Safer by design

• Background
• Risk management
• Alignment with QIPP
• Training proposed
• Development needs
• Delivery plan
• Final comments
KEEP OUT OF CHILDREN’S REACH

HUMAN BEINGS make MISTAKES
because the SYSTEMS,
TASKS and PROCESSES they work
in are poorly designed.

PROF. LUCIAN LEAPE,
Harvard School of Public Health
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• It is estimated that 850,000 medical errors occur every year in the UK
• This equates to some 10% of hospital admissions which costs £2 billion in additional hospital stays alone
• Around 50% could be ‘preventable’ by design?
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• The NHS is seriously out of step with modern thinking and practice with regard to design
• A direct consequence of this has been a significant incidence of avoidable risk and error
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• There was little evidence of any understanding or practice within the NHS equivalent to those which are commonplace in other safety-critical industries
In response; the Cambridge Engineering Design Centre has developed a practical toolkit for process modelling and risk assessment.
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• Effective risk management requires an ongoing programme of
  – Monitoring and review
  – Risk assessment
  – Communication and consultation
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- Retrospective hazard analysis comprises an ongoing cycle of
  - Incident identification
  - Route cause analysis
  - Change implementation
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- Retrospective hazard analysis can be essential …
  … but is not the most effective tool to prevent fires
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- Prospective hazard analysis comprises an ongoing cycle of
  - Preliminary risk reviews
  - Comprehensive risk reviews
  - Active risk control
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• Prospective hazard analysis …
  … thinking about things before they happen
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- The tools designed for hazard analysis can be used to actively support
  - Quality improvement
  - Productivity initiatives
  - Innovation assessment

Diagram showing patient safety, clinical & cost effectiveness, and patient experience.
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- This encourages collaboration in design and risk management to improve the delivery of safe systems
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• A system may include consumable products, capital equipment, care practice, paper records, management structures, training regimes etc.
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• An introductory course on risk review
• Using a staged approach to raising awareness and competence in risk management
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• Level 0 – Introduction
• Level 1 – Introduction
• Level 2 – Intermediate
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• Level 0 – introduction
• Raising awareness for:
  – Senior clinicians
  – Senior nurses
  – Board members
  – Senior management
  – GPs (commissioning leads)
  – Risk managers
  – Programme managers

In specialist care

• Blood test results finally show abnormal conditions
• Methotrexate overdose is suspected
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- Level 0 – introduction
- Leading to:
  - An understanding of the role of risk management
  - An appreciation of the value of systems thinking
  - A commitment to progress to level 2 training

Complex systems

- Not all failure modes can be predicted
- Future incidents may be prevented
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• Level 0 – introduction
• Up to 100 people, 1 hour
  – Introductory talk
  – Plenary discussion
  – Next steps?

Complex systems
• Not all failure modes can be predicted
• Future incidents may be prevented

Introductory talk
Plenary discussion
Next steps
Safer by design

• Level 1 – introduction
• Risk management for:
  – Clinicians
  – Nurses
  – Board members
  – Management
  – GPs
  – Risk managers
  – Programme managers

In specialist care

• Blood test results finally show abnormal conditions
• Methotrexate overdose is suspected
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• Level 1 – introduction
• Leading to:
  – An understanding of the role of risk management
  – An appreciation of the value of systems thinking
  – A basic understanding of hazards and risk
  – A commitment to progress to level 2 training

Complex systems

• Not all failure modes can be predicted
• Future incidents may be prevented
Safer by design

• Level 1 – introduction
• 20-40 people, 2 hours
  – Introductory talk
  – Group exercise (hazards/risk)
  – Plenary discussion
  – Next steps?

Complex systems
  • Not all failure modes can be predicted
  • Future incidents may be prevented

Introductory talk

Group exercise

Plenary discussion

Next steps
Safer by design

• Level 2 – intermediate
• Risk management for:
  – Clinicians
  – Nurses
  – Board members
  – Management
  – GPs
  – Risk managers
  – Programme managers

In specialist care

• Blood test results finally show abnormal conditions
• Methotrexate overdose is suspected
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• Level 2 – intermediate
• Leading to:
  – An understanding of the role of risk management
  – An appreciation of the value of systems thinking
  – A good understanding of hazards, risk and controls
  – The ability to facilitate risk assessment studies
  – A commitment to further specialised training

Complex systems

• Not all failure modes can be predicted
• Future incidents may be prevented
Safer by design

- Level 2 – intermediate
  - Introductory talk
  - Group exercise (experiences)
  - System mapping
  - Group exercise (mapping)
  - Risk analysis
  - Group exercise (hazards/risk)
  - Risk control
  - Group exercise (controls)
  - Plenary discussion
  - Next steps?
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• Level 2 – intermediate
• What level of safety is required?
• How do I achieve it?
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- A series of introductory guides to risk management are in draft
- All need some further development
- All will be available on the web
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- Opportunity to collect case studies in
  - Patient safety
  - Clinical & cost effectiveness
  - Patient experience
- Need to develop more training material
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• Need to develop training exercises
• Need to develop training language
• Need to develop performance indicators
• Need to identify and train trainers

Complex systems

• Not all failure modes can be predicted
• Future incidents may be prevented
Safer by design

• What would constitute a credible set of effective learning exercises?
  – Trainee experiences
  – Real scenarios
  – Prepared scenarios
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• What language would work best, in the context of healthcare delivery?
  – Engineering risk
  – Clinical risk
  – Cost / benefit
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• What would constitute a useful and measurable set of performance indicators?
  – Trainee feedback
  – Take-up of courses
  – Adoption of practice
  – Improved quality
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• Who would provide the training, in the context of healthcare delivery?
  – Clinicians / nurses
  – Risk managers
  – External consultants
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Initial events have been identified
- Medical Directors meeting
- Norfolk and Norwich University Hospitals
- Cambridge University Hospitals
- North Essex Partnership
- Cambridge and Peterborough
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• Need to identify further opportunities to introduce training for
  – Quality improvement
  – Productivity initiatives
  – Innovation assessment
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• Assistance is required to develop
  – Training exercises
  – An appropriate language of delivery
  – Performance metrics
  – Case studies
• Key resources include
  – John Clarkson (CU)
  – John Morrison (SHA)
  – James Ward (CU)
• 2 days per week of John Morrison for 6 months (more detail to be added here)
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- Success is critically dependent on the take-up of risk management
- Take-up is critically dependent on appropriate training packaging
- Packaging is critically dependent on availability of delivery resources
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John Clarkson