Violations and Migrations in Perioperative Practice

How organisational drift puts patients at risk

Professor Jane Reid
Session Focus

Discuss the concept of violation and migration in clinical practice

Identify common violations and migrations in the operating room

Consider the importance of identifying and owning routine violations to determine tolerances and thresholds of service quality

Explore and debate the challenges faced by perioperative leaders in upholding clinical and professional standards

Propose a range of strategies for Perioperative Leaders to adopt
Background/ Setting the Scene

Kohn 1999
Medical Error Causes

- 44,000 - 98,000 deaths / year in USA
- 8th Leading cause of death
- Medication error causes 7,000 deaths / year
- Workplace injuries 6,000 deaths / year
# Epidemiology of harm in healthcare

<table>
<thead>
<tr>
<th>Study</th>
<th>Number of Admissions</th>
<th>Adverse Event Rate %</th>
</tr>
</thead>
<tbody>
<tr>
<td>California Insurance (1974)</td>
<td>20,864</td>
<td>4.65</td>
</tr>
<tr>
<td>Utah-Colorado (1992)</td>
<td>14,052</td>
<td>2.9</td>
</tr>
<tr>
<td>QAHCS (1992)</td>
<td>14,179</td>
<td>16.6</td>
</tr>
<tr>
<td>UK (1999)</td>
<td>1014</td>
<td>10.8</td>
</tr>
<tr>
<td>Denmark (1998)</td>
<td>1097</td>
<td>9.0</td>
</tr>
<tr>
<td>New Zealand (1998)</td>
<td>6579</td>
<td>11.2</td>
</tr>
<tr>
<td>Canada (2000)</td>
<td>3745</td>
<td>7.5</td>
</tr>
<tr>
<td>Spain (2008)</td>
<td></td>
<td>8.4</td>
</tr>
<tr>
<td>Holland ( 2008 systematic review)</td>
<td>74485</td>
<td>9.2</td>
</tr>
</tbody>
</table>
Scale of the problem: death & severe harm

Over 8,000 reported fatal or severe harm incidents each year

NRLS post clinical review (after clear reporting errors excluded) April 2013-March 2014 England data: 8,018 incidents

Suicide/severe self harm: 19%
Fall (hip #/sub-dural): 17%
Pressure ulcer grade 4: 14%
Treatment error or delay: 8%
Obstetric-specific incident: 6%
Operation/procedure related: 6%
Clinical diagnostic error/delay: 5%
Missed deterioration: 9%
Medication incident: 6%
Healthcare associated infection: 6%
Pulmonary embolus: 6%
Test results not acted on: 6%
Transfer or discharge incident: 5%
Other/unclear: 4%
Scale of the problem: other sources

- Around 4,400 people commit suicide each year; 27% are known to mental health services; most are known to GPs.

- 4,849 deaths related to VTE within 120 days of hospital admission (for reasons other than VTE) each year.

- 9,500 patients with grade 2/3/4 pressure ulcers on each monthly survey.

- Around 3,000 hip fractures from falls in hospitals each year identified by the National Hip Fracture database.

Human Factors...

‘...refers to environmental, organisational and job factors, and human and individual characteristics which influence behaviour at work (in a way that can affect health and safety.)’

Health and Safety Executive (1999)
*Reducing Error and Influencing Behaviour*
"enhancing clinical performance through an understanding of the effects of teamwork, tasks, equipment, workspace, culture, organisation on human behaviour and abilities, and application of that knowledge in clinical settings”.

Ref www.chfg.org from Dr Ken Catchpole
The Swiss Cheese Model of Human Error Causation

Organizational Influences
Latent Failures
Unsafe Supervision
Unsafe Acts
Impact of Error

Failed or Absent Defenses
Preconditions for Unsafe Acts
Latent Failures
Active Failures
Human Factors in Safety

(30-20%)

Accident Causation

(70-80%)

Human Factors

Technical Factors
Human Factors in Safety

(30-20%)

Accident Causation

(70-80%)

Human Factors

Technical Factors

= Organisational / Safety Culture + Operator Behaviour
Human error is.....

- ubiquitous
- causes are known
- .....” just the downside of having a brain”....

.....Like a chronic disease process that affects our healthcare system

J Reason
## Human Error Rates

<table>
<thead>
<tr>
<th>Activity</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Error of commission</td>
<td>3/1000</td>
</tr>
<tr>
<td>Error of omission (without reminders)</td>
<td>1/100</td>
</tr>
</tbody>
</table>
Why Human Factors should be important to Perioperative Leaders

• Setting the organisational culture

• Sensitivity to safety/productivity trade-offs

• Support for front line clinical teams

• Not just about patient safety

• Assurance
Error producing conditions

- Stress
- Fatigue
- Interruptions / distractions
- Time pressure
- Poor design / interface
- Quality & quantity of Information
- Fragmentation
- Unfamiliarity
• Do you always drive at the required speed limit?
Systemic Migration to Boundaries

INDIVIDUAL BENEFITS

VERY UNSAFE SPACE

Driving 100 mph – the ‘illegal-illegal’ space (for almost all of us!)

Driving 80 mph - the ‘illegal-normal’ space

The speed limit is 70 mph - the ‘legal’ space

ACCIDENT

Life Pressures

Perceived vulnerability

Belief Systems

PERFORMANCE
Violation & Migration

- initial safe space of action
- borderline tolerated conditions of use
- progressive drift
- migration towards ‘normal illegal’
- violations of safe practice

Amalberti 2007
Violation producing conditions

• inadequate tools / training
• time pressure
• ambiguous / apparently meaningless rules
• unworkable procedures
Violation producing conditions

- lack of safety culture
- poor morale
- poor supervision / checking
- line management / staff conflict
- belief that bad outcomes will not occur
The WHO Checklist

• What is your policy and practice?

• Do you observe it every time?

• When do you /others (choose) to violate?

• How far is it safe to migrate?
Patient Safety First Surveys

- Feb-March 2010
- June 2011

Available at www.patientsafetyfirst.nhs.uk (under Interventions/Periop care/Resources)
Most commonly reported Challenges

- tendency to treat the Checklist as a ‘tick box exercise’ rather than as a tool to enhance communication and teamwork (78%)
- negative clinician attitudes / lack of clinical buy-in or engagement (77%)
- not seeing the Checklist as a priority (37%)
- not having enough time (37%)
Instrument Control

• What is your policy and practice?

• Do you observe it every time?

• When do you /others (choose) to violate?

• How far is it safe to migrate?
Swab Count

• What is your policy and practice?

• Do you observe it every time?

• When do you /others (choose) to violate?

• How far is it safe to migrate?
So how does this happen?
Systemic Migration to Boundaries

INDIVIDUAL BENEFITS

 very unsafe space

performance targets

perceived vulnerability

belief systems

performance

targets

staff fail to perform necessary checks

the ‘illegal-illegal’ space (for all of us!)

very unsafe space

accident

industrial benefits

surgeon helps himself to an instrument or swab during the count

‘illegal-normal’ space (for almost all of us!)

scrub nurse performs swab, needle and instrument controls

the ‘legal’ space

staff fail to perform necessary checks

the ‘illegal-illegal’ space (for all of us!)
The Royal Cornwall Hospital warned to improve or face enforcement action by the Care Quality Commission (CQC) after its **fifth surgical 'Never Event' within 18 month** August 17, 2011

CQC to investigate **'atypical' rise in never events** 5 October, 2011 Nottingham University Hospitals Trust reports **11 never events since April 2009; eight recorded in six months.**

**Seventh so-called 'never event'** recorded in Derriford since April last year. July 21, 2011

CQC orders improvements at Great Western Hospitals FT 22 February, 2012. **Chronology of cases of wrong site surgery and wrong implant**

Cambridge trust warned about surgical safety 17 July, 2012. **Run of Five never events in the theatre areas at Addenbrooke’s Hospital**

Croydon warned on surgical safety and equipment shortages 1 August, 2012. **Two wrong lens implants and a retained swab.**

Johns Hopkins Malpractice Study: Surgical 'Never Events' Occur at Least **4,000 Times Per Year.** Estimate in a week 39 cases of retained item, 20 cases of wrong procedure, 20 cases of wrong site

Source: HSJ news search/amednews
<table>
<thead>
<tr>
<th>Never Event</th>
<th>Number of incidents reported 2009/10 (National data)</th>
<th>Number of Incidents reported to all SHAs nationally 2010/11 (Number of Incidents Identified using the NRLS in brackets)</th>
<th>Number of Incidents reported to all SHAs nationally 2011/12 (Number of Incidents Identified using the NRLS in brackets)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retained Instrument/swab</td>
<td>&lt;10</td>
<td>67 (22)</td>
<td>161 (86)</td>
</tr>
<tr>
<td>Wrong Site Surgery</td>
<td>57</td>
<td>60 (19)</td>
<td>70 (41)</td>
</tr>
<tr>
<td>Wrong implant/prosthesis</td>
<td>*****</td>
<td>*****</td>
<td>41 (15)</td>
</tr>
</tbody>
</table>
9 May 2013
Hospitals reveal 750 'should never happen' blunders
BBC Radio 4, The World at One

Total “never events” 2009-12: 762
Top four types of “never events”:

Retained foreign object post-operation 322/762
Wrong site surgery 214/762
Misplaced feeding tubes 73/762
Wrong implants/prosthesis 58/762
The most commonly reported surgical never events

- retained swab ( Obstetrics)
- wrong site surgery (dental, neuro, ortho)
- wrong orthopaedic implant/lens (ophthalmology)
- wrong patient/procedure
Context is Everything

Understanding ‘context’, is increasingly regarded as the most influential factor to successful implementation of patient safety practices

(Shekelle et al 2011)
Tackling variability: Impact of culture and context

We need to understand why interventions that carry the same “label” achieve different outcomes when implemented in different settings

Shekelle (2011)
Øvretveit (2011)
Pronovost (2012)
AHRQ (2012)
Emotional Labour of Caring

Compassion Fatigue
Factors that increase potential for error/harm and compassion fatigue

Organisational Factors

- Conditions of work
- Nature of the work
- Poor Design
- Lack of standardisation
- Flawed systems and processes
- Inability to give of one’s best

Staff Factors

- Experience
- Training and preparation
- Supervision
- Morale
- Mental and physical health
- Tiredness
- Distraction
- Multi-tasking
- Resilience
Key Observations

compliance vs improvement

‘False assurance’ pursuing the elusive (100%) still ticking the box vs exception reports

variable leadership commitment to the checklist

no clear tolerances and thresholds or noticeable sanctions of performance

variable human factors awareness variable appreciation of the impacts on performance

Focus on theatre versus the ‘system’
Key Observations

lack human factors awareness

‘a collection of individuals’ vs a team

absence/presence of a shared mental model

lack of explicit professional behaviours and values

Leadership/management confusion

lack of readback/recall in situations of laterality and/or implant
Key Observations

Attitude and behaviour
‘the trust/management vs ‘improvement starts with me’

Duplication of effort/ Checklist doesn’t compliment documentation due lack of adaption

vulnerabilities in swab and instrument control

‘presence’ and discipline multiple glitches ‘distractions’
IT /Mobile access
**Key observations**

**wrong site surgery**
- failure to mark or flaws in marking procedure
- No ‘Sign in’ or ‘Time Out’

**wrong orthopaedic implant/lens**
- failure to check/ readback/recall/double check

**wrong patient/procedure**
- No ‘Sign In’/ ‘No Time Out’

**Retained swab or item**
- breaches in theatre safeguards / variability in practice
- in case of obstetrics: *lone working*
- no obvious ‘in charge’/leader /variation in quality control
Common Denominators & LEADERSHIP & Quality of Teamwork
“We can’t change the human condition, but we can change the conditions under which humans work”

James Reason
Perioperative Leaders can build positive safety cultures and strengthen compassionate care-giving by embracing Human Factors

• Communicating commitment

• Acknowledging the challenges and the costs to our care givers

• Active visible leadership for safety and compassionate care

• Strengthening patients’ and relatives’ voice in the system

• Actively developing managers’ relational skills

• Investing in Human Factors awareness and understanding for the workforce
Human Factors Approach

Environment

Individual Behaviour

Team & Group Behaviour

Organisational & Management Behaviour

EQUIPMENT
Design & Procurement

Processes, reliability

NTS training

Group team training exercises

Improvement science Incident investigation

Management involvement & commitment

Communication coordination

Decision-making

Skills knowledge

Group processes co-operation

Policies, safety programs, paternalism

Human Factors Approach
patients and families.....
the human impact
Violations and Migrations in Perioperative Practice

How organisational drift puts patients at risk

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