primary Driver:
Early recognition of sepsis

Secondary drivers	Change ideas			
Recognition of infection and new organ dysfunction	Use of NEWS2 to identify deterioration and organ dysfunction	Process to determine likelihood of infection, e.g. AoMRC decision making framework	Use of electronic observations to support clinical decision making	Process to identify variation in presentation, e.g. considerations of ethnicity in pulse oximetry, deterioration in optimal posture

Evidence and Guidelines:

- Academy of Medical Royal Colleges. Statement on the initial antimicrobial treatment of sepsis V2.0 2022.
- Bangash MN, Hodson J, Evison F, et al. Impact of ethnicity on the accuracy of measurements of oxygen saturations: A retrospective observational cohort study. EClinicalMedicine. 2022;48:101428.
- Nsutebu EF, Ibarz-Pavón AB, Kanwar E, et al. Advancing quality in sepsis management: a large-scale programme for improving sepsis recognition and management in the North West region of England. Postgrad Med J. 2018;94(1114):463-468.
- Scottish Intercollegiate Guidelines Network. SIGN 167 Care of deteriorating patients. A national clinical guideline. 2023.
- Society of Critical Care Medicine. Surviving Sepsis Campaign Guidelines 2021. 2021.
- Warttig S, Alderson P, Evans DJ, Lewis SR, Kourbeti IS, Smith AF. Automated monitoring compared to standard care for the early detection of sepsis in critically ill patients. Cochrane Database Syst Rev. 2018;6(6):CD012404.

Tools and Resources:

- NHS Education for Scotland (NES). National early warning score (NEWS) in NHS Scotland. 2021.
- Nutbeam T, Daniels R on behalf of the UK Sepsis Trust. Clinical Tools. 2023.
- Royal College of Physicians. National Early Warning Score (NEWS). 2017.

Primary Driver:
Early recognition of sepsis

Secondary drivers	Change ideas			
Regular reassessment for worsening physiology or clinical concern	NEWS2 charting allows documentation of clinical judgement that may alter frequency of observations	Patients, families, and carers are given advice to support identification of further deterioration	Local process to proactively identify and reassess people at higher risk of deterioration, e.g. neutropenia	Patient, family and carer view of illness and concerns consistently sought e.g. asking 'how well are you feeling compared to the last time we asked you?'

Evidence and Guidelines:

- Goodacre S, Fuller G, Conroy S, Hendrikse C. Diagnosis and management of sepsis in the older adult. BMJ. 2023;382:e075585.
- National Institute for Health and Care Excellence. National Early Warning Score systems that alert to deteriorating adult patients in hospital. 2020.
- Scottish Intercollegiate Guidelines Network. SIGN 167 Care of deteriorating patients. A national clinical guideline. 2023.

Tools and Resources:

- NHS Education for Scotland (NES). National early warning score (NEWS) in NHS Scotland. 2021.
- NHS Inform. Communication and involving you. 2023.

Primary Driver:
Early recognition of sepsis

Secondary drivers	Change ideas			
Recognition and escalation of patient, family and carer concern	Provision of accessible information to patients, families, and carers to support early recognition and access to treatment in sepsis	Process for patients, families, and carers to raise concerns about acute deterioration	Locally agreed process for staff to document and escalate concerns raised by patients, families and carers	Process to reliably provide feedback to the person who raised concern

Evidence and Guidelines:

- Bucknall T, Quinney R, Booth L, McKinney A, Subbe CP, Odell M. When patients (and families) raise the alarm: Patient and family activated rapid response as a safety strategy for hospitals. Future Healthc J. 2021;8(3):e609-e612.
- Demos. Martha's Rule: A new policy to amplify patient voice and improve safety in hospitals. 2023.
- McCoy L, Lewis JH, Simon H, et al. Learning to Speak Up for Patient Safety: Interprofessional Scenarios for Training Future Healthcare Professionals. J Med Educ Curric Dev. 2020;7:2382120520935469.
- McKinney A, Fitzsimons D, Blackwood B, McGaughey J. Patient and family involvement in escalating concerns about clinical deterioration in acute adult wards: A qualitative systematic review. Nurs Crit Care. 2021;26(5):352-362.
- Mills M. Martha's rule: a hospital escalation system to save patients' lives. BMJ. 2023;383:2319.

Tool and Resources:

- NHS Inform. Communication and involving you. 2023.
- Sepsis Research FEAT. Sepsis Awareness. 2023.

Primary Driver:
Early recognition of sepsis

Secondary drivers	Change ideas			
Escalation of clinical concern	Locally agreed escalation framework that incorporates clinical concern	Reliable notification of deterioration to consultant in charge of patient's care	Reliable timely triage of people with sepsis including in transition from NHS24, primary care, and SAS	Consider system-wide escalation mechanisms e.g. outreach team, electronic NEWS2 and decision support

Evidence and Guidelines:

- Care Quality Commission. PEOPLE FIRST: Escalation. 2023.
- Ede J, Petrinic T, Westgate V, et al. Human factors in escalating acute ward care: a qualitative evidence synthesis. BMJ Open Quality 2021;10:e001145.
- Scottish Intercollegiate Guidelines Network. SIGN 167 Care of deteriorating patients. A national clinical guideline. 2023.
- Wood C, Chaboyer W, Carr P. How do nurses use early warning scoring systems to detect and act on patient deterioration to ensure patient safety? A scoping review. Int J Nurs Stud. 2019;94:166-178.

Tools and Resources:

- Healthcare Improvement Scotland. SPSP Acute Adult. Principles of Structured Response to Deterioration. 2022.
- Healthcare Improvement Scotland. SPSP Acute Adult. Structure Response to Deterioration Mapping Tool. 2023.
- NHS Education for Scotland (NES). National early warning score (NEWS) in NHS Scotland. 2021.

Primary Driver

Timely structured response to sepsis

Secondary drivers	Change ideas			
A structured response to deterioration	Locally agreed standardised approach to structured response to deterioration	Shared decision making supported by access to any existing future care plan	Locally agreed criteria for completion of person centred TEP	Reassessment criteria documented as part of management plan e.g., worsening NEWS2 despite treatment
Sepsis Six and source control informed by illness severity and likelihood of infection	Use of AoMRC decision making framework to support timely delivery of Sepsis Six	Process to ensure assessment for source control and implementing any source control interventions in a timely manner	Collection of appropriate samples for infection investigations, including blood cultures, prior to first antimicrobial	Clinical assessment considers non-bacterial causes (e.g. viral infection) and associated de-escalation
Effective Antimicrobial stewardship	Process to establish true allergy status to maximise opportunity for first line antimicrobials	Antimicrobial plan documented in clinical notes, HEPMA and handover	Daily antimicrobial review informed by clinical assessment and microbiology results	Antimicrobials prescribed in line with local guidance, severity, and relevant past medical history	Daily antimicrobial review considers IV-Oral Switch Therapy (IVOST) in line with local guidance
Senior clinical decision maker review	Local escalation processes enable early involvement of a senior clinical decision maker	Locally agreed process for critical care review	Consultant review at least daily and within 14hrs of hospital admission	Local escalation processes set out who to contact and when

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Timely structured response to sepsis

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A structured response to deterioration	Locally agreed standardised approach to structured response to deterioration	Shared decision making supported by access to any existing future care plan	Locally agreed criteria for completion of person centred TEP	Reassessment criteria documented as part of management plan e.g., worsening NEWS2 despite treatment

Evidence and Guidelines:

- Pearse W, Oprescu F, Endacott J, Goodman S, Hyde M, O'Neill M. Advance care planning in the context of clinical deterioration: a systematic review of the literature. Palliat Care. 2019;12:1178224218823509.
- Pel-Littel et al. Barriers and facilitators for shared decision making in older patients with multiple chronic conditions: a systematic review. BMC Geriatr. 2021;21:112. https://doi.org/10.1186/s12877-021-02050-y
- Scottish Intercollegiate Guidelines Network. SIGN 167 Care of deteriorating patients. A national clinical guideline. 2023.
- Taylor DR, Lightbody CJ, Venn R, Ireland A. Responding to the deteriorating patient: The rationale for treatment escalation plans. J R Coll Physicians Edinb. 2022;52(2):172-9.

Tools and Resources:

- Healthcare Improvement Scotland. Right Decision Service. Response to deterioration. 2023.
- Healthcare Improvement Scotland. SPSP Acute Adult. Principles of Structured Response to Deterioration. 2022.
- Healthcare Improvement Scotland. SPSP Acute Adult. Structure Response to Deterioration Mapping Tool. 2023.

Primary Driver:
Timely structured response to sepsis

Secondary drivers	Change ideas			
Sepsis Six and source control informed by illness severity and likelihood of infection	Use of AoMRC decision making framework to support timely delivery of Sepsis Six	Process to ensure assessment for source control and implementing any source control interventions in a timely manner	Collection of appropriate samples for infection investigations, including blood cultures, prior to first antimicrobial	Clinical assessment considers non-bacterial causes (e.g. viral infection) and associated de-escalation

Evidence and Guidelines:

- Academy of Medical Royal Colleges. Statement on the initial antimicrobial treatment of sepsis V2.0. 2022.
- Goodacre S, Fuller G, Conroy S, Hendrikse C. Diagnosis and management of sepsis in the older adult. BMJ 2023; 382 :e075585
- National Institute for Health and Care Excellence. Guidance. Start smart then focus: antimicrobial stewardship toolkit for inpatient care settings. 2023.
- NHS National Services Scotland. National Infection Prevention and Control Manual. 2023.
- Society of Critical Care Medicine. Surviving Sepsis Campaign Guidelines 2021.

Tools and Resources:

- The UK Sepsis Trust. Our Clinical Tools. 2024.
- Antimicrobial prescribing guidance and resources are available from collections within the Healthcare Improvement Scotland Right Decision Service.

Primary Driver:
Timely structured response to sepsis

Secondary drivers	Change ideas				
Effective Antimicrobial stewardship	Process to establish true allergy status to maximise opportunity for first line antimicrobials	Antimicrobial plan documented in clinical notes, HEPMA and handover	Daily antimicrobial review informed by clinical assessment and microbiology results	Antimicrobials prescribed in line with local guidance, severity, and relevant past medical history	Daily antimicrobial review considers IV-Oral Switch Therapy (IVOST) in line with local guidance

Evidence and Guidelines:

- National Institute for Health and Care Excellence. Guidance. Start smart then focus: antimicrobial stewardship toolkit for inpatient care settings. 2023.
- Atkins PE, Bastin MLT, Morgan RJ, Laine ME, Flannery AH. Pharmacist Involvement in Sepsis Response and Time to Antibiotics: A Systematic Review. J Am Coll Clin Pharm. 2023;6(8):942-953.
- Ture Z, Güner R, Alp E. Antimicrobial stewardship in the intensive care unit. J Intensive Med. 2022;3(3):244-253.

Tools and Resources:

- Antimicrobial prescribing guidance and resources are available from collections within the Healthcare Improvement Scotland Right Decision Service.

Primary Driver:
Timely structured response to sepsis

Secondary drivers	Change ideas			
Senior clinical decision maker review	Local escalation processes enable early involvement of a senior clinical decision maker	Locally agreed process for critical care review	Consultant review at least daily and within 14hrs of hospital admission	Local escalation processes set out who to contact and when

Evidence and Guidelines:

- Campling N, Cummings A, Myall M, et al. Escalation-related decision making in acute deterioration: a retrospective case note review. BMJ Open. 2018;8(8):e022021.
- National Institute for Health and Care Excellence. Emergency and acute medical care in over 16s. Quality standard [QS174]. 2018.
- Scottish Intercollegiate Guidelines Network. SIGN 167 Care of deteriorating patients. A national clinical guideline. 2023.

Tools and Resources:

- Healthcare Improvement Scotland. Right Decision Service. Response to deterioration. 2023.

Primary Driver
Safe communication*

Secondary drivers	Change ideas				
Person and family centred care planning	Existing complex care plans, e.g. patient passports, used to inform acute care planning	Locally agreed process to understand pre-hospital baseline	Use of 'what matters to you' approach to plan and deliver care	Use of the word 'sepsis' in person centred conversations at point of deterioration	Documented person centred discussion with patient and family about recovery trajectory and rehabilitation planning
Effective multidisciplinary and multiagency team working	Patients of concern identified during board rounds, unit safety briefs and hospital huddles	Structured handovers within and between teams e.g. use of SBAR	Process for engaging all specialist and community teams involved in the person's care, e.g. social work, home care	Clarity of team roles and responsibilities in the care of a deteriorating patient	
Psychological safety to support escalation of concerns	Processes to support a culture which supports staff and students to raise concerns	Process for managers at all levels to effectively recognise and respond to patient safety concerns	Promotion of Speak Up advocates and ambassadors to encourage staff to raise concerns	Process to reliably provide feedback to the person who reported concern	

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Safe communication*

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Evidence and Guidelines:

- Grant N, Hewitt O, Ash K, et al. The experiences of sepsis in people with a learning disability – a qualitative investigation. Br J Learn Disabil. 2021; 50(4):514-524.
- Islam Z, Pollock K, Patterson A, et al. Thinking ahead about medical treatments in advanced illness: a qualitative study of barriers and enablers in end-of-life care planning with patients and families from ethnically diverse backgrounds. Health Soc Care Deliv Res. 2023;11(7):1-135.
- King HA, Doernberg SB, Miller J, et al. Patients' Experiences With Staphylococcus aureus and Gram-negative Bacterial Bloodstream Infections: A Qualitative Descriptive Study and Concept Elicitation Phase To Inform Measurement of Patient-reported Quality of Life. Clin Infect Dis. 2021;73(2):237-247.
- Warner BE, Lound A, Grailey K, Vindrola-Padros C, Wells M, Brett SJ. Perspectives of healthcare professionals and older patients on shared decision-making for treatment escalation planning in the acute hospital setting: a systematic review and qualitative thematic synthesis. EClinicalMedicine. 2023;62:102144

Tools and Resources:

- The Health Foundation. Person-centred care made simple. What everyone should know about person-centred care.
- NHS Education for Scotland (NES). Equality and Diversity zone. 2023.
- NHS Education for Scotland (NES). Once for NES: Learning Disabilities. Equal Health. 2023.
- NHS Education for Scotland (NES). Person-centred resources. 2023.

Primary Driver:
Safe communication*

Secondary drivers	Change ideas			
Effective multidisciplinary and multiagency team working	Patients of concern identified during board rounds, unit safety briefs and hospital huddles	Structured handovers within and between teams e.g. use of SBAR	Process for engaging all specialist and community teams involved in the person's care, e.g. social work, home care	Clarity of team roles and responsibilities in the care of a deteriorating patient

Evidence and Guidelines:

- Association of Ambulance Chief Executives. Delayed hospital handovers: Impact assessment of patient harm. 2021
- Hong JQY, Chua WL, Smith D, Huang CM, Goh QLP, Liaw SY. Collaborative practice among general ward staff on escalating care in clinical deterioration: A systematic review. J Clin Nurs. 2023;32(17-18):6165-6178.
- McLaney E, Morassaei S, Hughes L, Davies R, Campbell M, Di Prospero L. A framework for interprofessional team collaboration in a hospital setting: Advancing team competencies and behaviours. Healthcare Management Forum. 2022;35(2):112-117.
- Scottish Intercollegiate Guidelines Network. SIGN 167 Care of deteriorating patients. A national clinical guideline. 2023.

Tools and Resources:

- Healthcare Improvement Scotland. Understanding the key components of effective morning Hospital Huddles. 2021.
- NHS Education Scotland (NES). SBAR. 2017.

Primary Driver:
Safe communication*

Secondary drivers	Change ideas			
Psychological safety which supports escalation of concerns	Processes to support a culture which supports staff and students to raise concerns	Process for managers at all levels to effectively recognise and respond to patient safety concerns	Promotion of Speak Up advocates and ambassadors to encourage staff to raise concerns	Process to reliably provide feedback to the person who reported concern

Evidence and Guidelines:

- Martin GP, Chew S, Dixon-Woods M. Why do systems for responding to concerns and complaints so often fail patients, families and healthcare staff? A qualitative study. Social Science & Medicine. 2021. 287:114375.
- NHS Providers. Psychological Safety and Why It Matters. 2020.
- Pian-Smith MC, Simon R, Minehart RD, et al. Teaching residents the two-challenge rule: a simulation-based approach to improve education and patient safety. Simul Healthc. 2009;4(2):84-91

Tools and Resources:

- NHS Education Scotland (NES). National Whistleblowing Standards training. 2021.
- NHS Education Scotland (NES). Speaking up: national whistleblowing guidance for nursing and midwifery students in Scotland. 2021.

Primary Driver

Leadership to support a culture of safety

Secondary drivers	Change ideas			
Visible leadership at all levels	Conduct and share learning from leadership walkrounds	Opportunity for senior leaders to review sepsis related data and trends	Access to clinical and improvement leadership time to support sepsis improvement work	Sepsis improvement work aligns with organisational priorities
Safe staffing and resources to enable delivery of safe care	Identify and mitigate staffing needs using real time staffing tools, including acuity assessment	Process to escalate staffing shortfalls	Education and induction includes local processes for early recognition and response for sepsis	Identify and mitigate time periods where escalation response is less reliable
System for learning to support continuous improvement	Collect, share, and act on data and learning between teams, hospitals, and boards	Identify and share learning through existing processes e.g. MDT morbidity and mortality meetings	Structured process for multidisciplinary hot and cold debriefs	Forums for staff, patients and families, to identify areas for improvement
Staff wellbeing	Use of effective health and wellbeing conversations to identify and mitigate risks to wellbeing	Prioritise civility through communication and teamwork, e.g. use of TeamSTEPPS	Support job satisfaction through evidence based interventions, e.g. Professional Identity Development Programme	Access to senior support and discussion for all staff, e.g. through clinical supervision

Primary Driver:
Leadership to support a culture of safety

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Visible leadership at all levels	Conduct and share learning from leadership walkrounds	Opportunity for senior leaders to review sepsis related data and trends	Access to clinical and improvement leadership time to support sepsis improvement work	Sepsis improvement work aligns with organisational priorities

Evidence and Guidelines:

- Churruca K, Ellis LA, Pomare C, et al. Dimensions of safety culture: a systematic review of quantitative, qualitative and mixed methods for assessing safety culture in hospitals. BMJ Open. 2021;11(7):e043982
- Foster, M., Mha, B. S., & Mazur, L. (2023). Impact of leadership walkarounds on operational, cultural and clinical outcomes: a systematic review. BMJ open quality, 12(4), e002284.
- Kirkpatrick I, Altanlar A, Veronesi G. Doctors in leadership roles: consequences for quality and safety. Public Money & Management. 2023 Jun 8:1-8.

Tools and Resources:

- Institute for Healthcare Improvement. Leading a Culture of Safety: A Blueprint for Success. 2017.
- NHS Education for Scotland. Safety Culture Discussion Cards. 2023.
- The King's Fund. The practice of collaborative leadership: Across health and care services. 2023.

Primary Driver:
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Secondary drivers	Change ideas			
Safe staffing and resources to enable delivery of safe care	Identify and mitigate staffing needs using real time staffing tools, including acuity assessment	Process to escalate staffing shortfalls	Education and induction includes local processes for early recognition and response for sepsis	Identify and mitigate time periods where escalation response is less reliable

Evidence and Guidelines:

- Hotta S, Ashida K, Tanaka M. Night-time detection and response in relation to deteriorating inpatients: A scoping review. Nurs Crit Care. Published online April 24, 2023. doi:10.1111/nicc.12917
- Liu Q, Zheng X, Xu L, Chen Q, Zhou F, Peng L. The effectiveness of education strategies for nurses to recognise and manage clinical deterioration: A systematic review. Nurse Educ Today. 2023;126:105838.
- Zaranko B, Sanford NJ, Kelly E, et al. Nurse staffing and inpatient mortality in the English National Health Service: a retrospective longitudinal study. BMJ Quality & Safety 2023;32:254-263.

Tools and Resources:

- Healthcare Improvement Scotland. Workforce capacity and capability. 2021.
- Healthcare Improvement Scotland. Inclusion and involvement. 2021.
- Healthcare Improvement Scotland. Staffing level (workload) tools and methodology.
- NHS Education for Scotland. Health and Care Staffing in Scotland. 2022.

Primary Driver:
Leadership to support a culture of safety

Secondary drivers	Change ideas			
System for learning to support continuous improvement	Collect, share, and act on data and learning between teams, hospitals, and boards	Identify and share learning through existing processes e.g. MDT morbidity and mortality meetings	Structured process for multidisciplinary hot and cold debriefs	Forums for staff, patients and families to identify areas for improvement

Evidence and Guidelines:

- Healthcare Improvement Scotland. Learning from adverse events through reporting and review. A national framework for Scotland: December 2019. 2019.
- Institute for Healthcare Improvement. Leading a Culture of Safety: A Blueprint for Success. 2017.
- James S, Subedi P, Indrasena BSH, Aylott J. Review DebrIeF: a collaborative distributed leadership approach to "hot debrief" after cardiac arrest in the emergency department–a quality improvement project. Leadership in Health Services. 2022. Jun 28;35(3):390-408
- Steel EJ, Janda M, Jamali S, Winning M, Dai B, Sellwood K. Systematic Review of Morbidity and Mortality Meeting Standardization: Does It Lead to Improved Professional Development, System Improvements, Clinician Engagement, and Enhanced Patient Safety Culture? Journal of Patient Safety. 2023. 19:10-97.

Tools and Resources:

Healthcare Improvement Scotland. The Essentials of Safe Care: System for Learning. 2021.

Oliver N, Shippey B, Edgar S, Maran N, May A. The Scottish centre debrief model. Int J Healthcare Simulation. 2023.

Primary Driver:
Leadership to support a culture of safety

Secondary drivers	Change ideas			
Staff wellbeing	Use of effective health and wellbeing conversations to identify and mitigate risks to wellbeing	Prioritise civility through communication and teamwork, e.g. use of TeamSTEPPS	Support job satisfaction through evidence-based interventions, e.g. Professional Identity Development Programme	Access to senior support and discussion for all staff, e.g. through clinical supervision

Evidence and Guidelines:

- Cohen C, Pignata S, Bezak E, Tie M, Childs J. Workplace interventions to improve well-being and reduce burnout for nurses, physicians and allied healthcare professionals: a systematic review. BMJ Open. 2023;13(6):e071203.
- Sabancıogullari S, Dogan S. Effects of the professional identity development programme on the professional identity, job satisfaction and burnout levels of nurses: A pilot study. International Journal of Nursing Practice. 2015;21(6):847-57.
- Tulleners T, Campbell C, Taylor M. The experience of nurses participating in peer group supervision: A qualitative systematic review. Nurse Educ Pract. 2023;69:103606.

Tools and Resources:

- Agency for Healthcare Research and Quality. Team STEPPS. Team Strategies & Tools to Enhance Performance & Patient Safety. 2023.
- Healthcare Improvement Scotland. The Essentials of Safe Care: Staff Wellbeing. 2021.
- NHS Education for Scotland (NES). Staff Wellbeing Resources. 2021.
- NHS Education for Scotland (NES). Clinical supervision Resource. Supervision for nursing, midwifery and allied health professions (NMAHP). 2018.
- NHS Employers. Health and wellbeing conversations. 2023.

2023 SPSP Sepsis driver diagram and change package

Contributors

Healthcare Improvement Scotland

SCOTTISH PATIENT SAFETY PROGRAMME

SEPSIS RESEARCH FEAT — The voices of people with lived experience

NHS Dumfries & Galloway

NHS Orkney

NHS Ayrshire & Arran

NHS Shetland

NHS Lothian

Healthcare Improvement Scotland | SAPG

NHS Lanarkshire

NHS Borders

Public Health Scotland

NHS Fife

NHS 24

NHS Tayside

Scottish Ambulance Service

Working in Partnership with Universities

NHS Grampian

NHS Greater Glasgow and Clyde

NHS Forth Valley

NHS Highland

NHS Golden Jubilee

NHS Eileanan Siar Western Isles

Contributors

Expert Reference Group Chair: Dr Gregor McNeill, Consultant Intensive Care Medicine, NHS Lothian
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Kelly Aitken	Clinical Effectiveness Manager
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Dr Stephen Friar	Consultant in Anaesthesia
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Lucy Ann Glasgow	Improvement Advisor
Michelle Hankin	Clinical Governance and Risk Team Leader
Emma Hearn	Associate Quality Improvement Advisor
Dr Sharon Irvine	Consultant in Medicine and Infection
Dr Edward James	Consultant Microbiologist
Dr Iain Keith	Consultant Physician

Name	Job Title
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Dr Calum McGregor	Consultant Acute Physician
Dr Jayne McLaren	Consultant in Emergency Medicine
Catriona McLennan	Clinical Support Nurse
Dr Gregor McNeill	Consultant Intensive Care Medicine
Rhona Morrison	QI Facilitator, Patient Safety
Laura Neil	Lead AHP/ Interim Head of Clinical Governance & Quality Improvement
Prof. Kevin Rooney	Consultant in Anaesthesia and Intensive Care Medicine
Dr Gavin Simpson	Consultant Intensive Care / Anaesthetics
Moira Sinclair	Clinical Nurse Manager
Mark Smith	Advanced Nurse Practitioner Lead / Practice Development Nurse
Sue Vest	Risk Coordinator / Improvement Advisor
Dr Sarah Whitehead	Consultant Microbiologist and Infection Control Doctor

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