

Centralization and innovation: Competing priorities for health systems?

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Abstract

Over the last 15 years, there has been a trend in Canada to centralise the provision of health services that were previously administratively and fiscally decentralised. Canadian policy rhetoric on centralisation often identifies improved innovation as an anticipated outcome. This paper challenges the assumed relationship between centralisation and innovation. We incorporate evidence from the management literature into the debate on the structure of health systems to explore the effects that centralisation is likely to have on innovation in health systems. The findings of this paper will be of interest to international policymakers, who are currently grappling with the prospect of maintaining a decentralised approach or adopting a more centralised health system structure in the future.

KEYWORDS

centralisation, health systems, innovation, management, organizational structure

Highlights

- Health system policy rhetoric often assumes centralisation promotes innovation.
- Management research suggests centralisation negatively influences innovation.

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- Innovation requires front-line and middle manager input in decision-making.
- Policy goals should be informed by interdisciplinary evidence.

1 | INTRODUCTION

Recent Canadian health system reform efforts involved centralising administrative and fiscal responsibility for the provision of health services.¹⁻⁴ Enabling innovation has often been cited as a goal of centralising health systems.^{1,3,5} Yet, the proposed relationship between centralisation and innovation has not been explained in policy rhetoric nor has health systems research empirically examined this relationship.

This paper challenges the assumed relationship between centralisation and innovation in health systems by extrapolating from evidence in the management literature. The evidence suggests that centralised organizational structures stifle rather than foster innovation, specifically during the idea generation phase of innovation. With increasing demands for evidence-informed health policy making⁶⁻⁸ it is imperative that policy goals are rooted in available evidence from various disciplines. While we contextualise our arguments using Canadian examples, our conclusions have implications for international policymakers who regularly grapple with the prospect of decentralising or (re)centralising health system governance.⁹

2 | A BRIEF HISTORY OF CENTRALIZATION IN CANADIAN HEALTH SYSTEMS

Healthcare in Canada is publicly funded and comprised of 10 provincial and three territorial healthcare systems.¹⁰ Roles and responsibilities for healthcare are divided between the Canadian federal, provincial/territorial, and regional government(s).¹⁰ The federal government establishes the national priorities for provincial and territorial healthcare systems under what is known as the *Canada Health Act* and provides a federal health cash transfer to the provinces/territories if the conditions of the *Canada Health Act* are met.¹⁰ The federal government is also responsible for the provision of healthcare services for select populations within Canada (e.g., First Nations and Inuit people, federal inmates, members of the Canadian armed forces, refugees, etc.) as well as the regulation of pharmaceuticals and medical devices.¹⁰ Each provincial/territorial government is responsible for the organisation, provision, and delivery of medically necessary services to the people in their province/territory.¹⁰ Provided the province/territory adheres to the principles in the *Canada Health Act*, governments have the autonomy to independently organise their respective health systems as they deem appropriate.¹⁰

Across Canadian provinces and territories, we have seen a cyclical trend of decentralising and recentralising health systems.¹¹ Commendable scholarship exists on the benefits and consequences of centralisation and we do not seek to resolve the debate on centralised versus decentralised provision of health services.^{4,11-17} In this section, we present a synopsis of the arguments in favour of centralised and decentralised health system structures. We then describe the experiences of three Canadian provinces that administratively and fiscally re-organised their health systems under one centralised authority.

The centralisation and decentralisation of health systems are generally believed to target different priorities. Centralisation promotes standardisation, consistency, and equity across the health system through a hierarchical decision-making authority.¹⁸ Centralised structures may also allow for economies of scale and prevent local decision-makers from distributing scarce resources in an inefficient manner.^{19,20} On the other hand, decentralisation enables health systems the flexibility to address local population needs.¹⁵ Decentralisation may also increase decision-making speed by local managers regarding service delivery and increase public participation in decision-making processes.^{15,21}

In the early 2000s, many governments in North America and Europe adopted decentralised health system structures to encourage local priority-setting, decision-making, and innovation.^{11,17,21} In the last 15 years, debates arose regarding the negative influence of decentralisation on the sustainability and spread of local innovations, equity of patient access to services across regional boundaries, and the efficiency of service delivery given duplication and redundancies across these boundaries.^{11,13,14,22,23} As a result of these issues, some jurisdictions have since centralised administrative and fiscal responsibility for health service provision. Where centralisation has occurred, there is generally a perception that the decision to centralise was made in the absence of supporting empirical evidence.¹⁵

2.1 | Alberta, Canada

In 2008, Alberta moved to administratively and fiscally centralise all of its health services into one 'super-board' called Alberta Health Services (AHS).^{1,24} What resulted was a centralised system that struggled to achieve efficiency, experienced role confusion, and achieved administrative costs per capita that were only slightly below the Canadian average.^{11,25-27} In 2015, the board of AHS was subsequently dismantled into four decentralised administrative zones, suggesting that full centralisation was not advantageous.²⁸

2.2 | Nova Scotia, Canada

In 2015, the province of Nova Scotia administratively and fiscally centralised its nine district health authorities into a single authority called the 'Nova Scotia Health Authority' (NSHA), though in so doing it also established four geographic 'Health Authority Zones' to preserve local clinical and operational leadership.²⁹ The primary objective of the recentralisation of the NSHA was to constrain administrative spending on healthcare and to increase overall uniformity and flexibility within the health system.² Five years after the creation of the NSHA, it is unclear if Nova Scotia achieved its transformation objectives. For example, administrative bottlenecks have resulted from the consolidation of decision-making into a single structure that was once dispersed across several regional decision-making bodies.²

2.3 | Ontario, Canada

In 2019, the province of Ontario administratively and fiscally centralised its 14 Local Health Integration Networks and six independent health agencies into one centralised agency known as 'Ontario Health'.^{3,30} Although the reform occurred too close to the COVID-19 pandemic to allow for a meaningful appraisal of its impact, it is noteworthy that Ontario has subsequently decided, similar to Alberta and Nova Scotia, to pursue five administrative zones.³¹

3 | INNOVATION: A COMMON BUT UNDER-CONCEPTUALIZED THEME IN POLICY RHETORIC ON CENTRALIZATION IN CANADA

Alberta, Nova Scotia and Ontario each justified their centralisation efforts through a dual aspiration of cost savings and improvement in health services delivery. Also common across the three provinces was the belief that health system centralisation would enable innovation (Table 1). This emphasis on innovation is not surprising. Innovation is often touted as a desired outcome of, or conduit to achieve, health system transformation and as a means to maximise value for patients and communities within sustainable financial models.³²⁻³⁸

TABLE 1 Goals of provincial health system centralisation efforts

Province	Stated goals of centralisation
Alberta	To foster a, 'high quality and innovative [<i>emphasis added</i>] system that provides equitable access to health services [...and] streamline the healthcare system, saving money that could be invested in front-line services' ¹ (p329)
Nova Scotia	To constrain spending on healthcare, specifically as it related to administration, as well as to increase overall uniformity and flexibility within the health system. ² Moreover, the transformation sought to, "flatten the cost curve, achieve efficiencies and bring innovation [<i>emphasis added</i>] into the care delivery system"
Ontario	To ensure, 'consistent oversight of high quality health care delivery across Ontario, including a more efficient approach to coordinating health care services for patients, [improving] the patient experience and enabling innovation [<i>emphasis added</i>].' ³

Yet, 'innovation' is not clearly defined in policy rhetoric on centralisation nor is the hypothesised relationship between centralisation and innovation explained. Similarly, in the academic literature, although there is a growing body of literature that explores innovation in healthcare and where it originates,^{33,38,39} little is known about the effects of health system centralisation on innovation. In the following section we turn to the management literature for guidance on the conceptualisation of the nebulous term 'innovation' and for insight into the relationship between centralisation and innovation.

4 | EVIDENCE ON CENTRALIZATION AND INNOVATION WITHIN ORGANISATIONS

A growing body of management literature examines the structural conditions under which innovation occurs.^{40,41} Centralisation is one of five core dimensions of organizational structure and refers to the extent to which decision-making power is concentrated at the top levels of the organisation.⁴² The organizational behaviour literature suggests that a negative relationship exists between centralisation and innovation in both public and private sector organisations.^{40,43}

The negative relationship between centralisation and innovation seems to be a function of where innovation originates in organisations. The majority of innovations originate from front-line staff or middle managers because of their proximity to day-to-day organizational challenges and their intimate knowledge of 'how things work' rather than 'how things ought to work'.^{38,39,44,45} It is estimated that within the public sector, greater than 80% of innovations originate from front-line staff or middle managers.⁴⁴ When organisations are more centralised, front-line staff and middle managers have less involvement in decision-making, leading to decreased quantity and quality of ideas generated, reluctance to voice suggestions due to fear of scrutiny by senior management, and reduced motivation to implement new ideas.^{43,46,47}

For example, at Ford Motor Company (Ford), the centralisation of purchasing, engineering, and manufacturing led to cost savings but decreased localised innovation.⁴⁸ The decrease in localised innovation stemmed from decreased autonomy of local managers to customise manufacturing to meet the needs and tastes of local markets and ultimately resulted in a period of decreased market share for Ford.⁴⁸ Similarly, at Hewlett-Packard (HP), periods of centralisation led to excessive bureaucracy and slowed decision speed, which led to a significant drop in innovation.⁴⁸ Although there has been minimal scholarship on the relationship between centralisation and innovation in healthcare, the available evidence is consistent with the experiences of Ford and HP.^{49,50} For example, Atkinson and Singer (2021) found that hierarchical (centralised) organizational structures impeded innovation among interdisciplinary, hospital-based teams in the United States.⁴⁹

On the other hand, increasing the autonomy of local managers through the decentralisation of decision-making and financial management supports an innovation-oriented culture.⁵¹ In decentralised structures, a greater variety

of ideas are generated because more individuals are involved in decision-making.⁵² Consequently, these individuals are closer to operational challenges, have greater access to timely information to inform problem-solving, and have an increased urge to seek innovative solutions to problems because of a greater sense of control over their work.⁵³ For example, hospitals observed as 'highly adoptive' of innovation often decentralise decision-making to department heads rather than concentrate decision-making authority to a few hospital administrators or a chief of medicine.⁵⁰ Propensity for innovation is further enhanced within decentralised structures by encouraging employees to question situations and supporting them with the necessary resources to address identified challenges.³⁷

Despite general acceptance of a negative relationship between centralisation and innovation in the literature, evidence exists to support a more nuanced view in which the effects of centralisation on innovation may vary by stage of the innovation process.^{41,54} Although innovation is often defined as a discrete *product* or *outcome* such as a new way of doing things,^{33,54,55} it can also be conceptualised as a *process* through which ideas are generated and implemented over time.^{41,54} A process-oriented view of innovation suggests that if the innovation process is not well-supported, innovation will not emerge as an outcome.⁵⁵ This view allows for a more granular examination of pre-requisite activities specific to each of the two phases of innovation—idea generation and idea implementation—that collectively produce innovation.^{41,43,56} Many studies have found that centralisation is detrimental to idea generation.^{43,46,47,57,58} The evidence regarding the relationship between centralisation and idea implementation or adoption is more mixed with examples of both positive effects^{41,59} and negative effects.^{41,60}

In summary, centralisation may negatively influence idea generation because fewer individuals are involved in decision-making and feel safe to voice their suggestions leading to a reduction in the quantity and quality of ideas.^{43,46,47} Simultaneously, centralisation may positively influence the idea implementation phases because fewer decision-makers may accelerate consensus-building and innovation adoption and spread.^{53,61,62}

5 | CONCLUSION

We argue that centralisation and innovation are likely competing priorities rather than mutually compatible as they have been presented in Canadian policy rhetoric. We support our position by drawing on the organizational behaviour literature that repeatedly highlights a negative relationship between centralised organizational structures and innovation. Without recognition of this negative relationship and explicit strategies to address it, health system reforms are unlikely to achieve their objectives of enabling innovation.

The negative effects of centralisation on the idea generation phase of innovation are particularly concerning. Industry offers us a plethora of cautionary tales of organisations that failed to nurture idea generation (e.g., Blockbuster, Research in Motion, Ford, HP, Nokia, Kodak, Polaroid).^{48,54} Given what we know about where novel ideas tend to originate in healthcare—from front-line staff and middle managers—we must maintain health system structures that enable their ideas to be heard and put into practice.

Based on the findings in the management literature, we propose three recommendations. First, policy goals should be clearly explained and rooted in available and cross-disciplinary evidence. Achieving innovation through health system centralisation may not be attainable and thus should not be included in policy rhetoric. Second, if policymakers choose to retain innovation as a goal of centralisation, they should specify the stage of innovation they intend to influence; centralisation may facilitate the spread, but not the generation, of innovative ideas. While innovation 'scale and spread' is a legitimate and widely recognized problem in Canada,^{63,64} a country known for its 'perpetual pilot projects',⁶⁵ a focus on the innovation implementation stage overlooks the potential impact of centralisation on the idea generation phase of innovation. As such, if centralisation is pursued or maintained, policymakers and organizational leaders should establish mechanisms to ensure front-line staff and middle-management remain meaningfully engaged in the decision-making process where they have the opportunity to pitch and implement innovative ideas. Finally, we call on researchers to empirically examine the influence of centralisation on innovation in health systems alongside the traditional focus on cost and quality indicators.

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CONFLICT OF INTEREST

The authors declare that they have no competing interests.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

ETHICS STATEMENT

Not applicable.

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