Learning from Never Events

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KING'S College LONDON

Overview

- Introduce principles of resilient systems and Safety II
- Describe study of RCA reports following Never Events
  - Analysed from Safety II perspective
  - What can we learn to make RCA process more effective?
  - Recommendations

Traditional approach to safety - Safety I

- Reactive – aims to prevent future problems
- Humans are seen as unreliable – focus on human error
- Errors are categorised and counted – error taxonomies, estimation of error rates, search for data, studies on human limits
- Safety is defined as absence of adverse incidents – try to minimise the number of things that go wrong
- Parallels with medical models of illness – health as absence of illness, search for causes, removing cause results in health

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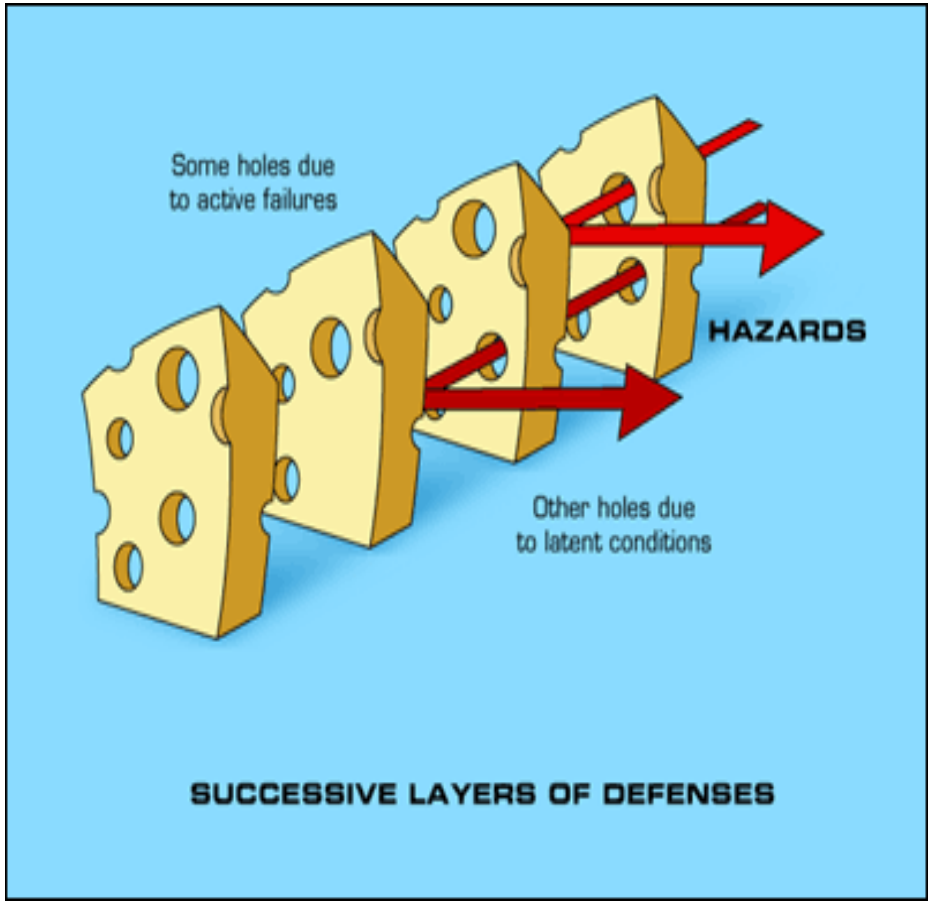
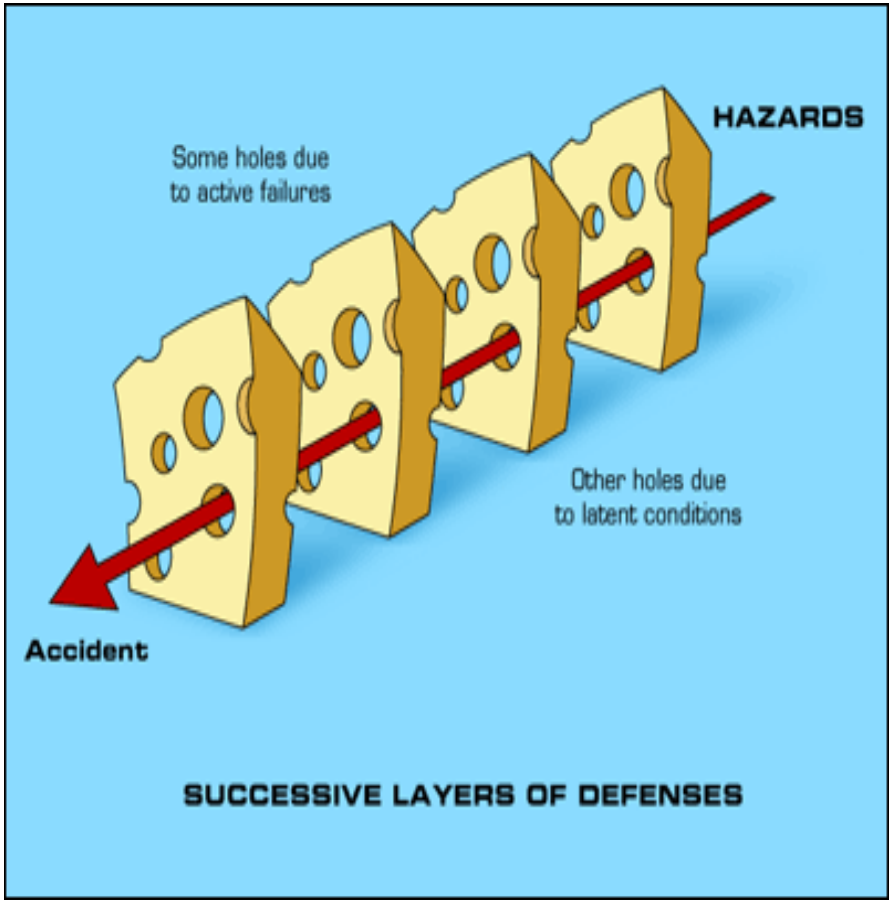
Swiss cheese model





Problems with Safety I

- Dissatisfaction with existing models and methods for improving safety – reactive, slow progress
- Limitations of root cause analysis, incident reporting – difficulty of establishing causes, same problems often recur, highly targeted solutions with wrong focus, time consuming

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Can incident reporting improve safety? Healthcare practitioners' views of the effectiveness of incident reporting

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Abstract

Objectives. Recent critiques of incident reporting suggest that its role in managing safety has been over emphasized. The objective of this study was to examine the perceived effectiveness of incident reporting in improving safety in mental health and acute hospital settings by asking staff about their perceptions and experiences.

Design. Qualitative research design using documentary analysis and semi-structured interviews.

Setting. Two large teaching hospitals in London; one providing acute and the other mental healthcare.

Participants. Sixty-two healthcare practitioners with experience of reporting and analysing incidents.

Results. Incident reporting was perceived as having a positive effect on safety, not only by leading to changes in care processes but also by changing staff attitudes and knowledge. Staff discussed examples of both instrumental and conceptual uses of the knowledge generated by incident reports. There are difficulties in using incident reports to improve safety in healthcare at all stages of the incident reporting process. Differences in the risks encountered and the organizational systems developed in the two hospitals to review reported incidents could be linked to the differences we found in attitudes to incident reporting between the two hospitals.

Conclusion. Incident reporting can be a powerful tool for developing and maintaining an awareness of risks in healthcare practice. Using incident reports to improve care is challenging and the study highlighted the complexities involved and the difficulties faced by staff in learning from incident data.

Keywords: risk management, incident reporting and analysis, adverse events, quality culture, medical error

How do we know we are safe?

- Safety is not the absence of error
- If we rely on error rates to indicate safety we can only know how safe we were in the past
- We need to strengthen safety in the present and future

Safety II – Resilient systems

- Proactive systems approach aimed at anticipating and preventing problems
- Based on the reality of clinical work –
  - Often messy, chaotic
  - Determined by social interaction and negotiation
  - Relies on co-ordination and articulation across groups, physical locations, time
- Organisational resilience, or safe adaptation is the key to creating safe systems

CARe Safety II/Resilient systems

- Resilience is “the intrinsic ability of a system or an organisation to adjust its functioning prior to, during, or following changes and disturbances, so that it can sustain required operations under both expected and unexpected conditions” (Hollnagel, 2011, p. xxxvi)
- Four cornerstones – anticipating, monitoring, responding and learning

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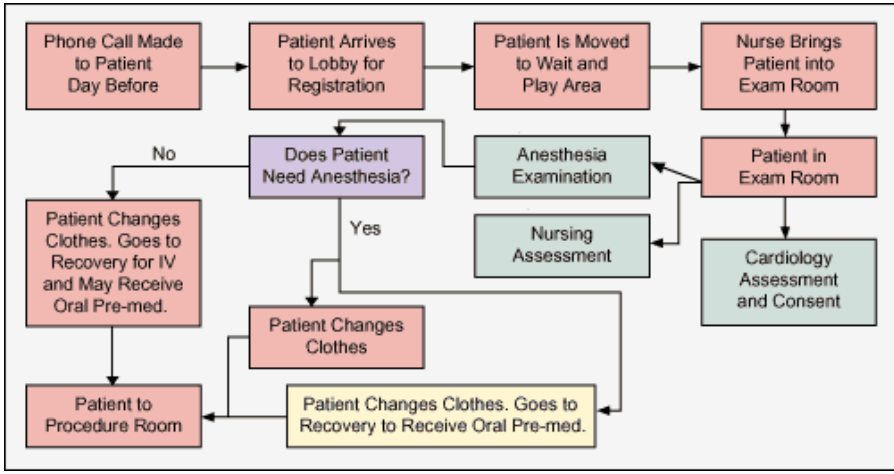
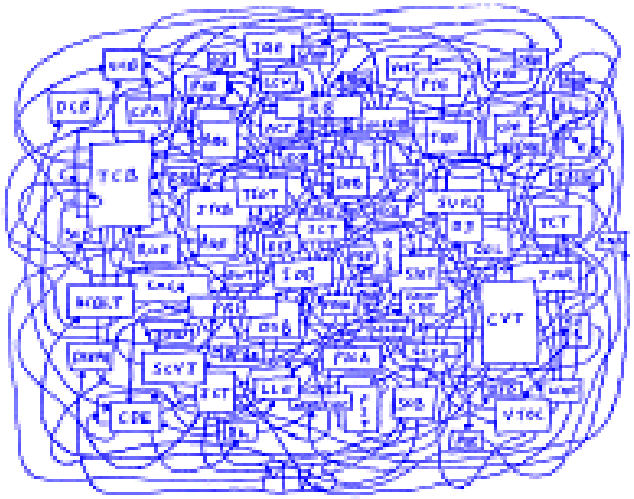
Safety II

- Key concepts
  - Work as imagined (WAI) is different to work as done (WAD)
  - Ability to adapt and work flexibly is what creates safety
  - Safety and harm emerge from the complexity
  - Safety II – maximise the number of things that go right





Safety I/II

- Never events seem to be a Safety I approach
  - Retrospective analysis
  - Root Cause Analysis is used to identify problems, propose solutions and implement them
  - Never Events keep happening – little evidence of learning
- Could a Safety II perspective help to understand Never Events and how to analyse and prevent them?

Never events – a misnomer

- **332 Never Events occurred in England between April-November 2017**
- Never Events are patient safety incidents that CAN cause harm or death –
  - 15 well defined events – updated regularly
  - wrong site surgery, wrong route drug administration, retained foreign objects, wrong implants
- It is assumed there is sufficient available evidence about how to prevent them so hospitals are penalised if they occur

Aims

1. Analyse **existing** RCA reports using a Safety II perspective to identify new insights
   - Effectiveness of reports using an existing framework of analytic effectiveness and new resilience dimensions
   - Effectiveness of actions using three point scale – did the action relate to individuals, the system, or removing the risk
   - Thematic analysis
   - Analysis of groups of similar incidents
2. Develop a Safety II framework to guide Never Event analysis

Partner hospital

Year	Number	Position in all organisations
2014-15	7	Joint 2nd
2015-16	15	1st
2016-17	6	Joint 6th

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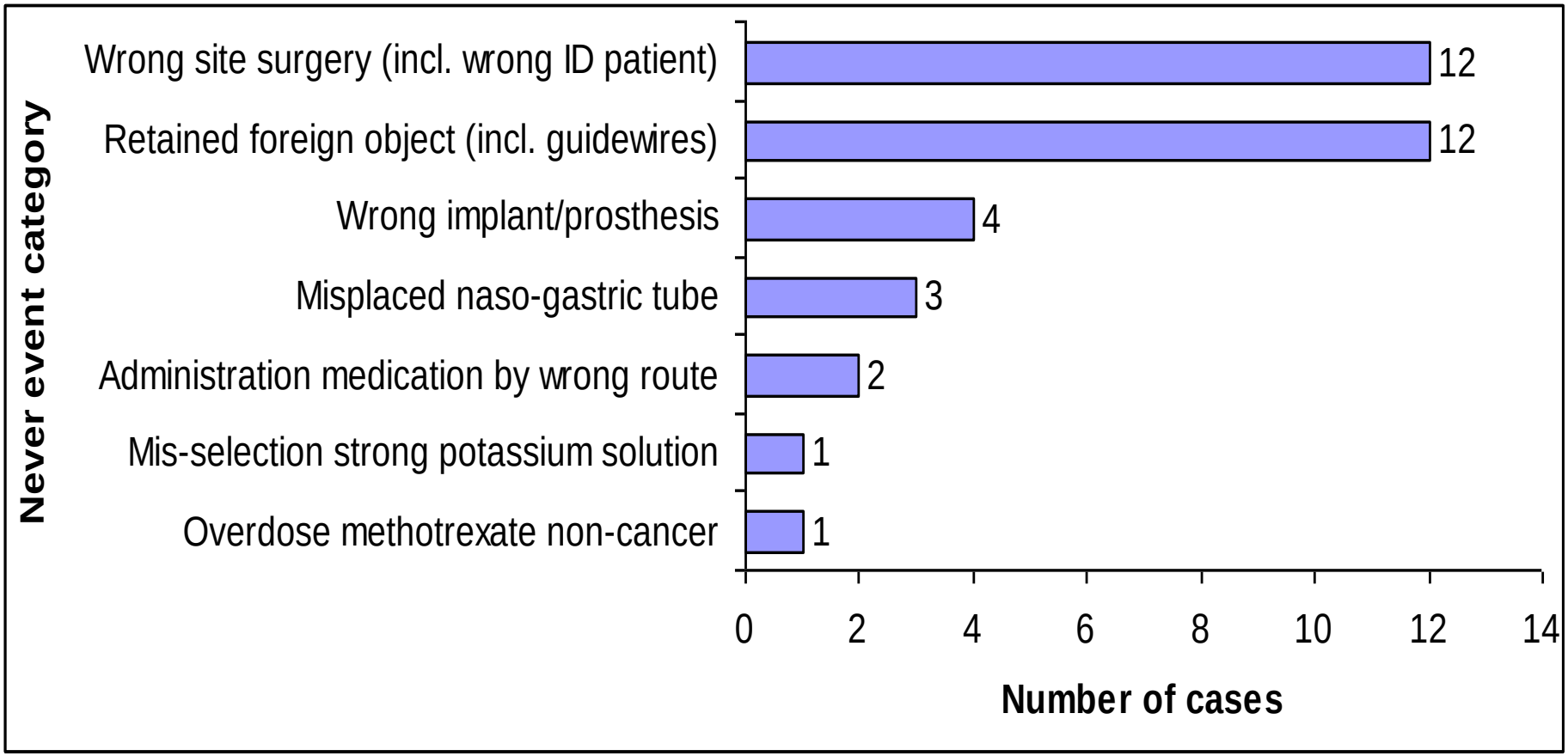
Never Events analysed

Never events between May 2014 and Sept 2017 n=35



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RCA effectiveness

- Used existing indicators of incident review meeting analytic effectiveness
- Nine dimensions – robustness of proposed causes and solutions, information seeking, systems problems

Safety Science

Volume 80, December 2015, Pages 105–114

Learning from patient safety incidents in incident review meetings: Organisational factors and indicators of analytic process effectiveness

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doi:10.1016/j.ssci.2015.07.012

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Highlights

- Learning from patient safety incidents is difficult.
- Lack of organisational support, high workload ineffective leadership hinders learning.
- Facilitating factors were participatory interactions and strong safety leadership.
- Process measures of meeting effectiveness were developed.
- Process measures highlighted important deficits in analytic effectiveness.

Anderson, J. E., & Kodate, N. (2015). Learning from patient safety incidents in incident review meetings: organisational factors and indicators of analytic process effectiveness. *Safety Science*, *80*, 105-114.

Resilience dimensions

- Seven resilience indicators added
  - Description and analysis of WAI vs WAD
  - How are problems usually solved
  - Weak signals understood
  - Learning applicable to other areas – organisation/NHS
  - Articulate link between cause and effect
  - Clear rationale for actions and how they would prevent recurrence
  - Likelihood actions would prevent recurrence

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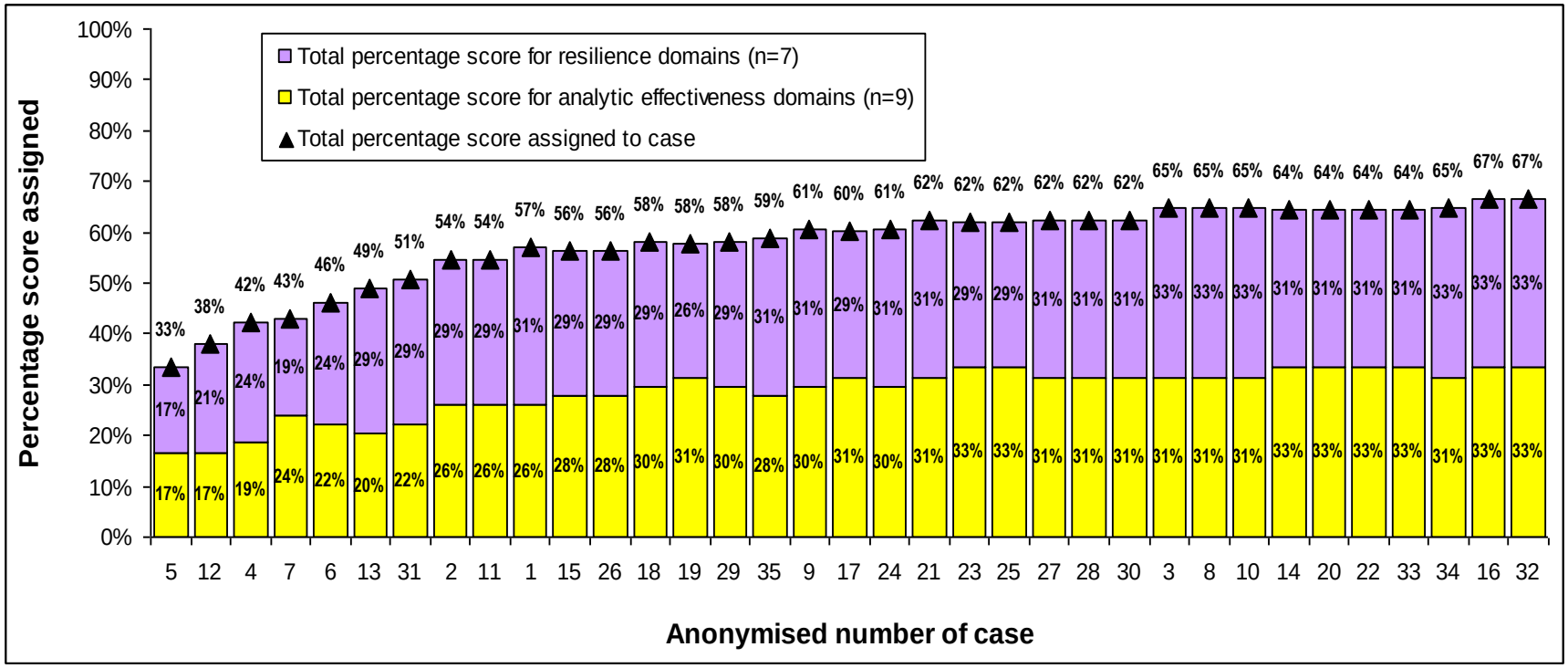
Ratings of effectiveness



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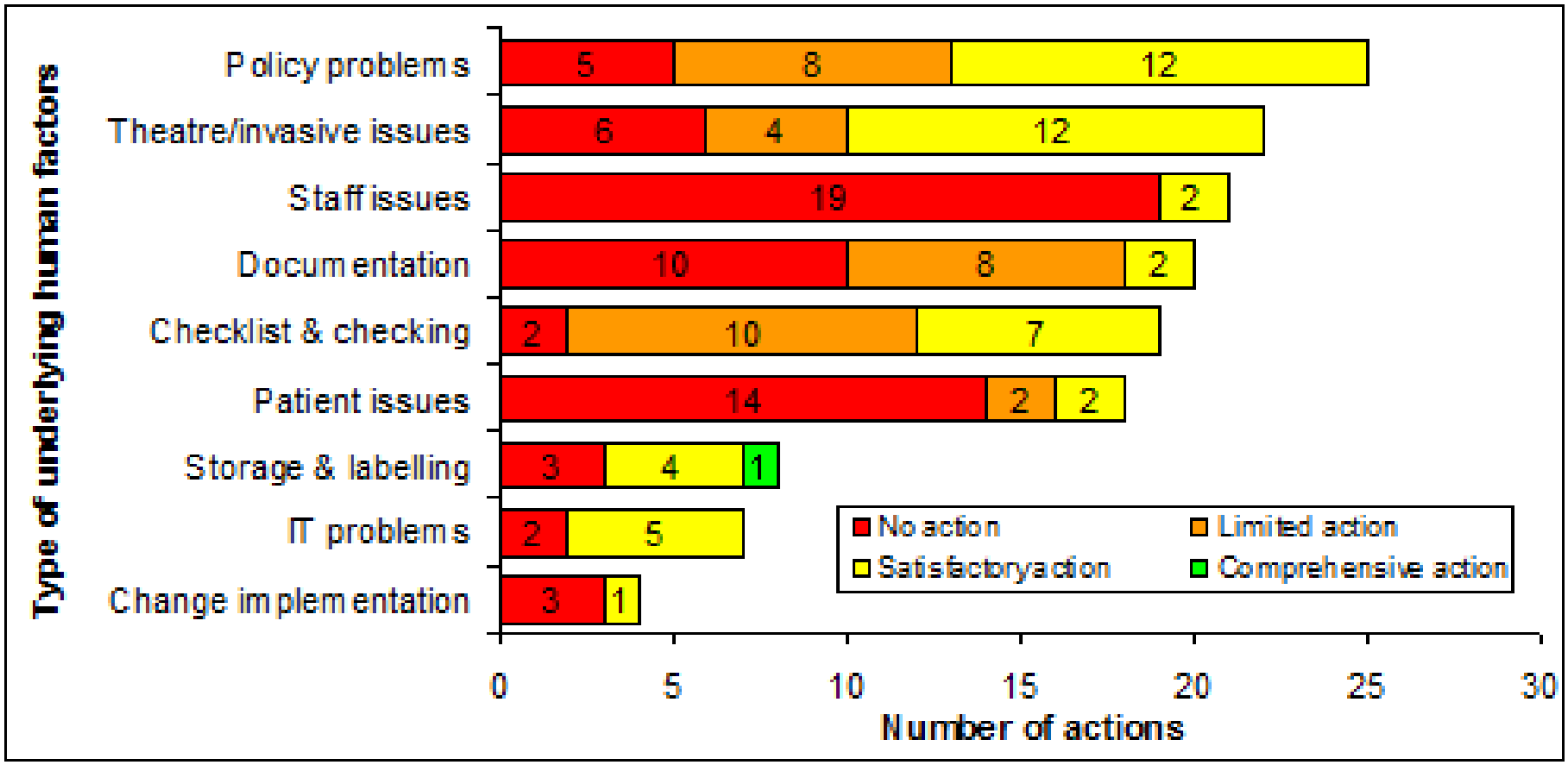
Underlying themes (n=144)

Policy problems	Inappropriate, poorly drafted, or lack of policy Difficult for staff to comply
Staff issues	Busy/overworked/tired; understaffed Under-trained or given inappropriate responsibility
Documentation	Non-completion, non-availability or counterintuitive
Checklist & checking	Checklist difficult, failure to use or incorrect version Other checking-related issues
Patient issues	ID, delirium/confusion/paediatric; Reliance on input to treatment; Patients inconvenienced for expediency
Theatre/invasive	Counting equipment, marking of site, complex surgery Left/right confusion; Mis-linking intubation (Luer)
Storage/labelling	Storage causing confusion; Inappropriate labelling
IT problems	Access issues, poor design, lack of interoperability
Change implementation	Lack of change control, actions not implemented, reverting to previous process

Each incident report contained one or more of these underlying themes, range 1 to 7.
About half were not associated with any action, n=64/144 (44.4%)

CARe Analysis of actions (n=144)



Groups of similar incidents

- The two never events categories with the highest number of incidents were:
  - Retained foreign object n=12/35 (34.3%)
  - Wrong site surgery n=12/35 (34.3%)

- Remaining cases n=11/35 (31.4%) were split across five further categories, range 1 to 4, so too small to identify common themes

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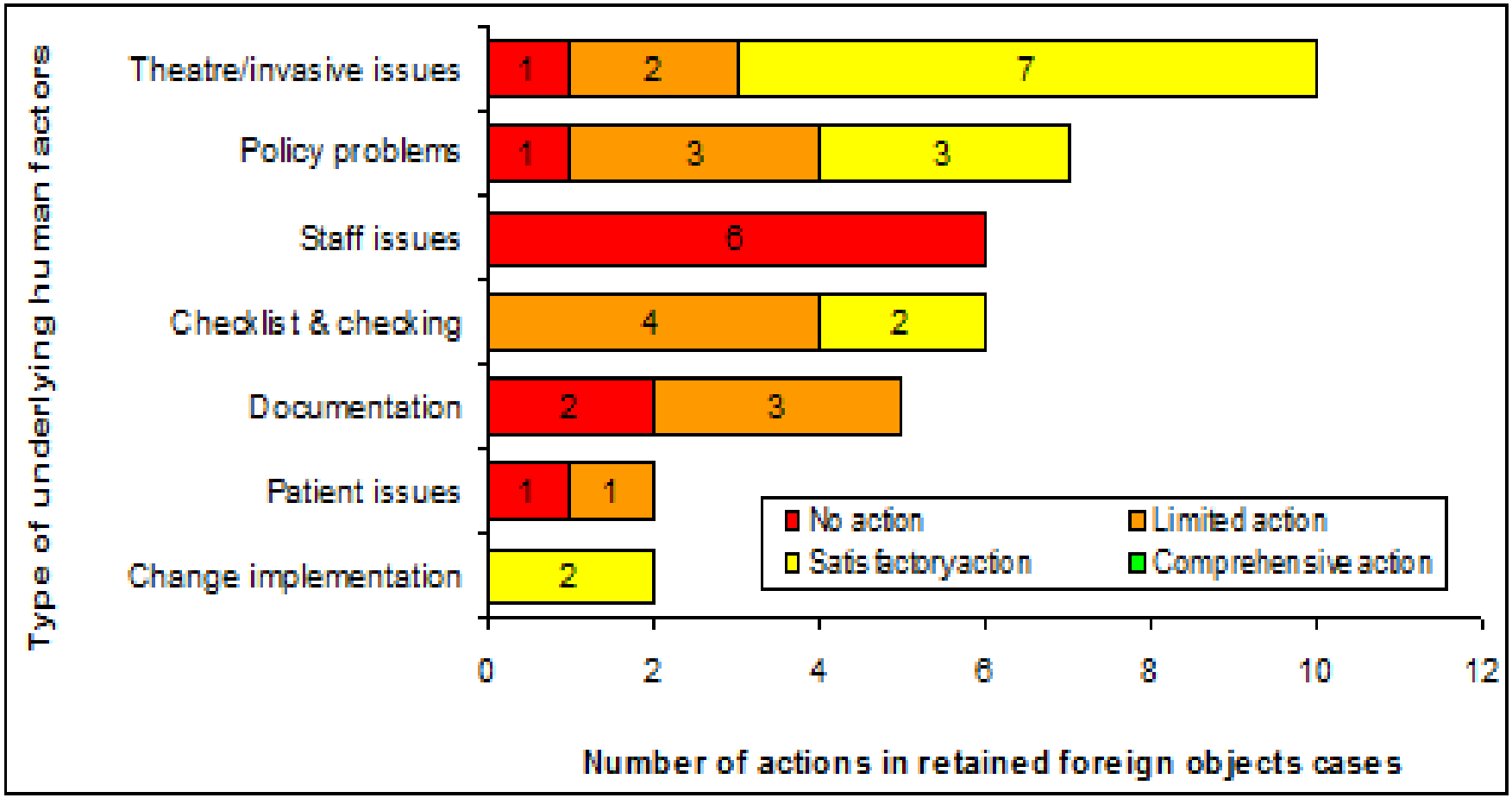
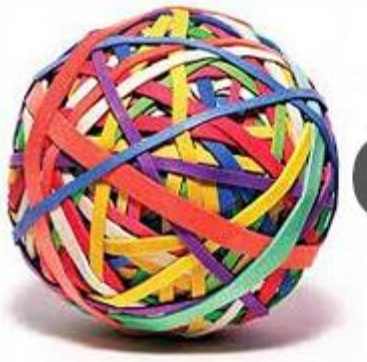
Retained foreign objects

(n=12 cases)



Wrong site surgery (n=12 cases)



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Main RCA weaknesses

1. Failure to understand or describe WAD, main challenges, how problems usually solved
2. Failure to consider weak signals – eg incomplete consent, documentation, verbal patient id
3. Failure to consider how the identified problem could affect other areas – dentistry, radiology
4. Actions have to be SMART – inhibits identification of big organisational problems

Specific, Measurable, Achievable, Realistic, and Timely

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Main RCA weaknesses

4. Staff well being not addressed – eg 14 hour operation, support following incident
5. Items added to checklists on the basis of the last incident – lost opportunity to think more holistically and design a better checklist
6. Policy problems not addressed
   - No attempt to understand why not followed
   - No recommendation to introduce a policy when it was warranted and vice versa

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Dilemmas

- Policies – judging the need for a policy, a change, design, taking into account WAD, evaluation
- Shifting the risk – Luer connectors for different routes of administration don't help if wrong med is in the syringe
- Increasing complexity by adding procedures
  - Checking procedures and checklists, documentation
- Staffing issues – fatigue, inexperience
  - How to address in a pressured system
- Patient preferences and involvement
  - delirium, confusion, dementia, consent, preferences
- IT systems – interoperability, usability
- Change implementation and control processes

Recommendations

1. Incorporate the effectiveness and resilience frameworks into future RCA processes to improve the quality of solutions and actions
2. Use Never Events as a window on the system to identify:
   - Weak signals (accidents waiting to happen)
   - Other areas that may be affected – Trust/NHS
   - Longer term actions –Allow actions even if they cannot be closed in a timely fashion, so long-term issues can be recorded

Recommendations

3. Add an examination of WAD into event analysis and other improvement activities such as audits, QI projects. How is work usually accomplished? What creates challenges and how are they resolved?
4. Use understanding of WAD to analyse
   - Is any action required?
   - Which actions might assist workers even if not a direct cause of the incident?
   - Which actions will inhibit work activity?
   - What change processes are required to implement action?

Recommendations

5. Use Never Events as a learning opportunity to raise risk awareness - solutions are never perfect and may even increase risk, but awareness may provide a defence

Conclusions

- Regulators, politicians and the media all live in a Safety I world
- Safety I practices such as Never Event analysis are sub optimal but can be improved
- Resilient Healthcare can contribute insights to improve the quality of Never Event analysis
  - Changing the emphasis of investigations to include a wider perspective and a focus on the system, not just the event
- **Safety I and II are not mutually exclusive!**

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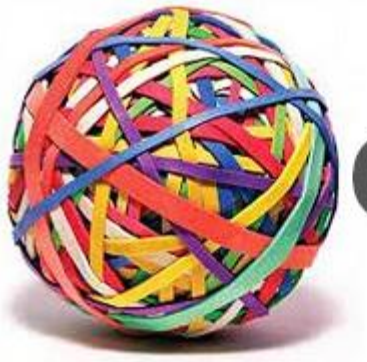
"There is always a well-known solution to every human problem - neat, plausible and … WRONG"

H. L. Mencken, 1949,

American columnist, essayist, magazine editor and acerbic critic of life and culture



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Many thanks for your attention

Reflections?
Comments?

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Dimensions of effectiveness - rating scale definitions

Here for info, not for examination during presentation

Dimension	Rating scale		
	Low (1)	Medium (2)	High (3)
Exploration of possible causes	No consideration of alternative causes. Converging on a cause early.	Some exploration of different causes, but unbalanced focus on one	Consistent focus on a range of possible causes
Consideration of systems problems	No consideration systems issues, or emphasis on individual actions	Some consideration, but focus is mostly on individuals	Exhaustive consideration of different types of systems problems
Critiquing of hypothesised causes	No critiquing of causes or acceptance without examination	Some critiquing of proposed causes, but not systematic	Different viewpoints actively elicited. Explicit critiquing of hypotheses
Seek further information about the incident	No further information sought about the incident	Information sometimes sought but reliance on known sources	Actively seeking out information from different sources
Exploration of a range of possible actions	No consideration of a number of different actions. Tendency to simplify	Some alternative actions are considered but not systematically	Systematic exploration of many different alternatives
Consideration of systems impact of potential actions	No consideration of how proposed action(s) would affect operations	Some consideration of how proposed actions would affect the work system, but not systematic	Systematic exploration of the effects of potential actions including unintended consequences
Critiquing of potential solutions	No critiquing of proposed solutions.	Some critiquing of proposed solutions, but not systematic	Different viewpoints actively elicited. Explicit critiquing of potential solutions
Seek further information about actions taken in similar cases	No other information sources consulted	Information sometimes sought but reliance on known sources	Actively seeking out information from different sources
Address problems spanning boundaries	No attempt to resolve problems that span organisational boundaries	Some attempt is made to resolve cross-boundary problems, but not systematically	Problems that cross organisational boundaries are identified and addressed

Dimensions of resilience - rating scale definitions

Here for info, not for examination during presentation

Dimension	Rating scale		
	Low (1)	**Medium (2)**	**High (3)**
Did they consider work as imagined (WAI) v work as done (WAD)? Definition below*	No consideration of WAI v WAD	Described gap between WAI & WAD	Implemented effective action plan related to difference between WAI & WAD
Was there a description of how issues are normally solved?	No description of normal policy or strategies for dealing with risk	Usual methods of dealing with risk are described	Detailed explanation of normal procedures for managing the risk and they are robust
Were any weak signals understood?*see below	Weak signals not identified	Noticed/described a weak signal of future risk, but little or no action taken	Developed an action plan related to weak signal
Did they identify aspects of the incident applicable to other areas or similar cases?	No consideration of applicability elsewhere	Some understanding of applicability elsewhere	Includes actions related to shared information or risks in other areas
Was there clarity of the link between cause and effect?	Unclear link between cause and effect	Some links between cause and effect described	Clear links between cause and effect shown
Was there a clear rationale for actions taken related to this incident?	No rationale for actions taken	Rationale given without clear link	All actions clearly explained and linked to incident
What is the likelihood that actions would prevent further incidents?	Unclear how actions would prevent further incidents	Some clarity of how actions could prevent further incidents	Clear explanation of how actions would prevent further incidents

- WAI = expected procedures without adaptation or deviation; WAD = normal day to day variation of healthcare; weak signals=accident waiting to happen