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Unlearning and Patient Safety

Abstract:

This chapter adds to the growing body of literature on unlearning by contributing a model applicable to the context of professional organisations, and more specifically to healthcare and patient safety. An overview of the global patient safety agenda is described and a gap in implementing sustained safety improvement identified. The UK's efforts to bridge this gap in patient safety by transforming their NHS into a 'learning organisation' are discussed. The unlearning literature is reviewed and an updated model of unlearning conceptualized that contains three dimensions relevant to the study of professionals: cognitive, cultural and political. As a research agenda, this chapter provides a starting point for thinking about how unlearning can be studied in organisations; establishing a theoretical foundation for future study.

Keywords: Patient Safety, Unlearning, Professionals, Root Cause Analysis, Practice Theory

Word Count: 4,938

Unlearning and Patient Safety

INTRODUCTION

Since the development of the patient safety movement in the early 2000s, healthcare organisations have moved forward with a plethora of safety improvement efforts. While major advances have been made in the area of patient safety, it remains a significant and very real problem (Waring 2013). This affects patients in terms of unexpected injury, suffering, protracted care, and healthcare organisations with regards to how to best configure services to deliver safer care. Unfortunately, despite current best efforts, it could be argued there is hardly any evidence of continued safety improvement (Landrigan et al. 2010).

Much has been invested in tools to promote organisational learning following incidents such as Root Cause Analysis (RCA) (Nicolini, Mengis, Meacheam, Waring, & Swan 2016). However, we know that hospitals' rarely learn from their failures (Nicolini, Waring & Mengis 2011), subsequently improvements based on learning from such failures are rarely implemented. This prevailing outcome is hereby referred to as an 'implementation gap'. Fresh ways of thinking are needed to improve upon past patient safety efforts to address this gap in learning.

This chapter is about the importance of understanding the unlearning concept in the context of patient safety to ensure forward accountability, the responsibility to learn lessons so that future people are not harmed by avoidable mistakes. This is particularly relevant to professional organisations where new learning is often applied atop existing professional practices, establishing a need to first unlearn.

Unlearning, the discarding of obsolete organisational practices to make room for new learning, is an under researched concept and has been described by some health researchers as "necessary to clear the way for new (more appropriate) learning in healthcare practice" (Rushmer & Davies 2004 p. 11). This chapter's updated unlearning model fills a research gap

on the enactment of unlearning and considers the importance of cognitive, cultural, and political factors that influence unlearning in professional organisations.

THE PATIENT SAFETY AGENDA

The release of landmark government reports in both the United States and United Kingdom are largely responsible for developing the patient safety agenda in the western world (Department of Health 2000; Kohn, Corrigan & Donaldson 2000). The release of these reports led healthcare organisations to implement patient safety initiatives. Unfortunately, there has been little evidence of widespread safety improvement (Landrigan, et al. 2010) as a result of this approach.

The health services literature is fairly comprehensive in documenting the trend of adverse events and medical errors in healthcare organisations across the globe, in this chapter, these are referred to collectively as incidents. The proportion of inpatient visits leading to harmful incidents ranges from a reported 3.7% in U.S. (Brennan et al. 1991) to 16.6% in Australia (Wilson et al. 1995) and as many as 70% of these incidents are deemed preventable (Leape 1994).

A Promise to Learn: The UK's Response

A case could be made for taking a deeper look at one country, the UK, and its National Health Service's (NHS) efforts attempting to learn from incidents. The NHS is an exemplary case given recent public calls for improved safety, resulting from several high profile failings in care that resulted in government led inquiries for improvement.

The gap in learning from incidents remains an ever-present concern for both the public and government, as claimed by UK Health Secretary Jeremy Hunt (2015), the NHS records 800 avoidable deaths every month, and 'wrong site surgery' incidents occurring twice a week on average.

The UK's most recent efforts to bridge this gap in patient safety, to "continually and

forever reduce patient harm" (National Advisory Group on the Safety of Patients in England 2013, p. 5), come in the form of recommendations that propose transforming the NHS into a learning organisation by embracing an ethic of learning. Learning organisations ideally contain the following five characteristics: systems thinking, personal mastery, mental models, shared vision, and team learning (Senge, 1990). The NHS's vision is supported by UK Health Secretary (Hunt 2015) who stated: "The world's fifth largest organisation needs to become the world's largest learning organisation".

The Implementation Gap

Numerous researchers have set out to analyze the initiatives undertaken by healthcare organisations to learn from incidents and prevent recurrences (Bishop & Waring 2011; Currie & Waring 2011; Iedema, Jorm & Braithwaite 2008; Iedema, Jorm, Long, Braithwaite, Travaglia, Westbrook 2005; Nicolini, et al. 2011; Wu, et al. 2008; Vincent 2003). These studies have tended to emphasise the way in which incidents were analyzed using tools like Root Cause Analysis (RCA), identification of risks, and how lessons learned were shared using formal reports of recommendations for improvement.

A study which comprehensively focused on the use of RCA in practice has suggested that healthcare organisations rarely learn from their failures (Nicolini, et al. 2011). This inability to learn has been hypothesized as the result of several barriers including a normalisation of deviance among staff (Vaughan 1999; Waring 2005), the promotion of quick fixes and work-arounds rather than systematic analysis (Tucker and Edmondson 2003; Waring, Harrison & McDonald 2007), and a predominant culture of blame (Carroll, Rudolph & Hatakenaka 2002; Currie & Waring 2011; Department of Health 2000).

Figure 1 below is the learning circle used by the UK's Department of Health (2000) to conceptualise the process of organisational learning in response to incidents and is shown here as a framework.

Current approaches tend to reflect a “find and fix” mindset (Hollnagel 2013, p. 6) resulting in a focus on the process of investigating incidents and compliance while skirting the issue of post-investigation learning and practice change.

(“Figure 1 goes about here”)

Furthermore, new learning is often overlaid atop existing professional practices, making change difficult to embed and sustain, highlighting the need to enact unlearning to make space for new safer practices.

Due to the impact of change initiatives on organisational matters such as resource allocation, authority and control, professional groups may be hesitant to unlearn past practices, and adopt new ones which threaten their organisational position. Freidson (1994) described this as collective control over knowledge traditionally associated with professional power and autonomy.

The concept of unlearning and how it might be enacted yields promise as a means to bridge the implementation gap by discarding obsolete practices.

ENACTING UNLEARNING

This chapter proposes unlearning as a concept worth critically exploring to understand how organisations can make room for new learning, which in the case of patient safety can result in improved, safer care.

Research grounded in unlearning literature has been limited in the healthcare setting. A ProQuest search of 36 separate databases for scholarly journals using the search terms ‘unlearning’ and ‘healthcare’ yielded 87 results, while ‘unlearning’ and ‘patient safety’ yielded only 8 results. No studies as of yet were found utilizing unlearning to investigate patient safety.

The applicability of unlearning to the study and practice of patient safety is supported by Rushmer and Davies (2004) who highlight that (emphasis added) “getting people to stop

doing things as well as getting new practices started" (p. 10) is a major challenge to managing quality, patient safety and medical error. This challenge results from clinician knowledge becoming stuck, ritualized and never removed from the organisation leading to the development of status quo (Rushmer & Davies 2004).

In contrast to research on learning, unlearning studies are scarce, resulting in a lack of knowledge about processes related to the concept, such as what forms it can take, how it occurs, and how it can be encouraged (Akgun, Byrne, Lynn, & Keskin 2007; Becker 2005; Brook, Pedler, Abbott, Burgoyne 2015; Tsang & Zahra 2008).

The concept of unlearning first emerged in Hedberg's 1981 chapter on How Organizations Learn and Unlearn in the Handbook of Organizational Design (Nystrom & Starbuck 1981) where he wrote "knowledge grows, and simultaneously it becomes obsolete as reality changes. Understanding involves both learning new knowledge and discarding obsolete and misleading knowledge." (p.3).

This chapter draws on Scott's (2008) institutional pillars in developing an updated model of unlearning. Given this model centres around professionals, Scott's (2008) view of professionals as institutional agents, whose function "can be described as variously specializing in creating, testing, conveying, and applying cultural-cognitive, normative, and/or regulative frameworks that govern one or another social sphere" (Scott 2008 p. 233), is applicable.

To develop this updated model existing conceptualisations of unlearning are reviewed: fading, wiping, and deep unlearning (Rushmer & Davies, 2004), transformational unlearning (MacDonald, 2002), and critical unlearning (Brook et al., 2015; Chokr, 2009). Each of these conceptualisations of unlearning are explored within one of the updated model's three proposed dimensions: cognitive, cultural, and political, drawn from Scott's (2008) cultural-cognitive, normative, and regulative pillars.

Cognitive

Rushmer & Davies (2004) conceptualise unlearning as a cognitive process that occurs at three distinct levels: fading, wiping, and deep unlearning. While also viewing unlearning cognitively, MacDonald (2002), defines unlearning uniformly, as a transformative process that is complex, challenging, and lengthy.

The idea of past learning automatically fading away or forgetting is not as relevant to the updated model as other levels of unlearning which are deliberately and intentionally enacted. Similar to how safety recommendations are deliberately launched and do not occur automatically or without directed efforts, unlearning past practices won't happen by default.

Wiping, as suggested by Rushmer and Davies (2004) is "To be pushed into unlearning … to be subject to focused, directive instruction to stop doing certain things." (p. 11) and "To unlearn complex learning we might therefore need to be pushed or pulled down the unlearning curve." (p. 11). Moving along a learning curve, while useful conceptually, is a very cognitive activity which make it difficult to see and study supporting a need for alternate perspectives, such as a practice-based approach.

Deep unlearning seems to only differ from other unlearning levels in the speed (very quickly) at which the unlearning curve is traversed (Rushmer & Davies 2004). This level could be seen as redundant in that it is also a deliberate enactment of unlearning and its relevance exists only in proportion to the severity of the act necessitating unlearning.

Transformative unlearning (MacDonald, 2002) is a more holistic conceptualisation, in that it considers the abandonment of established practices, knowledge, and assumptions that may be linked to sense of identity. In the case of MacDonald (2002), her identity as a nurse was challenged with the introduction of updated teaching guidelines pertaining to newborn supine, or side-lying positions. Transformative unlearning is a cognitive process of discernment involving: being receptive to new evidence (despite fear of possible infant

choking risks), recognition of evidence in support of new practices, and grieving loss of identity attached to past practices (MacDonald, 2002).

By moving past a cognition oriented perspective, and incorporating practice-based elements that views unlearning as something which is enacted, an updated model of unlearning can overcome the limits of past models (Akgun et al. 2007; Rushmer & Davies 2004). A practice approach accepts the practices of organisational actors as a unit of analysis for understanding how learning and unlearning can occur (Nicolini, 2013).

Questions remain about how organisational actors, such as professionals, discard practices. Tsang and Zahra (2008) provide no clear structure to define this discarding process. As a starting point, what factors influence the discarding of professional practices? What role might cultural and political factors play in unlearning professional practices?

Cultural

While settling on a definition of culture can be difficult, one review found twelve different definitions and was able to highlight two theoretical features common to most, the use of the word ‘shared’ and a reference to culture as unique to a particular context (Martin 2002).

To understand the relationship between culture and unlearning, the case of Bristol Royal Infirmary (BRI) is reviewed. It provides an example where culture enforced questionable professional practices that inhibited new learning (Weick & Sutcliffe 2003). The BRI pediatric cardiac surgery program tragically had much higher mortality rates (32.2%) than other similar hospitals in the UK (21.2%) (Weick & Sutcliffe 2003). These problems were said to stem from a ‘culture of entrapment’ which is “the process by which people get locked into lines of action, subsequently justify those lines of action, and search for confirmation that they are doing what they should be doing.” (Weick & Sutcliffe 2003, p. 73).

The culture at BRI trapped professionals into behavioural commitments which saw

them justify and rationalize poor performance stemming from a supposedly high volume of unusually complex patient cases, rather than considering their own failings or systematic issues (Weick & Sutcliffe 2003).

That culture led to ossification of professional practices related to justification and rationalization is evident in the case of BRI, highlighting the importance to unlearn. Overcoming this would have required unlearning practices associated with the prevailing mindset (emphasis added) "it would have taken a different mindset … It would have required abandoning the principles which then prevailed" (Department of Health 2002, p. 4).

The relationship between culture and unlearning in this case seems to suggest that certain types of culture (i.e. a culture of entrapment) reinforce a prevailing mindset which prevents professionals from unlearning practices. For example, it was common practice following an incident for BRI surgeons to rely upon their own operation logs as the most reliable source of data for finding plausible justification, rather than also considering the interdependencies and perspectives of other hospital staff (Weick & Sutcliffe 2003).

In the case of BRI, a culture of entrapment played a role in preventing deliberate unlearning from being enacted and is therefore suggestive of a negative relationship between the concepts. This raises questions concerning what type of culture might support the enactment of unlearning?

We know that implementation of Root Cause Analysis (RCA) practices in organisations can lead to changes in culture, which result in more trust and openness among staff, nurture more disciplined thinking about problems in the organisation (Carroll et al. 2002), and facilitate a more open safety culture that actively seeks out previous experiences of error in an effort to ensure they do not happen again (Department of Health 2001; Leape et al. 1998). While a safety culture seems compatible with the enactment of unlearning, given

the lack of research in this area it is difficult to say for certain, supporting the need for future study that includes a more robust model of unlearning incorporating culture.

Political

A weakness of unlearning literature is a lack of emphasis on possible political factors which can influence unlearning. The importance of political influences on learning is brought to the fore by Contu and Willmot (2003) who explore a situated understanding of learning, which implicates learning in broader social structures involving relations of power. This updated model aims to incorporate these elements, to demonstrate how "learning processes are inextricably implicated in the social reproduction of wider institutional structures." (Contu & Willmot 2003 p. 294).

To critically examine the unlearning concept it must be viewed as part of a wider learning literature that includes considerations of a social and political nature. This 'learning discourse', is the meaningful and structured totality of the subject of learning where organisational learning connects learning to organisation and has implications for the link between the wider social arena and organisations within which learning occurs (Contu, Grey, & Örtenblad 2003).

In this context, learning is seen to be an inevitable response to the uncertain and changing times of a globalised knowledge based economy. This response is based on the premise that learning is uncritically recognized as a good thing, where any concept bearing a title which includes 'learning' is seen positively such as "learning organization" (Contu, et al. 2003, p. 933). What this emphasizes is the dominance of 'learning' and its power as a tool in a wide range of social and political settings, as demonstrated by the UK's endorsement of 'learning organisation' as the solution to their NHS's safety woes.

Certain professionals such as doctors may view learning initiatives negatively and be hesitant to accept new learning as they are bombarded with information regularly and experience reform fatigue. This results in new learning adding to rather than replacing old

practices. While predominantly viewed as positive, learning conceals constraints on what can be learned, both socially and organisationally, which are both controlling and controlled (Contu et al. 2003).

By considering what political influences may weigh on the enactment of unlearning we bring a critical perspective to the updated model. As some researchers have suggested unlearning is a way to enable a critical and unlearning attitude, where broader ideologies and practices are challenged (Brook et al., 2015; Chokr, 2009). By adopting a critical attitude organisational actors can differentiate between individual experience and political factors which influence organisational challenges they face.

Critical unlearning, in contrast to inward focused deep, and transformative unlearning, is an outward focused, liberating process. It involves critical reflection at both a collective and public level, and enables the questioning of dominant ways of thinking and rediscovery of subjugated knowledge (Brook et al. 2015; Chokr, 2009). A key characteristic of critical unlearning is its social focus, not on the motivations and actions of individuals, but on organisational and institutional forces which impact upon the situation. Thus it frames the processes of working, managing, and learning in organisations, in a context of wider social influences.

Critical unlearning is a means to challenge the "relentlessly performative" nature of learning by questioning underlying dominant knowledges and social ideals. This questioning attitude empowers organisational actors with a "desire and willful determination not to be taken in" (Chokr, 2009, p.6) leading to the rediscovery of previously suppressed knowledges outside governing variables of the organisation.

For example, the process of learning from medical errors can be constrained by Root Cause Analysis (RCA) (Peerally, Carr, Waring & Dixon-Woods, 2016). RCA is prone to political hijacking, which stems from among other factors, investigative processes that lack

independence from the organisation where the error took place. There is also risk of investigative reports themselves, rather than learning and improvement, becoming a goal of RCA. Furthermore, RCA reports can end up tailored to moderate partisan interests, hierarchical tensions, and interpersonal relationships (Peerally, et al. 2016). Thus cultivating a critical attitude towards RCA can empower organisational actors in a way to consider these extraneous shortcomings, and begin a journey towards effective organisational learning.

RESEARCH AGENDA

While this chapter presents the idea of unlearning as holding value for researching and managing patient safety, the literature suffers from a lack of inquiry beyond initial descriptions, and no focused attempts, with the exception of Brook, et al. (2015), to place the process of unlearning in the broader literature on learning and organisations.

Conceptualizing Unlearning

Based on the dimensions of unlearning reviewed earlier an updated conceptual model has been constructed, see Figure 2. This model provides a framework for researchers to carry out further research on how unlearning is enacted in professional organisations.

The updated unlearning model (Figure 2) highlights the cognitive, cultural, and political dimensions across which unlearning might be enacted by organisational actors, at an individual and collective level. The factors which are implicit to the process of unlearning are identified for each dimension. Unlearning of the deliberate and transformative type are enacted at the individual and organisational level, while critical unlearning of exogenous factors, occurs at the political & environmental level.

(“Figure 2. Updated Unlearning Model goes about here”)

A Practice Based Framework for Researching Unlearning

A goal of further research should be to validate and explore this model's potential in a professionalised setting, like healthcare, to improve upon patient safety practice and research. The purpose of this section is to highlight what patient safety researchers may wish to consider in studying the concept, to advance theory in this area, and translating knowledge to practitioners on the front-lines of healthcare.

By moving from a cognitive perspective to a practice-based approach of unlearning, the updated model views the routinized practices of professionals as a unit of analysis for understanding how learning and unlearning can occur (Nicolini 2013).

As it pertains to observing unlearning, the discarding of practices, and supposing a general desire to understand how the phenomena occurs, what enables and inhibits it, a starting point is examining the practices of professionals in organisations. Compatible with this approach is a desire to access professionals' 'logic of practice', to build theory which better reflects the way in which practices are enacted (Sandberg & Tsoukas, 2011).

As suggested by Sandberg & Tsoukas (2011), examining temporary breakdowns, such as interruptions, or disturbances, in the flow of practice, emphasises a "focus on … the sociomaterial practice (i.e., ourselves, others, and tools) as something separate and discrete, singling people and tools out from their relational whole" (p. 344). It is during these breakdowns that professionals' absorbed coping is disrupted and, momentarily, the entirety of the sociomateriality of practice, that is the entanglement of the social and material, is observable (Sandberg & Tsoukas 2011).

The healthcare setting, especially scenarios involving patient safety, offer many opportunities to observe practice breakdowns, in the form of professional response to medical errors, incidents, and Root Cause Analysis (RCA) investigations. Analysing breakdowns in professional's practice offers researchers an opportunity to assemble ideas about how

practices might be discarded. Drawing on work from the military field involving friendly fire (Snook 2000), it's possible to identify the "practical drift" (Snook 2000, p. 225) that occurs during incidents. Which in Snook's (2000) case, resulted when local practices drifted, and no longer conformed to formal procedures.

Adopting a practice-based approach helps ensure the updated model of unlearning reflects how "organizational practices are constituted and enacted by actors" and "capture essential aspects of the logic of practice" (Sandberg & Tsoukas 2011, p. 339). This approach will develop unlearning as a concept, making it more applicable to the practices of front-line healthcare professionals, thus helping researchers in this field bridge the gap between theory and practice.

CONCLUSION

This chapter adds to scarce but growing body of literature on unlearning by contributing an updated model as a framework for how this concept can be enacted in the context of patient safety, and more broadly in professional organisations. The intent of this conceptual chapter has been to focus attention on advantages inherent to enacting unlearning for practitioners and researchers involved in patient safety.

The patient safety agenda was reviewed and the UK's 'learning organisation' solution for patient safety discussed. The implementation gap was identified and unlearning proposed as a solution to overcome this gap. Unlearning is a specific type of learning that is enacted to ensure obsolete professional practices are removed, creating space to embed new learning. The cognitive nature of past unlearning literature was discussed and the need to adopt a practice-based approach for future research presented. The potential relationship between culture and politics on the enactment of unlearning were also reviewed and incorporated into an updated unlearning model for further study.

This chapter serves as a reminder for those involved in patient safety to consider the broader context in which their efforts are placed. As a research agenda this chapter provides a starting point for thinking about how unlearning can be studied in organisations.

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APPENDIX

Figure 1. Learning Circle. Adapted from Department of Health, 2000.

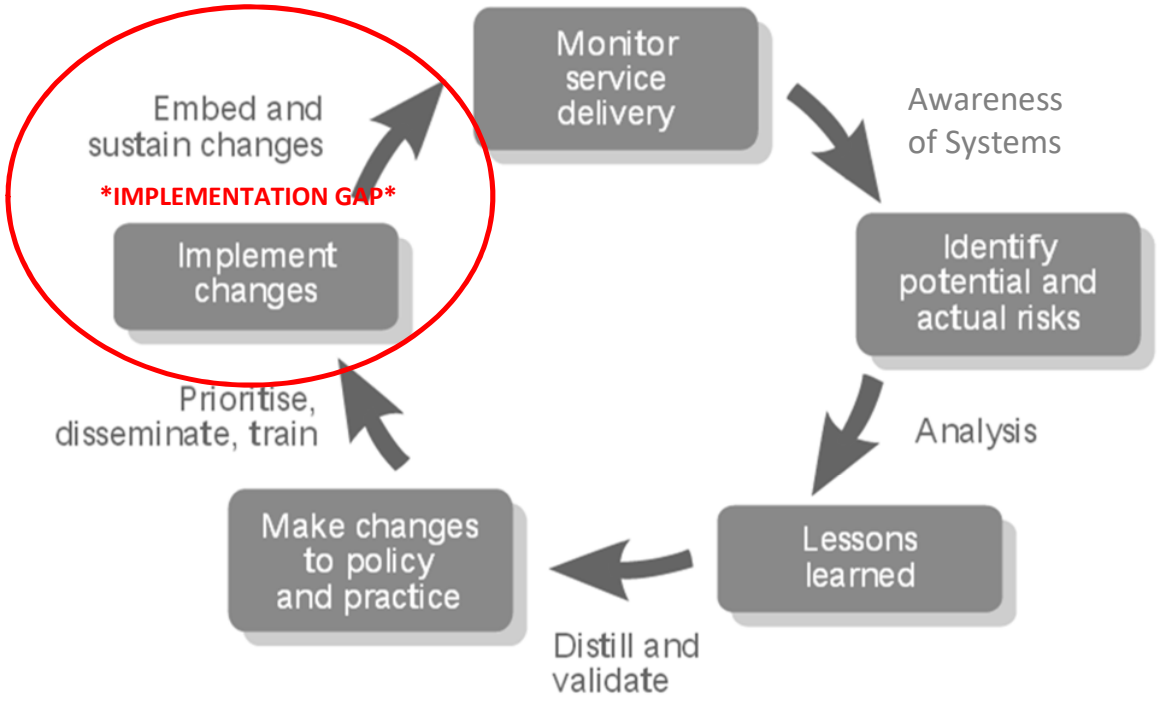

Figure 2. Updated Unlearning Model