NHS England

Safety action development guide

Version 1, August 2022

Contents

Improvement requires an integrated process

The first step when embarking on a process to learn and improve after a patient safety incident is to make efforts to understand the context and develop a deep understanding of work processes. It can be tempting to rush to identify what needs to change, but this cannot be done without understanding work as done and the system factors that influence work. A thorough understanding of the work system can be gained using a learning response method such as investigation, multidisciplinary team review or after-action review, supplemented with a system-based framework to guide thinking (eg SEIPS, Yorkshire contributory factors framework, HFACS, etc).

Learning response methods enable the collection of information to acquire knowledge. This is important, but it is only the beginning. A thorough human factors analysis of a patient safety incident does not always translate into better safety actions to reduce risk. You must move from identifying the learning to implementation of the lessons. Without an integrated process for designing, implementing, and monitoring safety actions, attempts to reduce risk and potential for harm will be limited. This document outlines an example process.

The process starts by identifying and agreeing those aspects of the work system where change could reduce risk and potential for harm (ie 'areas for improvement' or system issues). Actions to reduce risk (ie safety actions) are then generated in relation to each defined area for improvement. Following this, measures to monitor safety actions and the review steps are defined.

The term 'areas for improvement' is used instead of 'recommendations' to reduce the likelihood of solutionising at an early stage of the safety action development process. Understanding contributory factors and work as done should not be confused with developing safety actions. Areas for improvement set out where improvement is needed without defining how that improvement is to be achieved. Safety actions in response to a defined area for improvement depend on factors and constraints outside the scope of a learning response.

The process emphasises a collaborative approach throughout, including involvement of those beyond the 'immediate and obvious' professional groups and working closely with those with improvement expertise. Imposed solutions often fail to engage staff and lack sustainability as a result.

Overview of safety action development

Areas for improvement can relate to a specific local context or to the context of the wider organisation. While the approach to developing safety actions is similar for both there are differences in the team involved as well as (in some instances) the reporting mechanisms (see **Table 1**).

Table 1: Overview of safety action development according to context

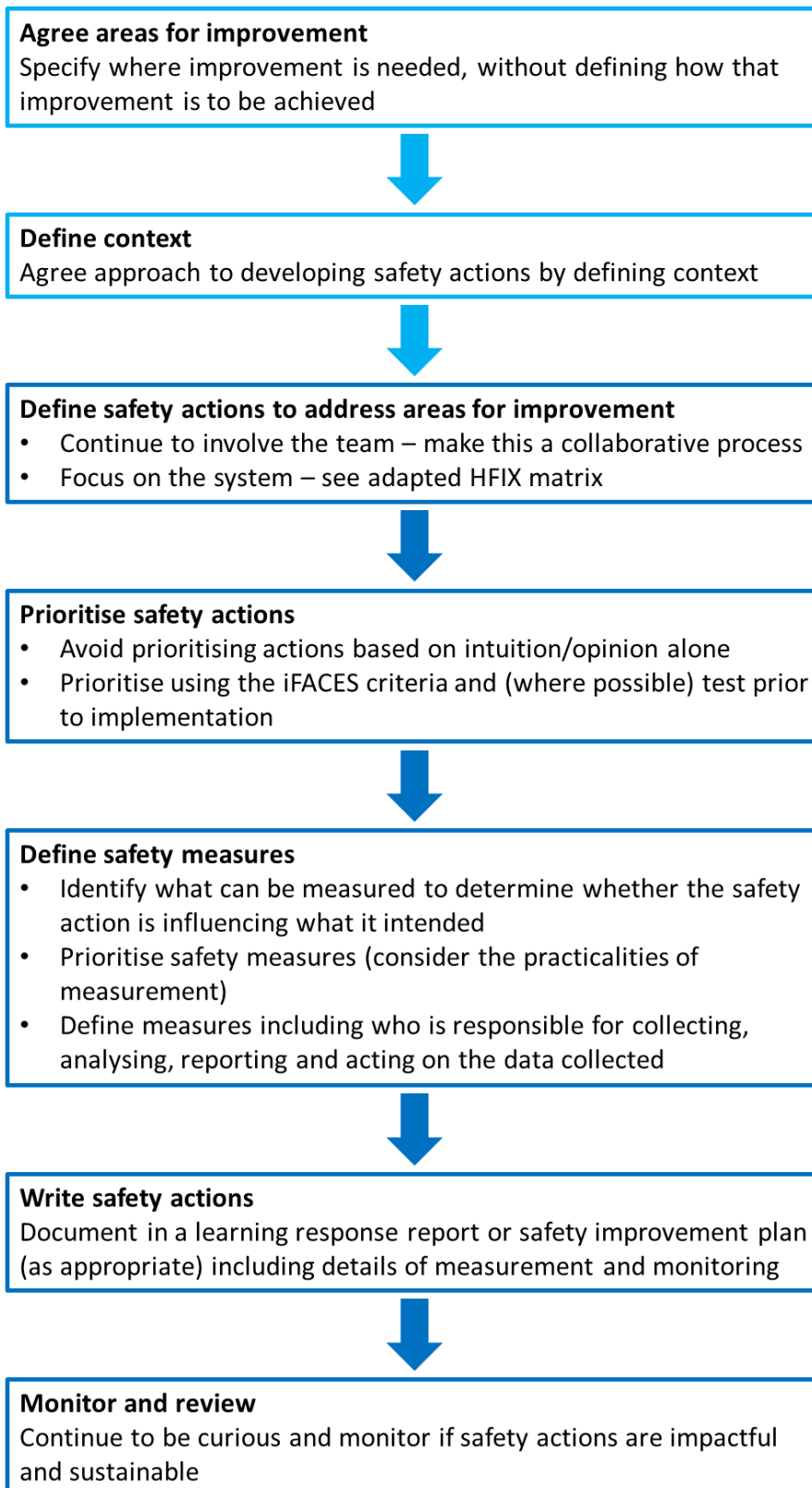|	Local context	Organisation context
Definition	Specific area for improvement highlighted by a single (or multiple) learning responses	Broader area for improvement identified across several learning responses – likely not in response to any single patient safety incident but incidents with common contributory factors across events. Likely require radical system redesign
Examples of areas that may require improvement	Environment layout and characteristics (eg light, noise) Tool design Task design Training	Deep routed organisational issues, likely with long histories and dynamics, eg: • Staffing, rotas, etc • IT infrastructure • Workload • Fatigue • Culture • Handovers • Procurement • Policies
Development team	Learning response team Involvement of local team to design and implement Quality improvement team Those affected by the incident	Learning response team Involvement of local **and** broader team to design and implement (eg leadership, management) Quality improvement team Those affected by the incident
Tools	SEIPS/HFIX (see Appendix A) iFACES (see Table 3)	

	Local context	Organisation context
Methods for developing safety action	Interviews Observations Focus groups Desktop reviews Simulation/testing Standards quality improvement methods such as PDSA cycles	Qualitative review of patient safety learning response findings Surveys Literature reviews – what has worked well elsewhere? Focus groups Consensus panel – reaches a wider group of members with experience of work
Expectation for recording	Included in learning response report (eg patient safety incident investigation (PSII) report) after an individual incident response or in wider safety improvement plan as appropriate.	Included in a safety improvement plan bringing together findings from various responses

Summary of safety action development process

Below provides an overview of the safety action development process that follows the identification of areas for improvement. While the process is depicted as linear, monitoring and review are cyclical in nature and can also inform the development of safety actions.

Collaboration with relevant teams should be considered throughout the safety action development process.

Figure 1: Overview of safety action development process

Agree areas for improvement
Specify where improvement is needed, without defining how that improvement is to be achieved

⬇

Define context
Agree approach to developing safety actions by defining context

⬇

Define safety actions to address areas for improvement
- Continue to involve the team – make this a collaborative process
- Focus on the system – see adapted HFIX matrix

⬇

Prioritise safety actions
- Avoid prioritising actions based on intuition/opinion alone
- Prioritise using the iFACES criteria and (where possible) test prior to implementation

⬇

Define safety measures
- Identify what can be measured to determine whether the safety action is influencing what it intended
- Prioritise safety measures (consider the practicalities of measurement)
- Define measures including who is responsible for collecting, analysing, reporting and acting on the data collected

⬇

Write safety actions
Document in a learning response report or safety improvement plan (as appropriate) including details of measurement and monitoring

⬇

Monitor and review
Continue to be curious and monitor if safety actions are impactful and sustainable

Agree areas for improvement

Involve the team

People work in different parts of the system and have different views and experiences of how work is carried out. We often do not think about involving those beyond our 'immediate and obvious' professional groups (eg doctors or nurses), yet capturing appropriate additional perspectives is essential for defining areas for improvement. Involving patients,[1] clients, carers and families, administration, laboratory, maintenance, and managers, for example, where appropriate and available, will capture valuable insights that may not otherwise be considered.

Outline areas for improvement

Areas for improvement are generated from an understanding of the context of work.

Areas for improvement do not seek to define precise safety actions; they set out where improvement is needed, without defining how that improvement is to be achieved.

Good areas for improvement provide an opportunity for a range of safety actions to be considered.

Defining areas for improvement (the problems to be solved/risks to be reduced) before brainstorming how to improve (ie safety actions) is valuable because it allows us to:

- consider multiple safety actions/ways to improve
- crowd source ideas.

When defining an area for improvement, it is important to avoid:

- skipping directly to the action/solution, eg we need more beds/staff/training
- assuming the answer, eg the problem is we do not have enough syringe drivers/an electronic system.

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[1] For further information on involving patients see the Engaging and involving patients, families and staff following a patient safety incident and the Involving patients in patient safety framework.

Instead, you should describe the conditions you are trying to improve, eg it is difficult for staff to logon to the electronic system.

People can agree with an area for improvement but may disagree on the potential actions.

Link with learning from patient safety incident response

Areas for improvement must be linked to the outcomes of learning responses or findings from other related approaches such as thematic reviews and horizon scanning: the reason for change must remain clear as safety actions are developed and implemented. This will help with implementation later.

Embrace ambiguity

You will never understand the problem completely and must be comfortable with an understanding that is 'good enough'.

Define context

Areas for improvement can relate to a specific local context or to the context of the wider organisation. While the approach to developing safety actions is similar for both there are differences in the team involved as well as (in some instances) the reporting mechanisms (see **Table 1**).

One method to determine the context for an area of improvement involves marking areas according to their 'sphere of control'[2]. There are three 'levels':

- **Control:** within the local team's control to address on their own. These relate to the local context.

- **Influence:** the team will likely need some outside help and they may need to be escalated. These may relate to the local or wider organisational context.

- **Escalate:** these require a lot of outside support (and usually a lot of resources); they tend to steal energy from the local team if that team attempts to tackle them alone. This resource could be better spent developing local safety actions that make tangible improvement. These are wider organisation areas for improvement and are best approached by aggregating learning and developing a safety improvement plan.

Try brainstorming a range of ideas within each layer of control.

Actions may be taken across the different layers of the system: some can be implemented quickly and reported in a learning response report (eg patient safety incident investigation (PSII) report) while others will take considerably longer to implement and produce results.

Where safety actions will take time to develop and implement, record the area for improvement in a learning response report but note that the safety actions will be developed as part of a wider safety improvement plan.

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[2] Adapted from Edwards, B., & Baker, A. (2020). Bob's guide to operational learning: How to think like a human and organizational performance (HOP) coach. Pre-accident investigation media: Santa Fe, New Mexico

Define safety actions

The process and tools for brainstorming safety actions is similar for both local and organisational areas for improvement, although the development and implementation team will likely be different.

Continue to involve the team

While safety action development may be led by one individual (eg a learning response lead) or team, a wider team must be engaged during development, including the local team, the quality improvement team and those with broader knowledge of ongoing improvement work related to the defined areas of improvement, or whose work may be informed by the findings from the learning response under consideration.

Quality improvement colleagues are a good resource for tools to develop safety actions and associated measures. Where possible, those affected by the patient safety incident should also be involved (See Engaging and involving patients, families, and staff after a patient safety incident).

Brainstorm safety actions

There are many ways to determine safety actions. For each area for improvement you could try brainstorming according to three categories[3]:

1. The 'good' are elements in your system that you want to make happen as often as possible. Areas for improvement in this category include:

   - standardised arrangement of meds in the cabinet
   - appropriate stocking of the crash cart.

2. The 'bad' are elements in your system that are highly variable or are making it difficult to complete work/meet an expectation. Areas for improvement in this category include:

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[3] Adapted from Edwards, B., & Baker, A. (2020). Bob's guide to operational learning: How to think like a human and organizational performance (HOP) coach. Pre-accident investigation media: Santa Fe, New Mexico

- determining the correct implant based on labelling alone
- following paperwork for monitoring CTGs.

3. The 'ugly' are elements in your system where you have found unmitigated risk that can cause severe harm or death:

- oversight of the emergency department during peak activity
- device does not give enough warning to prevent XX.

Based on the 'good, bad, ugly' mindset it can be helpful to think about brainstorming safety actions that:

- expand on what's good
- improve what's bad
- mitigate what's ugly.

Consider the sphere of control

Listen to the team whose work you are trying to influence. You want to hear the ideas that are within their control to act on.

Staff should feel empowered and encouraged to lead the development of improvements in their work.

Actions to address wider organisational areas of improvement will similarly require brainstorming. Participants must be able to influence the area of improvement identified (this might be management, senior leadership, procurement, manufacturers, etc).

Consider other ongoing safety actions

To avoid duplication and to ensure an integrated approach to risk reduction you should review other ongoing safety actions to determine whether they relate to the defined area for improvement. Additional actions may not be necessary.

Focus on the system

The Human Factors Intervention Matrix (HFIX[4]) uses a series of questions to prompt thinking about how each area of improvement identified might be translated into possible safety actions to reduce risk. Table 2 gives a high-level version of HFIX adapted to align with the Systems Engineering Initiative for Patient Safety (SEIPS[5]) work system categories. Further questions to guide thinking can be found in Appendix A.

Table 2: Adapted HFIX with prompt questions

Area for improvement		Set out where improvement is needed
Work system	Person(s)	How **can individual or team characteristics** be modified or changed to reduce risk or improve performance?
	Tasks	How can the **task or activity** be modified or redesigned to reduce risk or improve performance?
	Tools and technology	How can **tools, equipment or technology** be modified or redesigned to reduce risk or improve performance?
	Internal environment	How can the **physical environment** be modified or redesigned to reduce risk or improve performance?
	Organisation	How can **organisational factors** be modified or redesigned to reduce risk or improve performance?
	External environment	How can **regulatory or societal factors** be modified or redesigned to reduce risk or improve performance?

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[4] Shappell, S. & Wiegmann, D.A., (2006). Developing a methodology for assessing safety programs targeting human error in aviation. Proceedings of the Human Factors and Ergonomics Society Annual meeting, 19 (3), 252-269

[5] Holden, R.J., Carayon, P., Gurses, A.P., Hoonakker, P., Hundt, A.S., Ozok, A.A., & Rivera-Rodriguez, A.J. (2013). SEIPS 2.0: A human factors framework for studying and improving the work of healthcare professionals and patients. Ergonomics, 56 (11)

Prioritise safety actions

The number of safety actions for implementation is often high. Monitoring their implementation and tracking the resulting changes can be onerous.

Brainstorming safety actions helps to generate many alternatives for addressing an area for improvement. The next step is to decide which safety action or set of safety actions to test for implementation.

Intuition or opinion should not be the basis of prioritisation.

The iFACES tool[6] can help quantify the potential value of each identified action using six criteria: inequality, feasibility, acceptability, cost/benefit, effectiveness, and sustainability. Test safety actions

Once you have decided which safety actions to consider for implementation, where possible you should test them in 'real-life' or under simulated conditions. During testing you should observe and discuss the action:

- What issues did people find? Make the necessary improvements.
- Did users behave as expected? If not, update your safety action.

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[6] Adapted from: Solomon, D., Wood, L., & Wiegmann, D. (2021). Implementation a human factors approach to RCA2: Analysis of resultant safety recommendations. Proceedings of the 2021 HFES 65th international annual meeting

Table 3 below shows a rubric that supports a standardised and robust process for scoring, ranking, and selecting a final set of safety actions.

Test safety actions

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Table 3: iFACES criteria and scoring rubric

Criterion	Low ①———②———③———④———⑤ High		
	Low ① ②	**Medium** ③	**High** ④ ⑤
Inequality Does the intervention ensure fair treatment and opportunity for all?	The intervention is not accessible to the diverse population that will use it.	The intervention accommodates some inequalities but further investigation is needed.	Inequalities are reduced by this intervention.
Feasibility Can the change be implemented relatively easily or quickly?	The intervention does not exist today nor is it likely to become available in the near future; it is highly impractical and not suitable for your organisation.	The intervention exists but is not readily available or will require modifications to better fit the context in which it is intended to be used.	The intervention is readily available and could be implemented in a relatively short period of time without much effort.
Acceptability Will those being impacted by the intervention readily accept the change?	The intervention will not be tolerated by those it impacts. People are likely to consistently resist the change and attempt to work around the change.	The intervention will be tolerated by those it impacts. There may be moderate resistance but attempts to undermine the change will not be wide spread.	The intervention will be readily accepted by those it impacts. People are likely to welcome the change and make every attempt to ensure it works.
Cost/Benefit Does the benefit of the intervention outweigh the costs?	The cost of the intervention is exorbitant relative to its minimal expected impact on safety and performance.	The intervention is moderately expensive but cost could be justified by its expected benefit. Return on investment (benefits) is relatively equal to cost.	The cost of the intervention is nominal relative to the expected impact on safety and performance.
Effectiveness How effective will the intervention be at eliminating the problem or reducing its consequences	The intervention will not directly eliminate the problem or hazard and it relied heavily on wilful compliance with the change and/or requires humans to remember to perform the task correctly.	The intervention reduces the likelihood of the problem or hazard occurring but relies in part on human memory and/or wilful compliance with the change.	The intervention will very likely eliminate the problem or hazard and it does not rely on wilful compliance with the change or require humans to remember to perform the task correctly.
Sustainability How well will the intervention last over time	The impact of the intervention will diminish rapidly after it is deployed and/or will require extraordinary effort to keep it working.	The benefits of the intervention may have a tendency to slowly dissipate over time and will require moderate efforts to maintain its benefits.	The impact of the intervention will persist over time with minimal efforts being required to maintain its benefits.

Do not leave your team behind

You should continue to involve the wider team where possible. Plan at least one follow-up conversation with the team to make sure that those who do not have action ownership are still part of the discussion.

Define safety measures

Before finalising a safety action, plan how you will evaluate its effectiveness and progress towards specific goals. Meaningful measures need to be identified that can be monitored through normal processes, to ensure that the benefits of change are sustained.

It is important to plan when you would **abandon a safety action**, to avoid the temptation to press on at all costs. This reframes the decision to abandon the safety action as an **opportunity to invest in better alternatives** – not a wasted investment of time.

Defining safety measures is a three-step process.

Step 1: Identify measures

Consider what can be measured to increase confidence that the safety action is influencing what it was intended to.

Measures will change over time:

- The first measure acknowledges that the safety action has been introduced – it simply notes the existence of an activity, input or process related to the safety action. Measuring the completion of an action alone (eg check added to checklist) does not sufficiently indicate whether the change is beneficial.

- The second measure checks whether the activity, input or process is taking place, eg is the tool being used as intended? You may already have collected data on this when testing your safety action. You may need to adjust your safety action at this stage.

- Finally, and most importantly, you must measure the **effectiveness** of the safety action – that is, has the safety action delivered the intended benefits? You must also consider whether there have been any unintended consequences of implementing the safety action.

When measuring effectiveness, you should avoid counting the number of reported incidents and compliance with a safety action – this loses sight of the need to manage inherent risks and can be influenced by factors unrelated to safety (eg greater

awareness that there is a risk/problem). Instead, you should focus more on the change associated with the activity undertaken, eg changes in observed behaviours, improved documentation (due to paperwork redesign), faster response time (due to redesign of the PPE donning station).

Be aware of unintended consequences of measurement, eg measuring the number of safety briefings completed may result in a decline in briefing quality. An alternative measure could be attendee feedback or comments related to the meetings.

Step 2: Prioritise and select safety measures

You are likely to identify several safety measures, but selecting one or two measures will be more practical than measuring all of them.

Before you can prioritise, you need to sufficiently define the potential measures so they will be evaluated with a common understanding of what they entail. Your definition should include[7]:

- a description of the measure
- units of measurement (and any formula for its calculation)
- how data will be collected
- measurement frequency
- how the data will be visualised/displayed
- reporting intervals.[8]

To prioritise your safety measures, consider the practicalities and data availability. For example, are measures:

- currently collected and reported
- collected, but not reported
- available, but not collected
- not currently available.

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[7] Adapted from Rail Industry Safety and Standards Board (2016). Measuring safety performance: Guideline
[8] The time taken from collecting data to reporting it should reflect the risk indicated by the measure. There is little benefit in reporting measures that reflect the status of the organisation six months earlier if the nature of the measure requires action to be taken within a month.

This will give you insights into the effort required to monitor the safety action.

Further criteria for evaluating and identifying the best measures are given below. If the answers to these questions are predominantly 'yes', the measure is more favourable than one for which the answers are predominantly 'no'.

- Will there be enough data to identify trends?
- Will the quality of the data be good enough?
- Does the measure have a clear unambiguous definition?
- Is it easy to communicate what is being measured?
- Will it provide timely warning of deterioration?
- Does it measure what is intended?
- Will changes in the measure lead to action?
- Will the measure promote the desired behaviour?
- Do the benefits of the measure outweigh the costs of collecting and monitoring the data?

Several related measures may be identified. Rather than choosing one, consider whether combining the measures would be beneficial.

Creating a 'decisions log' to document why each measure is considered further or rejected provides a valuable audit trail.

If several measures appear promising, a trial could help decide which one is the most useful.

Step 3: Define measures

Once a measure has been selected, it must be clearly defined so that it is consistently recorded, reported, and understood across the organisation. This will require input from all those involved in measuring, analysing, reporting, acting on and reviewing, to ensure that the measure is clearly understood, this includes senior management who wish to gain assurance from the measures.

The definition should include:

- a description of what is being measured

- the purpose of the measure (ie what it is intended to manage and who it is intended to inform)
- the units of measurement and any formula for its calculation
- who is responsible for collecting, validating, analysing, reporting and acting on the measure (these may be different people in different parts of the organisation)?
- where or how the data should be collected
- the frequency of collecting, analysing and reporting
- if appropriate, the target value, goal, tolerances, and statistical tests that can be applied
- potential actions for when the measure deviates from the accepted tolerances, including when the deviation should be escalated.

Write safety actions

Safety actions should be SMART (specific, measurable, achievable, relevant, time-bound). They should also:

- Be documented in a learning response report or in a safety improvement plan as applicable.
- Start with the owner, eg "Head of patient safety to...".
- Be directed to the correct level of the system: that is, people who have the levers to activate change (ideally this should include the person closest to the work and who has been empowered to act).
- Be succinct: any preamble about the safety action should be separate.
- Standalone: that is, readers should know exactly what it means without reading the report.
- Make it obvious why it is required (ie given evidence in the learning response report or safety improvement plan).

When finalising your safety actions, continue to work with those to whom they are directed to ensure they are on board and willing to implement change.

While safety actions should feature in the learning response report or safety improvement plan alongside the information that supports them, an overview of measurement and monitoring should summarised in a table at the end (an example table for this is provided in Appendix B and also the PSII report template).

Summarised safety actions should be transferred to the corresponding reference on an organisation's local risk management system. Further detail about measures described in 'Step 3: Define measures' above (ie units of measurement, etc) may be best reported elsewhere (eg in an audit project/plan).

Monitor and review

Continue being curious: inquire about how things are working and monitor that safety actions put in place remain impactful and are sustainable.

The safety actions and associated measure(s) should be reviewed as defined in the safety action summary table (Appendix B) to ensure they continue to provide value by being the issues of most concern.

Organisations may differ in how they document, record and review safety action progress and impact through their local governance groups and links with quality improvement teams. For example, some safety actions may be monitored by a specific service area, while others may go through a wider organisation's action oversight group (or similar) with attendance from quality improvement colleagues.

A review should be carried out periodically (typically annually) or when an organisation makes substantial changes. This may be following a reorganisation, the introduction of new technology or in conjunction with your patient safety incident response plan review – the PSIRF suggests these plans are reviewed every 12 to 18 months, with a rigorous review of data at a minimum of every four years (in agreement with your ICB).

Final thoughts

Our desire to ensure an incident does not happen again can push us to skip learning and jump to solutions. But it is important we establish the learning before we start to define areas for improvement.

We cannot always 'fix' the system so that a patient safety incident will never happen again. Healthcare is complex and 'change is the only constant'. We can reduce risk and we can strive to fail safely, but perfect fixes may not exist.

While one safety action is unlikely to resolve a defined area for improvement, it is important to ensure all safety actions are meaningful. **Do not implement change for the sake of change** – we must ensure improvement results from change and continue to monitor this. No action will achieve its purpose on its own, independently of others and what goes on around it. This is the reality of a complex system.

Appendix A: SEIPS-HFIX

The SEIPS adaptation of the Human Factors Intervention Matrix (HFIX) provides a series of questions to prompt ideas about how to address identified areas for improvement. Use the system factors and accompanying questions to begin generating as many safety action ideas as you can to address each identified area for improvement.

Internal environment

Physical working environment in which individuals and teams perform their tasks

When considering ways of modifying the internal environment, ask:

- How could the number of distractions in the environment be reduced to allow the operator to focus attention more fully on the task?
- How could workspace arrangements or dimensions be modified to improve task performance?
- How could the workspace be made better suited to the range of individuals who will use the facility?
- How could lighting be changed to reduce shadows, glare or stark lighting changes (eg going from light to dark settings)?
- How could the noise level be modified or reduced to reduce fatigue, improve concentration or enhance communication?
- How could the temperature conditions be modified or improved to improve concentration, mood or performance?
- How could physical/technological barriers to performance or communication be modified or rearranged?
- How could the physical arrangement of workspaces/rooms be standardised to reduce confusion, delays or errors?
- How could floor surfaces be modified or improved to allow for better movement or rearrangement of equipment when needed?
- How could clutter be reduced or housekeeping improved to make the working environment more conducive to safe and productive work?

Tasks

Specific actions within larger work processes

When considering ways of modifying the tasks people perform, ask:

- How can the task be restructured so that it requires less reliance on human memory (ie use checklists or technology that signals next step in task)?
- If the task is done simultaneously with other tasks (divided attention), can it be done on its own? How can the mental workload/timesharing be reduced?
- How could checklists be developed to guide the task or verify that the task has been performed properly?
- How could immediate feedback be integrated into the task to allow operators to know when they have done things correctly or incorrectly?
- How can procedures or checklist be redesigned to be clearer or more user-friendly?
- If a task is repetitive, monotonous or boring, how could it be made more interesting? How could 'time on task' be changed to reduce vigilance decrements or mental lapses in attention?
- How could procedures be rewritten so that they are less ambiguous or inapplicable to the safety critical tasks operators perform?
- When operators switch tasks, what procedures could be developed to reduce negative transfer (habit interference)?
- How could a task be modified to reduce the demands on the operator's physical or perceptual limitations?

Tools and technology

Equipment, tools, software and documents used to perform work

When considering ways of modifying tools and technology, ask:

- How can warnings or alarms be improved to increase awareness of hazards or the presence of abnormal conditions?
- How could tools, checklists, manuals or displays be redesigned to reduce confusion and errors? (eg highlight with bold text the items in a checklist that are the most important and/or should be memorised)?

- Are better tools currently available but not purchased? What are these tools and how would they reduce errors on the job?
- How could technologies be developed to reduce the task demands on the human decision-making processes, perceptual processes or physical limitations?
- How could controls be more easily identified and/or better designed in terms of shape, size and other relevant considerations?
- How could information sources be integrated or located in a more effective manner?
- How could equipment be redesigned for more convenient maintenance?
- How could inspection or troubleshooting aids be developed to ensure equipment is in proper working order?
- How could maintenance procedures or schedules be improved to prevent equipment from failing during use?

Person(s)

Includes both characteristics of an individual and of a team

When considering ways of influencing individual and team characteristics, ask:

- How could changes be made to the way individuals are recruited or selected for employment to ensure that they have the appropriate knowledge and skills necessary to perform their required tasks safely and efficiently?
- How could the content of training programmes be developed or modified to improve individual's knowledge of procedures or tasks?
- How could the method of training delivery be improved or modified to enhance its impact on individual's knowledge and skills (eg use of simulation)?
- How could an individual's stress and fatigue be reduced or monitored to improve safety and performance?
- How could verbal communication procedures be improved to reduce the likelihood of miscommunication among team members (eg standardisation, readback)?
- How could the use of non-verbal communication (eg gestures or hand signals) be developed and standardised to improve communication?
- How could team briefings/planning sessions be developed or improved to improve communication and co-ordination?

- Could procedures be developed to improve interactions between team members?
- When individuals are working as a team, how could the responsibilities of each team member be more clearly defined?
- How could changes be made to ensure that team leaders are identifiable and responsible?
- How could handoffs/handovers be developed or improved to facilitate the communication between team members?

Organisation

Structures external to a person (but often put in place by people) that organise time, space, resources, and activity

When considering ways to modify the organisation of work, ask:

- How could standard operating procedures (SOPs) be modified to reduce risks and improve safety?
- How could the organisation ensure that SOPs are in place and that they are relevant and not out-of-date?
- How could operational risk management procedures be implemented to reduce safety hazards?
- How could tools that help supervisors plan activities and set goals be improved?
- What tools or job aids could be developed to help supervisors create schedules, improve team composition or reduce operator fatigue?
- How could the organisation improve its process for recruiting and hiring people who are better qualified or more experienced?
- How could the organisation improve its process for evaluating and purchasing equipment that is user friendly and designed for safety?
- How could leadership better communicate the importance and value of safety?
- How could the organisation better disseminate and share safety information or lessons learned from safety events across units (ie become more transparent)?
- How could the organisation better promote, reinforce or encourage safe practices?
- How could the organisation's structure be redesigned to improve the co-ordination and integration of activities across divisions/departments?

- How could policies (promotion, sick leave, overtime, etc) in the organisation be changed to improve safety?
- How could leadership become more engaged with staff or more aware of safety issues (eg leadership 'walk-arounds')?
- How could the organisation improve its contingency planning for possible staff shortages, equipment failures or budgetary restrictions?
- What tools could be developed to help supervisors identify problems with workplace design or layout?

External environment

Societal, economic, regulatory and policy factors outside an organisation

When considering ways of influencing the external environment, ask:

- How can manufacturers be influenced to improve the design of their products?
- How can regulation be changed to improve safety?
- How can external oversight/monitoring be improved to impact safety?
- How can national safety programmes be redesigned to improve safety?

Appendix B: Safety action reporting template

Area for improvement: [*eg review of test results*]								
	Safety action description *(SMART)*	**Safety action owner** *(role, team directorate)*	**Target date for implementation**	**Date Implemented**	**Tool/measure** *(eg audit)*	**Measurement frequency** *(eg daily, monthly)*	**Responsibility for monitoring/ oversight** *(eg specific group/ individual, etc)*	**Planned review date** *(eg annually)*
1.								
2.								
…								

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