Safety strategies in the real world
How do people create safety?

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Overview

- Our current view of safety
- New challenges
- Foundational ideas
- Strategies and interventions for the real world
- Reimagining patient safety
Patient Safety
Our current view

`The avoidance, prevention and amelioration of adverse outcomes or injuries stemming from the process of healthcare’

Incidents within a patient journey
(Healthcare professionals’ view)

Good care + incidents
How things go wrong

- Targeted at events
- Aim is to optimise reliability of basic procedures

Annals of Internal Medicine | Supplement

The Top Patient Safety Strategies That Can Be Encouraged for Adoption Now

<table>
<thead>
<tr>
<th>Table 2. Patient Safety Strategies Ready for Adoption Now</th>
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<tbody>
<tr>
<td><strong>Strongly encouraged</strong></td>
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<tr>
<td>Prospective checklists and anabiosis checklists to prevent operative and postoperative events</td>
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<tr>
<td>Bundles that include checklists to prevent central line-associated bloodstream infections</td>
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<td>Interventions to reduce urinary catheter use, including catheter reminders, stop orders, or nurse-initiated removal protocols</td>
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<tr>
<td>Bundles that include head-of-bed elevation, sedation vacations, oral care with chlorhexidine, and subglottic suctioning endotracheal tubes to prevent ventilator-associated pneumonias</td>
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<td>Hand hygiene</td>
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<td>The don’t ask list for hazardous medications</td>
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<td>Multicomponent interventions to reduce pressure ulcers</td>
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<td>Bundle precautions to prevent health care-associated infections</td>
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<td>Use of real-time ultrasonography for central line placement</td>
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<td>Interventions to improve prophylaxis for venous thromboembolism</td>
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Shekelle et al, 2013
New challenges

- Harm has been defined too narrowly and only by professionals
- Progress is slower than anticipated
- Only part of the healthcare system has been addressed
- Interventions are idealistic
- Safety and quality improvement equated
- … and healthcare is changing rapidly
Safety in healthcare is a moving target

Charles Vincent,¹ Rene Amalberti²

Safety in healthcare is a constantly moving target. As standards improve and concern for safety grows, we come to regard an increasing number of events as patient safety issues. In this respect, healthcare differs from almost all other safety-critical industries. What we regard as harm in, for instance, civil aviation remains the same whatever advances may occur in aviation technology or practice. In contrast, innovation and improving standards in healthcare alter our conceptions of both harm and preventability.

drug events in the community that cause admission to hospital, polypharmacy and general harm from overtreatment. All these, in the past, might have been regarded, but now receive greater attention by being viewed under the safety umbrella.

The perimeter of safety is, therefore, expanding. This is welcome for patients as it reflects rising standards and aspirations. However, the shifting perimeter does present problems, both conceptual and practical. The definition of harm seems increasingly difficult to pin down.

Safer Healthcare
Strategies for the Real World
Vincent & Amalberti 2016
Our ambition and questions

- Are we thinking about safety in the right way?
- How is safety achieved in different settings?
- A wider range of safety strategies and interventions?
- Can a framework of strategies and interventions be developed?
  - Applicable across contexts? Hospital, home, primary care
  - Across levels? Patient, frontline, organisation, regulation and government?

Foundations

The ideal and the real
Seeing safety through the patient’s eyes
Three models of safety
Countless examples of care falling below standards

- While outcomes are good ….
  - 228 patients reported 183 service deficiencies, each of which doubled their risk of harm (Taylor et al, 2008)
  - 20% of patients received less than satisfactory care often experiencing harm (Hutchinson et al, 2013)
  - 15% of out patient appointments are conducted with important information missing (Burnett et al, 2013)

- Poor reliability of basic processes endemic in most systems

Equipment availability in operating theatres

19% of operations with one or more equipment problem

‘We always need a colposcope with that list and time and time again it isn’t there or it’s broken or it isn’t back or nobody knows where it is’

Surgeon 3 Organisation A
5 levels of care

1. Optimal care and adherence to standards
2. Compliance with standards - ordinary care with imperfections
3. Unreliable care / poor quality - the patient escapes harm
4. Poor care with probable minor harm but overall benefits
5. Care where harm undermines any benefits obtained

The same thing?

Interventions to optimize care
Interventions to manage risk
Patient harm happens in every healthcare setting: at home in convalescence, in an operating room under anaesthesia, at the lab getting blood drawn, in the hospital corridor lying alone on a stretcher ……

Harm may result from missed diagnosis, scheduling delay, poor hygiene, mistaken identity, hostile behaviour, device malfunction, confusing instructions and hazardous surroundings.

The trajectory of harm begins with the unexpected experience of harm arising from or associated with the provision of care ……..

The patient may experience harm during the episode of care when the failure occurred, or later, after some time has passed. Harm as it is first endured may evolve, transform and spread

(Canfield, 2013)
The management of risk over time

Does this look like an incident?

Three models of safety
Avoiding risk: ultra safe

- Risk is excluded as far as possible
- Procedures & supervisory systems
- Priority given to prevention
- Strong regulatory control
- Training focused on rigorous procedures and management of workload
Managing risk: high reliability model

- Risk in not sought out but is inherent in the profession
- Group intelligence and adaptation
- Mutual protection of team members.
- Training and safety focused on adaptability and flexibility of procedures

Embracing risk: ultra-adaptive

- Taking risks is the essence of the profession
- Working conditions are unstable and sometimes unforeseeable
- Cult of champions and heroes
- Success analysis more important than accident analysis
- Training is acquisition of expertise, understanding own limitations
A model of safety for care in the home?
Strategies and Interventions for the Real World

Families of safety interventions

- Best practice
- Improve the system
- Risk control
- Adapt & respond
- Mitigation

Optimising Strategies

Risk Management Strategies
I Aspire to standards – safety as best practice

- Targeted at specific events
- Aim is to optimise reliability of basic procedures

II Improvement of processes and systems

- Staff training, assessment and feedback
- Standardisation and simplification
- Automation and decision support
- Improved equipment design
- Formalising team roles and responsibilities
- Standardisation of communication
- Reduce interruptions and distractions
- Improve organisation and level of staffing
III Risk control

- Withdraw services
- Reduce demand
- Place restrictions on services
- Place restrictions on conditions of operation
- Place restrictions on individuals
- Prioritisation of activities

Risk control in primary care: withdrawal of co-proxamol to reduce suicide

- Co-proxamol was the single drug used most frequently for suicide in England and Wales (766 deaths over 3 years).
- The Committee on Safety of Medicines (CSM) advised withdrawal which took place in December 2007.
- Major reduction in deaths involving co-proxamol
- Estimated 295 fewer suicides and 349 fewer deaths including accidental poisonings.
- Over next 6 years a major reduction in co-proxamol related deaths without apparent increase in deaths involving other analgesics.
### Potential for risk control in anaesthesia

Faulty gas analyser: Go or No Go?

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<th><strong>GO</strong></th>
<th><strong>NO-GO</strong></th>
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<td>Use TIVA with propofol (BIS monitored)... I am well aware that a functioning oxygen monitor is present in the guidelines. To cancel would be the counsel of perfection, but this won’t get the patient the treatment he needs [Consultant; 25 years’ experience]</td>
<td>Completely elective cases with faulty kit I would not proceed. There is a risk of awareness/hypoxia. Proceeding fails my stand up in court test. [Consultant; 10 years’ experience]</td>
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Grieg et al, 2015

### IV Monitoring, adaptation and response

- Resilient teamwork at the frontline
- Emphasis on adaptation, problem solving, flexibility
- Supportive interventions
  - Patient strategies and ‘safety briefings’
  - Safety monitoring by patients
  - Briefing and de-briefing
  - Team training for cross checking, monitoring
  - In situ simulation
Anticipation & Preparedness
Experts are constantly thinking ahead

- Pre-mission planning for fighter pilots often takes longer than the mission
- Each part of the route is analysed for possible threats, whether from hostile aircraft, personal factors, weather or technical breakdown.
- During the flight pilots devoted over 90% of available time to anticipation
- Typically they developed a ‘tree’ of events that might occur over the course of the flight.

Amalberti & Deblon, 1992

Box 9.1: Anticipation and preparedness in surgery

‘You need to have a strategy ready when there is bleeding; cold, automatic responses to a hazardous situation ingrained in your mind so that it can be done without stress and strain. What to do if the groin starts to bleed is one of the worst situations. When teaching I give them a list of things they’re going to do. I get them to repeat it to me over and over again so that when it does happen to them, and it will eventually, they don’t need to think, they just go into autopilot.'
Enhancing monitoring and adaptation at the clinical and executive levels

- Managers constantly adapt and firefight. How much is necessary and how much unnecessary and due to poor systems?
- Develop planned approaches to adaptation and recovery rather than relying on ad hoc improvisation.
- Executive training in risk scenarios and trade offs between safety and other objectives

V Mitigation

- Support for patients, families and carers
- Support for staff
- Financial and legal planning
- Management of media
- Response to regulators
Safety in home care: the dignity of risk

- Many adverse events: falls, wound infections, psychosocial, mental health problems, medication errors.
- Different environment, responsibilities, standards, supervision and regulatory context. Environment very prone to errors.
- Responsibility falls on patients and family.
- Safety in the home needs to be assessed not in terms of absolute safety but alongside other benefits.
- Safety is managed by personal resilience, expertise and a high reliance on monitoring, adaptation and, most of all, recovery.

Mitigation in home haemodialysis

- Established units provide training and prepare patients and carers very carefully for the home dialysis procedures.
- Instilling a culture of safety without unduly alarming the patient,
- Mitigate the risk of adverse events,
- Ensuring the patient is fully briefed in emergency procedures, letter for emergency department
- An explicit and comprehensive set of safety strategies as part of the basic programme.

Pauly et al, 2015
A Compendium of Safety Strategies
An Incomplete Taxonomy
Re-imagining Patient Safety

Our ambition and questions

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Rethinking Patient Safety

- Seeing safety through the patient’s eyes
  - A journey not an incident
- Seeking absolute safety is not always desirable
- Safety is the management of risk over time (which includes the reduction of harm)
- More attention to adaptation, monitoring and recovery
- Managing risk with patients and families

Analysis along the patient journey
Using a wider range of safety interventions

- Healthcare uses a very limited set of safety interventions.
- We must not be ashamed to use strategies to manage risk rather than optimise care as long as the final result is beneficial for the patient.
- Limited progress in patient safety is partly due to the underuse of available strategies and interventions.
- Like driving a car and only using first gear.

The trick is not to be bound by any one strategy but to blend to context

Playing on a palette of strategies and interventions to make organisational adjustments
A framework of safety strategies and interventions

- Best practice
- Improve the system
- Risk control
- Adapt & respond
- Mitigation

Optimising Strategies
- Quality Improvement
- Human factors & ergonomics

Risk Management Strategies
- Regulation & governance
- Resilience, team training

Strategies
- Quality Improvement
- Human factors & ergonomics
- Regulation & governance
- Resilience, team training