

What happens when healthcare innovations collide?

Sachin R Pendharkar,^{1,2,3} Jaana Woiceshyn,⁴ Giovani J C da Silveira,⁴ Diane Bischak,^{3,4} Ward Flemons,^{1,3} Finlay McAlister,⁵ William A Ghali^{1,2,3}

¹Department of Medicine, University of Calgary, Calgary, Alberta, Canada

²Department of Community Health Sciences, University of Calgary, Calgary, Alberta, Canada

³O'Brien Institute for Public Health, University of Calgary, Calgary, Alberta, Canada

⁴Haskayne School of Business, University of Calgary, Calgary, Alberta, Canada

⁵University of Alberta, Edmonton, Alberta, Canada

Correspondence to

Dr Sachin R Pendharkar, Rockyview General Hospital, 7007—14th St. SW, Calgary, Alberta, Canada T2V 1P9; sachin.pendharkar@ucalgary.ca

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THE STORY: AN INPATIENT DISCHARGE MODEL INITIATIVE

In February 2012, Alberta's minister of health issued three directives aimed at improving acute care hospital overcrowding. In response to one of these directives, Alberta Health Services (AHS) executives convened operational leaders, patients, clinicians and other service providers to design a standardised provincial approach to inpatient service delivery and discharge planning. The result was 'Path to Home' (P2H), an initiative that emphasised interdisciplinary collaboration and alignment of services to optimise hospital-based care and discharge. P2H incorporated elements of other successful patient care initiatives in Alberta, and was expected to reduce inpatient length of stay, lower hospital occupancy rates and ultimately improve waiting times for patients requiring hospital admission. Patients and families would also benefit from better coordination of care, thereby easing the difficult transition from hospital to home. The process of developing P2H and preparing for implementation was swift and thoughtful. Timelines were tight, but with the support of AHS senior leaders, the steering committee enthusiastically pressed on with a plan to roll out P2H in seven Alberta hospitals starting in April 2013. AHS leaders promoted P2H to staff and physicians, and momentum was building for this large-scale provincial healthcare initiative.

However, in late March 2013, the AHS Executive Committee determined that P2H overlapped with two similar initiatives, Care Transformation and Workforce Model Transformation (see [table 1](#) for a description of each initiative).¹ Each project was seeking organisational resource support for province-wide implementation. Budgets were frozen on all three initiatives pending a strategic

re-evaluation. Uncertainty set in, and stakeholders at all levels began to ask questions about what happened, and what was going to happen. Excitement and enthusiasm were slowly replaced by frustration, doubt and resignation.

In June 2013, the AHS Executive Committee decided to merge the three initiatives into a unified initiative named CoACT, with new leadership and project teams. Some local pilot projects began fairly quickly, with the provincial implementation of CoACT expected by March 2016. In the meantime, at hospitals where P2H implementation had begun during the 3-month budget freeze, work continued under the P2H framework and the project retained the name P2H.

THE SETTING: AHS

AHS is the single health authority for Alberta, providing healthcare services for over 4 million people. There are over 100 000 employees and 8400 physicians working within AHS's acute care hospitals, continuing care facilities and primary care centres. Operationally, AHS is organised into five zones; each zone has senior and administrative leadership, as do the healthcare facilities within each zone; these leaders oversee care within their jurisdiction, but are also tasked with providing comprehensive and coordinated care for all Albertans. Much like the leaders of other hospitals, regional health authorities or large health systems, leaders at various levels of AHS are faced with the task of managing patient care innovations.

ANALYSIS

Faced with limited resources and the pressure to improve timely access to high-quality patient care, healthcare organisations look for innovative solutions. Successful local innovations in patient care may be expanded across the



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Table 1 Description of legacy AHS innovations and new initiative

	Path to Home (P2H)	Care Transformation (CT)	Workforce Model Transformation (WMT)	CoACT
Origin	Ministerial directive	Local Hospital Department	AHS executive	AHS executive
Governance	Provincial team	Hospital team	AHS executive	Provincial team
Objective	Improve patient flow and discharge process to reduce inpatient length of stay	Efficiencies and new practices to reduce inpatient length of stay	Improve alignment of provider skills and duties	Coordinate and standardise care practices province-wide
Scope	Seven pilot hospitals, then full system	Single hospital	Six pilot units at three hospitals	Full system
Launch	April 2013	September 2010	September 2013	Phase I: March 2016 Phase II: March 2017
Key elements	<ul style="list-style-type: none"> ▶ ADOD ▶ Care Traffic Control ▶ Key performance indicators and targets ▶ Standardised operational and care processes 	<ul style="list-style-type: none"> ▶ Demand and capacity realignment ▶ Team integration and culture change ▶ Implementation of best practices ▶ Optimised transitions 	<ul style="list-style-type: none"> ▶ Optimisation of RN scope of practice ▶ Greater use of healthcare aides and LPNs ▶ 'Collaborative Care Model' (team-based) 	Integrate and combine the best elements of P2H, CT and WMT

ADOD, anticipated date of discharge; AHS, Alberta Health Services; LPN, licensed practical nurse; RN, registered nurse.

organisation so as to reap the quality and financial benefits of implementing the innovation on a larger scale. However, a mandate for spreading successful initiatives may lead to competition between them for leadership commitment, resources and the time and attention of front-line staff. This collision of innovations may hinder the achievement of the organisation's goals, particularly if the innovations have similar objectives.²

Few would dispute that spreading innovative care delivery models across patient care units within multiple hospitals is a massive undertaking. Given the significant infusion of resources required to make large-scale organisational change, it is critical for senior leaders to have a strong, authentic and continued commitment to the initiative.³⁻⁵ This support may exist as resources to support change initiatives, or the identification of senior leadership champions who are accountable for a project's success.³ A leadership commitment to innovation can engage providers by signalling a clear direction for change, reinforcing improvement expectations and maintaining momentum through externally mediated starts and stops.^{2 3}

The merger of three large initiatives within AHS provides additional lessons to be learned for any hospital or healthcare organisation that seeks to implement patient care innovations. Was the merger for better or for worse? The leaders and healthcare providers who were already engaged in the existing projects likely experienced confusion and disappointment at the decision to halt them, group them together and rebrand them anew. However, the merger of projects ostensibly allowed AHS to align organisational activities with a singular vision for improvements in patient care. In this paper, we examine the issues that arise when innovations collide, and how the leaders of hospitals and large healthcare organisations can manage the choices that result.

Top-down and bottom-up innovation need integration

A common theme in the discourse on organisational process improvement is the tension between leadership-driven 'top-down' change and grass roots 'bottom-up' innovation that begins at the front line. The top-down approach allows organisations to align innovations and resources with their vision and strategic direction and to maintain momentum through periods of uncertainty.^{2 3 6-8} In contrast, bottom-up change promotes local ownership and improves employee engagement.⁹ However, multiple similar bottom-up initiatives may lead to competition for limited resources⁷ and a lack of clarity among staffs serving multiple clinical units. Importantly and laudably, the tension between top-down and bottom-up change arises from enthusiasm at multiple levels to improve the system; the challenge lies in maintaining this enthusiasm while resolving the competition between innovations.¹⁰

How does the governance of healthcare delivery impact this relationship? The regionalisation of healthcare has been promoted as a way to improve coordination of services, realise economies of scale and emphasise a community rather than institutional focus for care.¹¹ However, it is unclear whether regionalisation has in fact resulted in these benefits.^{11 12} Does scaling health system governance *up* to the regional level help in integrating innovations or does it widen the chasm between leadership-driven and front-line change initiatives?

What is the role of the organisation's leadership? Is it to design and implement organisational initiatives? Is it to 'connect the dots' by facilitating communication, knowledge translation and resource support to groups that have successfully implemented similar initiatives? Or is it to set goals and a broad strategy for the organisation and identify the principles to guide the selection and implementation of initiatives,

no matter where they originate? The latter approach has proven successful in the Institute for Healthcare Improvement's '100 000 Lives' campaign.¹³ Importantly, healthcare organisation leaders must try to make innovation easier, recognising that a different degree of integration between top-down direction and grass roots innovation may be necessary.

In the absence of such integration, senior leaders will undoubtedly be faced with a collision of initiatives. The resolution may involve selecting a single project, or defining a process by which multiple organisational initiatives can be evaluated and supported.¹⁴ While well intentioned from a patient care perspective, the decision to merge the three AHS initiatives could threaten front-line engagement during implementation by eroding trust and fostering uncertainty about changing roles.^{10 15 16} Organisational leaders may be perceived as lacking strategic vision and having suspicious motives for changing the existing innovation.² This is a difficult choice, which will certainly result in individuals feeling resentful, insecure or resigned about the future. The goal for leaders of healthcare organisations is to mitigate these risks so that innovative change still moves forward. The process through which this is done is crucial.

Integrating regional innovations into local microsystems

In healthcare, as in other industries, local organisational culture and processes are important considerations for system-wide transformational change.¹⁷ Top-down change management approaches that do not account for local contexts can paradoxically stifle change and innovation,¹⁷ and frustrate front-line staffs who wish to take an active role in improving patient care processes.¹⁵ When an organisational initiative is planned, devolving operational control to departments and front-line providers can facilitate the tailoring of organisational initiatives to the local context, thereby fostering local ownership of initiatives and improving the likelihood of success.^{4 18 19} However, as demonstrated in the UK's National Health Service, if local units are given too much authority to customise without clear guiding principles, variation in processes may persist and the expected benefits of standardisation may not materialise.²⁰

The implementation of large patient care initiatives must include a consideration of local contexts, which may vary based on hospital size, rural or urban location or other factors. There may be similar local projects underway, which may collide with the proposed organisational innovation. Front-line individuals, whose engagement and ownership are critical for the successful local implementation, are likely to become disenfranchised. How do organisations tailor initiatives that aim to standardise processes to suit these highly variable contexts and to align with local initiatives? Is it the responsibility of organisational leaders

to dictate the components, sequence and timelines of project implementation or should their role be to define a set of guiding principles for staffs to apply in their local contexts? If the locus of control should be at a more local level, which of regional, hospital, clinical unit, or individual provider is the right level? Local leaders may have greater insights into the local context and may be more effective at maintaining front-line engagement. In this regard, the decision by zone and hospital leaders to retain the P2H framework and name at sites where implementation had begun was commendable.

Communicate, communicate, communicate

A crucial role for health system leaders is to clearly articulate the reasons for, mechanisms of and expected benefits of an innovation, in order to gain the trust of clinicians and persuade them to participate.¹⁶ Leaders must also acknowledge the uncertainty that accompanies innovation and mitigate the fear of change that may be felt by front-line staff.¹⁵ Finally, the opportunity for stakeholders to provide feedback on the process is critical for successful organisational change.¹⁰ Clear, consistent and bidirectional communication addressing these issues will promote a shared understanding of the purpose, goals and definition of success of the innovation, which will undoubtedly contribute to its success.²¹

When hospital or health system leaders choose to combine initiatives, as was done in AHS, the need for effective communication of organisational priorities is even greater; it is critical that the impetus for replacing existing innovations is clearly articulated to front-line staffs. Providing staffs with timely and accurate information about such top-down organisational change initiatives can be a challenge,^{3 21} particularly in larger organisations with many administrative levels between senior executive and front-line staffs. While P2H formally ended in 2013, the delay in launching CoACT could lead to feelings of uncertainty and cynicism among AHS staffs and clinicians; it is critical that leaders at the hospital, zone and provincial levels effectively communicate why and how this patient care initiative has changed.

The cost of making change

Organisational change is costly, both financially and in terms of the time and effort of stakeholders and participants. AHS's investment in the design of P2H included service contracts with external consultants as well as costs of stakeholder meetings and dissemination of project details across the organisation. The time investments by stakeholders were also significant and came with the additional expense of backfilling clinical positions during meetings. Implementation and evaluation were expected to bring further time and resource commitments.

When innovations collide, investments in existing projects may be squandered unless the return on those investments can be harnessed through their timely application to the merged initiative. Costs associated with abandoned elements of the initial project are unlikely to be recovered; in this regard, AHS may have minimised additional costs by incorporating most of the elements of P2H into CoACT. However, the delayed timelines between the launch of P2H and the provincial implementation of CoACT may result in additional planning and implementation steps and delayed cost savings that were expected to result from the innovation.

Finally, disenfranchisement of front-line workers due to multiple top-down initiatives may hinder successful implementation. But is it worth it? Perhaps, if the quality of patient care is significantly improved compared with what was expected with prior initiatives, and if financial benefits balance the monetary losses associated with the change. This is a tall order for most healthcare innovations.

CONCLUSION—CAN LARGE-SCALE ORGANISATIONAL INNOVATION SUCCEED?

Change within organisations is tumultuous at the best of times and is fraught with uncertainty for stakeholders at all levels. The decision to merge three large colliding innovations was consistent with AHS's organisational goal of providing high-quality care and ostensibly provided clearer direction for senior leadership. As CoACT is implemented provincially beginning in early 2016, it will become clear how the changes to the legacy projects have impacted the

efforts to engage front-line staffs to embrace this new innovation.

The AHS experience raises issues that must be considered by the leaders of any hospital or healthcare organisation that seeks to implement large-scale innovation (box 1). While a top-down approach may help to coordinate work, it brings a risk of disengaging workers. A process to integrate top-down and bottom-up innovation is necessary, but regardless of where this balance lies, consideration of local contexts is essential for ensuring a project's success. Furthermore, early communication of project objectives and a clear direction for innovation are essential components of any change management strategy. While the desire to improve patient care is laudable, organisations must promote engagement and the efficient use of resources to ensure the success of new patient care initiatives and future organisational changes. Most importantly, organisations must also commit to robust evaluation of both the clinical impacts of innovation and the cost-effectiveness of implementing these changes.

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Box 1 Tensions arising from colliding healthcare innovations

- ▶ Healthcare organisations need top-down implementation to organise change
 - This approach may undermine local innovation and cause frustration
 - Integration with local processes may promote re-engagement
- ▶ Stakeholder engagement is even more important in the face of change
 - Need to address change fatigue, uncertainty and loss of control
 - Regular and bidirectional communication will foster project ownership
- ▶ Additional costs will likely arise from redesign and delayed implementation
 - Delays and costs may be worthwhile if care quality significantly improved
 - Merging initiatives may reduce rework and promote uptake

REFERENCES

- 1 McAlister FA, Bakal JA, Majumdar SR, *et al.* Safely and effectively reducing inpatient length of stay: a controlled study of the General Internal Medicine Care Transformation Initiative. *BMJ Qual Saf* 2014;23:446–56.
- 2 Kotter JP. Leading change: why transformation efforts fail. *Harv Bus Rev* 1995;73:59–67.
- 3 Lukas CVD, Holmes SK, Cohen AB, *et al.* Transformational change in health care systems: an organizational model. *Health Care Manage Rev* 2007;32:309–20.
- 4 Greenhalgh T, Robert G, Macfarlane F, *et al.* Diffusion of innovations in service organizations: systematic review and recommendations. *Milbank Q* 2004;82:581–629.
- 5 Woiceshyn J, Daellenbach U. Integrative capability and technology adoption: evidence from oil firms. *Ind Corporate Change* 2005;14:307–42.
- 6 Chou AF, Yano EM, McCoy KD, *et al.* Structural and process factors affecting the implementation of antimicrobial resistance prevention and control strategies in US hospitals. *Health Care Manage Rev* 2008;33:308–22.
- 7 Grove L, Meredith O, MacIntyre M, *et al.* UK health visiting: challenges faced during lean implementation. *Leadersh Health Serv* 2010;23:204–18.

- 8 Reay T, Goodrick E, Casebeer A, *et al.* Legitimizing new practices in primary health care. *Health Care Manage Rev* 2013;38:9–19.
- 9 Harrison W, Hubley B, McLaughlin A, *et al.* *The wisdom project: stories from the field that inform leaders*. Alberta Health Services, 2013. <http://www.albertahealthservices.ca/Researchers/if-res-wisdom-case-study.pdf> (accessed 2 Feb 2015).
- 10 Pablo AL, Reay T, Dewald JR, *et al.* Identifying, enabling and managing dynamic capabilities in the public sector. *J Manag Stud* 2007;44:687–708.
- 11 Church J, Barker P. Regionalization of health services in Canada: a critical perspective. *Int J Health Serv* 1998;28:467–86.
- 12 Hurley J. Regionalization and the allocation of healthcare resources to meet population health needs. *Healthc Pap* 2003;5:34–9.
- 13 Rao H, Sutton R. The ergonomics of innovation. *McKinsey Q* 2008;4:131–41.
- 14 Nutt PC, Backoff RW. Transforming public organizations with strategic management and strategic leadership. *J Manag* 1993;19:299–347.
- 15 Allan HT, Brearley S, Byng R, *et al.* People and teams matter in organizational change: Professionals' and managers' experiences of changing governance and incentives in primary care. *Health Serv Res* 2014;49:93–112.
- 16 Waring JJ, Bishop S. Lean healthcare: rhetoric, ritual and resistance. *Soc Sci Med* 2010;71:1332–40.
- 17 McNulty T, Ferlie E. Process transformation: Limitations to radical organizational change within public service organizations. *Organ Stud* 2004;25:1389–412.
- 18 Langley A, Golden-Biddle K, Reay T, *et al.* Identity struggles in merging organizations: renegotiating the sameness-difference dialectic. *J Appl Behav Sci* 2012;48:135–67.
- 19 Plsek P. *Complexity and the adoption of innovation in health care. Accelerating quality improvement in health care: strategies to accelerate the diffusion of evidence-based innovations*. Washington DC: National Institute for Healthcare Management Foundation and National Committee for Quality in Health Care, 2003.
- 20 Silvestro R, Silvestro C. New service design in the NHS: an evaluation of the strategic alignment of NHS direct. *Int J Oper Prod Manag* 2003;23:401–17.
- 21 Casebeer AL, Hannah KJ. Managing change in the context of health reform: lessons from Alberta. *Healthc Manage Forum* 1998;11:21–7.