Managing risk in hazardous conditions: improvisation is not enough

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Healthcare systems are under stress as never before. An ageing population, increasing complexity and comorbidities, continual innovation, the ambition to allow unfettered access to care and the demands on professionals contrast sharply with the limited capacity of healthcare systems and the realities of financial austerity. This tension inevitably brings new and potentially serious hazards for patients and means that the overall quality of care frequently falls short of the standard expected by both patients and professionals. The early ambition of achieving consistently safe and high-quality care for all[1] has not been realised and patients continue to be placed at risk. In this paper, we ask what strategies we might adopt to protect patients when healthcare systems and organisations are under stress and simply cannot provide the standard of care they aspire to.

THE EVOLUTION OF POOR PERFORMANCE

Teams and organisations constantly have to adapt to times of increased demand. Emergency departments, for instance, become adept at managing times of heightened activity and very sick patients. However, the adaptations are usually improvised and vary widely depending on who is in charge at the time. In contrast, for clinical emergencies such as failed intubation or cardiac arrest, clinicians have many well-rehearsed and adaptable routines.

In the short term, staff adapt and cope with the problems for a few hours or a few days until conditions are easier. However, if pressures continue, poor working conditions and deviations from best practice become increasingly common. For instance, the English Care Quality Commission reported that hospital bed occupancy rates are more or less permanently above the recommended maximum of 85% for acute hospitals. In these circumstances, staff are overburdened to the point that they cannot possible achieve expected standards. These pressures are exacerbated by patients with increasingly complex conditions, inadequate staffing, missing equipment and other constraints. Staff increasingly rely on workarounds such as not checking patient identification or using disposable gloves as tourniquets.[2] A review of 58 studies from eight countries found that workarounds are common in all settings studied and that, while they may aid short-term productivity, they pose a variety of threats to patients.[3]

If these pressures continue, the short-term crises gradually metamorphose into a permanently stressed system with no immediate prospect of recovery. Staff have to accept that they cannot provide the care they wish to and that they cannot meet their personal and professional standards. Compassion begins to be driven out of the system due to fatigue, low morale and the simple lack of time to care. In time, staff illness and absence increases, motivation is undermined and patient complaints and dissatisfaction with the service increase.[4]

In time, organisations move to a point where healthcare professionals are completely unable to provide the standard of care they aspire to. For instance, in the last round (2014–2018) of mandatory French Hospital certification, reviewers found one or more areas of substandard care in over 60% of 2218 French hospitals.[5 6] Poorly performing hospitals are typically given 3–12 months to resolve these problems. However, in practice, for a variety of reasons, more than 10% of all French hospitals were unable to return

to an acceptable standard within a year. In France, as in other countries, plans are put in place to deal with poor performance, but sustained improvement may take years to achieve. Services therefore continue to run in an unsafe mode, with local adaptations and fixes, but seldom with any planned attempt to manage ongoing risk.

The central problem is that healthcare has very few developed strategies for proactively managing these recurrent organisational pressures and crises. Clinicians have well-planned routines for dealing with clinical emergencies and deterioration. What might be the equivalent strategies and routines for coping with organisational deterioration?

Managing risk rather than striving for absolute safety

Patient safety has, rather curiously, lost the central focus on the management of risk that was the core of earlier conceptualisations of safety. Jens Rasmussen set out such a vision in the 1990s with his pioneering conceptual paper on proactive risk management in complex organisations and wider society.[7] For Rasmussen, continuous changes and pressures are part of the natural life of any system. There is no ideal state of safety; continual anticipation and adjustment of the system are essential if risk is to be managed effectively.[8] Rasmussen's vision has been echoed by subsequent authors. For example, Carthey *et al*[9] pointed out in 2001 that the elimination or error and harm was not a realistic goal of safety management; threats and hazards would always exist, and the goal of safety management was to become better at recognising and managing threats to safety.

Proponents of Safety II define safety as the ability to succeed under varying conditions, which implies places a much stronger focus on the capacity of individuals, teams and organisations to adapt to a threat, hazards and a changing work environment. This stance draws attention to the ingenuity and adaptability that professionals in high-risk industries display in the continuing dynamic process that is needed to maintain ordinary and apparently 'standard' operations.[10]

We have many elegant descriptions of the resourcefulness and ingenuity of human beings in coping with hazard and crisis. However, while we have descriptions of successes, we have little idea of how often these improvised solutions are successful. Short-term fixes are adaptive at the time but impede the development of longer term solutions. They can also add risk to a system by creating new processes that are not known to managers and other members of the team, by adding additional steps to a process and, in the longer-term, normalising deviations from standard practice.[11 12] Most importantly, the existing literature offers little guidance as to how we might best prepare and support people and organisations to manage expected pressures and crises. How can we turn elegant conceptualisations into practical action?

Principles of managing risk in difficult conditions

To begin with, we can draw out some underpinning principles to frame our approach to managing pressures and crises.

► First, we must in a sense, give up hope of waiting for things 'return to normal'. We can of course continue to innovate and improve the system. However, we must face the fact of unsafe practice and ask how risk can be minimised in essentially dangerous conditions.

► Second, we must accept that we can never eliminate all risks and hazards. There is nothing wrong with eliminating risks where this is feasible we need to balance these preventative actions with a wider portfolio of safety strategies that are explicitly aimed at managing dynamic threats and pressures.[13]

► Third, although most of the literature on adaptation focuses on the management of surprises and unexpected problems, we believe the principal focus should be on expected problems and hazards. Pressures of beds, staffing, equipment and sick patients are unexpected in that it is hard to know when they will happen but entirely familiar. These situations are quite different from sudden, unexpected and unusual crises that are the focus of much of the literature.[14]

► Finally, we must acknowledge from the start that the management of risk when an entire unit or organisation is stressed necessarily requires engagement and action at all managerial levels. Negotiating new priorities, comprehensive training and strategies in a stressed organisation requires coordinated action between executives, middle management and frontline staff.

What would training for managing organisational threats in healthcare look like?

In many respects, healthcare has much to teach other industries, particularly about the management of clinical emergencies and crises. The skill and coordination shown by an expert surgical team dealing with a failed intubation or a major bleed can be breathtaking to an observer. Other high-risk industries, however, have made much more progress in preparation and planning for managing wider organisational risk in multiple defined and delineated hazardous situations. For instance, the oil company TOTAL and French state railways (SNCF), assisted by the Foundation for an Industrial Safety Culture have developed a new safety training for all managers, from executive to frontline[15] which specifically address the challenges, values and actions needed to maintain 'safety first' in adverse conditions, including the pressures of performance and production. This training is based on a preliminary field analysis of real adverse conditions leading to a safety culture diagnosis, followed by residential classroom training. The focus of the training is on the negotiation and management of conflicts between safety and production at all levels of the management chain and at different time horizons. Underlying the safety strategies is a set of golden

safety attitudes, which are adapted to different levels of the management chain.

We can begin to envisage the form such courses might take in healthcare. At the executive level, the main focus of such preparation would be on the management and negotiation between competing priorities, particularly between safety and other objectives, both in the short and longer term.[16] Executives cannot, and should not, simply prioritise safety over other domains (a naive reproach which is often made). A short-term impact on safety margins in response to financial or other pressures can be accepted, but only if it is actively managed, clearly expressed and communicated.

Middle managers, whether or not clinically trained, act as mediators and buffers between the frontline and the executive. They need to have a good sense of real conditions on the frontline and a portfolio of possible interventions that can be deployed at times of high workload or other pressures. A critical task is to be clear about what standards are absolutely inviolate (such as hand washing) and which can be relaxed, such as the timing and frequency observations of vital signs. An explicit and managed adjustment to pressure is infinitely preferable to a general and inconsistent degradation of standards.[17]

At the front-line management level, training should provide clinicians with a range of simple compensatory strategies that may preserve safety when compliance to best standards is becoming impossible. For instance, the use of healthcare huddles at each work shift, adjusting the team roles and priorities to best adapt to immediate pressures and concerns is an exemplar of a dynamic frontline safety practice.[18 19]

A research and development agenda

The first priority in developing practical strategies is to carry out primarily descriptive studies to identify common type of pressures and degraded conditions and their effect at the level of clinical team and the wider organisation safety matters. The creation of a taxonomy of types of familiar pressures and their effects would be an important foundation to developing potential methods of managing the different kind of stressors and risks that they pose to patients and staff.[20] Concurrently, the strategies adopted by clinicians and managers at times of crisis could be explored, initially as a descriptive exercise but with a view to developing a portfolio of strategies that could be tested more formally.

Developing training programmes which have the necessary underpinning of research and evaluation is clearly a long-term aim. However, pilot programmes could be established at an early stage which could test and evaluate combinations of different safety strategies in response to familiar pressures such as overcrowded wards. As in other industries, such training would help managers to negotiate conflicts between safety and production. It will also be necessary to develop an appropriate regulatory response to such programmes and such strategies. We need to find a way of adapting safety standards and guidelines to provide flexibility while still maintaining the aspiration for the best care that can be achieved in the circumstances.[17]

We can anticipate some resistance to this shift in perspective away from a vision of absolute safety towards the active management of risk. Pay for performance systems, for instance, and targets of zero harm imply, even if not explicitly stated, that absolute safety is the only acceptable goal in healthcare. Politicians, regulators and healthcare leaders may be uncomfortable articulating this shift in perspective to patients and families. In fact, the pressure on all healthcare systems is simply the daily reality for all clinicians and managers and for any patient or family member dealing with serious illness. There may be a certain relief in giving up the fantasy of absolute safety, which is actually an obstruction to progress, while still maintaining a positive and proactive approach to managing risk and avoiding harm. Nevertheless, it will be a challenge to convince professionals, regulators and most importantly patients and families, that the active anticipation and management of risk will be ultimately better than striving for unattainable absolute safety. Greater challenges may lie in the wider systems of regulation and governance which tend to assume the target of absolute safety and high standards of care at all times. A shift of this kind would require a change in attitudes, and adjustments in metrics of safety and quality, in the nature of investigations and inspections and potentially in performance management payment systems.

CONCLUSIONS

Healthcare is much more demanding and complex than in the early 2000s. In many countries, the quality chasm between the expected standard and the care delivered will not be bridged in the foreseeable future. We need of course to continue to innovate and improve the system. However, this will not in itself be enough to ensure safe care. We need in parallel to develop and implement prepared strategies for managing risk at times when ordinary standards cannot be met and the safety of patients is compromised. Finally, in making these proposals, we emphasise that we are not accepting defeat or suggesting that a certain level of harm is inevitable. We argue, in contrast, that the recognition of threats hazards and the development of active, practical risk management strategies is the route to safer healthcare.

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