Creating safety by strengthening clinicians' capacity for reflexivity

Rick Iedema

Correspondence to

Professor Rick Iedema,
Centre for Health
Communication, University
of Technology Sydney, PO
Box 123, NSW 2007, Sydney,
Australia;
r.iedema@uts.edu.au

Accepted 6 December 2010

ABSTRACT

This commentary explores the nature of creating safety in the here-and-now. Creating safety encompasses two dimensions: revisiting specific behaviours by focusing on substandard performance (reflection), and a more broad-ranging attention to everyday behaviours that are taken as given (reflexivity). The piece pays particular attention to this second dimension of creating safety. Two techniques that promote reflexivity are discussed: video-filming real-time, everyday clinical practice and inviting clinicians' feedback about their own footage, and reflecting on the knowledge and questions that patients and families have about their care, and about unexpected outcomes and clinical incidents. The piece concludes that feedback about everyday practice using these methods is critical to enhancing the safety of everyday activity.

INTRODUCTION

Across healthcare, standardisation helps 'tame' clinical complexity.¹ Standardisation is critical for ensuring that clinical-medical practice remains safe. This is particularly true for practices that are highly technical and potentially dangerous, such as central line insertion,² but standardisation also improves outcomes in areas such as clinical handover³ and discharge planning.⁴ Integrating standards and guidelines into everyday work is not straightforward, however. Practitioners need to adjust what they do,⁵ and this may involve 'bending the rules.'⁶ Resolving the tensions between standards and guidelines, on the one hand, and practical constraints, on the other, has been referred to as 'articulation work.'⁷ Since standardisation cannot cater for all possible circumstances and risks, and since contemporary healthcare is growing in complexity, articulation work takes on an increasingly important role in what clinicians do.

CREATING SAFETY

A critical aspect of articulation work, besides reconciling rules and practical constraints, is creating safety.⁸ Safety does not flow automatically from acting out a guideline or standard. Safety has to be worked at from moment to moment.⁹ This in situ creation of safety has been talked about in the literature in different ways: as 'error wisdom,'¹⁰ resilience⁶ and mindfulness.¹¹ Error wisdom manifests when clinicians respond quickly, flexibly and sensitively to problem situations, colleagues in trouble and patients susceptible to risk. For example, a senior clinician spots a junior clinician's worried expression as they attempt to intubate their patient. Resilience comes to the fore when frontline staff and patients adapt what they do to avert impending failures.¹² This is evident when senior clinicians adjust their own tasks enabling them to provide support to the junior clinician who is not coping.¹³ Mindfulness happens when clinicians and patients become able to think and act with one another and, at times, for one another. For example, the senior and junior clinician manage the intubation together, taking cues from the other and producing positive outcomes for them and for the patient¹⁴ (box 1).

CREATING SAFETY REQUIRES REFLECTION AND REFLEXIVITY

We understand the power of clinicians creating safety in situ, but we are less clear about where their capacity to create safety originates from. One way of beginning to clarify its origin is by distinguishing reflection from reflexivity. Reflection refers to the common practice of thinking back to an event and assessing it and our conduct in relation to it. Schön refers to this as

This paper is freely available online under the BMJ Journals unlocked scheme, see <http://qualitysafety.bmj.com/site/about/unlocked.xhtml>

Challenges of professional education

Box 1 Corridor exchange outside the procedures room

- To illustrate how teams mobilise these resources in situ to create safety, consider the following sequence recorded in a metropolitan hospital spinal unit. We see a senior clinician (Dr), a social worker (SW) and a nurse (N) displaying attentiveness to, and commenting on, each other's behaviours. They reduce the risk of cross-infection by the doctor advising the social worker, and the nurse advising the doctor. By being attentive to each other's behaviours, and by sharing their attentiveness, they reduce the risk of cross-infection.

The doctor observes the social worker entering the procedures room without protective gown or gloves.

Dr Do you want a gown, Don [Social Worker]?

Social worker comes back out of the procedures room. Doctor hands social worker a gown.

SW Oh thanks.

Doctor gets gown for himself.

Doctor and social worker gown up.

Doctor walks up corridor towards another procedures room while tying the apron around his front. He looks into another procedures room and walks out again.

Doctor walks back down the corridor, followed by a nurse.

N Um, Kim [Dr turns, nurse points at apron], don't tie it round the front.

Dr Uh, ok, sorry.

Doctor re-ties apron at the back.

- In this brief exchange, the doctor reminds the social worker that he needs a gown before entering the spinal patient's room, and then the nurse points out to the doctor that he needs to tie his gown at the back (to prevent the apron strings from coming into contact with patients and their (infected) wounds). This is an example of a team creating safety in situ. The power of this exchange resides in these clinicians' attentiveness being at once mutual, dynamic and freely shared.

'reflection-on-action.'¹⁵ Simulation offers an excellent means to encouraging reflection on, for example, how we practise intubation or resuscitation. Reflection is personal, focused and purposive. These qualities are important because they enable individuals to intervene in specific aspects of their own conduct.¹⁴

Reflexivity, in contrast, refers to our capacity to monitor and affect events, conducts and contexts in situ. To some degree, reflexivity resembles Schön's 'reflection-in-action',¹⁵ but unlike reflection, reflexivity is collaborative in nature, diffuse in focus, open-ended in purpose and immediate in effect. Reflexivity manifests as a sense in practitioners that there are situations or impending problems that are in need of addressing. It underpins their ability to devise on-the-spot corrections

and solutions. In short, reflexivity is a fully internalised and socially distributed monitoring and adjusting of the safety gradient of practice.

ENGENDERING REFLEXIVITY

We know that practice simulation stimulates reflection, but does it also engender reflexivity? In producing technical and targeted corrections, reflection tends to leave the remainder of our everyday habits untouched. Such corrections may entrain attentiveness to habits, but reflexivity is rarely the goal of reflection. The emergence of reflexivity depends on whether practitioners will put at risk not just specific aspects of their behaviour (as is achieved through reflection), but their personal

identity and, thereby, their social and organisational relationships.

While these are not our only possible options, consider two initiatives that have engendered reflexivity. The first is feedback using video footage of real-time practices to frontline clinicians. Practitioners' interest in this method derives from three things. First, video feedback reveals to them their own habits. Remember, habits are activities often enacted without conscious awareness. Video feedback engenders recognition of such habits, alerting practitioners to practices that they have come to regard as 'given' over time. Second, video feedback may reveal a degree of disconnection between practice and purpose. The footage shows practitioners that what they do and say does not always serve what they try to achieve. Third, in becoming aware of these matters, practitioners gain the capacity to intervene in their habits. Viewing footage of real-time practice is therefore enabling: it short-circuits practitioners' thinking, their in situ conduct and practical problems. It links what they do in real time, how they do it, who does it, how well or badly all this matches espoused goals, and what can and needs to be done to improve what is done (box 2).

The second initiative to engender reflexive capacity in practitioners is sharing with them patient stories about care. These stories can lead to immediate and practical outcomes by informing clinicians' deliberations about how services or service spaces can be improved and redesigned. This process has been referred to as 'experience-based design'²⁴ and more recently as 'co-design.'²⁵

Box 2 Video-based feedback

Video feedback is now a common training tool in healthcare. However, its purpose is often to encourage reflection on selected aspects of care practice.¹⁶ The video-feedback method referred to as 'video-reflexive ethnography' invites input from, and gives considerable control and direction to, practitioners. This becomes a source of trust for clinicians; it may explain their interest in being involved and the considerable impact that such video feedback has on practice. For example, a project that tracked and recorded the introduction of new test-ordering IT enabled participants to understand their situation and alert outsiders to the problems created by the new system.^{17 18} Another project visualised the interactions in and among high-performance teams, and it became a means for team members to anticipate roadblocks and pro-actively address them.^{19 20} Yet other projects focused on clinical handover, enabling frontline clinicians to appreciate the risks and change opportunities present in existing ways of communicating.^{21 22} These projects confirmed that practitioners who decided to engage in video feedback were able and keen to cross over from personal reflection and technical adjustment into practice-wide, team-based and safety-conscious reflexivity.²³

Box 3 Redesigning practice using patients' stories

Patients' stories are powerful because they offer the listener two opportunities for identification: identification with the story-teller, and identification with the characters and events in their story. This identification creates emotional impact. Stories about unexpected outcomes, in particular, may reveal for clinicians their own assumptions about practices, standards and outcomes, and the divergence between these and those of their patients.²⁶ Patients' accounts provide a unique learning tool because patients (and to a lesser extent relatives) are the eye-witnesses of care. Their lack of medical expertise and uncertainty about hospital processes notwithstanding, patients may know much about the moment-to-moment unfolding of processes, care trajectories, errors and failures. The knowledge they bring concerns not just their own vulnerabilities and reactions to care. Their knowledge also covers the complexities of care,²⁷ including clinicians' moods, stresses and struggles, and their hospital's organisational, planning and resource shortcomings.

Mirroring the growing involvement of users in commercial product and service design, co-design combines meeting public demands and expectations, improving service—consumer relationships and educating the public about what is (and what is not) feasible for a service or product to deliver. More confronting for this purpose are patients' and relatives' accounts about unexpected outcomes and clinical incidents (box 3).

Patients' stories have a similar impact on clinicians' awareness, as does video footage of in situ practice. Both represent clinical work without privileging the practitioner's perspective. Both portray what clinicians do as it is experienced and seen by others, and that is what lends them their power.

CONCLUSION

Videos of in situ practice and patients' accounts shine a very different light on clinicians' practices compared with scientific evidence and statistical information.²⁸ They frame care from the perspective of everyday experience. They position the clinician and the team alongside other participants in the processes of care. This enables practitioners to call their habits into question in a way that impacts on who they are and how they relate. This also is what distinguishes these methods in their aim to improve safety and engage clinicians in health reform.

Funding The research reported on here was made possible thanks to grants awarded by the Australian Research Council and the Australian Commission on Safety and Quality in Health Care.

Competing interests None.

Patient consent Obtained.

Ethics approval Ethics approval was provided by the University of Technology Sydney, University of NSW, as well as all relevant health service Human Research Ethics Committees.

Provenance and peer review Not commissioned; externally peer reviewed.

REFERENCES

1. Woods DD, Patterson ES, Cook RI. Behind human error: taming complexity to improve patient safety. In: Carayon P, ed. *Handbook of Human Factors and Ergonomics in Health Care and Patient Safety*. Mahwah, NJ: Lawrence Erlbaum Associates, 2007:459–76.
2. Pronovost P, Needham D, Berenholtz S, et al. An intervention to decrease catheter-related bloodstream infections in the ICU. *N Engl J Med* 2006;355:2725–32.
3. Australian Commission on Safety and Quality in Health Care. *The OSSIE Guide to Clinical Handover Improvement*. Sydney: Australian Commission on Safety and Quality in Health Care, 2009.
4. Shepperd S, McClaran J, Phillips C, et al. Discharge planning from hospital to home. *Cochrane Database Syst Rev* 2010;(1):CD000313. doi:10.1002/14651858.CD000313.pub3.
5. Bosk CL, Dixon-Woods M, Goeschel C, et al. The art of medicine: reality check for checklists. *Lancet* 2009;374:444–5.
6. Hollnagel E. Resilience: the challenge of the unstable. In: Hollnagel E, Woods DD, Leveson N, eds. *Resilience Engineering: Concepts and Precepts*. Aldershot: Ashgate Publishing Ltd, 2006:9–18.
7. Suchman LA. *Plans and Situated Actions: The Problem of Human–Machine Communication*. Cambridge: Cambridge University Press, 1987.
8. Vincent CA. *Patient Safety*. 2nd edn. Oxford: Wiley-Blackwell, 2010.
9. Gherardi S, Nicolini D. Learning the trade: a culture of safety in practice. *Organization* 2002;9:191–223.
10. Reason J. Beyond the organizational accident: the need for 'error wisdom' on the frontline. *J Qual Safety Health Care* 2004;13:28–33.
11. Weick K. Reduction of medical errors through mindful interdependence. In: Sutcliffe K, Rosenthal M, eds. *Medical Error*. San Francisco: Jossey-Bass, 2004:177–99.
12. Wears RL, Perry SJ, Anders S, et al. Resilience in the emergency department. In: Hollnagel E, Nemeth CP, Dekker SWA, eds. *Remaining Sensitive to the Possibility of Failure*. Aldershot: Ashgate, 2008:193–210.
13. Turnbull E, Flabouris A, Iedema R. An outsider's perspective of the lifeworld of ICU. *Aust Crit Care* 2005;18:71–5.
14. Klein G. *Sources of Power: How People Make Decisions*. Cambridge, MA: MIT Press, 1999.
15. Schön D. *The Reflective Practitioner: How Professionals Think in Action*. New York: Basic Books, 1983.
16. Mackenzie CF, Xiao Y. Video techniques and data compared with observation in emergency trauma care. *J Qual Saf Health Care* 2003;12(Suppl II):ii51–7.
17. Forsyth R. *Tricky Technology, Troubled Tribes: A Video Ethnographic Study of the Impact of Information Technology on Health Care Professionals' Practices and Relationships* (unpublished PhD thesis). Sydney: The University of NSW, 2006.
18. Iedema R, Forsyth R, Georgiou A, et al. Video-research in health: visualizing the effects of computerizing clinical care. *Qual Res J* 2007;6:15–30.
19. Carroll K. *Unpredictable Predictables: Complexity Theory and the Construction of Order In Intensive Care* (unpublished PhD Thesis). Centre for Health Communication, University of Technology Sydney, Sydney, 2009.
20. Iedema R, Long D, Forsyth R, et al. Visualizing clinical work: video ethnography in the contemporary hospital. *Health Sociol Rev* 2006;15:156–68.
21. Iedema R, Merrick E, Kerridge R, et al. 'Handover—Enabling Learning in Communication for Safety' (HELiCS): a report on achievements at two hospital sites. *Med J Aust* 2009;190:S133–6.
22. Iedema R, Merrick E, Rajbhandari D, et al. Viewing the taken-for-granted from under a different aspect: a video-based method in pursuit of patient safety. *Int J Mult Res Approach* 2009;3:290–301.
23. Iedema R, Rhodes C. An ethics of mutual care in organizational surveillance. *Organ Stud* 2010;31:199–217.
24. Bate P, Robert G. *Bringing User Experience to Healthcare Improvement: The Concepts, Methods and Practices of Experience-Based Design*. Oxford: Radcliffe Publishing, 2007.
25. Iedema R, Merrick E, Piper D, et al. Co-design as discursive practice in emergency health services: the architecture of deliberation. *J Appl Behav Sci* 2010;46:73–91.
26. Iedema R, Sorensen R, Manias E, et al. Patients' and family members' experiences of open disclosure following adverse events. *Int J Qual Health Care* 2008;20:421–32.
27. Iedema R, Allen S, Britton K, et al. *Final Report: The '100 Patient Stories' Project including Indicators of Effective Open Disclosure and Open Disclosure Fundamentals*. Sydney: UTS Centre for Health Communication & Australian Commission for Safety and Quality in Health Care, 2010.
28. Iedema R, Braithwaite J, Sorensen R. The reification of numbers: statistics and the distance between self, work and others. *BMJ* 2003;326:771.