Reporting & Learning: From Extraordinary to Ordinary

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Introduction

The development of a reporting and learning culture is a key feature of successful safety-critical systems (Reason, 1997). A reporting culture ensures that safety management systems (SMS) are fed with important safety-related information from people who are in direct contact with potential hazards. A learning culture ensures that the organisation is able to draw the right lessons from its SMS, and that the organisation is willing to embrace change when it is needed.

In 2000, the UK Department of Health published the influential report "An Organisation with a Memory" (Department of Health, 2000). The report highlighted the need for the UK National Health Service (NHS) to develop a reporting and learning culture in order to capture systematically data about the extent of patient harm. This recommendation led to the establishment of the National Patient Safety Agency (NPSA), which was tasked with the development of a National Reporting and Learning System (NRLS). Since 2003 NRLS is collecting data about incidents and adverse events at a national scale in England and Wales. In addition to the NRLS, many NHS organisations are also operating local incident reporting systems at departmental and organisational level. Incident reporting is now well established in the NHS, and it is regarded as a key instrument for improving patient safety and the quality of services (Anderson et al., 2013, Barach and Small, 2000).

While NRLS and other incident reporting systems receive significant amounts of data, questions have been raised about the ability to generate learning, and subsequently change, from this information (Carruthers and Phillip, 2006, Sari et al., 2007, Shojania, 2008). Research suggests that incident reporting data have significant limitations in reflecting the frequency at which incidents occur (Westbrook et al., 2015). Numerous studies have investigated barriers to incident reporting, which include lack of training in the use of incident reporting, usability problems of the electronic systems used for incident reporting, uncertainty about what constitutes a reportable incident, blame culture and fear of consequences, lack of feedback, and the absence of learning relevant to local practices (Benn et al, 2009, Braithwaite et al., 2010, Lawton and Parker, 2002, Pasquini et al., 2011, Sujan et al., 2011a).

In this chapter we argue that a key reason why incident reporting fails to lead to sustainable learning in health care is to be found in the concept itself rather than exclusively in any barriers to reporting. With this type of learning the focus is on incidents and adverse events, i.e., on something that occurs infrequently – the extraordinary. The second volume in the present series on Resilient Health Care (Wears, Hollnagel and Braithwaite, 2015) suggests that a shift in focus from understanding failures (Safety-I) towards understanding everyday clinical work (Safety-II) is required (Hollnagel, 2014). We propose that, accordingly, reporting and learning needs to shift attention from the extraordinary failure event towards ordinary, everyday clinical work. Learning from the ordinary might be one way to narrow the gap that

exists between work-as-imagined (WAI) and work-as-done (WAD) by providing timely and detailed information about everyday clinical work, and by promoting mindful reflection on practice.

Learning from the Extraordinary

When a patient is harmed, it is a noteworthy and tragic event. Research suggests that around one in ten patients admitted to hospital will suffer an adverse event, around half of which might be preventable (Vincent, Neale and Woloshynowych, 2001). However, it is equally true that most patients will have an uneventful stay, and they will receive care to a high standard. In this respect, adverse events and serious untoward incidents happen infrequently. It is precisely their extraordinary character that attracts attention. Managers, health care professionals, and patients need to know what went wrong. Organisations want to ensure that the same event does not happen again.

The focus on extraordinary failures is the key characteristic of traditional approaches to safety management, which leading thinkers in the area of Resilience Engineering refer to as Safety-I (Hollnagel, 2014). Safety management from a Safety-I perspective aims to reduce harm and adverse events as far as possible by either eliminating the causes of harm or by controlling the risk associated with these. In order to prevent an undesirable event from repeating itself, the analysis of and the learning from incidents and adverse events frequently lead to the implementation of additional safeguards or defences in order to reduce or eliminate vulnerabilities in the system (Reason, 1997). Such defences often include technological solutions, such as the introduction of electronic prescription systems that have the capability to provide decision support to health care professionals as well as to guard against prescribing errors (Donyai et al., 2008). Further interventions that are prompted by learning from extraordinary failures include attempts at eliminating human error by constraining behaviour and reducing variability through standardisation (Reason, 2000). Examples might include standardised communication protocols or the introduction of mandatory checklists (Hindmarsh and Lees, 2012, Joint Commission Centre for Transforming Healthcare, 2010).

Safeguards, defences and standardisation are examples of well-intentioned interventions that represent instances of formal assumptions about how work should be carried out – work-as-imagined (WAI) (Hollnagel, 2015). Their primary purpose is to break a particular causal chain in order to prevent a specific failure trajectory from repeating itself. However, the way everyday clinical work is actually unfolding – work-as-done (WAD) – is different, and modern health care systems might best be understood as complex adaptive systems (Braithwaite et al., 2013). Where WAI is slow to change and relatively stable, WAD is dynamic. WAD is changing constantly because the demands, available resources, and environment are changing. Health care settings are full of competing organisational priorities and goals, and suffer from a chronic shortage of resources. Health care professionals are adapting their performance by making dynamic trade-offs between goals in order to translate the tensions and contradictions into safe practices based on the characteristics of the specific situation (Sujan, Spurgeon and Cooke, 2015a, Sujan et al., 2015b). Such necessary performance adjustments contribute to organisational resilience (Fairbanks et al., 2014, Sujan, Spurgeon and Cooke, 2015c). From a WAI perspective, however, performance variability is often regarded as detrimental deviations or violations (Hollnagel, 2015).

Learning from the extraordinary, from failures and adverse events tends to favour such static interventions, so that events do not repeat themselves. As these interventions are not grounded in a thorough understanding of everyday clinical work, they lack the foundation for appreciating the contribution to the delivery of safe care of the trade-offs and performance adjustments that people make on a daily basis (Cook, 2013). Instead, such interventions introduce additional constraints, tensions and contradictions, which have to be dynamically managed by front-line staff. The gap that exists between WAI and WAD is reinforced or widened.

Learning from the Ordinary

The thinking behind what is referred to as Safety-II regards the trade-offs and performance adjustments that people undertake on a daily basis as the origin of both success and failure (Hollnagel, 2014). Health care professionals make context-dependent judgements using their expertise and experience about which goals to prioritise and which specific rules to abide by (Debono and Braithwaite, 2015). Most of the time, these performance adjustments enable successful transformation of WAI into practice; sometimes the performance adjustments are inadequate and lead to failure.

Empirical studies of everyday clinical work, such as those contained in (Wears, Hollnagel and Braithwaite, 2015), provide evidence that the focus of patient safety improvements, and health care improvements more generally, should be on ordinary everyday performance rather than on the extraordinary failure. Similarly, it could be argued that the focus of reporting and learning needs to shift from incidents towards everyday clinical work. While a deep analysis of the extraordinary might provide interesting and useful insights about the various workplace and upstream factors at play during an incident, it is not possible to adequately describe WAD through the analysis of such incidents alone (Cook, 2013). Building an understanding of WAD – of the ways in which trade-offs and performance adjustments are made - will only be possible through a study of the ordinary.

For example, such a path to reporting and learning was taken as part of the Proactive Risk Monitoring in Health Care (PRIMO) approach. This approach to organisational learning was developed in order to elicit a rich contextual picture of the local work environment, to move away from negative and threatening notions of errors and mistakes, and to encourage active participation and ownership with clear feedback for local work practices (Sujan, 2012). The distinguishing feature of the PRIMO approach is that it focuses on learning from the ordinary, in this case the various hassles that practitioners experience in their everyday clinical work. A brief summary of the PRIMO approach is provided in Table 1.

Table 1: Characteristics of the PRIMO approach to organisational learning

PRIMO consists of staff narratives, a monitoring survey, and long-term and short-term improvements.	Local teams, such as a hospital ward or pharmacy, manage PRIMO for their environment. PRIMO consists of three elements: staff narratives about hassle, a survey to monitor risk perceptions, and long-term and short-term improvements.
Staff narratives about hassle document WAD.	Staff contribute free-text narratives about something that caused them hassle during their working week. The local PRIMO champion

	performs an analysis of each narrative, extracting contributory factors (Safety-I), such as inadequate equipment, and any coping strategies or performance adjustments that staff adopt to manage the hassle (Safety-II).
Monitoring survey is used to build up a risk profile.	A survey based on the contributory factors identified from the staff narratives is distributed at regular intervals to all members of staff (of the local work environment) to build up a risk profile over time.
Long-term and short-term improvements aim to reduce risk, support performance adjustments, and prevent participation fatigue.	Based on the survey results, the highest-ranking risk factors are identified as areas for improvement. This is complemented by improvements aimed at supporting the execution of coping strategies and performance adjustments based on the staff narratives. In order to maintain staff participation and to combat participation fatigue, fast and visible improvements ("quick wins") to the local work environment are an important part of the PRIMO strategy that complements its longer-term aim. These are also identified from the staff narratives.

Hassle in this instance can be defined loosely as anything that causes people problems during their daily work. Examples of hassle include, for instance, unavailable equipment such as drip stands on a ward or supporting equipment for undertaking radiographic procedures. There are a number of important benefits of learning from everyday hassle. Among these the most important benefit is arguably that the focus on hassle supports building an understanding of the system dynamics, i.e., of the way performance adjustments are made, and the way work ordinarily unfolds. Reports of hassle typically contain not only descriptions of how the hassle manifested itself, but also how people coped – how they adapted their behaviour in order to continue to provide safe and good quality care (Sujan et al., 2011b). Examples of typical adaptations made by health care professionals include the sharing of information and personal negotiation to create a shared awareness, prioritisation of goals and of activities, and offering and seeking help.

A brief example of a reported hassle from a hospital pharmacy environment is given in Table 2. In this situation, the reporting health care professional (the dispensary manager) describes a common situation of arriving at work and finding the dispensary understaffed and under pressure to cope with prescriptions. The dispensary manager goes on to describe how the hassle was dealt with by recognising the seriousness of the problem, by creating a shared awareness of the problem among different parties (such as the drug manufacturing staff and the pharmacy clinical director), by identifying potential additional resources, and by revising goals and priorities. In this specific example it might be possible to enhance resilience by making these performance adjustments visible to practitioners and their managers, and by facilitating and supporting such behaviours where possible. A concrete intervention might be the introduction of short morning " team huddles" aimed at building shared awareness.

When reporting is directed towards the extraordinary, such learning typically is not available. This is because incidents represent situations that have broken down, i.e., situations where the performance adjustments have proved insufficient to maintain the system (or care delivery process) under control. However, looking at ordinary, everyday clinical work allows a better understanding of the system dynamics at play and of how organisational resilience is achieved.

Table 2: Hassle - Staffing problems in the dispensary

I came in about 8.30 am hoping to finish off a report from yesterday's [project] meeting, but soon after I arrived a technician told me that the department was extremely short staffed. On top of the planned annual leave, off-site training AND the 3 new Band 6 pharmacists that needed training up, we had 3 people ring in sick. I checked the allocation of staff on the rota and went to talk to Manufacturing staff to explain that there were no other manufacturing trained staff in dispensary to help them out today (they were already stretched). I walked past Clinical Director's office and made him aware that we were really short. Manufacturing leads had not arrived yet so I went to the Distribution team to see if they could have one of the new Band 6 pharmacists observe a top up to take pressure off the dispensary so they could focus on getting some work through. I also put myself in for an additional 1.5hr ACT [Accredited Checking Technician] slot to relieve a senior dispensary technician, so that she could be hands on if needed to maintain some training when the Band 6 pharmacist came back.

I realised that my work plan for today would have to be scrapped!

Realigning WAI and WAD

Work-as-done by practitioners is necessarily different from work-as-imagined in the minds of those who design and manage it. It has been suggested that as the gap between WAI and WAD widens, organisations are prone to becoming more brittle (Dekker, 2006), because policies and procedures that do not reflect the demands and challenges of everyday clinical work might impose additional and potentially contradictory priorities and constraints. As a result, practitioners might become increasingly disconnected from WAI, focusing on practical ways of delivering good quality care and keeping patients safe. While this creates resilience at the local level, there is a risk that, overall, organisations become more brittle as those responsible for managing work remain unaware of the performance adjustments that are necessary to ensure patient safety (Debono and Braithwaite, 2015). The challenge for safety management and for Resilience Engineering is to devise ways to keep WAI and WAD aligned. Alignment in this sense does not mean that WAI and WAD are in perfect correspondence. Rather, the intention is to create mutually positive awareness (meaning appreciation) among the different stakeholders of how they perceive work and of how it actually unfolds.

Incident reporting and, more generally, learning from the extraordinary are clearly struggling to achieve this, as their focus is not directed towards understanding WAD. Learning from the ordinary, however, might offer opportunities for creating such a positive awareness and for realigning WAI and WAD.

Learning from the ordinary can provide timely and rich information about WAD in a non-threatening context. Managers usually do not have access to data that directly describes WAD. Their information typically consists of outcome data and other process data that have been aggregated and interpreted over a period of time (Hollnagel, 2015). Often, these data have been collected in such a way that they can feed comfortably into the WAI perspective, for example data about compliance with standard operating procedures, such as WHO surgical checklist compliance data, or data about the frequency of occurrence of harm, such as pressure ulcers. Such data do not provide learning about the positive impact of performance adjustments on successful outcomes, and they might carry negative connotations of errors, deviations and violations. As a result, practitioners might be tempted to hide performance adjustments from those responsible for managing work, and in this way contribute to organisational brittleness rather than resilience (Debono and Braithwaite, 2015). On the other hand, the example of hassle narratives illustrates a potential way of documenting and of learning about how practitioners anticipate and adapt to disturbances through trade-offs and performance adjustments. As hassle scenarios typically represent situations in which disturbances were successfully being dealt with, the performance adjustments that practitioners employ can be brought in a positive way to the attention of those who imagine (i.e., reason about and manage) clinical work.

Learning from the ordinary can contribute to mindful reflection about WAD. Documenting hassle and the way it was dealt with in narratives, and the subsequent analysis and sharing of this information, encourages an active and ongoing discussion about practice. One of the hallmarks of so-called High Reliability Organisations is that they keep the discussion about risk and safety going even in the absence of adverse events (Weick and Sutcliffe, 2007). With learning from the ordinary such discussions are supported, and their focus shifts from failures and their prevention towards performance adjustments and improvements to practice. In this way, health care professionals can build a better understanding of the consequences of the trade-offs and performance adjustments that they have to make. Front-line staff and their managers can engage in meaningful discussions about continuous improvements in a non-threatening context.

Conclusion

Health care organisations should seek out alternative approaches to complement their established processes for reporting and learning. Current reporting and learning is limited to the analysis of incidents and adverse events. The change that is generated from this type of learning often does not appreciate the positive contribution of performance adjustments, and might widen the gap that exists between work-as-imagined and work-as-done. Learning from the ordinary has the potential to provide valuable information about the judgements and performance adjustments that people make in order to deliver safe care. In this way, learning from the ordinary can contribute to reducing the gap between WAI and WAD by providing rich information about WAD to those who design, manage and evaluate clinical work, and by promoting an environment within which health care professionals can reflect about their everyday clinical work.

Will learning from the ordinary become ordinary, i.e., accepted practice? In the short term this remains doubtful. Following adverse events there is a strong and understandable emotional response

among all parties, and such events will always attract attention. However, as the frustration at the lack of progress with reducing adverse outcomes grows, more and more health care organisations might turn to alternative approaches. They might consider complementing their existing safety management practices with proactive approaches from a Safety-II perspective, such as the one described in this chapter.

While learning from the ordinary thus offers opportunities for contributing to organisational resilience, it is also important to consider that any reporting and learning takes place in a socio-cultural context. Further research should aim to understand the factors that enable or inhibit the successful implementation of such an approach to organisational learning. Approaches rooted in realism emphasise the need to understand the mechanisms and the context of change. Further research should aim to identify and to describe the factors that contribute to successful organisational learning across a range of different settings.

Acknowledgements

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