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Improvement attributes in healthcare: implications for integrated care

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Abstract

Purpose – Healthcare quality improvement is a key concern for policy makers, regulators, carers and service users. Despite a contemporary consensus among policy makers that integrated care represents a means to substantially improve service outcomes, progress has been slow. Difficulties achieving sustained improvement at scale imply that methods employed are not sufficient and that healthcare improvement attributes may be different when compared to prior reference domains. The purpose of this paper is to examine and synthesise key improvement attributes relevant to a complex healthcare change process, specifically integrated care.

Design/methodology/approach – This study is based on an integrative literature review on systemic improvement in healthcare.

Findings – A central theme emerging from the literature review indicates that implementing systemic change needs to address the relationship between vision, methods and participant social dynamics.

Practical implications – Accommodating personal and professional network dynamics is required for systemic improvement, especially among high autonomy individuals. This reinforces the need to recognise the change process as taking place in a complex adaptive system where personal/professional purpose/meaning is central to the process.

Originality/value – Shared personal/professional narratives are insufficiently recognised as a powerful change force, under-represented in linear and rational empirical improvement approaches.

Keywords Integrated care, Improvement models

Paper type Literature review

Introduction and context

Healthcare quality remains a persistent concern for policy makers, regulators and carers and is particularly important for vulnerable cohorts (Silvester *et al.*, 2014). Quality is typically defined across three domains: individual care experience, cost and population health (Stiefel and Nolan, 2012), and has been explored from several perspectives including patient experience and outcomes (Øvretveit, 2011), continuous performance improvement (Margolis *et al.*, 2010; Alexander *et al.*, 2006) and culturally (Parry, 2014; Batalden and Davidoff, 2007). Placing quality in a broader sociological perspective, Shojania and Dixon-Woods (2013) suggest that healthcare quality is an emergent healthcare property, amplified by Miller and Miller (1991) and D'Souza and Sequeira (2011) who concur that adverse events result from system failures rather than rogue individuals. To address healthcare quality systemically, reference is made to high-reliability organisations whereby safety cultures result from collective mindfulness (Chassin and Loeb 2013; Buchanan, 2003). Consequently, attention is paid to the healthcare organisation, typically focused on leadership and process (Anderson *et al.*, 2011; D'Souza and Sequeira, 2011; Benson, 2005; Shojania and Dixon-Woods, 2013; Parry, 2014), accreditation (Serrano, 2010), culture (Christiansen *et al.*, 2010; Holden, 2005) and regulation (Chassin, 2013; Chuang and Inder, 2009). In Ireland, as elsewhere, healthcare experience is under scrutiny (Table I) with multi-morbidity and healthcare consumption increasing as the population ages (Nolte, 2015) (Figure 1).

Access to urgent care, a recognised quality barometer, typically indicates systemic problems (WHO 2010, p. 6), e.g., prolonged waits for patients over 75 years has significant

clinical implications such as poorer outcomes (Sprivulis *et al.*, 2006; Richardson and Mountain, 2009; Imison *et al.*, 2012; Clegg *et al.*, 2013). Internationally, systemic solutions to access problems include integrating care for older people (Wodchis *et al.*, 2015; Naylor *et al.*, 2015; Goodwin, 2013). Ireland's Integrated Care Programme for Older Persons was established, which aimed to implement interventions that enable older persons to access planned, timely care (Health Service Executive, 2015, p. 13). Within this programme's design, it was recognised that systemic improvement is challenging and complex. The author therefore conducted an integrative literature review, focused on the attributes required for systemic implementation, which in turn informs the approach to programme implementation.

## Literature search strategy and screening criteria

Publications on improvement attributes were located using: Leadership AND Culture AND Quality Improvement AND Healthcare. Inclusion criteria were: English language; peer reviewed; systemic in nature and published between 2000 and 2015. A specific, secondary search (including grey literature) included prominent healthcare quality improvement, leadership or culture authors. Articles with the term "transformation" when used in systematic improvement were included, as attributes are similar. The PRISMA approach (Moher *et al.*, 2009) was used to select and funnel relevant articles. Sociological and business journal databases were also included where relevant: Academic Search Complete; Allied and Complementary Medicine Database; Biomedical Reference Collection, Expanded; Business Abstracts with Full Text (H.W. Wilson); CINAHL Plus with Full Text; MEDLINE; PsycARTICLES; and PsycINFOCINAHL. The initial search yielded 32,860 articles, refined to 8,727 for screening. Consequently, 287 abstracts were reviewed in detail.

Age group	Actual population 2011 and projected population to 2031 (,000s) Ireland by older age groups and all ages					
	2011	2016	2021	2026	2032	% change 2011-2031
65 and over	532	624	732	855	991	*86.4*
85 and over	58	70	85	104	136	*132.8*
All ages	4,575	4,687	4,875	5,042	5,187	13.4
Source: Central Statistics Office (Ireland), population projections (2011-2031)						

Table I.
Percentage increase
in older aged cohort
(2011-2031)
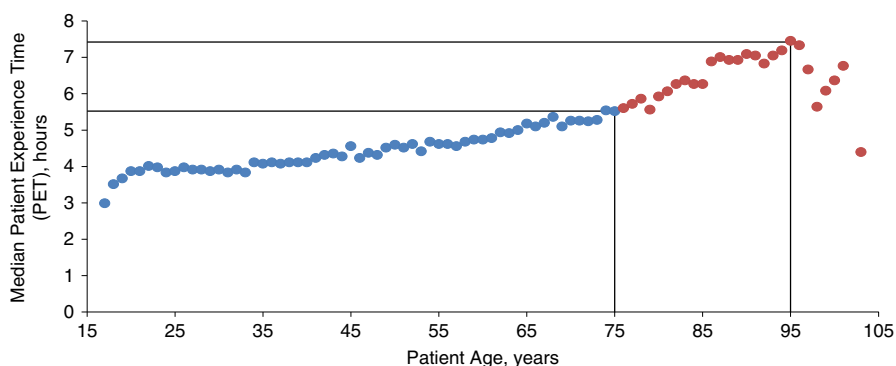
Source: SDU (2014)

Figure 1.
Waiting times for bed
increases with age,
all hospitals 2014

Articles published prior to 2000 were excluded. Articles too narrow in focus (e.g. a single disease or a specific professional concern) or the core focus was not leadership, culture and quality improvement were excluded. The search yielded 42 useable articles, i.e., selected for their focus on systemic change and/or where leadership, culture and quality improvement are an explicit theoretical focus. The annotated bibliography is available on request from author (Figure 2).

Findings

Five broad domains emerged from the review (Figure 3), which fell into the following domains: process, organisational, cultural, leadership and personal/professional. Whilst articles selected included at least one domain, 50 per cent ($n = 21$) combined three domains, with a relatively even distribution across four domains. One in five articles (21 per cent, $n = 9$) covered either four or five domains but only 5 per cent ($n = 2$) addressed all five domains.

Process domain

This domain is typically focused on checklists, protocols and standardisation. Whilst Ferlie and Shortell (2001) felt that a process checklist could not have the full attributes necessary to capture improvement dynamics, some authors, such as Luxford *et al.* (2011), advocated accountability, leadership and patient/family engagement. Others, such as Haines *et al.* (2004), Heenan *et al.* (2012) and Harrison and Daly (2009), emphasised data and technology, suggesting
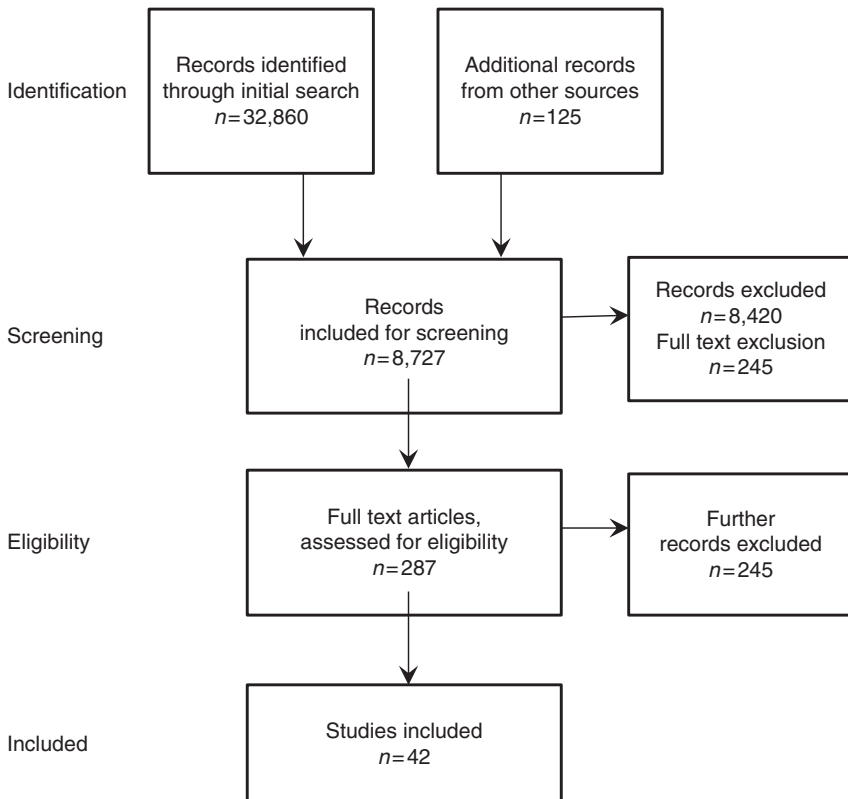
Figure 2.
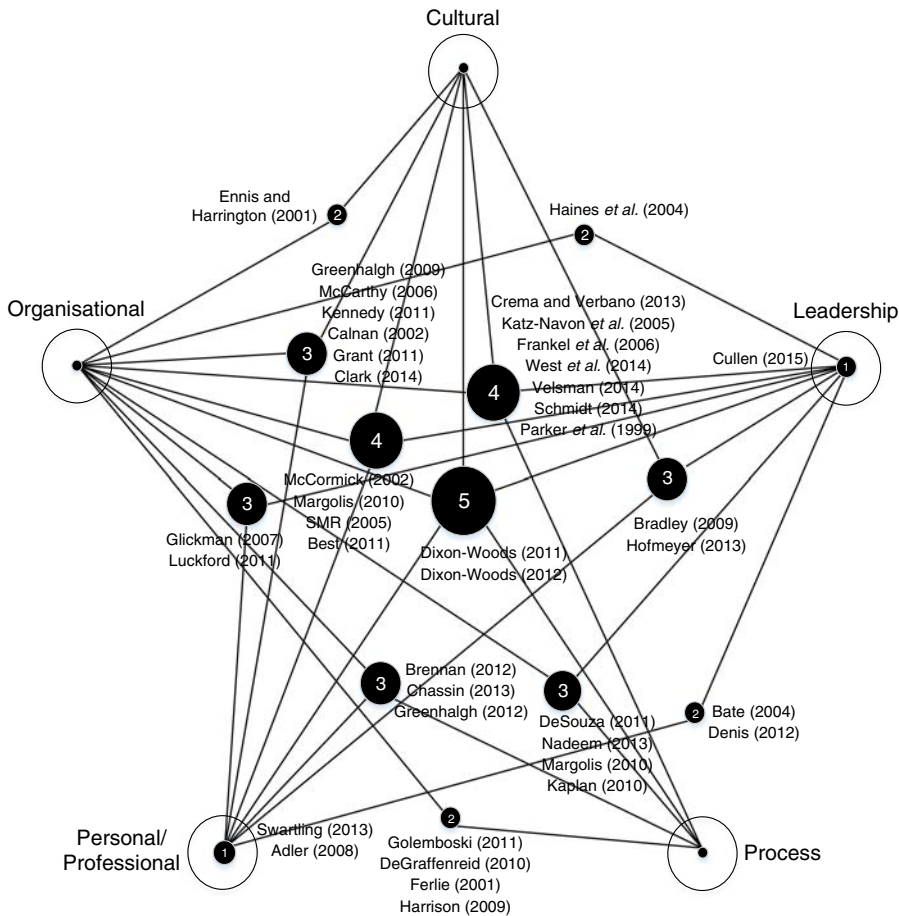The PRISMA-style systematic literature review process

Figure 3.
Domain prevalence in the literature

a strong correlation between technology-enabled knowledge management and improvement. Kennedy *et al.* (2011) suggested that data utilisation strengthens accountability, thus promoting certain values and behaviour. However, Myers and Shannon (2012) indicated that business intelligence is insufficient when organisational culture does not support improvement. Golemboski (2011) and Brandrud *et al.* (2011) concluded that improvement is based on reliable information, used by staff that possess improvement knowledge. In summarising process attributes, Brennan *et al.* (2012) developed a conceptual framework, which included readiness for change, organisational culture, quality improvement implementation, organisational assessment and organisational learning. This approach was reinforced by Best *et al.* (2012) who concluded that five simple (improvement) rules are necessary: blending designated leadership with distributed leadership; establish feedback loops; attending to organisational history; engaging physicians; and including patients and families in the process.

Personal/professional domain
This domain reflects attributes such as values, meaning, autonomy and purpose. Addressing clinician perspectives, Adler *et al.* (2008) described the tension between (professional) autonomy and organisational priorities. Corrigan and McNeill (2009) posited

that professional loyalty is placed before organisational improvement, proposing professional autonomy draws on loyalty to patients and the profession as a first principle. Adler *et al.* (2008) observed that professional networks rely on collegial structure to mobilise power and maintain governance over the profession rather than organisational structures. Grant (2011), Dixon-Woods *et al.* (2014) and Ibrahim *et al.* (2013) suggested that junior doctors, wishing to preserve a distinct identity separate from organisational requirements, are largely shaped by compliance with superiors. Callanan *et al.* (2002) and Poddar (2013) appealed to clinical leaders to bridge the management and clinician divide. These studies, resonant with Ham (2003, 2008), explored healthcare leadership context and highlighted the need to engage clinicians in organisational change, thus avoiding the dominant clinician vs management paradigm. Callanan *et al.* (2002) highlighted how hidden incentives (financial or otherwise) militated against improvement and recommended initiatives that span professional and managerial boundaries. Clinical governance, fuelled by consumer awareness and self-regulation failures (Flynn, 2002), provided an opportunity to address a perceived deficit in professional accountability. However, whilst a focus on clinical performance signalled a shift in relationship between managers and clinicians, Dixon-Woods *et al.* (2014) revealed how performance targets result in false comfort from quantitative metrics. In contrast, Clark *et al.* (2013) and Swartling and Poksinska (2013) suggested that meaningfully engaging employees enhances personal motivation, which is more effective than enforcing improvement through regulation. In that regard, successful leaders value employee input and placed decision making in their hands, thus creating cultures that deliver sustained, high-quality services.

Organisational domain
In this domain attributes typically focus on data, information technology, organisational structures and governance. Katz-Navon *et al.* (2005), Kvist *et al.* (2013), Psychogios *et al.* (2009) and Lemieux-Charles *et al.* (2002) focused on how leadership can impact positively on organisational improvement. Frykman *et al.* (2014) and Øvretveit (2011) indicated that improvement is typically based on common sense (or intuition or empiricism). Hofmeyer (2013) proposed that research has yet to identify the specific mechanisms by which leadership behaviour can have a positive influence, citing building social capital by enhancing trust and open communication. This resonates with Greenhalgh *et al.* (2009) who emphasised the relationships characterised by trust and flexibility, combined with incentives that reward performance. Glickman *et al.* (2007) described key attributes, including: design; incentives; and information management. McCarthy and Blumenthal (2006) and Lynn (2011) advocated transparent data, learning collaboratives and listening to patient voices combined with regulation, reward and experience-based wisdom. Bradley *et al.* (2009) and Pascale *et al.* (2010) assumed that improvement competencies already exist in organisations and can be mobilised in the right conditions. Øvretveit (2011), Leviton (2011), Booth *et al.* (2013) and Nadeem *et al.* (2013) suggested that research into what works is hampered by system complexity and contextual difference. Consequently, health systems are increasingly recognised as complex adaptive systems (Benson, 2005; Weberg, 2012). Holden (2005) defined complexity and adaptivity using individuals who collectively share an environment, who may act independently but whose actions will co-impact. Complexity theory suggests that the key to understanding systems is through recognising patterns and interactions among system agents and that these relationships are not easily influenced by external forces. San Martín-Rodríguez *et al.* (2005) classified these as interactional factors (interpersonal relationships between team members), organisational factors (conditions within the organisation) and systemic factors (conditions outside the organisation). Consequently, any attempt to improve should benefit from incorporating an organisational narrative that draws on these interactions.

Leadership domain
In this domain attributes typically focus on vision, style and philosophy. Leadership's influence on improving healthcare is ubiquitous and has received considerable attention (Young, 2000; DaCosta, 2012; Denis *et al.*, 2012; Erskine *et al.*, 2013; Latham, 2013). LeBrasseur *et al.* (2002), Kvist *et al.* (2013) and Frankel *et al.* (2006) proposed that leaders drive values, values drive behaviours and behaviours drive performance. Style is important; Bohan and Laing (2012) advocated honest, inclusive, supportive styles. West *et al.* (2014) and West (2014) outlined how leader-staff engagement results in improved job satisfaction, improved organisational commitment, reduced staff turnover and improved employee well-being. Complexity leadership is gaining traction in healthcare (Denis *et al.*, 2012; Weberg, 2012), which advocates a shift from traditional, hierarchical leadership to complexity leadership involving shared, distributed and collective leadership. West *et al.* (2014) focused on collective leadership, which seeks to empower staff to take responsibility for high-quality care. West (2014) proposed that collective leadership, combined with dynamic learning culture, shapes behaviour more effectively, consistently and profoundly than explicit targets or regulation. In this characterisation, collective leadership includes: strong strategic narrative; attending to trust and fairness; having compassion for staff; and delegating responsibility. Erskine *et al.* (2013) and Veronesi and Keasey (2011) expressed concerns that failure to understand complexity, coupled with a failure to distribute leadership tasks to all levels, will damage managerial-clinical relations and undermine sustainable improvements. Consequently, complexity leadership recognises leadership as a social process where knowledge trumps position and where interactions among people in complex systems produce valuable, new and unpredictable capabilities that cannot be realised when the parts act alone.

Cultural domain
In this domain attributes address beliefs, stories and group norms. Kaplan *et al.* (2010) and Edwards *et al.* (2014) reflected on the dynamics within professional networks, which are characterised by multiple interwoven strands, which Crema and Verbano (2013) attempted to untangle by listing key attributes: organisation and communication; process management; error management; and customer/patient management. Spiers *et al.* (2010), Lee *et al.* (2010) and Schaffer *et al.* (2013) explained that the psychological contract with managers depends on rewards and respect for the values central to professional identity. McCormack *et al.* (2002) and Christiansen *et al.* (2010) recommend a learning culture, which pays attention to individual and group needs. From an anthropological perspective, Veldsman (2013), Bate (2004) and Buchanan (2003) explored how organisational narratives shape culture and how group solidarity is built on the personal stories, unifying the narrative that emerges from sharing stories over time. Stories are therefore presented as a medium through which multiple professional identities coalesce under a common social vision and, if skilfully harnessed, can drive improvement that acquires a cultural identity, which is included in the organisational DNA.

Discussion
Implementing conventional improvement science methods, such as Lean Six Sigma, is often presented as scientifically rational, with a linear, reductionist epistemology and process (De Graffenried-Ruffin, 2000; Clark *et al.*, 2013; Fursule *et al.*, 2012; Feng and Manueal, 2007). The argument for adopting this approach from its original domains is compelling when one draws parallels with reliable industries, including harnessing technology and data to improve healthcare through task analysis, standardised processes and best practices. Scoville and Little (2014), for example, suggested that value stream mapping and process redesign remain central to improvement methods; they also

acknowledge complexity and social network theories, and motivation roles, and the need for enhanced improvement frameworks.

Greenhalgh *et al.* (2009, 2012) and Øvretveit *et al.* (2011) found few empirical systemic improvement healthcare studies, which allow generalisation. Whilst Wang *et al.* (2006) provided useful insights into aligning organisational factors, along with significant literature on discrete concepts that can theoretically contribute to improvement, there is limited literature on effectively combining attributes that deliver systemic change. The difficulty in simultaneously addressing leadership attributes, cultural characteristics, organisational structures, personal-professional issues and processes is a reflection on healthcare complexity and associated difficulty in achieving improvement. Dominant organisational and process foci (governance, information technology and data) that tend to address more concrete issues appear reassuring but are insufficient. Øvretveit *et al.* (2011), for example, made a compelling case for understanding improvement conditions, depending on the change. In that regard, Langley and Denis (2011) drew attention to the social and micro-political dimensions that improve healthcare. They suggested that initiatives will fail unless they account for interests, values and power relationships. This is essentially based on a social constructivist perspective, whereby reality is shaped by shared social (professional) narratives. Dixon-Woods *et al.* (2011) addressed this comprehensively by combining things that must be done (e.g. evidence-based pathways), whilst cultivating a grass roots professional social movement that endorses the new approach. Only two articles (Dixon-Woods *et al.*, 2011, 2012) addressed all five domains which, when deployed collectively, comprise a substantially complete healthcare improvement framework. The Dixon-Woods *et al.* (2011) recommendations have a rational, empirical bias, the other recommendations point to issues such as purpose, motivation, meaning, belonging and identity.

Rouse (2008) and Meyer (2008) advocated behaving more like a farmer than an engineer in cultivating healthcare improvement. This approach advocates building a trusted network, whose connections build commitment to a common purpose, which is different from a standards-driven approach that seeks to engage professional social networks through personal meaning and purpose.

Conclusion

A central theme emerging from the review is that implementing systemic change as a rational, linear, planned process does not sufficiently accommodate organisational dynamics. The attributes within the five domains identified in the literature review are consistent with Deming's (1990, 1993) original thesis on improvement attributes and his direct healthcare experience. It seems that a focus on hard improvement attributes (governance, data, standards, processes) has neglected soft but essential attributes outlined by Deming; these attributes typically exist within the cultural and professional domain and include values, belonging, purpose, motivation and autonomy. It appears that healthcare leaders failed to recognise complexity as a context, or they have not cultivated a culture that promotes purpose and meaning through collective leadership. The literature points to recognising healthcare improvement as taking place in a complex adaptive system as a first principle (Holden, 2005; Weberg, 2012; Benson, 2005). The author summarises attributes specific to healthcare improvement, identified in the literature (Figure 4). The recommendations arising from this review are intended to inform systemic change, in this case implementing an integrated care programme for older people, including building a social network between personnel involved, gathering key integration indicators and refining the approach to accommodate local conditions. The process will be evaluated after three years; a key component will focus on the impact and importance of personal motivation, meaning and purpose, operating within and influenced by trusted personal/professional networks.
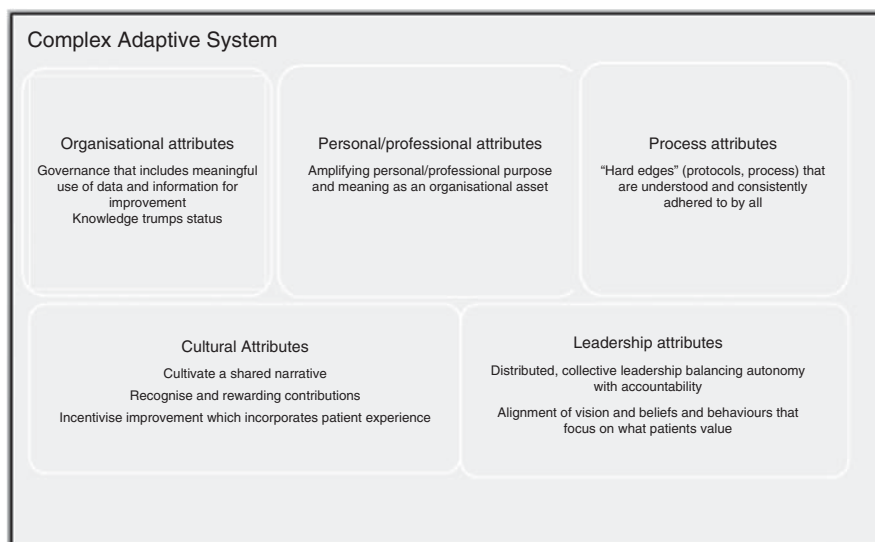
Figure 4.
Healthcare
improvement attribute
ecosystem

Recommendations

A key insight in the integrated care literature is the need to reframe the improvement
approach as a social problem, to be addressed through a professional grassroots
movement, thus, framing improvement as a sociological exercise. This is a key
differentiation from more linear improvement approaches. There is a need to recognise
the social dynamics associated with autonomous professional networks and to ensure that
any improvement approach is sympathetic to the culture and values that underpin this
network. Improvement approaches to systemic change also need to accommodate the
hidden dynamic within personal/professional networks, whereby shared narratives on
one's personal/professional purpose and meaning are powerful, hidden forces, which
improvement science needs to incorporate. Whilst good leadership is intuitively an
essential requirement for improvement, Øvretveit (2008), West *et al.* (2014), West (2014)
and Denis *et al.* (2012) propose that collective leadership has to be embraced as the
preferred approach to reflect healthcare's complexity. This means recognising that
expertise, not status, determines leadership roles in each improvement effort.
Finally, technology, structure, process and data are essential but not sufficient
for systemic improvement. The things that are necessary, referred to by Dixon-Woods
et al. (2011) as hard edges, such as agreed care pathways, must be built on
common purpose and meaning, which capitalises on trusted personal/professional
networks. This will require cultivation, particularly where tensions between managerial
and clinical roles exist.

Limitations

Complexity theory and integrated care have been introduced, but the opportunity to
provide a more complete exploration is limited not simply by the word count but by the
review's focus. The author recognises that systemic healthcare improvement is affected
by several disciplines including sociology, psychology and anthropology. A significant
challenge is to synthesise the systemic improvement literature and not omit key
commentators. The author sought to include key sources in the field and the search
strategy may have limited the results.

References

Adler, P.S., Kwon, S.W. and Heckscher, C. (2008), "Professional work: the emergence of collaborative community", *Organization Science*, Vol. 19 No. 2, pp. 359-376.

Alexander, J., Weiner, B., Shortell, S., Baker, L. and Becker, M. (2006), "The role of organizational infrastructure in implementation of hospitals' quality improvement", *Hospital Topics*, Vol. 84 No. 1, pp. 11-20.

Anderson, R., Crabtree, B., Steel, D. and McDaniel, R. (2011), "Case study research: the view from complexity science", *Qualitative Health Research*, Vol. 15 No. 5, pp. 669-685.

Batalden, P. and Davidoff, F. (2007), "What is 'quality improvement' and how can it transform healthcare?", *BMJ Quality and Safety*, Vol. 16 No. 1, pp. 1-2.

Bate, P. (2004), "The role of stories and storytelling in organizational change efforts: the anthropology of an intervention within a UK hospital", *Intervention Research*, Vol. 1 No. 1, pp. 27-42.

Benson, H. (2005), "Chaos and complexity: applications for healthcare quality and patient safety", *Journal of Healthcare Quality*, Vol. 27 No. 5, pp. 4-10.

Best, A., Greenhalgh, T., Lewis, S., Saul, J.E., Carroll, S. and Bitz, J. (2012), "Large-system transformation in health care: a realist review", *Milbank Quarterly*, Vol. 90 No. 3, pp. 421-456.

Bohan, P. and Laing, M. (2012), "Can leadership behaviour affect quality and safety?", *British Journal of Healthcare Management*, Vol. 18 No. 4, pp. 184-190.

Booth, B.J., Zwar, N. and Harris, M.F. (2013), "Healthcare improvement as planned system change or complex responsive processes? A longitudinal case study in general practice", *BMC Family Practice*, Vol. 14 No. 1, pp. 51-62.

Bradley, E.H., Curry, L.A., Ramanadhan, S., Rowe, L., Nembhard, I.M. and Krumholz, H.M. (2009), "Research in action: using positive deviance to improve quality of health care", *Implementation Science*, Vol. 4 No. 2, pp. 1-11.

Brandrud, A., Schreiner, A., Hjortdahl, P., Helljesen, G., Nyen, B. and Nelson, E. (2011), "Three success factors for continual improvement in healthcare: an analysis of the reports of improvement team members", *BMJ Quality and Safety*, Vol. 20 No. 3, pp. 251-259.

Brennan, S.E., Bosch, M., Buchan, H. and Green, S.E. (2012), "Measuring organizational and individual factors thought to influence the success of quality improvement in primary care: a systematic review of instruments", *Implementation Science*, Vol. 7 No. 1, pp. 1-19.

Buchanan, D.A. (2003), "Getting the story straight: illusions and delusions in the organizational change process", *Tamara Journal of Critical Organisation Inquiry*, Vol. 2 No. 4, pp. 7-21.

Callanan, I., McDermott, R. and Buttimer, A. (2002), "Involving Irish clinicians in hospital management roles, barriers to successful integration", *Clinician in Management*, Vol. 11 No. 1, pp. 37-46.

Chassin, M.R. (2013), "Improving the quality of healthcare: where law, accreditation and professionalism collide", *Health Matrix*, Vol. 23 No. 2, pp. 395-407.

Chassin, M.R. and Loeb, J.M. (2013), "High-reliability health care: getting there from here", *Milbank Quarterly*, Vol. 91 No. 3, pp. 459-490.

Christiansen, A., Robson, L. and Griffith-Evans, C. (2010), "Creating an improvement culture for enhanced patient safety: service improvement learning in pre-registration education", *Journal of Nursing Management*, Vol. 18 No. 7, pp. 782-788.

Chuang, S. and Inder, K. (2009), "An effectiveness analysis of healthcare systems using a systems theoretic approach", *BMC Health Services Research*, Vol. 9, pp. 195-205.

Clark, D.M., Silvester, K. and Knowles, S. (2013), "Lean management systems: creating a culture of continuous quality improvement", *Journal of Clinical Pathology*, Vol. 66 No. 8, pp. 638-643.

Clegg, A., Young, J., Iliffe, S., Rikkert, M. and Rockwood, K. (2013), "Frailty in elderly people", *Lancet*, Vol. 381 No. 9868, pp. 752-762.

Corrigan, J. and McNeill, D. (2009), "Building organizational capacity: a cornerstone of health system reform", *Health Affairs*, Vol. 28 No. 2, pp. 205-215.

Crema, M. and Verbano, C. (2013), "Guidelines for overcoming hospital managerial challenges: a systematic literature review", *Journal of Therapeutics and Clinical Risk Management*, Vol. 9, pp. 427-441.

D'Souza, S.C. and Sequeira, A.H. (2011), "Information systems and quality management in healthcare organization: an empirical study", *Journal of Technology Management for Growing Economies*, Vol. 2 No. 1, pp. 47-60.

DaCosta, J. (2012), "Leadership models for healthcare improvement", *British Journal of Healthcare Management*, Vol. 18 No. 11, pp. 575-580.

De Graffenried Ruffin, M. Jr (2000), "Building a framework to transform health care", *Physician Executive*, Vol. 26 No. 1, pp. 46-51.

Deming, W.E. (1990), "Some notes on management in a hospital", *Journal for the Society for Health Systems*, Vol. 2 No. 1, pp. 74-77.

Deming, W.E. (1993), *The New Economics for Industry, Government, Education*, 2nd ed., MIT Press.

Denis, J.-L., Langley, A. and Sergi, V. (2012), "Leadership in the plural", *Academic. Management Annals*, Vol. 6 No. 1, pp. 211-283.

Dixon-Woods, M., McNicol, S. and Martin, G. (2012), "Ten challenges in improving quality in healthcare: lessons from the health foundation's programme evaluations and relevant literature", *BMJ Quality and Safety*, Vol. 21 No. 10, pp. 876-884.

Dixon-Woods, M., Bosk, C.L., Aveling, E.L., Goeschel, C.A. and Pronovost, P.J. (2011), "Explaining Michigan: developing an ex post theory of a quality improvement program", *Milbank Quarterly*, Vol. 89 No. 2, pp. 167-205.

Dixon-Woods, M., Baker, R., Charles, K., Dawson, J.F., Jerzembek, G., Martin, G., McCarthy, I., McKee, L., Minion, J., Ozieranski, P., Willars, J., Wilkie, P. and West, M. (2014), "Culture and behaviour in the English national health service: overview of lessons from a large multi-method study", *BMJ Quality and Safety*, Vol. 23 No. 2, pp. 106-115.

Edwards, M., Penlington, C., Kalidasan, V. and Kelly, T. (2014), "Culture change, leadership and the grass-roots workforce", *Clinical Medicine*, Vol. 14 No. 4, pp. 342-344.

Erskine, J., Hunter, D., Small, A., Hicks, C., McGovern, T., Lugsden, E., Whitty, P., Steen, N. and Eccles, P.M. (2013), "Leadership and transformational change in healthcare organisations: a qualitative analysis of the North-East transformation system", *Health Services Management Research*, Vol. 26 No. 1, pp. 29-37.

Feng, Q. and Manueal, C.M. (2007), "Under the knife; a national survey of Six Sigma programmes in US healthcare organizations", *International Journal of Health Care Quality Assurance*, Vol. 21 No. 6, pp. 535-547.

Ferlie, E.B. and Shortell, S.M. (2001), "Improving the quality of health care in the United Kingdom and the United States: a framework for change", *Milbank Quarterly*, Vol. 79 No. 2, pp. 281-316.

Flynn, R. (2002), "Clinical governance and governmentality", *Health Risk and Society*, Vol. 4 No. 2, pp. 155-173.

Frankel, A.S., Leonard, M.W. and Denham, C.R. (2006), "Fair and just culture, team behavior, and leadership engagement: the tools to achieve high reliability", *Health Services Research*, Vol. 41 No. 4, pp. 1690-1709.

Frykman, M., Hasson, H., Athlin, Å.M. and Von Thiele Schwarz, U. (2014), "Functions of behaviour change interventions when implementing multi-professional teamwork at an emergency department: a comparative case study", *BMC Health Services Research*, Vol. 14, pp. 1-25.

Fursule, N., Bansod, S. and Fursule, S. (2012), "Understanding the benefits and limitations of six sigma methodology", *International Journal of Scientific Research and Publication*, Vol. 2 No. 1, pp. 1-9.

Glickman, S., Baggett, K., Krubert, C., Peterson, E. and Schulman, K. (2007), "Promoting quality: the health-care organization from a management perspective", *International Journal of Quality in Health Care*, Vol. 19 No. 6, pp. 341-348.

Golemboski, K. (2011), "Improving patient safety: lessons from other disciplines", *Clinical Laboratory Science*, Vol. 24 No. 2, pp. 114-119.

Goodwin, N. (2013), "Understanding integrated care: a complex process, a fundamental principle", *International Journal of Integrated Care*, Vol. 13, pp. 1-2.

Grant, P. (2011), "Doctors attitudes to a culture of safety: lessons for organizational change", *Clinical Risk*, Vol. 17 No. 5, pp. 165-170.

Greenhalgh, T., MacFarlane, F., Barton-Sweeney, C. and Woodard, F. (2012), "If we build it, will it stay?' A case study of the sustainability of whole-system change in London", *Milbank Quarterly*, Vol. 90 No. 3, pp. 516-547.

Greenhalgh, T., Humphrey, C., Hughes, J., MacFarlane, F., Butler, C. and Pawson, R. (2009), "How do you modernize a health service? A realist evaluation of whole-scale transformation in London", *Milbank Quarterly*, Vol. 87 No. 2, pp. 391-416.

Haines, V.Y. III, St-Onge, S. and Marcoux, A. (2004), "Performance management design and effectiveness in quality-driven organizations", *Canadian Journal of Academic Science*, Vol. 21 No. 2, pp. 146-161.

Ham, C. (2003), "Improving the performance of health services: the role of clinical leadership", *Lancet*, Vol. 361 No. 9373, pp. 1978-1980.

Ham, C. (2008), "Doctors in leadership: learning from international experience", *International Journal of Clinical Leadership*, Vol. 16 No. 1, pp. 11-16.

Harrison, J. and Daly, M.A. (2009), "Leveraging health information technology to improve patient safety", *Public Administration and Management*, Vol. 14 No. 1, pp. 218-237.

Health Service Executive (2015), "Integrated care programme, older persons, concept and framework", Clinical Strategy and Programmes Division, Health Service Executive, Dublin.

Heenan, M., DiEmanuele, M., Hayward-Murray, K. and Dadgar, L. (2012), "Hospital on a page: standardizing data presentation to drive quality improvement", *Healthcare Quality*, Vol. 15 No. 1, pp. 41-45.

Hofmeyer, A.T. (2013), "How can a social capital framework guide manager to develop positive nurse relationships and patient outcomes?", *Journal of Nursing Management*, Vol. 21 No. 5, pp. 782-789.

Holden, L.M. (2005), "Complex adaptive systems: concept analysis", *Journal of Advanced Nursing*, Vol. 52 No. 6, pp. 651-657.

Ibrahim, J.E., Jeffcott, S., Davis, M.C. and Chadwick, L. (2013), "Recognizing junior doctors' potential contribution to patient safety and health care quality improvement", *Journal of Healthcare Organisation and Management*, Vol. 27 No. 2, pp. 273-286.

Imison, C., Poteliakhoff, E. and Thompson, J. (2012), *Older People and Emergency Bed Use: Exploring Variation*, The King's Fund, London.

Kaplan, H.C., Brady, P.W., Dritz, M.C., Hooper, D.K., Linam, W.M., Froehle, C.M. and Margolis, P. (2010), "The influence of context on quality improvement success in health care: a systematic review of the literature", *Milbank Quarterly*, Vol. 88 No. 4, pp. 500-559.

Katz-Navon, T., Naveh, E. and Stern, Z. (2005), "Safety climate in health care organisations: a multidimensional approach", *Academic Management Journal*, Vol. 48 No. 6, pp. 1075-1089.

Kennedy, D.M., Caselli, R.J. and Berry, L.L. (2011), "A roadmap for improving healthcare service quality", *Journal of Healthcare Management*, Vol. 56 No. 6, pp. 385-400.

Kvist, T., MÄntynen, R., Turunen, H., Partanen, P., Miettinen, M., Wolf, G.A. and VehvilÄinen-Julkunen, K. (2013), "How magnetic are Finnish hospitals measured by transformational leadership and empirical quality outcomes?", *Journal of Nursing Management*, Vol. 21 No. 1, pp. 152-164.

Langley, A. and Denis, J.-L. (2011), "Beyond evidence: the micropolitics of improvement", *BMJ Quality and Safety*, Vol. 20 No. 1, pp. 43-46.

Latham, J.R. (2013), "A framework for leading the transformation to performance excellence part I: CEO perspectives on forces, facilitators, and strategic leadership systems", *Quality Management Journal*, Vol. 20 No. 2, pp. 12-33.

LeBrasseur, R., Whissell, R. and Ojha, A. (2002), "Organisational learning, transformational leadership and implementation of continuous quality improvement in Canadian hospitals", *Australian Journal of Management*, Vol. 27 No. 2, pp. 141-161.

Lee, H., Spiers, J.A., Yurtseven, O., Cummings, G.G., Sharlow, J., BhattiI, A. and Germann, P. (2010), "Impact of leadership development on emotional health in healthcare managers'", *Journal of Nursing Management*, Vol. 18 No. 8, pp. 1027-1039.

Lemieux-Charles, L., Murray, M., Baker, G.R., Barnsley, J., Tasa, K. and Ibrahim, S.A. (2002), "The effects of quality improvement practices on team effectiveness: a mediational model", *Journal of Organisational Behaviour*, Vol. 23 No. 5, pp. 533-553.

Leviton, L. (2011), "Reconciling complexity and classification in quality improvement research", *BMJ Quality and Safety*, Vol. 20, pp. 25-28.

Luxford, K., Safran, D.G. and Delbanco, T. (2011), "Promoting patient-centered care: a qualitative study of facilitators and barriers in healthcare organizations with a reputation for improving the patient experience", *International Journal of Quality in Health Care*, Vol. 23 No. 5, pp. 510-515.

Lynn, J. (2011), "Building an integrated methodology of learning that can optimally support improvements in healthcare", *BMJ Quality and Safety*, Vol. 20, pp. 52-57.

McCarthy, D. and Blumenthal, D. (2006), "Stories from the sharp end: case studies in safety improvement", *Milbank Quarterly*, Vol. 84 No. 1, pp. 165-200.

McCormack, B., Kitson, A., Harvey, G., Rycroft-Malone, J., Titchen, A. and Seers, K. (2002), "Getting evidence into practice: the meaning of 'context'", *Journal of Advanced Nursing*, Vol. 38 No. 1, pp. 94-104.

Margolis, P., DeWalt, D., Simon, J., Horowitz, S., Scoville, R., Kahn, N., Perelman, R., Bagley, B. and Miles, P. (2010), "Designing a large-scale multilevel improvement initiative: the improving performance in practice program", *Journal of Continuing Education in the Health Professions.*, Vol. 30 No. 3, pp. 187-196.

Meyer, C. (2008), "The convergence of information, biology and business; creating an adaptive healthcare system", *The Bridge, National Academy of Engineering*, Vol. 28 No. 1.

Miller, J.G. and Miller, J.L. (1991), "A living systems analysis of organizational pathology", *Behavioural Science*, Vol. 36, pp. 239-241.

Moher, D., Liberati, A., Tetzlaff, J. and Altman, D.G. (2009), "Preferred reporting items for systematic reviews and meta-analyses, the PRISMA statement", *Open Medicine*, Vol. 3 No. 3, pp. 123-130.

Myers, J.S. and Shannon, R.P. (2012), "Chasing high performance: best business practices for using health information technology to advance patient safety", *American Journal of Managed Care*, Vol. 18 No. 4, pp. 121-125.

Nadeem, E., Olin, S.S., Hill, L.C., Hoagwood, K.E. and Horwitz, S.M. (2013), "Understanding the components of quality improvement collaboratives: a systematic literature review", *Milbank Quarterly*, Vol. 91 No. 2, pp. 354-394.

Naylor, C., Alderwick, H. and Honeyman, M. (2015), *Acute Hospitals and Integrated Care*, The King's Fund, London.

Nolte, E. (2015), "Delivering integrated care", EU Observatory Summer School, 30 July, Venice.

Øvretveit, J. (2008), "Effective leadership of improvement: the research", *International Journal of Clinical Leadership*, Vol. 16 No. 2, pp. 97-105.

Øvretveit, J. (2011), "Understanding the conditions for improvement: research to discover which context influences affect improvement success", *BMJ Quality and Safety*, Vol. 20, pp. 18-21.

Øvretveit, J., Leviton, L. and Parry, G.J. (2011), "Increasing the generalisability of improvement research with an improvement replication programme", *BMJ Quality and Safety*, Vol. 20, pp. 87-91.

Parry, G.J. (2014), "A brief history of quality improvement", *Journal of Oncology Practice*, Vol. 10 No. 3, pp. 196-199.

Pascale, R., Sternin, J. and Sternin, M. (2010), *The Power of Positive Deviance*, Harvard Business Press, Boston, MA.

Poddar, R. (2013), "Learning between managers and doctors", *British Journal of Healthcare Management*, Vol. 19 No. 4, pp. 192-197.

Psychogios, A.G., Wilkinson, A. and Szamosi, L.T. (2009), "Getting to the heart of the debate: TQM and middle manager autonomy", *Total Quality Management and Business Excellence*, Vol. 20 No. 4, pp. 445-466.

Richardson, D. and Mountain, D. (2009), "Myth versus facts in emergency department overcrowding and hospital access block", *Medical Journal of Australia*, Vol. 190 No. 7, pp. 369-374.

Rouse, W. (2008), "Healthcare as a complex adaptive system, implications for design and management", *The Bridge, National Academy of Engineering*, Vol. 28 No. 1.

San Martín-Rodríguez, L., Beaulieu, M., D'Amour, D. and Ferrada-Videla, M. (2005), "The determinants of successful collaboration: a review of theoretical and empirical studies", *Journal of Interprofessional Care*, Vol. 19 No. 1, pp. 132-147.

Schaffer, M.A., Sandau, K.E. and Diedrick, L. (2013), "Evidence-based practice models for organizational change: overview and practical applications", *Journal of Advanced Nursing*, Vol. 69 No. 5, pp. 1197-1209.

Scoville, R. and Little, K. (2014), "Comparing lean and quality improvement", IHI White Paper, Institute for Healthcare Improvement, Cambridge, MA.

SDU (2014), "The case for a radical overhaul of the care pathways for the elderly in the emergency department", Special Delivery Unit Report, Health Service Executive.

Serrano, L. (2010), "A culture of excellence, ISO 15189: 2007 medical laboratory accreditation", *Clinical Leadership Management Review*, Vol. 24 No. 1, pp. 1-4.

Shojania, K. and Dixon-Woods, M. (2013), "'Bad apples': time to redefine as a type of systems problem?", *BMJ Quality and Safety*, Vol. 22, pp. 528-531.

Silvester, K.M., Mohammed, M.A., Harriman, P., Girolami, A. and Downes, T.W. (2014), "Timely care for frail older people referred to hospital improves efficiency and reduces mortality without the need for extra resources", *Age Ageing*, Vol. 43 No. 4, pp. 472-477.

Spiers, J.A., Cummings, G.G., Langenhoff, P., Sharlow, J. and Bhatti, A. (2010), "But we can't go back", *Journal of Leadership Studies*, Vol. 4 No. 1, pp. 6-19.

Sprivulis, P.C., Da Silva, J.A., Jacobs, I.G., Frazer, A.R. and Jelinek, G.A. (2006), "'The association between hospital overcrowding and mortality among patients admitted via Western Australian emergency departments'", *Medical Journal of Australia*, Vol. 184 No. 5, pp. 208-212.

Stiefel, M. and Nolan, K. (2012), "A guide to measuring the triple aim: population health, experience of care, and per capita cost", IHI Innovation Series White Paper, Institute for Healthcare Improvement, Cambridge, MA.

Swartling, D. and Poksinska, B. (2013), "Management initiation of continuous improvement from a motivational perspective", *Journal of Applied Economic and Business Research*, Vol. 3 No. 2, pp. 81-94.

Veldsman, D. (2013), "The stories that leaders tell during organisational change: the search for meaning during large-scale transformation", PhD dissertation, University of South Africa, Pretoria.

Veronesi, G. and Keasey, K. (2011), "National health service boards of directors and governance models", *Public Management Review*, Vol. 13 No. 6, pp. 861-885.

Wang, M., Hyun, J., Harrison, M., Shortell, S. and Fraser, I. (2006), "Redesigning health systems for quality, Lessons from emerging practices", *Journal of Quality and Patient Safety*, Vol. 32 No. 11, pp. 599-611.

Weberg, D. (2012), "Complexity leadership: a healthcare imperative", *Nursing Forum*, Vol. 47 No. 4, pp. 268-277.

West, M. (2014), "Leadership for cultures of high-quality care", *British Journal of Healthcare Management*, Vol. 20 No. 6, pp. 260-261.

West, M., Lyubovnikova, J., Eckert, R. and Denis, J.L. (2014), "Collective leadership for cultures of high quality health care", *Journal of Organisational Effectiveness People and Performance*, Vol. 1 No. 3, pp. 240-260.

WHO (2010), "Health service delivery", available at: www.who.int/healthinfo/systems (accessed 1 December 2016).

Wodchis, W.P., Dixon, A., Anderson, G.M. and Goodwin, N. (2015), "Integrating care for older people with complex needs: key insights and lessons from a seven-country cross-case analysis", *International Journal of Integrated Care*, Vol. 15 No. 6, pp. 1-15.

Young, G.J. (2000), "Managing organizational transformations: lessons from the veterans health administration", *California Management Review*, Vol. 43 No. 1, pp. 66-82.

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