Principles of Human Factors and Safety Science Methods

A personal selection by Tony Giddings and Guy Hirst

‘It is important not to blame people for what went wrong but to understand why what they did at the time made sense to them” Sidney Dekker

Error is normal. It is not a moral issue. It must be expected and planned for.

All individuals are vulnerable to error and need systems to protect patients (and themselves) from harmful consequences. Systems should make it easy for fallible humans to do the right thing.

Memory is unreliable. It needs to be prompted by people or procedures.

Standardise common procedures based on best evidence and consensus.
Then enforce compliance.
Improvise and review as required.

Care is only safe when it expects and copes with rare and atypical risks.
Trying harder doesn’t work, trying smarter may.

Experts make many fast and effortless decisions using automatic thinking. Experts make a small percentage of expert errors: 95% reliable but the 5% needs courageous challenge.
Such expert decision-errors do not invite self-review.
They occur in perception, assumption and communications.
A ‘second brain’ is needed; that explains the importance of team working.

Being in control means being aware; it depends on slow thinking and using team awareness.
Access to team awareness needs openness, a flattened hierarchy and barrier-free communications.
This means considering all suggestions and opinions as valuable and not as challenges to be defended, ridiculed or ignored.
Teamwork depends on collegiate, interactive teams and mutual respect. It is essential to patient safety.

If we think of the problem we may be able to solve it.
Expertise means doing it right every time.

Sustained improvement needs to be home–grown, reviewed and reinforced.
It is dependent on both insight and leadership, from the Board to the front line.
Leadership is not transferrable; it has to be built anew.
It should be a property of the system rather than an individual skill.

Checklists and read-backs need understanding, skills and enforcement.

All individuals are fallible. Individuals are seldom to blame.

Blame is an easy and satisfying reaction but is generally a shallow response offering no prospect of improvement. Understanding the real causes of failure lifts the burden of ignorance and inappropriate guilt. It offers a route to improvement.

Sanctions are necessary to deal with egregious acts or inappropriate behaviour.
Behaviour defines culture. Culture kills the best strategies.

Individual practice provides little opportunity for accountable quality control; institutions allowing individual practice resemble farmers' markets.

Safe hospitals need a board level safety officer and active safety research into best practice.

Incident reporting should not be anonymous but the reporter should be protected and given feedback.

Role models are powerful agents for good or ill; beware the normalization of deviance.

Beware the illusion of knowledge that is prompted by the delusion of excellence.

Box 1

The shift in behaviour from leaders across the system that we need to see:

Leadership behaviours that increase risk and make healthcare less safe:

- Blame staff (even when they haven't been given the conditions for success)
- Fail to focus on the patient (often signalling instead that targets and costs are 'centre stage')
- Make bad news unwelcome (too often silencing it)
- Not heed signals and warnings that things are amiss
- Muffle the voice of the patients, their carers and their families and largely ignore their complaints
- Fail to listen to staff
- Diffuse responsibility and disguise who is in charge
- Offer no systematic support for improvement capability
- Game data and goals
- Lead by rules and procedures alone in a disengaged way
- Apply sanctions to errors
- Create fearfulness amongst colleagues and staff
- Ignore the development of the next generation of leaders
- Treat all problems as though they can be "fixed" with existing technologies or writing clearer procedures

Leadership behaviours that reduce risk and make healthcare more safe:

- Abandon blame as a tool
- Constantly and consistently assert the primacy of safely meeting patients' and carers' needs
- Expect and insist upon transparency, welcoming warnings of problems
- Recognise that the most valuable information is about risks and things that have gone wrong
- Hear the patient voice, at every level, even when that voice is a whisper
- Seek out and listen to colleagues and staff
- Expect and achieve cooperation, without exception
- Give help to learn, master and apply modern improvement methods
- Use data accurately, even where uncomfortable, to support healthcare and continual improvement
- Lead by example, through commitment, encouragement, compassion and a learning approach
- Maintain a clear, mature and open dialogue about risk
- Infuse pride and joy in work
- Help develop the leadership pipeline by providing support and work experiences to enable others to improve their own leadership capability
- Recognise that some problems require technical action but that others are complex and may require many innovative solutions involving all who have a stake in the problem