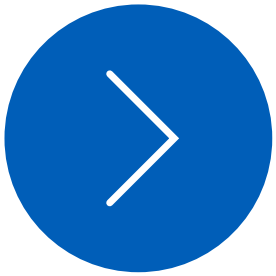
NHS Patient Safety Syllabus

Training for every member of staff across the NHS

Making Safety Active:

- Preventing harm before it occurs
- Identifying risks and making them safe
- It is time to change what we do and how we think about patient safety



V 2.1 (June 2022)

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Foreword

Patient safety is more vital than ever as we emerge from the Covid19 pandemic, with NHS resources under pressure

The first NHS England Patient Safety Strategy was launched at the Patient Safety Congress in July 2019 to describe ways in which the NHS will continuously improve patient safety, building on the foundations of a safer culture and safer systems.

The Academy of Medical Royal Colleges has worked with colleagues from the University of Warwick to develop this new NHS Patient Safety syllabus to complement it as the basis for education and training for staff throughout the NHS.

This syllabus represents an exciting new approach to patient safety, incorporating an emphasis on a proactive approach to identifying risks to safe care and including systems thinking and human factors. This sets the scene for a step change in thinking about patient safety which should lead to significant gains as it reaches a critical mass of trained practitioners.

We look forward to continuing our work with NHS England as specific curricula are developed for all staff groups.

Everyone stands to benefit from improved patient safety.

Professor Dame Helen Stokes-Lampard
Chair of the Academy of Medical Royal Colleges

"CQC welcomes the development of the patient safety syllabus and its curriculum guidance which represents an opportunity to understand the factors that are essential foundations of safety, and will help everyone think differently about how to provide the consistently safe care that must underpin all services in the NHS."

Victoria Vallance, CQC's Director of Secondary and Specialist Healthcare

"Developing an NHS patient safety syllabus for the NHS is a core part of the NHS Patient Safety Strategy. The initial training material (Levels 1 and 2) are now available online and early evaluations have been extremely positive.

The team at the Academy of Medical Royal Colleges has now transformed the remainder of the syllabus into a full set of educational modules (levels 3,4 and 5). This will allow delivery to begin in earnest which, alongside an accreditation process, will ensure consistent, high-quality patient safety education and training is provided to the NHS.

This material, which focusses on both proactive and reactive approaches to patient safety, alongside key areas like systems-thinking and human factors, will provide staff with a common set of concepts, helping to create a positive culture of patient safety, and ultimately lead to safer care."

Dr Aidan Fowler, National Director of Patient Safety, NHS England and NHS Improvement

Introduction

Patient safety continues to be a significant issue in healthcare and a focus of both quality improvement and academic research.

The NHS published its first Patient Safety Strategy in July 2019 with the development of the first NHS-wide Patient Safety Syllabus to support a transformation in patient safety education and training in the NHS. The Patient Safety Strategy included ambitions to develop training in the fundamentals of patient safety that would be relevant to all NHS staff – clinical and non-clinical – as well as more detailed training and education that could be incorporated into clinical and non-clinical undergraduate and postgraduate healthcare education and continuing professional development.

Version 2 of the syllabus was agreed and finalised following extensive review of version 1. This version 2.1 simply includes minor updating to reflect the fact that the two e-learning modules for levels 1 and 2, and the curriculum guidance modules, are now complete. The syllabus will next be reviewed in Q4 2024.

This syllabus is designed for all NHS staff and is structured to provide both a technical understanding of safety in complex systems and a suite of tools and approaches that will:

- Build safety for patients
- Reduce the risks created by systems and practices
- Develop a genuine culture of patient safety.

Although there are a number of well-known safety procedures in healthcare – including the intention to learn from incidents and national safety regulations – this syllabus is distinct in three ways. Firstly, it draws explicitly from widely used safety methodologies applied routinely in other safety-critical industries such as the nuclear industry and process engineering. These are industries where the use of a systems-based approach and the recognition of human performance variability have brought safety to high-risk areas. These industries have long been upheld as learning opportunities for healthcare. Secondly, and in line with best practices from safer sectors, the syllabus adopts an approach that brings a systems perspective to reactive safety methods and – perhaps most importantly – uses a systems approach to enhance patient safety proactively. Thirdly, this is the first NHS-wide patient safety syllabus. The syllabus consists of five sequential domains, drawn from developing themes in patient safety, which are outlined in the next section.

Any syllabus is descriptive rather than prescriptive, providing a set of concepts and subjects that are to be covered, rather than a tightly defined programme for a specific course. This is appropriate since the concepts and tools of patient safety must be taught across many professions and many levels of seniority and responsibility. The syllabus is, therefore, the basis for the preparation of detailed curricula and training modules, designed for specific levels of the NHS; the guidance for creating these curricula has been completed and training providers will now be creating/adapting their courses in line with the syllabus. The training will need to be accredited to confirm that it adheres to the syllabus.

Key domains and underpinning knowledge

The domains of this syllabus are presented below as a linear sequence although there are inevitable dependencies and synergies between them. To understand this and to support the structure and content of each domain, the syllabus sets out the key outcomes for each domain and the underpinning knowledge and expertise required at each stage.

Figure 1. Five domains in the patient safety syllabus

The rationale used in developing the domains embodies a spiral of learning, with each domain building on and deepening the work carried out in previous domains. The elements of underpinning knowledge and expertise fall into four key themes that run through each of the domains and, through the unfolding of further knowledge within each domain, will build to a comprehensive understanding in each area.

The syllabus has now been translated into guidance for training providers to create discrete learning modules to form a curriculum. These will be discrete for the purposes of educational design, but inevitably the skills in different domains will integrate in different ways in a behavioural context depending on the demands of each situation. From the curriculum, staff will be able to select those modules of most significance to their work – perhaps focusing on systems-based incident review, or on human factors. The design of the learning modules, and the incorporation of an *'Essentials for patient safety'* module for all staff, will enable staff and patients to benefit quickly from the clear focus on patient safety, and inclusion of an *'Access to practice'* module provides essential elements of the four key themes of the syllabus for those who choose to develop their expertise further.

The four key themes of underpinning knowledge and expertise are:

- Systems thinking
- Human factors
- Risk expertise
- Safety culture.

Key domains and underpinning knowledge

Although elements of each area will be used in each domain, some domains have a strong focus on two or three areas. For example, Domain 2 (learning from incidents) draws most deeply on expertise in risk and human factors; Domain 4 (creating safe systems) draws more from systems thinking and safety culture.

The overall structure of the syllabus also focuses on **knowledge**, **action**, and **consolidation**. Domain 1 provides the systems *knowledge* which is critical to carrying out the necessary *actions* in reactive approaches in Domain 2. Domain 3 provides the *knowledge* base for *actions* in proactive approaches to patient safety in Domain 4. Domain 5 draws on all previous domains to provide the knowledge and tools that consolidate and maintain patient safety.

The following sections take the domains above and specify the capabilities. Each domain contains a number of subsections describing key elements and within each subsection are more detailed capabilities to be attained in building expertise in the area. In addition to the detailed capabilities, examples are provided of generic learning and development activities, themselves divided into those to be delivered in the early part of training and those to be mastered at a higher level.

Domain 1

Systems approach to patient safety

This key introductory and context-setting domain includes two streams:

- The systems approach to safety
- Patient safety in its public context

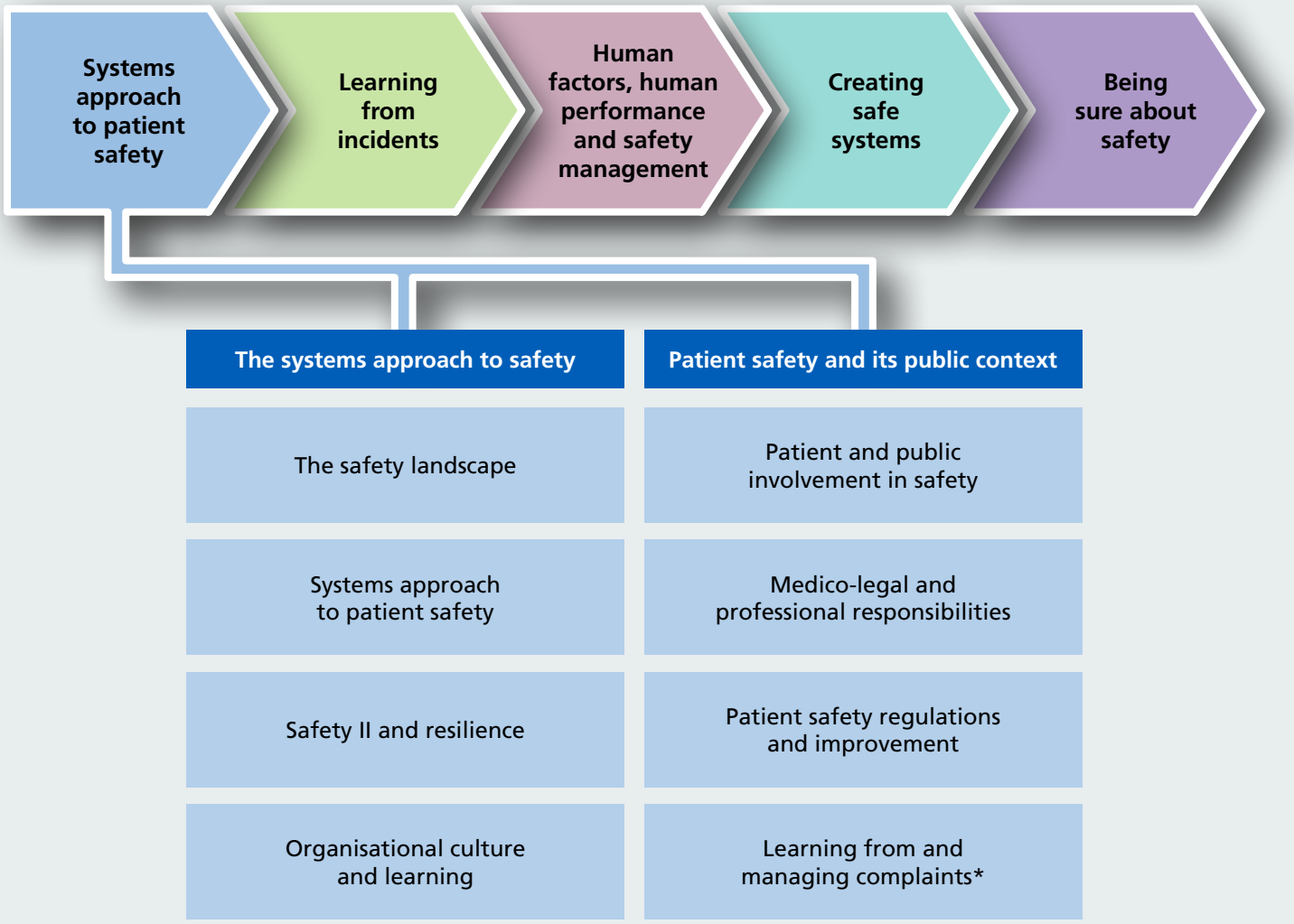

Figure 2. The eight key elements in Domain 1

* This is likely to be included in future versions of the syllabus. In particular, complaints management and learning is an area open for consultation.

Systems approach to patient safety

1. The safety landscape

1.1 Has knowledge of national learning reports and can describe key findings

1.2 Has knowledge of essential safety procedures, including reporting, safety alerts and regulatory requirements

1.3 Applies lessons from key case studies in patient safety

1.4 Analyses patient harm levels to evaluate the safety of the area

2. Systems approach to patient safety

2.1 Recognises and describes the effect of systems design on risk and safety

2.2 Outlines the principles of direct and latent failures and of performance-influencing factors

2.3 Describes safety approaches used in other safety-critical industries

2.4 Explains the fundamentals of human factors and human performance

2.5 Acts to break the link between error and blame by describing system-induced error in all incident responses and reports

3. Safety II and resilience

3.1 Recognises the key principles of Safety-II theory and how they may complement Safety-I

3.2 Encourages anticipation, adaptation, monitoring, and responding, to address existing and developing risks

3.3 Has detailed knowledge of evidence-based interventions in Safety-II and how they apply to improving patient safety

3.4 Is able to integrate and apply the principles and practices of Safety-II in making direct improvements in patient safety

4. Organisational culture and learning

4.1 Recognises organisational culture and the principles of safety culture

4.2 Explains the effect of blame culture on organisational learning

4.3 Analyses and evaluates safety culture and organisational learning

4.4 Contributes to sharing lessons learned in patient safety and promotes a learning culture

5. Patient and public involvement in patient safety

5.1 Recognises and adopts the 2021 NHS Framework for involving patients in patient safety

5.2 Supports organisation-wide protocols for listening, responding to, and sharing patient-centred information including those regarding current priorities in patient safety

5.3 Works in partnership with patients and carers in key areas of safety where public and patient involvement improve patient safety, including medication safety, service design, incident reporting and investigations, and communication

5.4 Supports a culture of patient safety through identifying and sharing examples and evidence of patient safety improvement through public, patient, and carer involvement

6. Medico-legal and professional responsibilities

6.1 Aware of, and understands, key concepts and definitions in medical ethics and law and the provisions of significant legislation including the Health and Social Care Act (2012) and further instruments, Deprivation of Liberty Safeguards (DOLS), Mental Capacity Act (2005), the Mental Health Act (2007), and equivalent provisions from devolved legislations

6.2 Explains the ethical and clinical issues involved with patient care, including the withholding or withdrawal of care, and with the rights of the patient to refuse care

6.3 Complies with legal requirements in patient confidentiality and information governance

6.4 Recognises the legal issues surrounding clinical negligence, compensation, and the accountability of individual practitioners

6.5 Understands the legal basis of, and requirements relating to, the activities of Coroners, Coroners' inquests, medical examiners and related law

7. Patient safety regulations and improvement

7.1 Outlines and explains key safety recommendations from professional bodies and regulators, including mandated safety practices

7.2 Ensures that recommendations such as national patient safety alerts are complied with

7.3 Is aware of all indications of patient harm and risk, including incident reporting, complaints and mortality reviews

7.4 Has full knowledge of the Duty of Candour regulations and how they are to be applied

Domain 2

Learning from incidents

Reporting and learning from incidents is an essential element in patient safety. This is the reactive element of safety management, complemented by the proactive approach of later domains. Incident analysis has the first responsibility of preventing further harm to patients in similar contexts and therefore must take a systems-based approach, carefully identifying systems-induced error and changing the way work is carried out in order to create safety for patients.

This domain provides a methodological approach, describes systems-based interventions, guidance for managing human performance and its variations, and essential systems for avoiding blame.

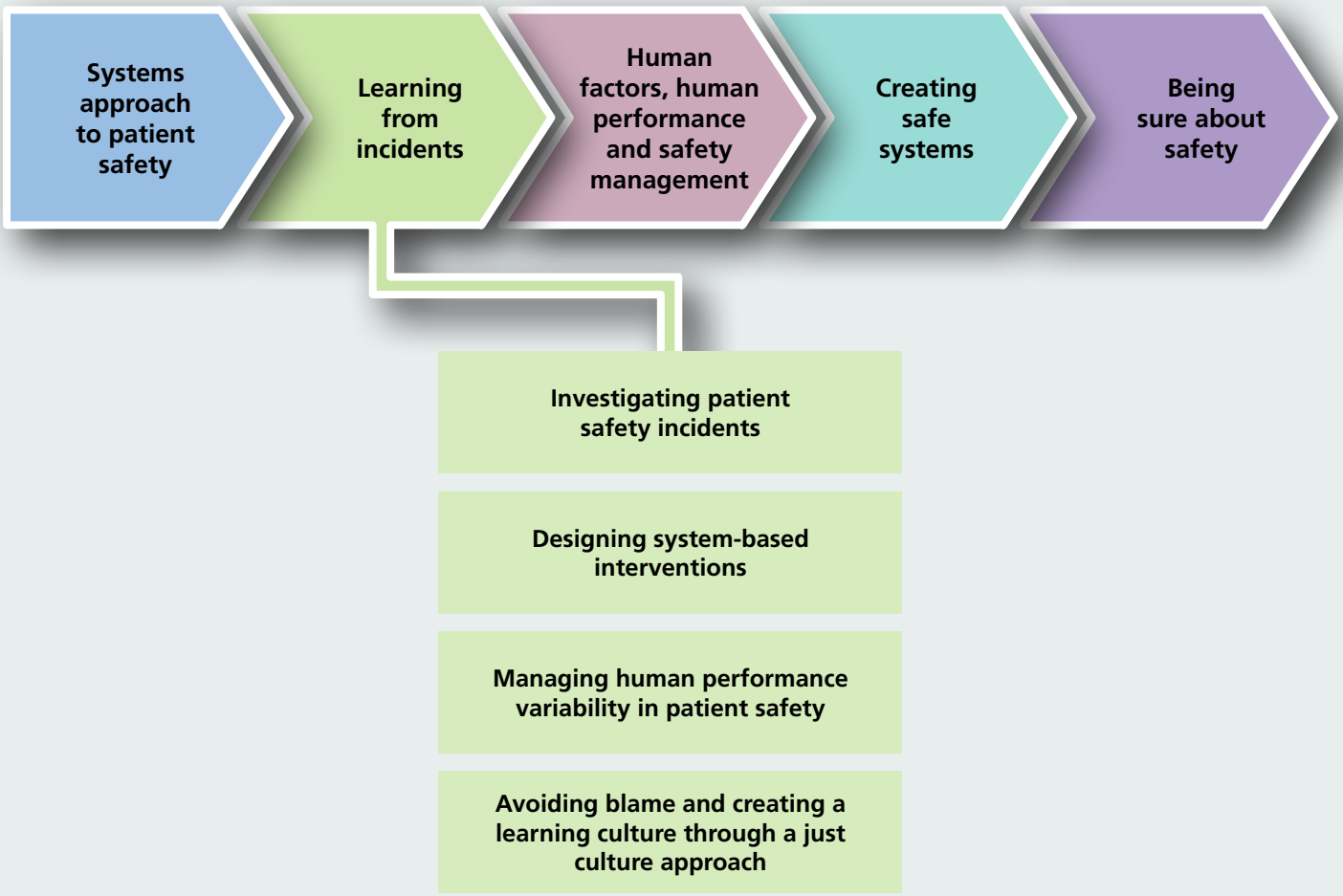

Figure 3. The four key elements in Domain 2

Learning from incidents

1. Investigating patient safety incidents

1.1 Ensures that a multidisciplinary team with a qualified leader manages the incident investigation

1.2 Involves patients and carers in the investigation process

1.3 Creates an evidenced timeline for the patient journey through document review and unbiased data collection

1.4 Uses a systematic approach to identifying causal and contributory factors in analysing incidents

1.5 Where appropriate, uses an understanding of human performance and its variability to describe discrete care and service delivery problems

2. Designing systems-based interventions

2.1 Uses the wider system and context to respond to incident investigations

2.2 Uses an understanding of each separate care delivery problem to bring about changes in the system which will prevent future harm

2.3 Uses an awareness of stronger and weaker interventions when developing safety interventions

2.4 Checks the robustness of interventions for the impact on future risk and safety

3. Managing human performance variability in patient safety

3.1 Ensures that incident investigations recognise and highlight human contributions to risk and patient safety incidents

3.2 Applies an understanding of human performance variability as a consequence of systems rather than an explanation of safety failures

3.3 Evaluates system-induced human error to design effective safety interventions

3.4 Builds human performance management explicitly into incident investigation reports

4. Avoiding blame and creating a learning culture through a just culture approach

4.1 Explains how to distinguish between systems-based failures in safety and the contribution of individual staff

4.2 Uses the 'Just Culture Guide' (JCG) with each individual failure in a systematic way to challenge and validate individual behaviours

4.3 Documents and shares the outputs from the JCG with those involved in the incident and the investigation to ensure complete transparency

4.4 Demonstrates that systems failures identified by the JCG are addressed in the response to the incident or near-miss

4.5 Uses a knowledge of systems and systems-induced failures to prevent inappropriate blame of staff following a patient safety incident

Domain 3

Human factors, human performance, and safety management

In this domain, human factors is introduced with special relevance to patient safety. There is a focus on task management, the role of humans in safety systems, communication and other non-technical skills, process reliability in clinical practice and safety assurance.

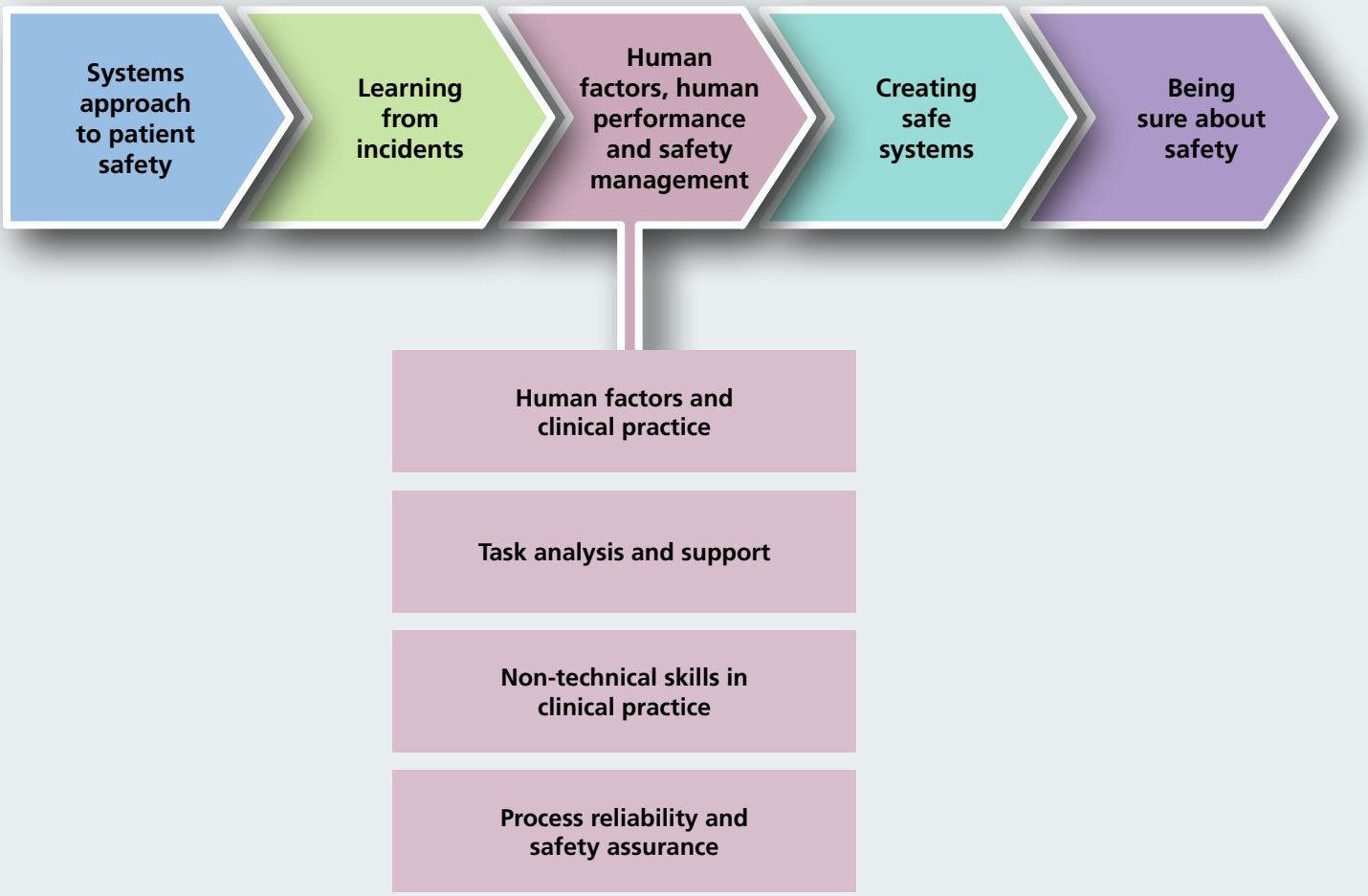

Figure 4. The four key elements in Domain 3

Human factors, human performance, and safety management

1. Human factors and clinical practice

1.1 Outlines and explains the role and effect of humans in complex systems and the fundamentals of human factors

1.2 Reflects performance to explain human factors in practice

1.3 Evaluates the key factors that affect human performance and relate them to local work systems

1.4 Demonstrates knowledge of the effect of human factors management in safety-critical industries

2. Task analysis and support

2.1 Outlines and explains the psychology of human performance variability and error modes

2.2 Analyses the range of tasks in the work area and evaluates task types as skill, rule, and knowledge-based or applies other cognitive framework

2.3 Applies a knowledge of performance influencing factors and their effect on human performance

2.4 Evaluates safety-critical tasks where support is required to minimise error and improve quality of patient safety

3. Non-technical skills in clinical practice

3.1 Uses case studies to understand the effect of non-technical skills on working practice

3.2 Carries out evaluation of personal non-technical skills (communication, situational awareness, stress management teamwork and leadership)

3.3 Outlines and explains the hierarchy gradient and its effects

3.4 Applies strategies to improve non-technical skills

4. Process reliability and safety assurance

4.1 Has knowledge of the key principles and methodologies of quality improvement as they relate to healthcare and evaluates their effect on patient safety

4.2 Can access and apply the evidence-base for quality improvement as it relates to patient safety in healthcare

4.3 Explains the relationship between clinical outcomes and process reliability

4.4 Identifies, maps and monitors safety-critical processes against clinical goals

Domain 4

Creating safe systems

This domain describes proactive safety techniques to prevent harm to patients, builds an understanding of the strengths and weaknesses of safety interventions and the effect of contextual factors on safety and promotes a focus on safety culture.

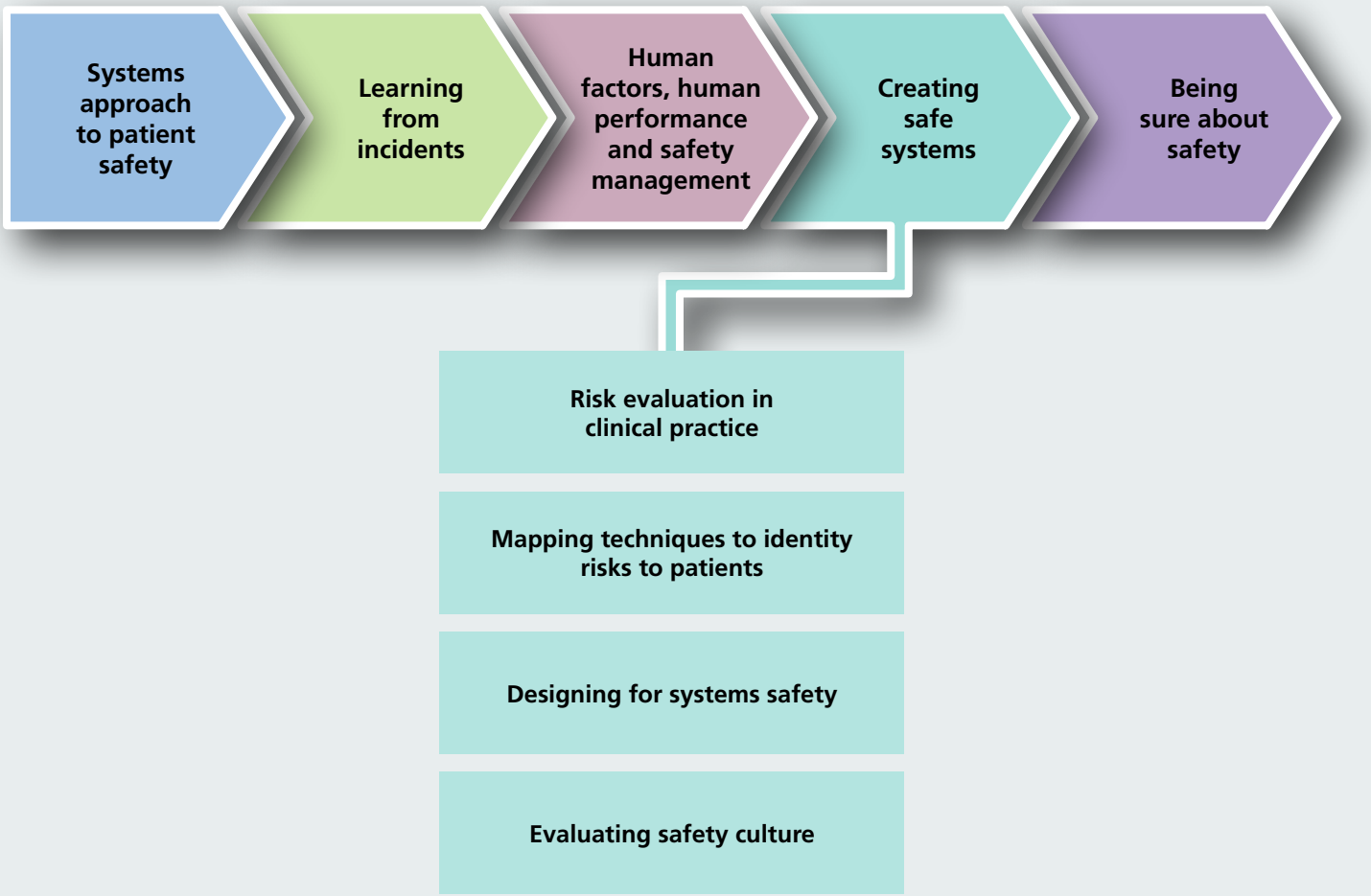

Figure 5. The four key elements in Domain 4

Creating safe systems

1. Risk evaluation in clinical practice

1.1 Adopts a consensus-based approach to identifying risk, with multi-professional involvement

1.2 Has knowledge of hazards and risks and uses standard methodology to assess risks to patients

1.3 Applies formal risk analysis using Failure Mode and Effect Analysis (FMEA)

1.4 Identifies proximal and systemic causes of potential failures and develops strategies to address immediate risks

2. Mapping techniques to identify risks to patients

2.1 Understands and applies process mapping to understand systems and to identify high-level risks to patients

2.2 Applies Hierarchical Task Analysis (HTA) to decompose safety-critical tasks and identify specific task risks

2.3 Takes outputs from mapping techniques to structure improvement programmes in safety and quality

2.4 Uses Hierarchical Task Analysis as a tool to design goal-oriented safe clinical systems

3. Designing for systems safety

3.1 Leads on consensus-based evaluation of why things go wrong for patients

3.2 Outlines and explains checklist design and uses safety checklists appropriately

3.3 Outlines and explains weak and strong interventions in building safety

3.4 Applies the Hierarchy of Control to design and implement effective barriers to patient harm

4. Evaluating safety culture

4.1 Explains the key dimensions of reporting culture, just culture, flexible culture and learning culture

4.2 Applies a safety culture discussion instrument to create dialogue about risk, safety, reporting and learning

4.3 Identifies and applies formal safety culture evaluation instruments

4.4 Encourages and supports staff involved in safety incidents

Domain 5

Being sure about safety

Continues the application of proactive safety techniques to prevent harm to patients; understands the strengths and weaknesses of safety interventions and the effect of contextual factors on safety; evaluates dimensions of safety culture.

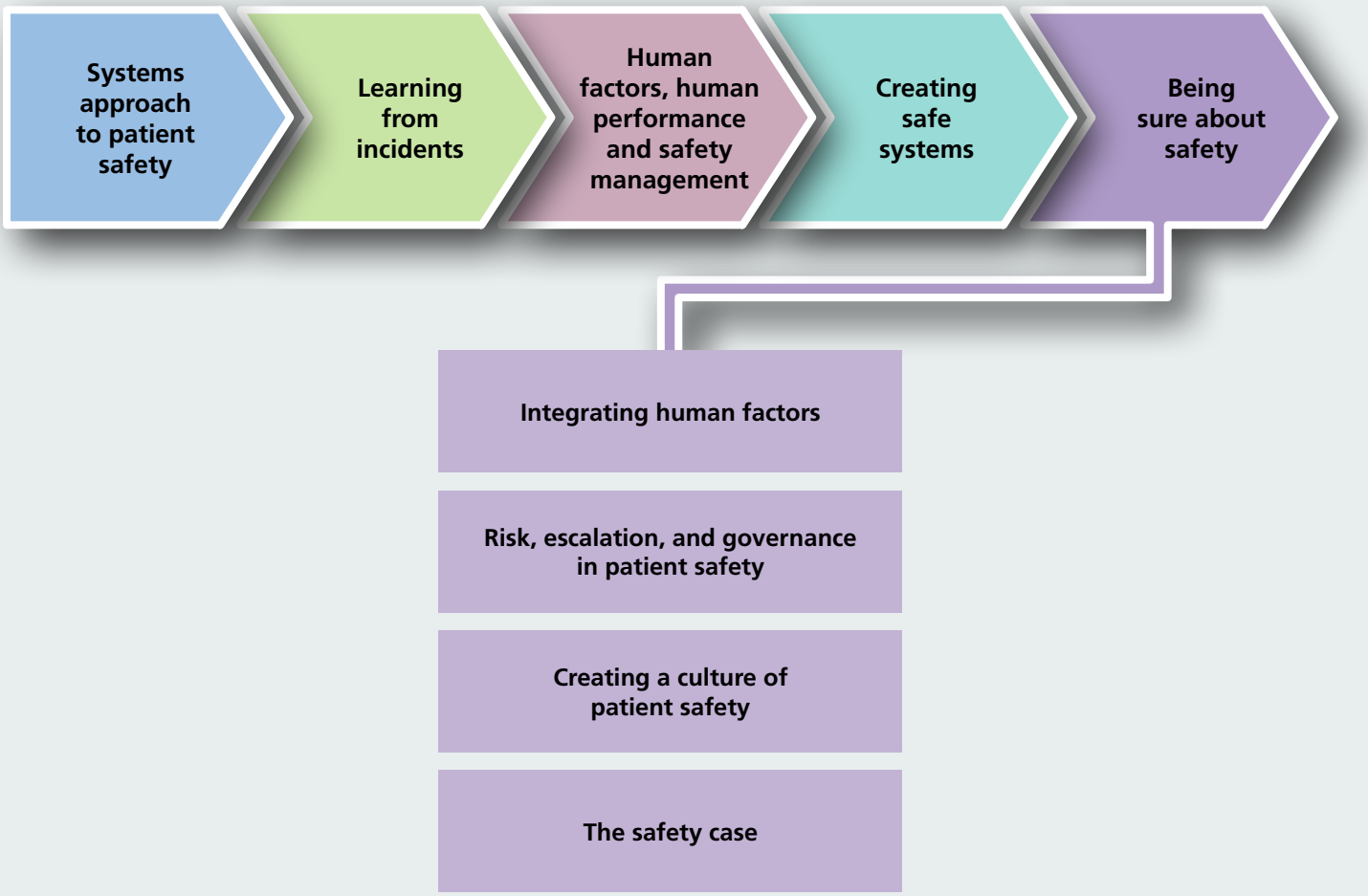

Figure 6. The four key elements in Domain 5

1. Integrating human factors

1.1 Evaluates human factors integration through regular assessment against a formal system review checklist

1.2 Checks safety-critical tasks and provides task support and usable, effective procedures for all staff

1.3 Identifies, supports, and contributes to the design and implementation of safety-critical handovers and communications

1.4 Applies continuous monitoring of key risks and process reliabilities

2. Risk, escalation, and governance in patient safety

2.1 Understands and uses clinical governance meetings to review risks and identify residual (uncontrolled) risks

2.2 Justifies and applies the risk management strategies of eliminate, avoid, transfer, mitigate, contain, or accept

2.3 Populates the risk register with current and residual risks

2.4 Escalates uncontrolled risks to the next level of the risk hierarchy and monitors response

3. Creating a culture of patient safety

3.1 Fosters an open, multi-professional approach to patient safety using both reactive and proactive methods

3.2 Develops or adopts techniques such as Proactive Risk Management in Healthcare (PRIMO), sharing lessons learned or the use of huddles as cultural interventions

3.3 Uses case studies from healthcare and other industries to ensure a continuing focus on safety management

3.4 Promotes the principle of measuring and monitoring patient safety, such as the Health Foundation's Measurement and Monitoring of Safety

4. The safety case

4.1 Builds a safety case with defined scope, an evaluation of safety level, description of risks, risk control measures and residual risks

4.2 Applies the safety case as a tool to measure and monitor safety

4.3 Uses the safety case to address residual risks through improvement activities

4.4 Develops the use of safety case as a tool in governance and regulatory compliance

Glossary

Capability
The ability and confidence to use and develop skills and attributes in complex and changing circumstances

Cognitive interviews
A technique intended to enhance retrieval of information by helping the witness to reconstruct the original context of the incident or near-miss

Curriculum (see also syllabus)
A detailed description of the content and delivery accompanied by a planned sequence of training

Error modes
Taxonomy of human error or human performance variability

Failure Modes and Effects Analysis (FMEA)
The process of reviewing systems and sub-systems to identify potential failure modes in a system, their relative risks and their causes and effects

Flexible culture
A culture which respects the skills and abilities of 'front line' staff and which allows control to pass to task experts

Harm
Physical or psychological damage or injury, or damage to the culture of an organisation

Hazard
A source of danger or harm, which gives rise to risk

Hierarchy gradient
Perceived difference in authority between junior and senior staff; often responsible for lack of communication in safety

Hierarchy of control
A methodology structured to select the most effective control measures to eliminate or reduce the risk of hazards

Hierarchical Task Analysis (HTA)
A detailed examination of the tasks users must do to achieve particular aims, breaking down large tasks into sub-tasks by analysing task goals

Human error
A label used (often in hindsight) to characterise an action or omission that leads to an unintended increased risk of harm

Human factors/ergonomics
The scientific discipline concerned with the understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data, and methods to design in order to optimize human well-being and overall system performance (International Ergonomics Association, 2000)

Human factors: person-based/ non-technical skills
Non-technical skills (NTS): The cognitive and social skills that complement workers' technical skills*

*(Flin et al., 2003, cited in Flin, O'Connor and Crichton, 2008)

Glossary

Just culture
A concept in systems thinking which emphasises that safety incidents are the consequence of working systems, rather person or persons directly involved

A Just Culture Guide
Developed from James Reason's "Incident Decision Tree" to help distinguish individual actions and conditions from systems factors

Learning culture
A culture with the capability to draw the appropriate conclusions from safety events and information and the will to change

Manchester Patient Safety Framework
A framework developed to understand patient safety in several key dimensions, used as an assessment and discussion tool

Near-miss
Unsafe acts or events that could have harmful outcomes in other circumstances; learning opportunity for the organisation

Non-technical skills
See Human factors

Organisational culture
The assumptions, values and artefacts that contribute to the unique social and psychological environment of an organisation

Performance-influencing factors
Factors that combine with human psychology to affect human performance, variability and error. In general, these include personal factors, environmental factors, equipment and procedural factors

Proactive Risk Monitoring in Healthcare (PRIMO)
A tool for risk management that aimed to complement existing methods by plugging the gaps in risk management strategies and procedures

Process mapping
The creation of an accurate visual representation of a system, showing work-flow and agency

Process reliability
The reliability of the processes (usually sub-systems) that are required to assure stated health outcomes. For example, the frequency of unaddressed patient deterioration is affected by the reliability of processes (sub-systems) including physical observations, early warning score recording and interpretation escalation and response

Quality Improvement (QI)
A systematic, formal approach to the analysis of work systems in order to improve performance

Reporting culture
An organisational climate in which people are prepared to report their errors or near-misses

Residual risk
A known risk in a system for which incomplete or absent risk control measures are recorded

Risk
The potential for harm as a consequence of a hazard, usually derived as a product of probability and level of harm

Root Cause Analysis (RCA)
A process used to identify the primary sources of a near-miss or patient safety incident

Safety case
A structured argument, supported by evidence, intended to justify that a system is acceptably safe for a specific application, or to specify a level of safety

Safety culture
A set of beliefs, perceptions and values that employees possess with regard to risk and safety

Glossary

Situational awareness
The perception of environmental elements and events, the comprehension of their meaning, and the projection of their future status. Or, 'knowing what is going on around you'

Syllabus (see also curriculum)
A high-level specification of a course of study

Systems approach
Recognition that the performance of an enterprise depends on a dynamic and inter-related set of parts; the focus on systems as a route to safety and productivity

Systems expertise
An understanding and application of systems thinking when applied to improvement in an organisation

Task analysis
Analysis of how a task is accomplished, including any sub-tasks, preconditions and the range of factors affecting each step or element in the system

Task support
Provision of systematic help for the user in carrying out tasks, often taking the form of visual guides, flowcharts etc

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- Allied Health Professions Federation
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- Council of Postgraduate Medical Deans
- Council of Deans of Health
- Department of Health Northern Ireland
- General Medical Council
- Health and Care Professions Council
- Healthcare Safety Investigation Branch
- Health Education England
- Health Education and Improvement Wales
- Lay representatives
- Medical Schools' Council
- National Association of Clinical Tutors
- NHS Clinical Commissioners
- NHS Education for Scotland
- NHS Employers
- NHS England and Improvement
- Nursing and Midwifery Council
- Royal College of General Practitioners
- Royal College of Midwives
- Royal College of Nursing
- Royal College of Physicians including its Chief Registrar Programme
- Royal Pharmaceutical Society
- Society & College of Radiographers
- UK Foundation Programme

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The syllabus will be reviewed in early 2024, three years after v2.1 was agreed

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