

The development of a safety culture: a fanciful hope in the health care sector?

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Patient safety is a dimension of health care quality and a part of organisational safety culture. A deficit in safety culture results represents an increased risk for 'system' errors. Errors in the health care sector are frequent and seriously harm a significant amount of patients. These errors must be seen as the end-product of accumulation of latent and active failures within the system and not systematically as the result of an individual mistake. The management of system failure to increase patient safety requires a cultural change. A long-lasting 'blame and shame policy' is seriously hampering this cultural change as under-registering of near misses and adverse events are the norm!

Organisational safety culture is multi-faceted and multidimensional. The main characteristics of the safety culture will be highlighted, as well as the methods to assess and detect a weakening safety culture. The health care sector faces an enormous challenge and the journey to better and safer care is a never ending road full of stumbling blocks hindering progression, especially in an environment where reduced financial potential will soon become the norm.

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Introduction

The 1999 publication of the Institute of Medicine report provoked an earthquake in public opinion and the health care sector (HCS).¹ Americans became aware that the system designed to provide care, was in itself a serious threat to their personal health and wellbeing. Other national reports from around the world confirmed similar numbers of accidents occurring in their health care sector.²⁻⁵

It also quickly became clear that the reported incidence of adverse events (AE) was in fact an under-estimation of the real numbers.²⁻⁵ The World Health Organisation (WHO) estimates that one in ten patients hospitalised will be seriously harmed by the system.⁶ As a result, the myth of medical infallibility was seriously tarnished.⁷ This under-reporting of the harm to patients is partly due to a ubiquitous and obsolete 'shame and blame'

policy. With such a policy, operational risk management (ORM) as performed in high reliability organisations (HRO) such as the civil aviation industry, is hampered as it requires an open and transparent declaration of near misses and adverse events (AE). Indeed, the only way to manage risk is through measurement, analysis and implementation of corrective actions and applying the virtuous cycle of Edward Deming (Plan Do Check Act). We intend to highlight the different components of a safety culture (SC), the methodology used to assess the maturity level of the SC and the alarming signs of a weakening culture.

Definition of a safety culture

The SC term emerged in 1987 in an Organisation for Economic Co-operation and Development (OECD) Nuclear agency report after the Chernobyl disaster.⁸ In

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Table 1. AHRQ; Agency for Health Care Research and Quality: 12 dimensions of a safety culture.

1. Communicate openness
2. Feedback and communication about error
3. Frequency of events reported
4. Handoffs and transitions
5. Management support for patient safety
6. Non punitive response to error
7. Organisational learning : continuous improvement
8. Overall perception of patient safety
9. Staffing
10. Supervisor/manager expectations and actions promoting safety
11. Teamwork across units
12. Teamwork within units

1991, the International Atomic Energy Authority (IAEA) defined SC as “an assembly of characteristics and attitudes in organisations and individuals which establishes that, as an overriding priority, nuclear plant safety issues receive the attention warranted by their significance”.⁹ The definition by the Advisory Committee on the Safety of Nuclear Installations was endorsed by the Health and Safety Commission of the United Kingdom in 1993.¹⁰ “The safety culture of an organisation is the product of individual and group values, attitudes, perceptions, competencies, patterns of behaviour that determine the commitment to, and the style and proficiency of an organisation health and safety management. Organisations with positive safety cultures are characterised by communication founded on mutual trust, by shared perceptions of the importance of safety and confidence in the efficacy of preventive measures”.

The SC is for the group what character and personality are for the individual (INPO: Principles to a strong nuclear safety culture, 2004). In 1985, Edgar Schein defined organisational culture “as a pattern of shared basic assumptions – invented, discovered or developed by a given group as it learns to cope with its problems of external adaptation and internal integration – that has worked well enough to be considered valid and, therefore, be taught to new members as the correct way to

perceive, think and feel in relation to those problems”.¹¹ In such an organisational culture there is the visible part of the iceberg consisting of artefacts and espoused values. Artefacts are the organisational structures and processes; espoused values are the goals, strategies and philosophies. The less visible part is made up of beliefs, perceptions, thoughts and feelings.

The variability in definition of organisational SC depends on the perspective taken, but a summarising definition can be found in the European Strategic Safety Initiative: “it is the set of enduring values and attitudes regarding safety, shared by every member of every level of an organisation”.

Components of and how to measure a safety culture

A SC consists of three groups of fundamental aspects: personal (values, beliefs and attitudes), behavioural (competencies and patterns of behaviour) and situational (organisational systems and sub-systems). The European Aviation Safety Agency (EASA) quotes six main characteristics for a SC: commitment, behaviour, awareness, adaptability, information and justness.¹² The Agency for Health Care Research and Quality (AHRQ) lists twelve dimensions in the safety culture (Table 1). For each of the characteristics in the EASA

and dimensions in the AHRQ, there are potential indicators to be evaluated within the organisation as a whole, but the effort should be continued until one understands the finer granularity of the culture by defining the subcultures within the different subgroups. This initial assessment of the SC helps raise awareness in the field about the problem of patient safety and allows identifying areas of improvement. Serial assessment over time enables tracking changes and hence measuring the effect of patient's safety interventions or programs. Finally, these SC assessments are the cornerstones for benchmarking (internal and external) and can help in the fulfilment of regulatory requirements.

There are various methodologies and techniques to assess SC (for a review see The Health Foundation Evidence Scan: Measuring Safety Culture, available online: [provide web link](#)). Most of the time, a combination of techniques has to be used to capture all the possible dimensions. The triangulated approach resides in safety attitudes questionnaires (SAQ), interviews, observations and review of documentation. The aim of such approaches is to investigate which organisational factors influence the implementation of actions to improve SC. They provide a methodology to measure progress or detect a weakening SC. They allow the assessment of sustainable improvements as well as potential threats.¹³⁻¹⁵

In the situational factors influencing SC, two are considered of key importance; a continuous improvement attitude and a total commitment of management. In the threats to SC, the following problems are identified: lack of adequate resources and skills, lack of future prospects, lack of learning from near misses, inappropriate documentation, and lack of employee ownership of change.

The maturity level can be measured and the organisation can be put on a SC ladder. According to the Manchester Patient Safety Framework (MaPSaF) there are five levels: the pathological, the reactive, the calculative, the proactive and the generative level.¹⁶ At the lowest level the SC is rated pathological because there is a poor one way negative communication (top-down), with a focus on blame. In such organisations patients obtain only information after exerting a lot of pressure. In the most mature level, the generative one, everybody communicates on safety issues and learns from the experience of others. The organisation is totally transparent; patients are included in risk-management strategies. There is deference to expertise and the staff is empowered to develop and implement new ideas. Good practice is communicated totally transparently, internally and externally.

From goal theory concepts to reciprocal determinism to Reason's model

One should measure the SC as you can only manage what you do measure. Once you have a picture of the actual state of the maturity level of the SC in your organisation and sub-organisations, you can define goals. Goals should be SMART, i.e. specific, measurable, achievable, realistic and possibly attained in a reasonable time period. Organisational leaders and managers should commit themselves in setting up the organisational goals in SC and support all efforts required to achieve these goals.

Assuming the challenge is accepted, the greater the challenge the better the performance tends to be. Moderators of goal attainment according to Latham and Lee are training (ability in safety management), commitment to the goal at various levels of the organisation, and goal conflict (safety versus productivity). Goal related mediators are behaviour (effort and persistence), quality of decision making and confidence in pursuing action at individual and unit level.¹⁷⁻¹⁸

The organisational SC is reflected in a dynamic relationship between psychological, behavioural and situational factors. These three dimensions make up the model of reciprocal determinism: people are neither controlled by their environments nor entirely self-determining.¹⁹ The potency of this model is that the relative strength of each source may be different and that it is dynamic in nature with potential time lapses between changes at the three levels (not necessarily occurring simultaneously).²⁰ Not considering the dynamic interactions between psychological, behavioural and organisational factors when designing initiatives to modify the SC, will result in an exercise in futility. The MRD model also illustrates why a SC assessment should be multi-dimensional in nature.

One can further link the MRD model to Reason's model.²¹ The psychological element in the MRD model (personal factors) reflects in the 'just culture'. The behavioural element translates in a 'reporting culture' and the environmental element is the basis for a 'learning culture'.

The journey - go to zero risk

This journey should start with the initial assessment of the organisational SC. The absolute minimal requirement to do so is a survey. These tools are available online (for example the Hospital Survey on Patient Safety Culture (HSPSC) is available on the Agency for Health care Research and Quality (AHRQ) website; SAQ available on the website of the ECRI institute). [Provide the web](#)

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Table 2. IHI leadership guide in patient safety and high reliability.

1. Address strategic priorities, culture, and infrastructure
2. Engage key stakeholders
3. Communicate and build awareness
4. Establish, oversee and communicate system-level aims
5. Track/measure performance over time, strengthen analysis
6. Support staff and patient/families impacted by medical errors
7. Align system-wide activities and incentives
8. Redesign systems and improve reliability

links. This SC assessment should be targeting both the organisation as a whole (generic approach) as well as specific domains within the organisation because of existing subcultures.

Such a journey should target a minimum of three groups: senior leaders, project team leaders and frontline staff. Once the initial assessment is made the triple E should be applied: engagement (commitment to change), execution (action plan, communication and allocating resources) and evaluation (measurement of the effect).

The AHRQ summarises this multi-step journey in key words such as leadership, teamwork, partnership with clinicians and managers, action plans and measurement, safety science education, incorporating safety initiatives in overall organisational safety plan, establishment of a non-punitive reporting system, disclosure with apology to victims as a claim avoidance strategy, sharing information on successes to maintain enthusiasm.

Where do we stand in the health care sector?

In the HCS you often hear the claim “Our culture is patient safety”. Too often this is just a slogan! There is a chiasm between what we think we do and what we do. The HCS is 40 years behind the ORM as practiced in HRO’s. HRO’s are characterised by preoccupation with failure although AE’s are rare, do not simplify interpretations or accept conventional explanations and are seeking for the deep causes of error (root cause analysis). These HRO’s are able to detect minor deviations before these events lead to serious safety threats. They are mindful to errors that did occur and spend effort correcting those errors before they worsen. They defer

the building and implementation of corrective actions to people who have the expertise in the field.

In the HCS we are still far away from this level of SC. There is a dramatic loss of situational awareness and we are poised by several myths in the medical sector. The myth of medical infallibility coupled to a ubiquitous shame and blame policy is a barrier in progression of patient safety management.⁷

It is essential to identify signs of a weakening SC. In the IAEA-TecDoc-1321 published in October 2000 (available online: [provide web link](#)), there are seven levels which should be evaluated. These levels are rated in importance from one (not important) to ten (very important): the most important ones are the presence of a continuous improvement attitude at all levels of the organisation (rated 10/10) and management commitment in safety improvement (rated 9/10). This is followed by resource adequacy in skills, knowledge and experience (rated 5/10) and effective communication (4/10). Effective communication should be vertical and horizontal, both internal and external. The last three in importance are effective planning systems (3/10), management of skills and competencies (suitable and qualified personnel) (3/10) and lastly, external influences (societal, political, economic and legal).²²

It is clear that if we want to have an impact on the continuous maturation of the SC within the HCS, special attention should be paid to leadership. As stated by Ann Rhoades, the people system guru and cofounder of Jet-Blue Airways, one should acknowledge that “leaders drive values, values drive behaviours and behaviours define culture”. Champion leaders should be identified in our organisations. These leaders should be well

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Key messages for clinical practice

1. Patient's safety is one dimension of health care quality and a part of organisational safety culture.
2. Errors in the health care sector must be seen as the end-products of accumulation of latent and active failures within a 'system' and not as individual errors.
3. The key situational factors influencing the safety culture are a continuous improvement attitude and a total commitment of management.
4. One has to consider the dynamic interactions between psychological, behavioural and organisational factors when constructing and improving a safety culture.
5. We should identify champion leaders, well aware of the functioning of our healthcare system and trained in concepts and methods of operational and enterprise risk management.

aware of the way the HCS is functioning and trained in concepts and methods in operational and enterprise risk management. They should know about the eight steps to achieve patient safety and high reliability within the HCS as reported in the white paper of the Institute for Healthcare Improvement (*Table 2*).²³ They should be aware of the different subcultures within the organisation and be able to motivate the most reluctant professionals, often the medical staff, to adhere to the SC.²⁴ This is probably one of the most difficult tasks as some authors consider these medical staff organisations to be "obsolete and moribund structures, incapable of fulfilling its purposes and overseeing quality".²⁵

Conclusion

The HCS itself is a serious threat to patient health and safety. Awareness of this problem is rising worldwide. This public awareness is undoubtedly a powerful catalyst for the engagement of clinical leaders and top hospital managers in risk management strategies. There is no effective safety management possible without an unconditional and totally supportive leadership; this leadership should be at the clinical and educational levels, including our faculties involved with the training of next generation physicians. In this period of economic crisis, the combination of loss of situational awareness in the HCS and the emphasis put by top administrative management on purely financial and economic indicators, result in a real danger that the epidemics of adverse events in the HCS is not going to vanish into thin air. AHRQ strongly recommends

seeking leadership support to create a SC, partnering between clinicians and managers to engage in SC assessment and incorporating SC initiatives into the overall organisational plan. Moreover, it is high time to provide safety science education at all levels of the organisation as well as opportunities for training in non-technical skills (assertive communication, teamwork and managing personal resources). As long as the managerial and clinical leaders are not aware of this priority, a well-developed and continuously maturing SC will remain a fanciful hope in the HCS.

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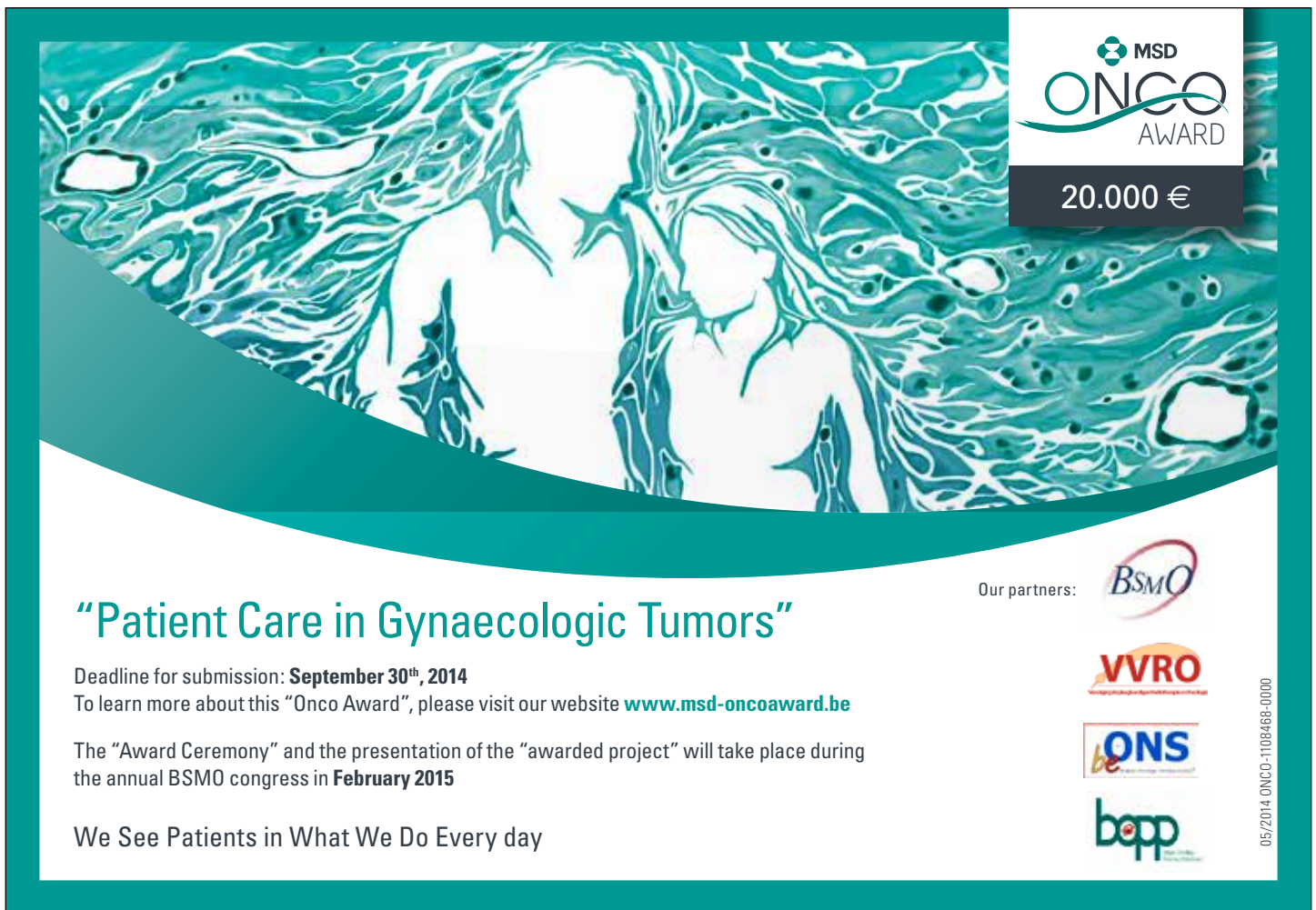
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