A Manhattan Project for Canadian Healthcare?

Neil Seeman

Abstract

Canada's healthcare system faces mounting crises, from dementia to homecare shortages, yet responses remain mired in stakeholder consultation. Some experts now call for a "Manhattan Project" approach. However, the Manhattan Project's centralized wartime model is incompatible with Canada's federated healthcare system. A better template is DARPA – the Defense Advanced Research Projects Agency – which enables rapid, parallel experimentation across distributed jurisdictions. A Canadian healthcare DARPA would require leadership willing to abandon consensus, protection for failure, compressed timelines and, crucially, reallocation of existing resources rather than new bureaucracy. This model replaces inertia with iteration, creating mechanisms that learn faster than disease spreads.

Introduction: Defining a "Manhattan Project"

Dementia cases in Canada are projected to reach one million within a decade. Responses have largely focused on strategic planning and stakeholder consultation.

Some experts in the field now call for a different approach: a "Manhattan Project" for dementia (Raaj 2025). The comparison is bold: the Manhattan Project, run through the US Office of Scientific Research and Development, mobilized 130,000 people, cost $2 billion per 1940s US dollars in today's rate when adjusted to today's value and produced the atomic bomb in under three years (Rhodes 1986).

Can we replicate that model – for dementia, or for any chronic health crisis in Canada? Should we even try, given our political culture of negotiation over top-down decision-making?

The answer depends on how we define a "Manhattan Project." If we mean throwing money at a problem until it melts away, history warns us. If we mean recruiting remarkable talent, eliminating silos and demanding results on a fixed timeline, we should turn to the lessons of the Defense Advanced Research Projects Agency (DARPA), a program birthed by the Manhattan Project.

From Manhattan to DARPA: A Better Model

The Manhattan Project worked because of the US wartime emergency powers and singular federal control. Canadian healthcare has neither. Provinces hold jurisdiction.

Yet the Manhattan Project's true legacy was not the bomb. It was DARPA, created in 1958 to turn wartime improvisation into a repeatable, peacetime engine of invention. DARPA kept the best parts – clarity of mission, unconventional talent and parallel experimentation – while adapting to a federated system where no single authority controls everything (Fuchs 2010).

This approach offers a potential model for Canadian healthcare innovation. Rather than attempting centralized control, it creates a distributed innovation engine that respects provincial jurisdiction while enabling rapid experimentation in a "flywheel effect" of continuous learning.

This approach would complement, not replace, existing healthcare innovation efforts. Many provinces and systems and hospitals already conduct pilots and quality improvement initiatives. The DARPA model's contribution would be its compressed timeline, exuberance for fast failure and systematic integration of non-traditional perspectives.

The DARPA Model: How It Would Work

Notably, DARPA complements traditional stakeholder engagement with rapid problem identification and diverse talent recruitment, including perspectives from outside traditional healthcare networks. A healthcare DARPA could operate in six-month cycles.

Month 1: DARPA-style problem selection

A small leadership team – not a committee – identifies one measurable challenge within provincial control. For example, reduce preventable emergency department visits by socially isolated seniors by 30% within 18 months, or improve homecare quality scores by 25% while maintaining current budgets.

Month 2: DARPA-style team assembly

Rather than relying only on traditional healthcare expertise, this approach would actively recruit diverse perspectives, notably, "superforecasters": people proven at solving complex problems in unfamiliar domains (Tetlock and Gardner 2015). They would think in a way our system cannot – laterally, rapidly and without fear of being wrong – and they might include a community organizer who reduced youth violence, a data scientist from the insurance sector, a homecare worker with 20 years of experience, a serial entrepreneur who has deployed artificial intelligence (AI) for supply chain innovation or a family caregiver who navigated the system for a parent with dementia.

Research on superforecasters who anticipate system shocks and spot trends shows that domain expertise matters for the full team less than cognitive diversity, willingness to update beliefs based on new information and comfort with ambiguity (Tetlock and Gardner 2015). Traditional healthcare stakeholders, while bringing essential domain knowledge, may face institutional constraints that limit exploration of differentiated approaches. Even science fiction writers have proven to be adept at anticipating technological and social futures under the DARPA model (Gunn and Candelaria 2004).

Months 3 and 4: DARPA-style parallel prototyping

The team splits into three subgroups, each developing a distinct solution. For the seniors' isolation problem, one group might prototype a volunteer "check-in" network using existing community organizations. Another might test AI-enabled remote monitoring that alerts family members to changes in routine. A third might redesign homecare scheduling to build continuity of relationships rather than optimizing for efficiency.

Month 5: DARPA-style evidence review

An independent evaluation team – again, not the implementers – assesses which approach shows promise. The metric is simple: Did it move the needle materially on the stated goal? If not, stop it. No sunk-cost fallacy. No face-saving.

Month 6: DARPA-style scale decision

If one approach works, the province commits to scaling it. If none works, the team disbands and leadership picks a new problem. The cycle repeats.

Implementing this model would face several practical challenges: securing funding for rapid experimentation, managing political risk when experiments fail and integrating successful prototypes into existing regulatory frameworks. While significant, these barriers are not insurmountable and merit explicit attention in any implementation design.

Why This Escapes the Consensus Trap

Healthcare reforms in federated systems face inherent challenges when multiple stakeholders hold legitimate interests that must be balanced. While consultation ensures that diverse perspectives are heard, it can unduly extend timelines for innovation. Each interest group, as a rational actor, holds legitimate concerns that must be addressed before any implementation can proceed.

A DARPA model inverts this approach. It does not ask, "What can everyone agree on?" Instead, it asks, "What can we test quickly that's within our control?" This positioning matters because provinces hold most system levers – but rarely pull them. For example, they can incentivize medical schools to require a greater percentage of their graduates to pursue family medicine (Sanfilippo 2025).

Consider home care. Ontario's system serves roughly 750,000 clients annually but faces persistent quality challenges from fragmentation and workforce shortages (Health Quality Ontario 2018). A critical shortage of personal support workers, with estimates calling for an additional 6,800 by 2028 and 51,000 by 2031, is straining the system amid an aging population (Garfinkel 2025).

A DARPA-style team might prototype "continuity pods": small teams of homecare workers assigned to the same 30–40 clients for at least six months. Workers would have protected time for family communication and care plan updates. The hypothesis is that continuity reduces errors, improves satisfaction and catches problems before they escalate to emergency departments.

This does not require new legislation but only one health region that is willing to reallocate the existing homecare contracts differently. If it works, others adopt it. If it fails, the cost is contained.

The Social Connectedness Example

Take social isolation among seniors – a driver of depression, cognitive decline and healthcare utilization (Holt-Lunstad et al. 2015). The standard response is to fund more programs: seniors' centres, meal delivery and friendly visiting. These undoubtedly help, but they do not scale and they do not reach the most isolated.

A DARPA-style team might ask: What if we embedded social connection into existing touchpoints? Pharmacists see isolated seniors monthly. Postal workers notice when mail piles up. Grocery delivery drivers enter homes. What if we trained and compensated these workers to flag isolation and connect people to resources?

One sub-team might test a "pharmacy-based loneliness screening" protocol in 20 locations. Another might pilot a partnership with Instacart to offer opt-in wellness checks. A third might recommend a municipal bylaw requiring landlords of seniors' buildings to employ a part-time community connector.

These are not traditional healthcare interventions. They are system redesigns, what Gary Hamel calls business model innovations (Hamel 2000), that leverage existing infrastructure. They are testable within months, not years.

The Federal–Provincial Reality and the Venture Capital Model

Healthcare in Canada is not like building a bomb under federal control. Provinces hold jurisdiction. However, that is precisely why a DARPA model works better than a Manhattan Project. DARPA does not require national coordination. It requires one jurisdiction willing to experiment, with federal support to recruit talent, fund rigorous evaluation and systematically disseminate results to other provinces. The experimenting province provides the laboratory; the federal government provides the connective tissue.

If Ontario proves continuity pods can stabilize home care, Alberta will copy it. If British Columbia cracks the social isolation equation, Quebec will iterate. In this model, federalism stops the friction – it becomes the lab. Healthcare harnesses federalism: 10 provinces and three territories run different experiments, learn from each other's failures and scale successes.

Distinct from the Manhattan Project, the federal government's role under this model is not to mandate solutions; it is to convene and fund the infrastructure: recruiting talent nationally and even internationally, establishing evaluation teams, building data systems and facilitating knowledge exchange across jurisdictions. One province experiments, and the federal government ensures the learning spreads. *Think of it as venture capital for provincial innovation, with the federal government as the connector and knowledge broker.*

What This DARPA-Model Demands

A healthcare DARPA requires four things Canada currently lacks:

First is the leadership that is willing to abandon consensus; a health minister who says, "We're testing three approaches to homecare quality. Two will probably fail. That's the point."

Second is protection for failure. Civil servants and clinicians would not innovate if failure ends careers. Explicit permission to experiment is needed.

Third is speed. Six-month cycles, not five-year plans; rapid prototyping, not endless consultation.

Fourth is reallocation, not addition. This need not be an expensive new bureaucracy. It requires bold rethinking of how government already spends on healthcare innovation, redirecting existing funds from slow-moving strategic plans toward rapid experimentation and liberating decision-making authority from consensus-driven processes to accountable program managers with clear mandates.

A healthcare DARPA would not cure bureaucracy overnight, but it will replace inertia with iteration. HQ

References

Fuchs, E.R.H. 2010. Rethinking the Role of the State in Technology Development: DARPA and the Case for Embedded Network Governance. *Research Policy* 39(9): 1133–47. doi:10.1016/j.respol.2010.07.003.

Garfinkel, I. 2025, July 31. Home-Care in Ontario Can't Keep Up – And It's Getting Worse. *Toronto Star*. Retrieved October 26, 2025. <https://spon.ca/home-care-in-ontario-cant-keep-up-and-its-getting-worse/2025/07/31/>.

Gunn, J.E. and M. Candelaria. 2004. *Speculations on Speculation: Theories of Science Fiction.* Scarecrow Press.

Hamel, G. 2000. *Leading the Revolution*. Harvard Business School Press.

Health Quality Ontario. 2018. *Home Care Reporting System: Technical Specifications*. Queen's Printer for Ontario.

Holt-Lunstad, J., T.B. Smith, M. Baker, T. Harris and D. Stephenson. 2015. Loneliness and Social Isolation as Risk Factors for Mortality: A Meta-Analytic Review. *Perspectives on Psychological Science* 10(2): 227–37. doi:10.1177/1745691614568352.

Raaj, A. 2025, September 22. Experts Urge "Manhattan Project" on Dementia as Cases Projected to Soar Past 1 Million. *CTV News*. Retrieved October 30, 2025. <https://www.ctvnews.ca/health/article/dementia-cases-in-canada-more-than-1-million-cases-projected-by-2030/>.

Rhodes, R. 1986. *The Making of the Atomic Bomb.* Simon & Schuster.

Sanfilippo, A. 2025. *The Doctors We Need: Imagining a New Path for Physician Recruitment, Training, and Support.* Sutherland House.

Tetlock, P.E. and D. Gardner. 2015. *Superforecasting: The Art and Science of Prediction.* McClelland & Stewart.

About the Author

Neil Seeman, JD, MPH, is a senior fellow and an associate professor at the Institute of Healthcare Policy, Management and Evaluation and a senior fellow at Massey College at the University of Toronto in Toronto, ON. He is a Fields Institute fellow, publisher at Sutherland House Experts and senior academic advisor to the Investigative Journalism Bureau and the Health Informatics, Visualization and Equity Lab at the Dalla Lana School of Public Health at the University of Toronto. Neil can be reached by e-mail at neil.seeman@utoronto.ca.