Training sessions to support use of the SAR Quality Markers

Safety science

Session 3. 28 June 2022

1		TODAY Welcome and agenda
2		**Thinking about why things go wrong.** Breakout rooms. **Handout 1. Models of why organisational accidents happen.** • What are the explanations for why things go wrong that are offered by these different models? • How are they similar and/or different? • Does it matter which you use and if so why? Feedback and discussion
3		Breakout rooms. **Handout2: Some key concepts** Feedback and discussion
4		Breakout rooms. **Handout 3: Key systemic ideas that can strengthen analysis in reviews.** • Thinking back to reports you've written or read are these insights that are implicit or explicit in your reports? • Do you think they apply? Would they improve our reports? • What would be the barriers to implementing more ideas from systems thinking? Feedback and discussion
5		**What do we need to do to take this forward?** In what ways do these ways of thinking strengthen the analysis in SCRs? Are some structures/approaches to reviews more conducive to this kind of analysis than others? What kinds of understanding and skills would you and your co-workers need? What are the barriers to this kind of analysis?

Learning Objectives

The aims of this session are:

1. To introduce the basic theoretical approaches to understanding the causes of error in high risk fields such as aviation, engineering and health.
2. To give an awareness of some key concepts from these approaches
3. To encourage participants to make connections between some key concepts from systems thinking and their own practice related to SARs
4. To give participants the opportunity to consider what further support would be needed in order to be able to apply systemic thinking in their reviews

Handout 1: models of why organizational accidents happen

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Simple models of causation where an event or events, failure in a component or a significant error is seen as leading to a disaster

Manageable, mental models that offer simple explanations. Sometimes a series of 'errors' (sometimes linked, possibly coincidental but unrelated) will be seen as contributing.

"It is natural and nearly irresistible to think of events as if they develop in a step-by step progression, where one action or event follows another…and that there is a cause-effect relationship between the two"

Erik Hollnagel

Reflects and reinforces day to day language and thinking

'Cause' and 'root cause'
It was the product of …
This was the direct result of …
Component failure
Human error
One thing (inevitably) led to another…
There was a domino effect

Complex organisational and systems models inevitably rely on a less everyday language, making it harder to communicate findings

"Neil Garnham QC highlighted 12 missed opportunities to protect Victoria Climbié in his closing evidence to the Laming inquiry this week."

Community Care, 21 February 2002

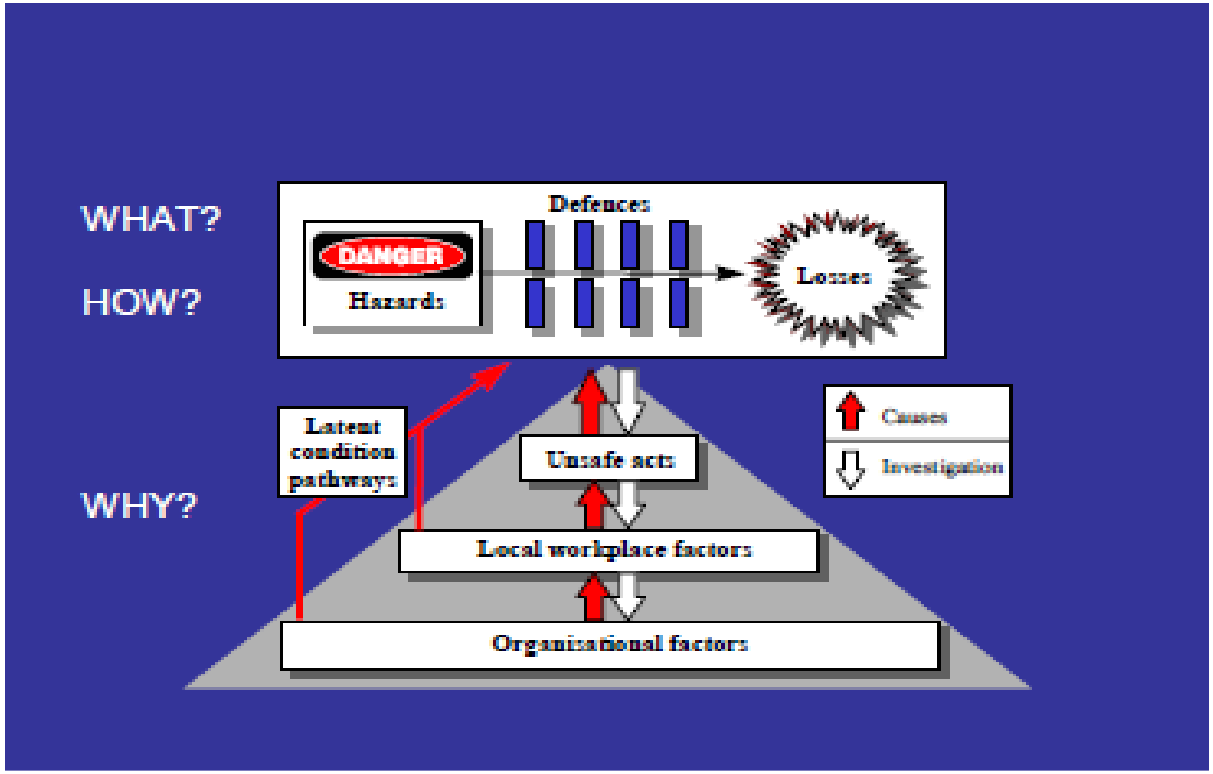
But causation can only be linear in hindsight, because we can trace the path to the disaster.

No one can knows what would have happened if a different course of action had been taken at any of these points.

These 12 episodes highlighted vulnerabilities in safeguarding arrangements.

But is any better understood by treating it as a 'missed opportunity'?

Complex causation of organisational accidents – many variations, used widely in accident investigation



Organisational accidents are distinguished from the sorts of simple human errors that happen in simple activities in everyday life

The model acknowledges the complexity of 'organisational accidents' and the extent to which organisations now seek to defend against them

It uses the technical language of structure, alignment, defences, errors and contributory factors. The term 'latent conditions' borrows from the medical notion of 'latent pathogens'.

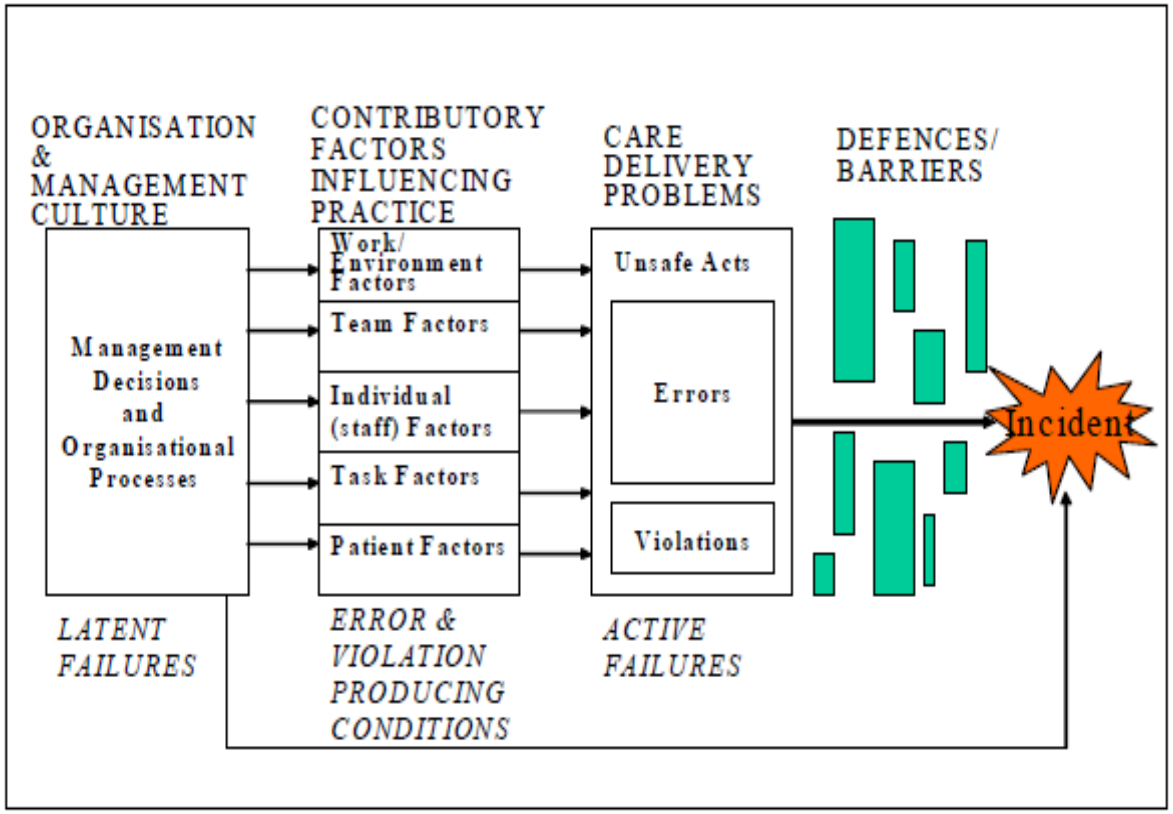
The weight attached to gaps in the protective measures put in place by modern organisations gave rise to the metaphor of a "Swiss Cheese", where holes align in certain instances to 'allow' an organisational accident to happen

"For each individual unsafe act we need to consider what local conditions could have shaped or provoked it. For each of these local conditions we then go on to ask what upstream organisational factors could have contributed to it"

Reason (1997) *Managing the risks of organisational accidents*

Developments in the health sector from models of complex causation

In its structural view of how incidents occur this model is structurally very similar to the previous one. Both seek to understand individual error in context.



Taylor-Adams and Vincent ,'Systems Analysis of Clinical Incidents' ,The London Protocol, Second edition (2000)

However there is an explicit focus on the value of understanding and reducing future risk

'… if the purpose is to achieve a safer healthcare system, then it is necessary to go further and reflect on what the incident reveals about the gaps and inadequacies in the healthcare system in which it occurred. The incident acts as a ''window'' on the system—hence systems analysis. Incident analysis, properly understood, is not a retrospective search for root causes but an attempt to look to the future. In a sense, the particular causes of the incident in question do not matter as they are now in the past. However, the weaknesses of the system revealed are still present and could lead to the next incident.'

Charles Vincent (2004) 'Analysis of clinical incidents: a window on the system not a search for root causes', *Quality and Safety in Health Care*

More recent thinking on systems

'This model sees accidents as emerging from <u>interactions</u> between system components and processes, rather than failures within them. As such accidents come from the normal working of the system; they are a systematic bi-product of people and organisations trying to pursue success with imperfect knowledge and under the pressure of other resource constraints (scarcity, competition, time limits)'.

Dekker (2006) *The Field Guide to Understanding Human Error,* p 81

Much modern industrial and commercial activity and public service provision has become so complex that it is impossible to specify exactly what action is required to obtain the desired outcome i.e. procedures can't be written for every situation.

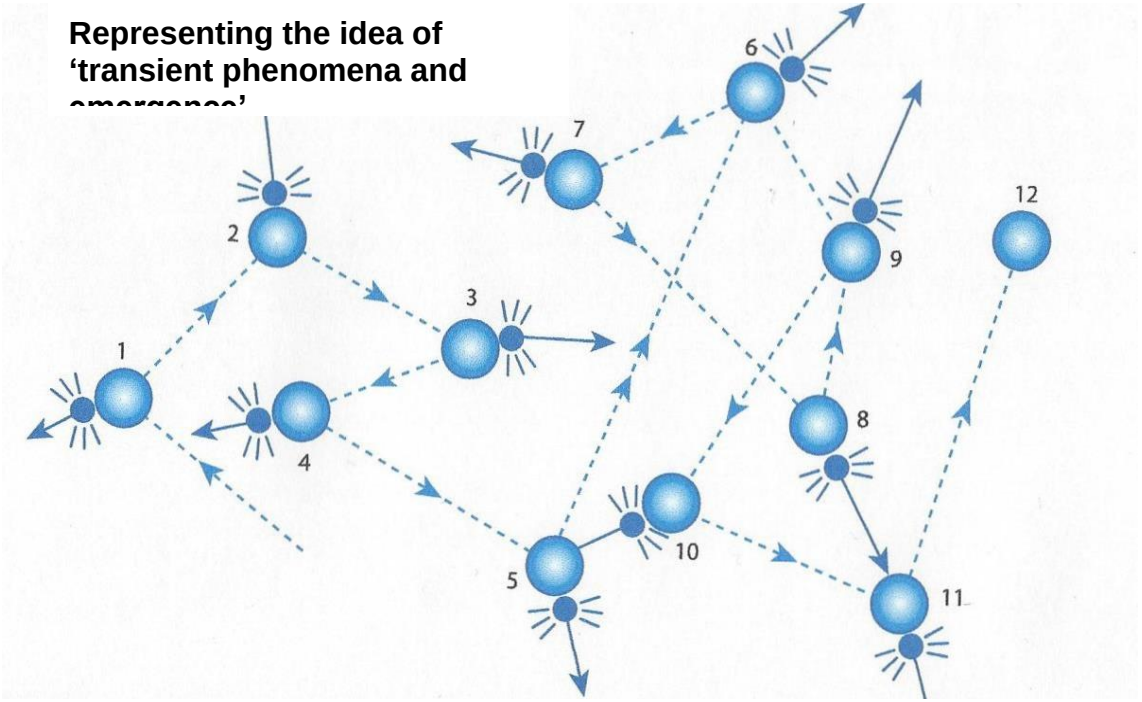
'When such systems perform reliably, it is because people are flexible and adaptive, rather than because the systems are perfectly thought out and designed'.

'The variability of everyday performance is necessary for the system to function, and is the source of successes as well as of failures'. (EUROCONTROL, 2013)

The behaviours that get things done effectively most of the time sometimes contribute to the development of poor outcomes and major incidents. Thus accidents

'Although it is still common to attribute a majority of adverse outcomes to a breakdown of components and normal system functions, there is (sic) a growing number of cases where that is not so. In such cases the outcome is said to be emergent rather than resultant'

Representing the idea of 'transient phenomena and emergence'



The diagram and all other quotes are from European Organisation for the Safety of Air Navigation (EUROCONTROL) (2013) *From Safety 1 to Safety 2 – A White Paper*

What would a model explaining organisational accidents for safeguarding look like?

As models of accident investigation have developed they have been tested, adapted and applied in different fields.

Woloshynowych et al (2005) tested parallels between industry, aviation and health and found that

'aviation, nuclear power, chemical and petroleum industries are also complex, hazardous activities carried out in large organisations, by for the most part dedicated and highly trained people. The parallels with health care are obvious and it would be surprising if we could not learn from them….

(But there are also) ***many differences between industry and healthcare. First, healthcare consists of an extraordinarily diverse set of activities…environments and associated responsibilities…***

Even with the most cursory glance at the diversity of healthcare, the parallels with the comparatively predictable high-hazard industries with usually a limited set of activities begins to break down….

Healthcare is in large part also routine but in certain areas healthcare staff face very high levels of uncertainty. ….

Unlike industry tolerance for uncertainty on the part of healthcare staff, and indeed the patient is vital. Hence the nature of the work is very different from most industrial settings.

NB

- Patient safety and quality initiatives in the NHS have not historically encompassed safeguarding
- There are no significant references to safeguarding in the systems literature
- The SCIE 'Learning Together' model built on the root cause analysis and early systems models used by the NHS to find a model that could be applied to safeguarding

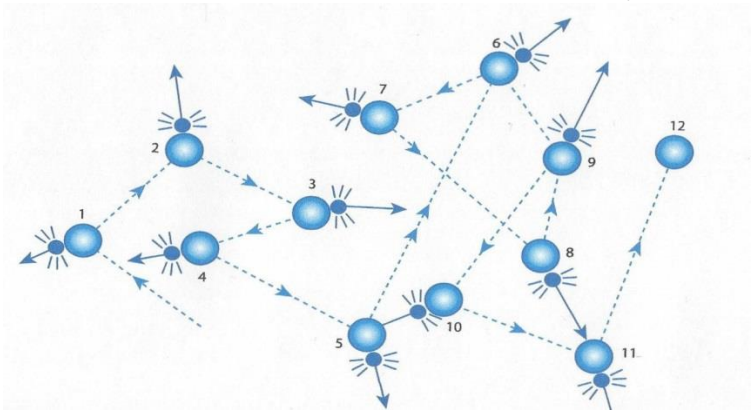
A model for safeguarding needs to continue to assert that children's deaths result from "organisational accidents" rather than individual errors

It must recognise that safeguarding children is a "wicked" problem, i.e. one to which there is no final, agreed solution, subject to competing, changing policy and societal priorities and demands

Staff involved make unpalatable choices on the basis of imperfect information

Harm is caused to children by behaviour and conditions located outside the professional system (except in the rare cases of professional abuse)

In some respect, every presentation is unique
Knowledge of the risk posed by individuals varies enormously from case to case, and is sometimes nil.



Models that take account of 'transient phenomena' and treat cases with very poor outcomes as a bi-product of pressurised normal working are well suited to capturing the complexity and unpredictability of safeguarding work.

Handout 2: Some key concepts

Learning into Practice: improving the quality and use of serious case reviews.

LiPP SCR Masterclass 2: Systems thinking

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Glossary of terms

A selection of concepts

Increasing complexity of working arrangements can increase risk, especially when complexity is linked to tight coupling and interdependence of functions. The quest for efficiency drives growing division of labour and increased complexity. This is shown to increase the risk of error (especially when parts of the system are separated by time and place and controlled separately). The source of errors is more opaque and it may be harder to recover when something goes wrong

Tighter coupling of operations. In a tightly 'coupled' system, functions rely on one another, strongly influence one another or must happen in a given sequence or window of time. This may increase the scope for error or miscommunication.
The impact of an error in one function may adversely affect other functions and tasks. A tightly coupled system may find it harder to recover from an error in one part of the system

Normal accidents No organisation can specify the practice response to every set of circumstances in detail. Organisations rely on staff 'at the sharp end' to adjust their activity in order to manage pressures, unusual circumstances and new or unexpected workload pressures. Front line staff usually 'create safety' but in some circumstances the things that usually work contribute to failure.

Latent and active failures. Front line staff are seen as the inheritors of problems caused by the poor design of procedures and arrangements. Potential shortcomings remain hidden until a particular set of circumstances arises

Existence of a 'just culture' as a precondition for investigative neutrality and learning and improvement Working Together states that "professionals must be involved fully in reviews and invited to contribute their perspectives without fear of being blamed for actions they took in good faith" (WT 2015 Section 4.10). But that begs the questions, 'What is good faith?' and 'Who is to judge?'

Organisational approaches recognise that 1) activity and outcome do not necessarily correlate – there is not necessarily an error to uncover 2) errors are common place in complex high-risk activities 3) if errors are uncovered they mark the starting point for the investigation, not its end point. Errors will be described and understood, but it is not the role of the SCR to determine whether those who were involved acted in 'good faith' or not.

Outcome and hindsight bias Have you ever caught yourself asking, 'How could they not have noticed?' How could they not have known?' Then you are reacting to failure. And to understand failure you first have to understand your reactions to failure.
Sidney Dekker, The Field Guide to Understanding Human Error (2006)

'Looking back, the situation faced by the clinician is inevitably grossly simplified'
Charles Vincent, (2010) Patient Safety, 2nd edition

We are naturally swayed by the outcome to imagine that everything that 'went wrong' contributed in some way to the final tragedy or might have (if something different had been done) prevented it. In reality professionals working in safeguarding are frequently faced with a range of unpalatable choices which they must make on the basis of incomplete or incorrect information. After we know the outcome of a case history the range of apparent choices appears to be much narrower and the implications of each of them is perfectly clear.

None of the people involved in the care of Victoria Climbié wilfully 'missed an opportunity' to save her because none of them knew that she was going to be killed. In context very different pressures and reasoning shaped their actions.

Handout 3: Key systemic ideas that can strengthen analysis in reviews.

Learning into Practice: improving the quality and use of serious case reviews.

LiPP SCR Masterclass 2: Systems thinking

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Glossary of terms

A selection of systems concepts to help making sense of front line practice

Trade-offs. Organisations, teams and staff may have shifting or incompatible objectives and priorities. Sometimes these arise from external pressure (time and resources); often trade-offs are inherent in the task or function itself.

New arrangements or working methods that create new vulnerabilities or 'pathways to failure'. We introduce new approaches and arrangements with a view to improving an aspect of service (usually quality or efficiency). Even innovations which are designed with safety and quality in mind will contain new pathways to failure (often hidden and difficult to anticipate)

Drift to failure. Serious organisational accidents can often be shown to have been influenced by a gradual shifting in priorities which led to quality and safety being treated as lower priorities.
Organisations sometimes find it difficult to spot early signs of deteriorating standards, especially if senior managers are perceived as being unreceptive to bad news

Difficulties of bringing knowledge to bear in context. Accident investigations have considered many aspects of this including:
1) what knowledge is relevant?
2) is that knowledge accessed?
3) is the situation being oversimplified?
4) Are those involved aware of the limits of their knowledge?

Clumsy introduction or application of technology. How does the introduction of technology shape tasks? How does it affect the ability to access and apply relevant knowledge?