# OVERCOMING DISPARITIES IN HEALTHCARE FOR NEW BRUNSWICKERS WITH CHRONIC DISEASES

## A Report on the Cardiovascular & Diabetes Health Rapid Innovation Challenge

Facilitated by the
Pond-Deshpande Centre at the
University of New Brunswick

**April 2026**

# EXECUTIVE SUMMARY

For a small region, New Brunswick bears more than its share of chronic disease. In 2025, Statistics Canada reported that 55% of New Brunswickers live with one or more chronic conditions, the most common being cardiovascular disease (CVD) and diabetes.

The McKenna Institute decided to address this situation through the i4 Initiative. The i4 involved partnering with DataNB (formerly NB-IRDT, the New Brunswick Institute for Research, Data, and Training) and the Pond-Deshpande Centre (PDC) through a three-phased approach:

**PHASE 1**—DataNB studied the various factors in NB that are creating conditions for high rates of CVD and diabetes. Their research report is available **here**.

**PHASE 2**—PDC led the Cardiovascular Disease & Diabetes Health Rapid Innovation Challenge, which is the subject of this report. Over 100 days of intense collaboration, three teams created ideas for potential solutions, which the McKenna Institute and PDC then developed into three prototypes and three possible research projects. This is the focus of this report.

**PHASE 3**—Building on the ideas and prototypes generated through the Rapid Innovation Challenge, the University of New Brunswick is opportunities to refine and implement these prototypes. This includes advancing work on in-pharmacy models that could strengthen early detection, prevention, and management of diabetes and cardiovascular disease.

## What Is a Prototype?

In a social innovation context, a prototype is a small-scale, low-risk experiment designed to test an idea or intervention in a real-world setting before investing significant resources. It's not about creating a polished final product but about learning quickly. Prototypes can:

- **Explore** whether a concept addresses the problem it's meant to address.
- **Engage stakeholders** (community members, service users, policymakers) early in the design process.
- **Test assumptions** about what might work in practice.
- **Gather feedback** to adapt, refine, or pivot the idea.

Precursors to pilots, prototypes are intentionally lightweight, fast, and iterative, minimizing the risks of investing too much too soon into an untried idea.

## Final Prototypes

Each of the prototypes described below offers an opportunity to address inequities in access to care, improve health outcomes for underserved populations, and reduce health system costs.

**1. In-pharmacy screening for diabetes and CVD—**This intervention is proposed for regions of the province that have high rates of chronic disease. It would include:

- Awareness-raising campaign to draw people to the pharmacy testing site.
- Blood test showing sugar levels over the past three months (A1c test)
- Framingham Risk Profile, which includes a blood test showing levels of lipids (fats), a blood pressure reading, and a questionnaire assessing the risk of CVD.

**2. Program promoting women's cardiovascular health—**This would include:

- Kick-off event to share the latest knowledge and leading practices
- Asset mapping of resources for promoting women's cardiovascular health.
- Campaign to raise women's awareness about risk factors for CVD.

**3. Cardiac peer navigator program—**This initiative would train people who have successfully recovered from a cardiac event to support patients recently released from hospital following a heart attack or stroke. Peer navigators would:

- Encourage patients to attend a cardiac rehab program (local or virtual).
- Connect them with other community supports, such as cooking classes, exercise groups, and social clubs.

## Proposed Research Projects

The research projects outlined below are needed to fill critical gaps in knowledge and create a solid foundation for evidence-informed interventions.

### 1. NB Insulin Pump Program

A wearable insulin pump can greatly improve quality of life for someone living with diabetes. However, the existing financial aid program to help New Brunswickers access this new technology is underused by low-income patients—the very people who need it the most. Research would identify reasons for this limited response and ways to improve uptake.

### 2. Women's Cardiovascular Health at High-risk Life Stages

A woman's risk of CVD increases during pregnancy, and gestational diabetes is on the rise in NB. Women are also vulnerable to CVD during other times of hormonal flux (post-partum, perimenopause, and menopause), but few care pathways facilitate early detection. Research would recommend interventions based on leading practices established elsewhere.

### 3. Mortality Among the Undiagnosed

According to DataNB, in 2018, 13% of deaths attributed to CVD and 6% of deaths attributed to diabetes occurred among people who had not been diagnosed with the condition that killed them. Research would examine patterns in deaths among the undiagnosed, paving the way for policy changes.

## Continuing the Momentum

Since the Challenge concluded, we've been encouraged to see conversations continuing, and new discussions starting.

***This spring, PDC will host a virtual showcase featuring the i4 Challenge in Spring 2026. We will share more information through the PDC newsletter, which you can subscribe to here.***

# About the Pond-Deshpande Centre at the University of New Brunswick (PDC)

Founded at the University of New Brunswick in 2012 with a visionary donation from entrepreneurs Gerry Pond and Gururaj and Jaishree Deshpande, PDC uses social innovation and social entrepreneurship to address and help solve some of society's most pressing challenges. We develop inclusive workforces, invigorate civic innovation, and create more just economic systems. Fundamentally, we bring people together to solve complex challenges.

Some of our past projects include the Economic Immigration Lab and the Early Childhood Education Lab. Much like a social innovation lab, the 100-Day Challenge initiative brings people together who share a passion and drive to solve a longstanding problem. PDC acts as a guide through the 100 days as participants define and analyze the problem, develop solutions, and rapidly test those solutions.

Read more on our website: www.ponddeshpande.ca.

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# INTRODUCTION

Stephanie calls herself “one of the lucky ones.”[1] When she started experiencing the symptoms of a heart attack, she recognized them and quickly sought medical help—even though at 43, the possibility of heart disease had been far from her mind.

Stephanie was “lucky” because she knew the signs to watch for, which for many women are subtle. She was also living in Fredericton, where she could easily get to an ER (emergency room) with the medical staff and equipment needed to diagnose and treat her condition.

Many New Brunswickers are not so fortunate. In March 2025, Statistics Canada reported that “the burden of chronic disease” weighs more heavily on Atlantic Canadians compared with their counterparts west of Quebec.

**In New Brunswick, 55% of the population lives with one or more chronic diseases, including cardiovascular disease (CVD) and diabetes[2] while the rate for the rest of Canada is 46%.[3]**

In 2018, one quarter of all deaths in NB were related to cardiovascular causes.[4]

Heart disease and diabetes are two of the most-studied diseases in Canada, **but advances in medical knowledge alone are not enough to lighten the load of chronic disease.** As the Statistics Canada report mentioned above recognizes, social determinants of health—such as gender, geographic location, income, and experiences of racism and historical trauma—create disparities in access to care and affect health outcomes.

Exactly what are the social determinants that make some New Brunswickers “the lucky ones” like Stephanie and others not so “lucky”?

More importantly, how can we address them to lower the rate of CVD and diabetes in New Brunswick?

These are the questions that provoked the i4 Initiative, which included the Cardiovascular & Diabetes Health Rapid Innovation Challenge. The Challenge ran between March 12 and June 11, 2025.

1. Percival, S. (2025, July 7). Love Your Heart. LinkedIn. https://www.linkedin.com/pulse/love-your-heart-steph-percival-qjrjc/?trackingId=Xor4MY0iTye7vRG22NkPBQ%3D%3D
2. Statistics Canada. (2025, March 5). Key findings from the Health of Canadians Report, 2024. https://www150.statcan.gc.ca/n1/daily-quotidien/250305/dq250305a-eng.htm.
3. Service New Brunswick. (n.d.). 2018 annual statistics. Government of New Brunswick. https://www2.snb.ca/content/dam/snb/VitalStatistics-StatistiquesCivil/AnnualStatistics-StatistiquesAnnuels/2018/Table16.pdf
4. Folkins, C. et al. (2025, June). Summary Report: Distribution of Disease Burden and Healthcare Resource Utilization Associated with Diabetes and Cardiovascular Conditions in New Brunswick. NB-IRDT. https://unbscholar.dspace.lib.unb.ca/server/api/core/bitstreams/6e2b355b-0e54-4155-ad3a-7a0aef9e8471/content

Over 100 days, Challenge participants used different tools and frameworks to probe the questions from various angles. They conceptualized potential solutions, keeping in mind the needs of both local communities and the province's health and social systems. Then the PDC team developed those ideas into three prototypes, descriptions of small-scale, rapid experiments to test possible solutions.

The Challenge teams also identified areas where more information is needed before solutions can be developed. To address these knowledge gaps, they proposed three research projects.

One of the prototypes is being further developed as a free program offering in-pharmacy screening for diabetes and cardiovascular disease.

## Purpose of This Report

This document provides a guided tour through the Cardiovascular & Diabetes Health Challenge, which formed part of a multi-partner collaboration within UNB led by the McKenna Institute.

### The report:

- **Explains the origin of the Challenge.**
- **Summarizes research** conducted by DataNB (formerly NB-IRDT, the New Brunswick Institute for Research, Data, and Training) to frame the Challenge.
- **Traces the journey of the Challenge participants,** who worked in three teams to address three different themes.
- **Outlines the concepts** developed by Challenge participants and then refined by the PDC team.
- **Describes the next step:** further development and implementation of a prototype offering free screening for cardiovascular disease and diabetes in select New Brunswick pharmacies.


## Origin of the Challenge

Statistics Canada's annual reporting draws attention to health issues in provincial populations at a high level, but the federal data isn't granular enough for local leaders to act on it.

The University of New Brunswick has called out this deficiency, and they're on a mission to generate provincial data for provincial change. Through their i4 Initiative, they intend to inform, innovate, improve, and implement solutions that will make healthcare more effective and equitable for New Brunswickers.


In this i4 project, the McKenna Institute decided to tackle healthcare gaps in the prevention and treatment of chronic illnesses among women and other underserved populations across the province, as part of a multi-partner collaboration within UNB. This topic aligns well with the provincial government's mandate to increase access to primary care."[5] It also helps advance UNB's Strategic Research Plan, which identifies "healthy and safe communities" as one of five priority research areas[6].

Given the prevalence of CVD and diabetes, it made sense to focus on these two conditions as the starting point. The two illnesses are also often intertwined.[7] For example, diabetes is a contributing factor in 30% of strokes, and people with diabetes have a 300% greater risk of being hospitalized for CVD compared with the general population.[8] Similarly, heart failure can increase a person's likelihood of developing diabetes.

## The i4 process has unfolded in four phases, involving multiple partners:

| Team | Objective | Lead |
|---|---|---|
| 1 **Inform: Data-Driven Insights** | Gather detailed provincial data on the different factors affecting the distribution of CVD and diabetes across New Brunswick so as to identify populations of highest need | DataNB, New Brunswick's provincial data repository, with funding from the Maritime SPOR SUPPORT Unit (MSSU) |
| 2 **Innovate: Rapid Innovation Challenge** | Bring together a diverse group of healthcare leaders, policymakers, and people with lived experience of CVD and diabetes to develop prototypes of innovative interventions, with the aim of overcoming disparities in access to care and health outcomes | PDC |
| 3 4 **Improve & Implement: Funding for real-world impact** | Provide funding to refine and implement the most promising prototypes, helping to close gaps in cardiovascular and diabetes care across NB | UNB |

5. Office of the Premier. (2024, November 13). Mandate letter to the Honourable John Dornan, Minister of Health. Government of New Brunswick. https://www.gnb.ca/en/gov/contacts/members-executive-council/mandates-letters/mandates-dornan.html.
6. University of New Brunswick. (2023). Strategic Research Plan. https://www.unb.ca/research/_assets/documents/vpr/strategic-reseach-plan.pdf
7. Elendu C. et al. (2023). Heart failure and diabetes: Understanding the bidirectional relationship. Medicine, 102(37). https://pmc.ncbi.nlm.nih.gov/articles/PMC10508577/
8. Diabetes Canada. (n.d.). Diabetes in New Brunswick. https://www.diabetes.ca/en-CA/advocacy-policies/advocacy-reports/national-and-provincial-backgrounders/diabetes-in-new-brunswick

# KEY INSIGHTS FROM DATANB

During the first stage of the i4 process, Dr. Chris Folkins and his colleagues used DataNB's rich stores of public data to analyze the distribution of CVD and diabetes across the province. This preliminary work helped identify geographical areas with the greatest need for targeted interventions.

## Research Team

- **Principal Investigator: Dr. Chris Folkins,** Senior Scientist with DataNB.
  Dr. Folkins has a PhD in Pharmacy and is interested in the role pharmacists can play in enhancing patient care and improving healthcare at the system level.
- **Co-investigator: Dr. Ted McDonald.**
  Dr. McDonald is a health economist and the founding director of DataNB.
- **Research Assistant: Jacques Al Alam.**
- **Data Analyst: Jacob Prosser.**

## Research Goals

Dr. Folkins and the research team wanted to discover how CVD and diabetes show up in different parts of the province. They set out to describe how rates of CVD and diabetes vary in relation to geographical location and other factors, such as age, gender, income, and so on. They also wanted to identify patterns linking these sociodemographic factors to use of the healthcare system.

# Methodology

As New Brunswick's provincial data repository, DataNB provides access to large data sets that researchers can link and then use to generate insights into complex issues. All the data comes from public sources, which are usually siloed. By connecting the data sets, researchers can make visible patterns and trends that would otherwise remain hidden.

## For their research into the distribution of CVD and diabetes, Dr. Folkins and the DataNB team examined eight different indicators of disease burden among adults:

- **Disease prevalence** (instances of issues such as hypertension, stroke, and diabetes)
- **Mortality** (deaths among people with CVD/ diabetes)
- **Emergency department (ED) visits and hospital admission rates**
- **Visits to physicians**
- **Use of physician services to manage diabetes**
- **Frequency and results of hemoglobin A1c testing** (a test to monitor blood sugar in pre-diabetic and diabetic patients)
- **Rate of participation in the NB Insulin Pump Program**
- **Usage rate of the Tele-Care 811 provincial health line**

The chart below shows the data sets used and the sociodemographic characteristics considered.[9] Data came from reports issued annually from 2014 to 2022 although not all data sets covered that entire period.

### Data Sets

- Citizen data (basic demographic and geographic data for NB citizens with active provincial Medicare)
- Canadian Chronic Disease Surveillance System
- Vital Statistics
- Horizon and Vitalité Department Data
- Discharge Abstract Data (hospital discharge records)
- NB Physician Billing
- Hemoglobin tests
- NB Insulin Pump Program
- Tele-Care 811
- Social Assistance Data
- Long-Term Care Data
- Permanent Resident Data
- Census

### Sociodemographic Characteristics

- Age category
- History of receiving social assistance payments
- Immigrant status, including country of origin and language fluency
- Rural or urban location
- Attachment to primary care provider
- Household composition
- Travel distance from residence to nearest healthcare centre
- Long-term care client status
- Household income
- Canadian Index of Multiple Deprivation (CIMD) (rating of geographical areas in terms of residential instability, economic dependency, ethno-cultural composition, and situational vulnerability)
- Preferred language (English or French)

9. Folkins, C. et al. (2025), *Distribution of Disease Burden and Healthcare Resource Utilization Associated with Diabetes and Cardiovascular conditions in New Brunswick.* UNB, NB-IRDT, pp. 6-8. https://unbscholar.lib.unb.ca/handle/1882/38320

## Observations

Because many New Brunswick communities are small, the researchers faced challenges in working with data at the community level. In some cases, it was not possible to share information related to sociodemographic characteristics without running the risk of revealing individual identities.

Taking a high-level view, however, the DataNB team was able to expose some noteworthy patterns in the data.

### They noticed some **geographical patterns,** pointing to six provincial hot spots for chronic disease (as shown on the map below):

- **Dalhousie and Minto have the highest prevalence of chronic disease.**
- **Kedgwick and St. Stephen have the highest mortality rates related to CVD and diabetes.**
- **Kedgwick also has the highest rate of ED visits.**
- **Dalhousie, Campbellton, and Edmundston have the highest hospital admission rates.**

**PROVINCIAL HOT SPOTS FOR CHRONIC DISEASE**

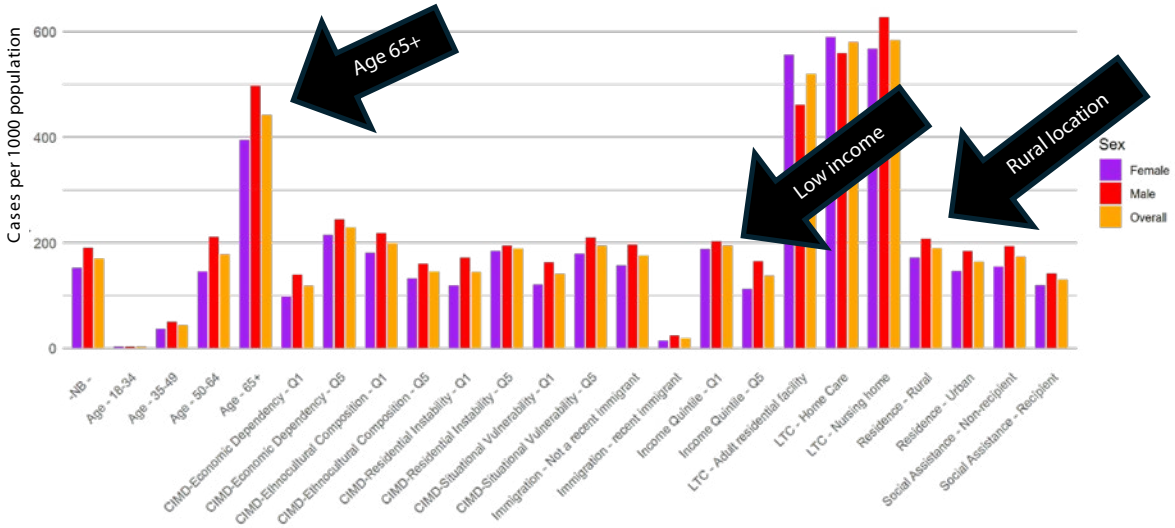

DataNB, "Diabetes and Cardiovascular Disease Across NB in 2018" *Summary Report: Distribution of Disease Burden and Healthcare Resource Utilization Associated with Diabetes and Cardiovascular Conditions in New Brunswick.* June 2025. https://unbscholar.lib.unb.ca/items/c1ddcdf4-384d-4ee3-a19a-ca6efd9c0a00

### Analysis of sociodemographic data for these regions pointed to social patterns that coincided with the heavy disease burden in these regions:

- **An older population**
- **Lack of healthcare services nearby**
- **A population with a lower average income, education, and/or social standing**

## The chart below shows the prevalence of CVD and/or diabetes associated with different sociodemographic characteristics.

Figure 159. Prevalence of multiple chronic conditions (cardiovascular and/or diabetes) by personal characteristics, overall and by sex, 2018 (cases per 1000 population)
(two or more among acute myocardial infarction, heart failure, hypertension, ischemic heart disease, stroke, diabetes)




Folkins, C., Al Alam, J., Prosser, J., & McDonald, T. (2025). *Distribution of disease burden and healthcare resource utilization associated with diabetes and cardiovascular conditions in New Brunswick.* Fredericton, NB: New Brunswick Institute for Research, Data and Training. June 2025. Fig. 159. https://www.unb.ca/datanb/research/publications/_resources/pdf/figures-153-176-cv-and-diabetes-indicators-by-personal-characteristics-and-for-nb-2018.pdf

Researchers also observed **patterns in mortality rates,** which show that many New Brunswickers are dying of chronic diseases they don't know about. About 13% of deaths attributed to CVD and 6% of deaths attributed to diabetes occur among people who haven't been diagnosed with these illnesses.

In addition, they uncovered two **behavioral patterns** regarding people living with diabetes:

- **Diabetic patients with a lower income and a history of social assistance are less likely than others to access financial assistance for an insulin pump through the Insulin Pump Program.**
- **Diabetic patients throughout the province aren't monitoring their blood sugar levels as often as Diabetes Canada's guidelines recommend.**

**Access the full report from the DataNB study here.**
**Download the summary report here.**

# OVERVIEW OF THE CHALLENGE PROCESS

Rapid Innovation Challenges, facilitated by the PDC, follow a proven methodology to spark social innovation.

Within the context of a Rapid Innovation Challenge, social innovation means using a defined methodology to harness collective intelligence and create potential, context-specific solutions that have the potential to be scaled up if they are successful.

It also means working to an intentionally tight deadline. Participants step rapidly through an innovation sprint. In just 100 days, they go from zero to one, from a blank slate to a prototype ready to develop into a real-world intervention.

## A Different Kind of Innovation

Social innovation is the process of developing and putting into practice new ideas, approaches, or collaborations that improve how we as a society address our social challenges. These include housing, healthcare, education, poverty, food security, gender-based and racial violence, and so on.

Industrial innovation tends to focus on creating commercial value by developing new technology and increasing efficiency. In contrast, social innovation aims to create social value—positive, enduring impact for people, communities, and the environment.

**Through social innovation, communities can develop new services, programs, policies, or ways of working together that make social systems more fair, effective, and sustainable.**

A Rapid Innovation Challenge creates the conditions for social innovation to happen in a short period of time. It brings together diverse stakeholders—such as community members, policymakers, entrepreneurs, people with lived experience, academics, and service providers—to co-design practical solutions to complex issues. The goal isn't merely to generate ideas but to quickly test, refine, and mobilize solutions that can create systemic change.

For participants who are used to linear planning and rigid development schedules, the fluid, iterative nature of a Rapid Innovation Challenge can feel messy, awkward, and inefficient. But messiness is part of the creative process. The freedom to generate multiple ideas and reject many of them creates a safe space where team members don't have to worry about making mistakes. Instead of obsessing about producing a perfect idea and a fail-proof workplan, they can focus on examining trial ideas from different perspectives and refining them in response to input from multiple sources.

## What Makes the PDC Method Different

Here are four characteristics that distinguish our approach to catalyzing social innovation:

**Ecosystem connections.** We've developed trusted relationships across multiple sectors, including academia, government, business, and the broader community.

**Systems orientation.** Because we take an ecosystem view of issues, we don't just see part of a system or a single system. We consider the interrelated systems that together weave our social reality. As a result, we generate prototypes that integrate into social structures formed by policy, practice, and economic forces.

**Capacity for mobilization.** With UNB's resources behind us and our entrepreneurial network, we can test innovations locally and mobilize them into broader adoption. We help activate prototypes by connecting them to funding, policymakers, or partner organizations that can champion and implement them. We also showcase emerging innovations by featuring them in events and reports.

**Global networks.** While we innovate to solve New Brunswick problems, we also help take local solutions to the wider world. As members in global associations, we have the social capital to mobilize Atlantic-based solutions nationally and internationally. For example, we're part of WIN-VC (Women and Nonbinary Impact Network for Venture Capital), Social Innovation Canada, and global Deshpande networks.

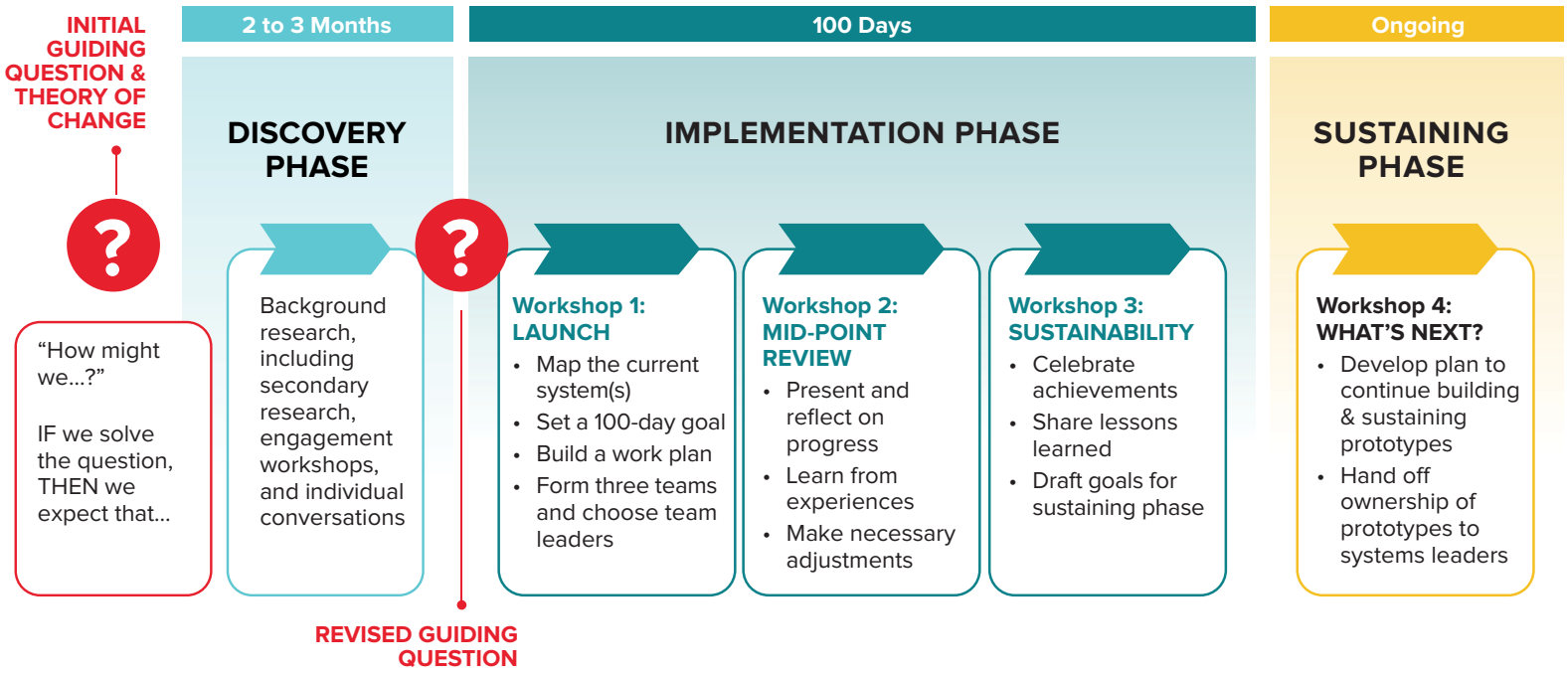
## The Rapid Innovation Challenge Methodology

The key to this model is bringing together stakeholders from various systems, including people with lived experience. When leaders and practitioners with diverse perspectives gather around the same table and engage in hands-on innovation, solutions emerge that are both novel and practical.

Radical collaboration shapes a Rapid Innovation Challenge from the beginning, long before the first workshop with participants. As soon as PDC has been engaged to facilitate a Challenge, the first step is to recruit a System Leaders group and engage with them through an in-depth Discovery phase. Systems leaders generally occupy positions that give them the authority to move prototypes forward.

This team of influential stakeholders from various systems determine the open-ended question that will guide the Challenge and choose three key themes for participants to focus on. You can view a list of System Leaders for the Cardiovascular & Diabetes Health Challenge in Appendix A.

**THE DIAGRAM BELOW TAKES YOU STEP BY STEP THROUGH THE RAPID INNOVATION CHALLENGE METHODOLOGY, DESCRIBING THE ACTIVITIES THAT DRIVE CREATIVITY AND COLLABORATION AT EACH STAGE. FOR A MORE IN-DEPTH EXPLANATION, PLEASE SEE THE NOTES PANEL BELOW THE DIAGRAM.**




**NOTES:**

- **Initial Guiding Question.** This is framed to spark participants' imagination and steer them toward blazing new paths rather than following the trail of conventional problem-solving.

  The question always starts with "How might we..." For the Cardiovascular & Diabetes Health Rapid Innovation Challenge, it was first stated as "How might we improve disparities in cardiovascular health outcomes for females and other underserved populations in NB?"

- **Theory of Change.** This is the logic behind the Guiding Question. It spells out how solving the How Might We question should deliver meaningful, sustainable results.

  The theory of change can be expressed as an If/Then statement. For example: ***IF*** *we address social factors that negatively influence health outcomes for chronic diseasess,* ***and IF*** *we remove barriers to accessing early diagnosis and treatment,* ***THEN*** *we will reduce rates of chronic disease and lower healthcare costs.*

- **Discovery Phase (2 to 3 months pre-launch).** The discovery phase looks different for each challenge. This stage uncovers background knowledge to help participants start exploring the initial Guiding Question. During this stage, Challenge organizers also recruit participants. For the Cardiovascular & Diabetes Health Rapid Innovation Challenge, insights from DataNB's research formed the foundation of the Discovery Phase.

- **Revised Guiding Question.** A thorough Discovery Phase tends to result in rethinking the initial Guiding Question. As new information emerges, the focus of the Guiding Question may shift and its scope narrow.

  For example, the Challenge under discussion began with a question focused just on CVD. As the DataNB research emerged, and as teams began to do their own research, participants discovered that CVD and diabetes are often closely linked. As a result, the Guiding Question expanded to include both chronic diseases.

- **Implementation Phase.** Through 3 onsite workshops, Challenge participants work in teams to examine the How Might We question from multiple perspectives and develop a prototype, an idea for a possible solution. As part of this process, they receive feedback from other teams, and sometimes people from outside the Challenge, so they can refine their prototype.

- **Sustaining Phase.** Through a What's Next? workshop, participants develop an action plan to ensure that their prototype launches successfully and takes root in the community.

# DISCOVERY FINDINGS

In any Rapid Innovation Challenge, the Discovery phase plays a critical role in establishing the project goals and scope and providing an evidence-informed basis for innovation. For the Cardiovascular & Diabetes Health Challenge, insights from DataNB's research formed the first layer in the Discovery foundation.

The PDC team supplemented this quantitative research by consulting with system leaders in academia, not-for-profits, and healthcare. They also interviewed New Brunswick residents with lived experience of receiving cardiovascular and diabetes care.

## Key Themes from Stakeholder Consultations

Leaders from four different organizations participated in the Discovery phase conversations, along with people with lived experience.

- **Heart & Stroke NB**
- **NB Medical Society**
- **YMCA of South Eastern NB**
- **NB Institute of Population Health**
- **People with Lived Experience**

## Through conversations with these advisors, nine key themes emerged, many of which aligned with the preliminary findings from the DataNB research:


**Sex affects outcomes.**
The proportion of people who die from a cardiovascular-related condition without a prior diagnosis varies by sex as well as region. In some parts of the province, women experience higher mortality rates than do men.


**New Brunswickers with chronic disease rely heavily on emergency departments.**
This is especially true for women and for people in rural areas.


**Women and men access cardiovascular and diabetes care differently.**
Women are more likely to access healthcare services in general. Men often delay getting care.


**Physician access reduces the number of physician visits.**
People with a family doctor see physicians less often than do people without a family doctor.


**Physician attachment matters.**
When a diabetes patient has a long-term relationship with their primary care provider or team, they are more likely to access blood testing and other diabetes management services.


**Collaborative care is the future.**
Elsewhere in Canada, integrated, team-based approaches are replacing physician-centric models and community agencies, such as the YMCA, are also filling gaps in care.


**Community-based prevention is needed.** Downstream interventions improve access to clinical and medical care. This must be married with upstream interventions to improve community living conditions.


**Sex affects participation in physical activity.**
Female participation in sports and exercise declines more sharply than does male participation, starting in junior high.


**Diabetes patients aren't participating in blood testing often enough.** Most regions in New Brunswick are falling below the recommended minimum frequency for HbA1c testing (three to six months).

## Lived Experience Interviews

The PDC team interviewed five women from communities across New Brunswick, three anglophones and two francophones.. They ranged in age from 40+ to 70+ and had lived experience with a variety of conditions related to CVD and/or diabetes.

### These conversations revealed the following barriers to accessing timely and appropriate care:

- **Delays in waiting for appointments, referrals, diagnostic tests, and follow-up care**
- **Financial challenges regarding the costs of prescriptions, healthy food, and exercise programs**
- **Transportation issues, especially for those in rural areas**
- **Language barriers, especially for francophones traveling to specialists in Nova Scotia**
- **Stress of balancing family responsibilities with medical appointments and self-management**
- **Discrimination by insurance companies, such as restrictions based on genetic testing**

## System Leaders Meeting

On February 21, 2025, the PDC facilitation team met with system leaders to hear early findings from the DataNB research, presented by Dr. Folkins. The group also heard about the key themes that had surfaced during individual conversations with system leaders.

### THE LEADERS THEN DECIDED ON THREE CRITICAL ELEMENTS NEEDED TO START THE CHALLENGE:

1. **Guiding Question:** How might we improve disparities in cardiovascular health outcomes for females and other underserved populations in NB?

2. **Theory of Change:** IF we prioritize CVD prevention and management for those most impacted (females and other underserved populations), THEN we can address their unique health needs, reduce risks and improve early intervention, LEADING TO better detection, personalized treatment, and improved health management, ULTIMATELY IMPROVING long-term health outcomes, quality of life, and equity across cardiovascular and diabetes care.

3. **Focus Areas** (a specific population for each team to concentrate on):
   - Those who have been diagnosed with diabetes and/or CVD
   - Those who have diabetes and/or CVD but are undiagnosed
   - Women in pregnancy and perimenopause/menopause

# IMPLEMENTATION

Three in-person workshops anchor a Rapid Innovation Challenge: Launch, Midpoint Review, and Sustainability Phase. Each of these meetings gives participants a chance to engage in guided activities so they can explore issues from different angles, generate possible solutions, and stress-test emergent ideas.

## Launch Workshop

On March 12, 2025, the Challenge officially kicked off with an in-person workshop on the UNB campus, and the 100-day clock started ticking. Over two intense days, participants formed teams and learned how to use tools of human-centered design, including journey mapping, Problem Statements and Guiding Questions, and the Systems Transformation Triangle.

The System Leaders also participated in the Launch Workshop, and they continued to serve as advisors for the rest of the Challenge, answering team questions, providing reference material, and helping to evaluate evolving concepts.

### Team Formation

The 16 Challenge participants represented diverse backgrounds, including academia, the Government of New Brunswick, the federal government, healthcare, and consulting. The group also included people with lived experience of CVD and/or diabetes.

To establish context, Dr. Folkins presented early findings from the DataNB research. (The final report on the study was released in June 2025)

**THREE TEAMS THEN FORMED AROUND THE ESTABLISHED FOCUS AREAS:**

- **Team 1: Underserved individuals diagnosed with diabetes and/or CVD**
- **Team 2: Underserved individuals undiagnosed and at risk of diabetes and/or CVD**
- **Team 3: Women at critical life stages (pregnancy and perimenopause/menopause)**

You can view the complete team lists in Appendix A.

## Team Leadership and Support

Each team selected a team lead (or co-leads) and was also paired with a facilitator and designer (a PDC staff member or associate). The two PDC support roles are critical to the Rapid Innovation Challenge methodology:

- The **facilitator** leads teams through hands-on activities during the workshops. Between workshops, they also respond to questions and provide coaching-style guidance. As participants grapple with complex questions and parse research, participants have a guide to help them make sense of what they're learning and challenge their thinking.

- The **designer** helps document and communicate the team's thinking as it evolves, using graphic notetaking to record discussions visually and support collaboration. This ensures continuity between team meetings, enabling teams to keep up the momentum as they develop their ideas.

  During the Cardiovascular & Diabetes Health Challenge, PDC designers captured team discussions (from meetings and email threads) and resource materials in the Notion platform. This allowed teams to share information seamlessly and access it all in one place.

## Journey Mapping

Each team imagined a representative patient and the different social determinants of health shaping their life experience. For example, Team 1 imagined a 60-year-old woman living in St. Stephen and diagnosed with CVD in the ER.

Each team then envisioned the patient's health journey, including all the different points at which they'd connect with the health system and other social systems. They mapped these interactions visually, noting positive points in the process as well as barriers, gaps, and detours.

## Problem Definition

Teams then zeroed in on the issue they were trying to solve and formulated a detailed problem statement. The PDC facilitators provided a template that enabled participants to avoid one of the most common traps of social innovation: describing the problem imprecisely or in a way that short-circuits creative thinking.

The next step was for teams to put themselves into a solution-finding mindset by asking an open-ended question (Guiding Question), phrased as "How might we...?" A strong "How might we" question sets a team up to explore a problem collaboratively, with curiosity and a willingness to be surprised.

**The chart below shows the problem statements and Guiding Questions that each team arrived at by the end of the Launch workshop.**

## Team 1: Underserved individuals diagnosed with diabetes and/or CVD

### Problem statement

*In the context of trying to...* improve ongoing care for cardio/metabolic health
*We have...* systemic, personal, societal, and demographic issues
*This matters...* to the patient, providers, and the healthcare system because it will improve healthcare access.
*We will know we're making progress by...*

- Practitioner visits
- Hospital stays
- Inequalities of interventions

**How might we...** increase enrolment and tailor cardiac rehabilitation to ensure equitable access?

## Team 2: Underserved individuals undiagnosed and at risk of diabetes and CVD

### Problem statement

*In the context of trying to...*

- Decrease the risk of CVD
- Decrease the number of CV events among undiagnosed individuals
- Increase the number of CV risk diagnoses

*We have...*

- Cardio rehab
- A need to better understand the research

*This matters to...*

- Cardio patients
- All of us

*We will know we're making progress by...*

- Knowledge is power
- Cardiovascular events suck

**How might we...** support underserved individuals undiagnosed at risk of diabetes & CVD?

## Team 3: Women at critical life stages (pregnancy, post-partum, perimenopause, and menopause)

### Problem statement

*In the context of trying to...* improve cardiovascular health outcomes for women at critical life stages
*We have...* neglected to provide women with the continuing care required to prevent severe cardiovascular outcomes once they've been identified as high-risk following pregnancy
*This matters...* to women, their families, our society, and the outcomes of our province because women are an essential part of our society and economy who deserve the opportunity to live long and fulfilling lives
*We will know we're making progress by...* identifying a clear pathway to care that ensures screening, follow-up and preventative care for women who are at higher risk of CVD

**How might we...** increase the focus across the healthcare system on improving outcomes for women's heart health, particularly for women who have been diagnosed with gestational hypertensive disorders and/or gestational diabetes during pregnancy?

## Personas

Journey mapping is an essential tool for social innovation because it enables people with different perspectives to view a system from the point of view of a person using it. To make the teams' journey maps as detailed and true to the user's experience as possible, on the second day of the Launch workshop, participants learned how to develop personas.

A persona is a fictional character representing one of the real people social innovation is meant to serve. Personas put names, faces, and personal histories to anonymous users. They enable innovators to stay human-centered as they consider the complex, impersonal machinery of societal structures and social systems.

Below is an example of a persona representing one of the underdiagnosed groups of New Brunswickers, a woman in postpartum.

### User Persona: Becca Martin

**Bio**

**Name:** Becca Martin

**About:** 32-year-old mother, who gave birth to her second child, a girl, three weeks ago. She experienced gestational diabetes during her pregnancy, but her symptoms have since disappeared.

Becca has one other child, a 7-year-old boy, and lives in Caraquet with her husband, Bart. Together, Becca and Bart run a landscaping business. Becca's family lives in Ontario.

**Likes**

- Spending time with her children and family
- Baking
- Watching movies
- Playing darts
- Reading romance novels
- Scrapbooking
- Having a spa night with her girlfriends
- Date night with Bart at their favourite pub
- Spending time in the outdoors

**Dislikes**

- Cooking
- Bookkeeping
- Conflicts with difficult clients
- Housework
- Parent-teacher meetings
- Spending the weekend with her in-laws
- Team sports

**Goals**

- Return to her pre-pregnancy weight
- Get her baby to sleep through the night
- Find a part-time employee to handle admin tasks
- Help her son improve his reading
- Take a family vacation to Disney World

**Frustrations**

- Fatigue
- Cooking all the family meals
- Lack of time for self-care, including medical appointments
- Rising cost of living, especially groceries
- Stress of balancing business responsibilities with family responsibilities
- Feeling isolated
- High costs of childcare (juggling childcare with business tasks)

**Needs**

- Food
- Shelter
- Rest
- Physical activity
- Social connection
- Emotional support

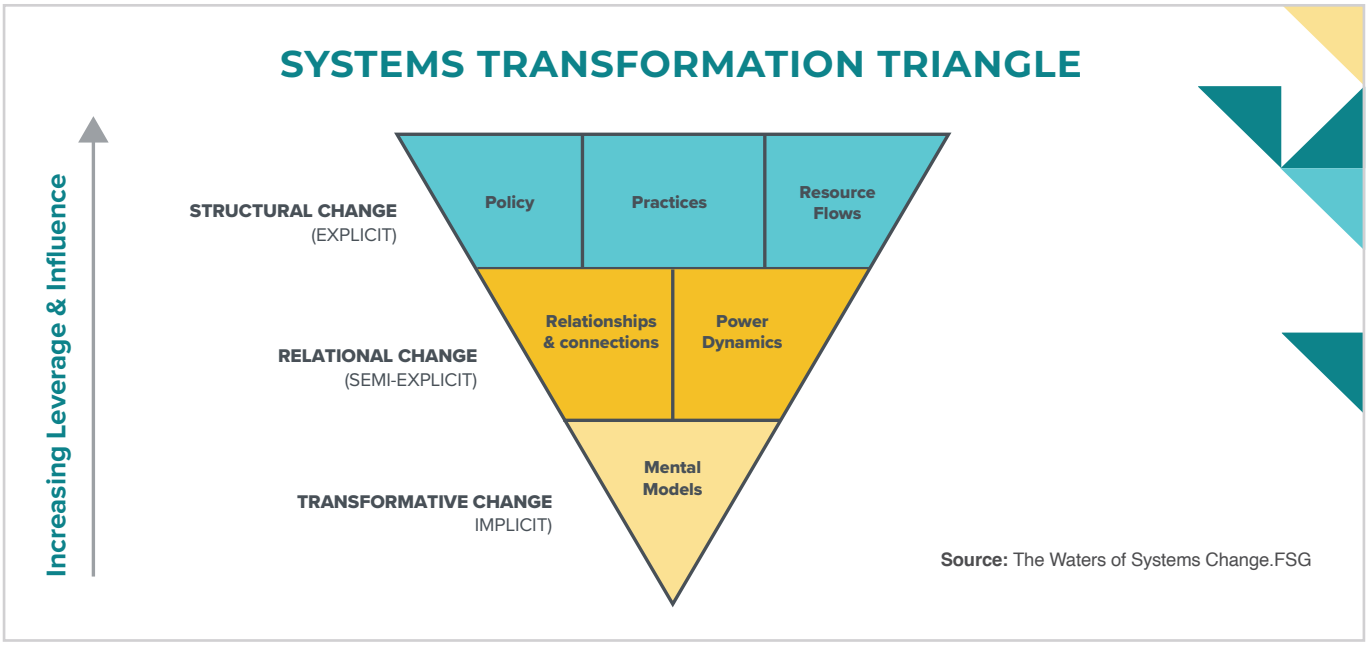
**Barriers:**

- Heavy burden of family responsibilities
- High expectations of family and society
- Perfectionism
- Lack of support at home and in the business
- Isolation from family

## Systems Transformation Triangle

The final tool participants learned about during the Launch workshop was the Systems Transformation Triangle shown below. The Triangle identifies the six different kinds of conditions innovators must consider as they strive to make systemic change.

Teams used this diagram to describe the different aspects of their problem they might need to consider when developing potential solutions. The Triangle also served as a touchstone throughout the Challenge as teams used it to evaluate the feasibility of possible interventions.




## Midpoint Review

Following the Launch workshop, teams met virtually each week to continue exploring the problem and brainstorming solutions. They investigated published research, spoke with healthcare practitioners, and interviewed people with lived experience of chronic disease.

### AS THE TEAMS DOVE DEEPER INTO THEIR FOCUS AREA, THEY REFINED THEIR APPROACH:

- **Team 1** discovered that follow-up after a diagnosis of CVDs is not equitable across the province. They decided to develop solutions to give more New Brunswickers access to cardiac rehabilitation.
- **Team 2** learned that people are falling through the cracks of the health system and dying of undiagnosed CVD and/or diabetes. They chose to create solutions to expand awareness and access to screening.
- **Team 3** noticed that gestational hypertension and diabetes are on the rise in NB and that both conditions increase health risks over the long term. Yet support for women after pregnancy is lacking. They determined they would design solutions to fill gaps in research, prevention programs, and diagnosis.

**People with lived experience brought vital insights about inequities in healthcare. Partway through the Challenge, Stephanie Percival (Team 3) experienced a mild heart attack. Her journey from diagnosis to recovery made her realize just how ill-equipped the system is to deal with CVD in women.**

**In a blog on LinkedIn, Percival writes that her heart attack would have been easy to ignore "Because the fact is, for women especially, heart attacks are not always the dramatic Hollywood events we tend to assume they are and, for women especially, we're accustomed to carrying on with our pain.... If I hadn't known the symptoms, I might have taken a nap, And I likely would have woken up the next day feeling fine, maybe a bit under the weather. And the issue in my heart would never have been diagnosed or treated."[10]**

On May 7, 2025, the teams reconvened to review their progress as a cohort. This was an opportunity for them to compare notes, share resources, and exchange feedback.

Each team presented a preliminary prototype, and the other teams raised questions and suggested modifications.

Then it was back to the drawing table. For another month, the teams continued their weekly meetings as they evolved their rough idea for a prototype into a practical plan for a real-world intervention.

## Sustainability Workshop

At this final workshop of the Implementation phase, each team presented their final prototype. Below is a summary of their proposed solutions, all of them locally designed solutions with the potential to improve the health and well-being of New Brunswickers.

### Team 1: Underserved individuals diagnosed with diabetes and/or CVD

#### Goal

Improve access to care and quality of care for patients eligible for cardiac rehabilitation programs across NB

#### Situation

- Only 50% of people admitted to hospital for a cardiovascular condition are referred to cardiac rehab, and according to testimony from the team, only about 50% of those people register.
- Rehab programs are more readily available in urban areas than in rural areas.
- Current programs impart information and don't focus on changing behavior.
- Barriers to accessing rehab: family responsibilities (especially for women), financial responsibilities, dislike for exercise, transportation challenges, mental health concerns, lack of understanding about the value of the program, limited availability of programs, timing of programs.

10. See footnote 1.

- Barriers to completing rehab: all of the above, plus worsening health, loss of motivation, lack of social support, and stigma around exercise or health status
- Optimizing medication (often for diabetes as well as CVD) is an important part of cardiac rehab, but patients also encounter challenges with this: lack of coverage, fragmented care, limits on the role of pharmacists, lack of access to specialists in rural areas

### Interventions

1. **PRIORITY:** Cardiac navigators to ensure that all patients get referred to rehab
2. Referral through pharmacy care clinics
3. Review of current rehab programs to see whether they might benefit from evidence-based approaches to support behaviour change
4. Her Healthy Heart study to examine women's cardiovascular health in NB
5. Review barriers to accessing cardiovascular and Type 2 diabetes therapies

## Team 2: Underserved individuals undiagnosed and at risk of diabetes and CVD

### Goals

- Increase awareness of women-specific risk factors for CVD
- Identify at-risk and undiagnosed women who are 40+ through screening
- Guide women who are unattached to a physician to existing pathways to resources, programs, information, or care

### Situation

- Only 11% of women in Canada can name one or more of women's specific risk factors for heart conditions and stroke
- 90,000 New Brunswickers do not have a primary care provider
- Transportation challenges, mental health concerns, lack of understanding about the value of the program, limited availability of programs, timing of programs

### Intervention

Screening initiative for women 40+ that provides education and awareness around women-specific risk factors, identifies at-risk individuals, and provides women who are unattached to a physician with pathways to existing resources, care, information, or programs:

- Where—local pharmacies, clinics, and other community locations (e.g., wellness fairs)
- What—basic screening (e.g., blood test, questionnaire) to enable early diagnosis
- Who—screening done by a pharmacist, nurse practitioner, or other health professional
- How—series of pre-screening interactions to build awareness and trust

## Team 3: Women at critical life stages (pregnancy and perimenopause/menopause)

### Goal

Improve outcomes for women's heart health, especially for women who have been diagnosed with hypertension or diabetes during pregnancy

### Situation

- Hypertensive pregnancy disorders (HPD) are increasing in NB; the risk of developing a cardiovascular disorder doubles for someone who has been diagnosed with HPD
- 50% of women who are diagnosed with gestational diabetes are at risk of developing Type 2 diabetes
- Healthcare professionals tend to focus on the baby and assume the mother will be fine
- Gaps in care: lack of resources, lack of awareness and prevention, lack of access to primary care, lack of data specific to NB

### Interventions

- Research study examining ways to improve postpartum follow-up for women who have been diagnosed with cardiovascular or diabetes complications during pregnancy
- Connect to national initiatives and expertise focused on prevention and empowerment, such as the Cardio Prevent Program at the Canadian Women's Heart Health Centre (University of Ottawa Heart Institute) and JumpIn for Heart Health
- Offer a better continuum of care to women postpartum and beyond; identify natural care points in the system where routine screenings could be done, such as after childbirth or through the NB Healthy Families, Happy Babies program

# PROTOTYPES

By addressing gaps in research, diagnosis, and care, the three teams produced several innovative ideas. Following the 100 days of the Challenge, PDC and the McKenna Institute developed these into three prototypes:

- **Free in-pharmacy screening for diabetes and CVD**
- **Program promoting women's cardiovascular health**
- **Cardiac peer navigator program**

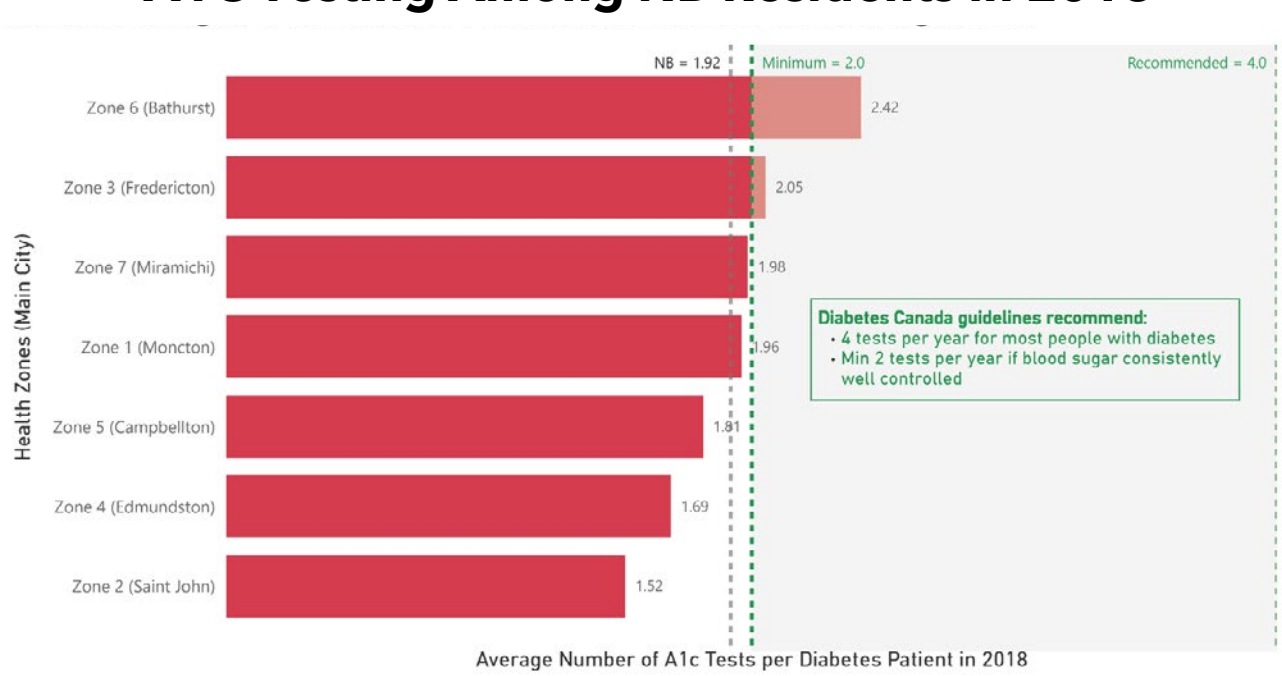
It was agreed that all of the prototypes have strong potential to improve the health and well-being of New Brunswickers. UNB is currently considering next steps for the first prototype, including the possibility of developing it into a multi-year pilot project across multiple sites.

The sections below provide the rationale for each prototype and a brief description of the proposed solution.

## Prototype 1: Free In-Pharmacy Screening for Diabetes and CVD

### Rationale:

Diabetes Canada recommends that people living with diabetes monitor their blood sugar levels through A1c testing[11] every three to six months, or four times a year.[12] On average, New Brunswickers with diabetes are testing their A1c levels only once or twice a year. As the graph below shows, this lag is happening across all regions of the province.[13]




Blood Sugar Monitoring and Glycemic Control (2018). See footnote 4.

11. While at-home testing measures blood sugar in the moment, the A1c test measures the average blood sugar levels over the past three months.
12. Diabetes Canada: Clinical practice guidelines. Diabetes Canada | Clinical Practice Guidelines. (n.d.). https://guidelines.diabetes.ca/cpg/chapter9
13. See footnote 9. |

This low compliance rate poses a double problem because poorly managed diabetes increases the likelihood of CVD, which is already a concern for any diabetes patient.[14]

Currently, A1c testing is available for free with a referral from a family doctor or at a walk-in clinic. For patients who want the convenience of doing the test at a pharmacy or at home, the cost ranges from $25 (onsite at a pharmacy) to $50-250 (home kit).

Both of these options present barriers for patients. On the one hand, a visit to a family doctor or walk-in clinic requires time and access to transportation. On the other hand, getting a pharmacy or home kit costs money.

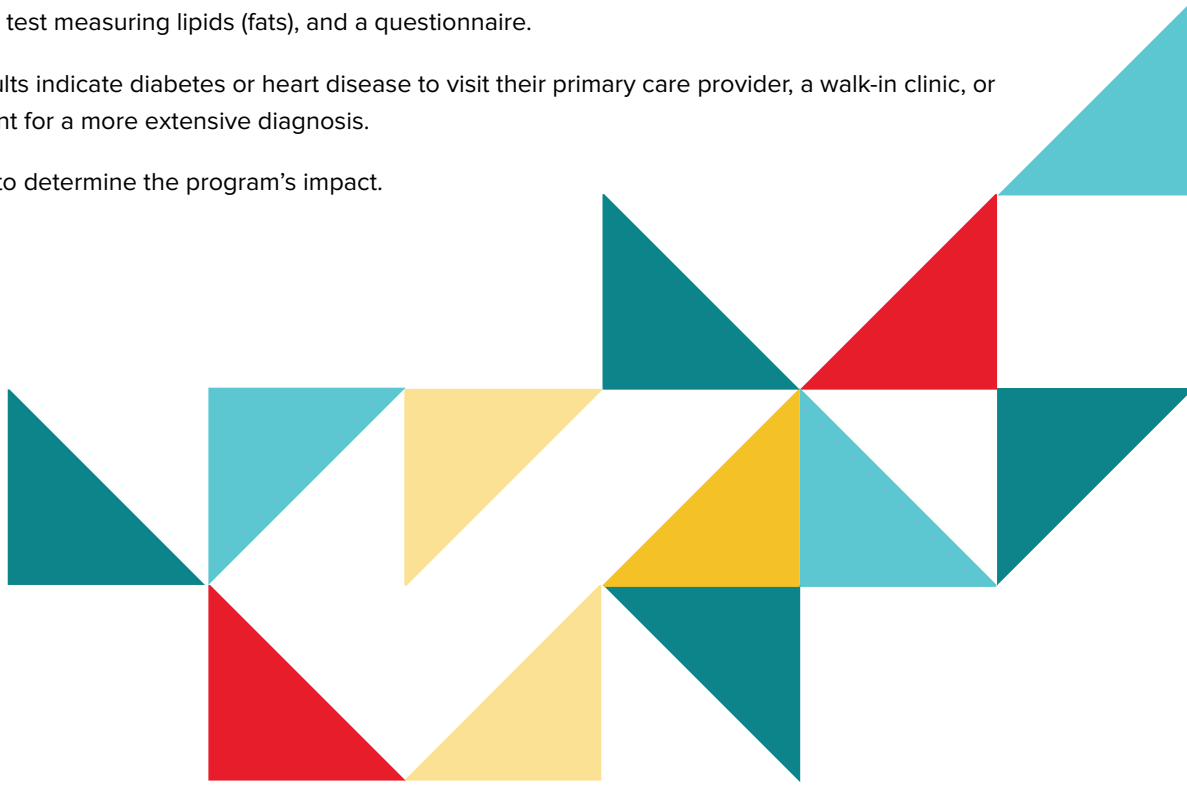
Making testing free and available in a convenient location should enable more New Brunswickers to identify health risks at an early stage, before they require costly treatment.

## Description:

A free testing program will be delivered through select pharmacies located in areas of the province with high rates of multiple chronic conditions.

### THE NEW TESTING PROGRAM WILL:

- Start with a public education campaign to raise awareness about the importance of monitoring for diabetes and CVD.
- Provide free A1c testing through various pharmacy sites.
- Include with the A1c testing a simple diagnostic for CVD, the Framingham Risk Profile, which includes a blood pressure reading, a blood test measuring lipids (fats), and a questionnaire.
- Refer patients whose results indicate diabetes or heart disease to visit their primary care provider, a walk-in clinic, or the emergency department for a more extensive diagnosis.
- Collect and analyze data to determine the program's impact.



14. Ahmad, A., Lim, LL., Morieri, M.L. et al. Precision prognostics for cardiovascular disease in Type 2 diabetes: a systematic review and meta-analysis. Commun Med 4, 11 (2024). https://doi.org/10.1038/s43856-023-00429-z; Damaskos C, Garmpis N, Kollia P, Mitsiopoulos G, Barlampa D, Drosos A, Patsouras A, Gravvanis N, Antoniou V, Litos A, Diamantis E. Assessing Cardiovascular Risk in Patients with Diabetes: An Update. Curr Cardiol Rev. 2020;16(4):266-274. doi: 10.2174/1573403X15666191111123622. PMID: 31713488; PMCID: PMC7903509.

## Prototype 2: Program Promoting Women's Cardiovascular Health

### Rationale:

CVD is the number one cause of premature death in women across the country[15], yet many women are unaware of the risk and uninformed about symptoms. As a result, many women with CVD go undiagnosed until the disease is advanced and the consequences severe.

By addressing gaps in the care pathway for women at risk of CVD, this prototype should facilitate early diagnosis, improving health outcomes and avoiding expensive interventions.

### Description:

Heartbeat NB: Women's Health in Focus will raise the profile of women's cardiovascular health in NB and improve health outcomes for women, especially those going through pregnancy, post-partum, and the menopause transition.

#### THROUGH THREE PHASES, THE PROJECT WILL:

- **Build local expertise**—A learning event will bring experts from the University of Ottawa Heart Health Institute to share knowledge and leading practices.
- **Strengthen connections among service providers and community partners**—This will involve mapping the ecosystem of organizations that support women's heart health. The map will provide a navigation aid for women and will identify gaps to address.
- **Raise awareness among the general population**—The main educational tool will be a video of interviews with women who have survived a cardiac event.

15. Jaffer, S., et al., (Oct. 2020). The Canadian Women's Heart Health Alliance Atlas on the epidemiology, diagnosis, and management of cardiovascular disease in women-Chapter 2: Scope of the problem. CJC open. https://pmc.ncbi.nlm.nih.gov/articles/PMC7801195/?; GNB. (n.d.-c). https://www2.gnb.ca/content/dam/gnb/Departments/h-s/pdf/en/Publications/Health_Indicators3.pdf

# Prototype 3: Cardiac Peer Navigator Program

## Rationale:

Being hospitalized for a cardiac event can be destabilizing. Upon discharge, patients must grapple with a scary diagnosis that often causes anxiety. They must also adapt to new medications, a new diet, and a new exercise regime.

Facing such changes, many patients become confused and overwhelmed, and one quarter of patients who suffer a heart attack find themselves in the hospital again within 90 days of the incident. Re-admission is costly to the healthcare system, and second heart attacks within that 90-day window correlate with nearly a 50% chance of death within five years.[16]

Cardiac rehabilitation programs play a critical role in helping cardiac patients through a challenging transition period. However, challenge participants testified that only about half of cardiac patients leaving New Brunswick hospitals get referred to rehab, and that only half of those register for a program.

Two groups that are falling through the cracks are women and people living in rural communities. Women could benefit from extra support because their condition is often not well understood, and they tend to shoulder a heavy burden of family responsibilities. Rural New Brunswickers are disadvantaged because most rehab programs are available only in urban areas.

Providing access to personalized support should help prevent repeat cardiac events and relieve pressure on emergency rooms and hospitals.

## Description:

A bilingual Cardiac Peer Navigator Program will help more cardiovascular patients access life-saving care following a hospital stay. Health navigator programs already exist (for Indigenous patients and oncology patients, for example) and can serve as models as this prototype is developed and tested.

### A NETWORK OF TRAINED, PAID NAVIGATORS FOR CARDIAC PATIENTS WILL:

- **Encourage patients to access cardio rehab,** either locally or online, and stick with it.
- **Help patients find their way to the healthcare resources** they need and advocate for themselves.
- **Coordinate with different healthcare providers,** such as physicians, nurses, physiotherapists, and pharmacists.
- **Connect patients with community resources** to bolster their physical and mental well-being, such as support groups, exercise groups and classes, cooking classes, social clubs, and so on.

16. American Heart Association. (2024). Life after a heart attack. www.heart.org. https://www.heart.org/en/health-topics/heart-attack/life-after-a-heart-attack?

# PROPOSED RESEARCH PROJECTS

A Rapid Innovation Challenge focuses on pragmatic solutions—the process moves swiftly from framing a problem to designing practical interventions that accelerate system change. In some cases, however, the first step in an intervention is to gather more information. In such situations, the risk of basing a solution on flawed assumptions overrides the usual benefits of taking immediate action.

The Cardiovascular & Diabetes Health Rapid Innovation Challenge revealed three pressing problems that require further discovery before prototypes can be developed:

## 1. Low Uptake of the NB Insulin Pump Program (NB-IPP)

New Brunswick has the highest rate of diabetes in Canada, so optimizing diabetes care is a priority for the health system. When patients have trouble managing their diet and insulin injections, their treatment escalates, and they may end up in the ER or hospital.

For someone who requires regular doses of insulin, an insulin pump can improve their health and overall quality of life. Traditional treatment requires manual injections multiple times a day, but a pump is a wearable device that delivers a continuous flow of medication.

Recognizing that equipment costs can create barriers for some New Brunswickers, the Government of NB provides financial aid through the New Brunswick Insulin Pump Program (NB-IPP). However, the program is underused—especially by New Brunswickers who are socio-economically disadvantaged. In other words, the people for whom the program is designed are the least likely people to use it.

**To address this health equity issue, the proposed project will:**

- Identify barriers to learning about the NB-IPP, enrolling in it, and using it over the long term
- Develop evidence-informed recommendations to improve uptake
- Assess the cost implications of increasing uptake among underserved populations

## 2. Women's Cardiovascular Health at High-risk Life Stages

CVD is a leading cause of death for women, and research has shown that women are at risk of developing heart issues at four critical stages of their lives: pregnancy,[17] postpartum, perimenopause, and menopause.[18]

Given that gestational diabetes is on the rise in NB,[19] and given the province's ageing population, the state of women's cardiovascular health has significant implications for the province's health and social systems. Currently, however, little is known about risk factors, women's experiences receiving care, and effective diagnosis and treatment options.

**To fill in these knowledge gaps, the proposed project will:**

- Analyze regional and demographic trends in women's cardiovascular health
- Examine leading practices for education, diagnosis, and treatment options tailored to women
- Develop evidence-informed recommendations for increasing awareness and improving health outcomes for women during the four critical life stages

## 3. Mortality Among the Undiagnosed

According to DataNB,'s report on the distribution of chronic disease in NB, in 2018, 13% of deaths attributed to CVD and 6% of deaths attributed to diabetes happened among people who had not been diagnosed with the condition that killed them.

Why are so many New Brunswickers suffering from undetected chronic disease? Answering that question could help develop preventive measures to address CVD and diabetes in the early stages, before they become a matter of life or death.

**To lay the foundation for future interventions, proposed research will:**

- Analyze the backgrounds and characteristics of people who die with undiagnosed CVD and/or diabetes
- Investigate factors that may be hindering or enabling diagnosis
- Develop evidence-informed recommendations to enable more New Brunswickers to receive a timely, accurate diagnosis of CVD and/or diabetes

17. O'Kelly, A. C. et al., (2022). Pregnancy and reproductive risk factors for cardiovascular disease in women. Circulation Research, 130(4), 652–672. https://doi.org/10.1161/circresaha.121.319895
18. Ryczkowska, K. et al. (2022, December 10). Menopause and women's cardiovascular health: Is it really an obvious relationship? Archives of Medical Science: AMS. https://pmc.ncbi.nlm.nih.gov/articles/PMC10074318/
19. Perinatal Health Profile 2018-2023. New Brunswick Perinatal Health Program. Moncton, NB, 2024. https://horizonnb.ca/wp-content/uploads/2024/07/Perinatal-Health-Profile-2018-2023-1.pdf

# WHAT'S NEXT? WORKSHOP

On December 10, 2025, Challenge participants and system leaders gathered for a final meeting to discuss next steps on the work they'd begun during the 100-day design process.

Staff from the PDC and the McKenna Institute described the three final prototypes and research projects, which they'd refined together.

This work will continue through a multi-partner collaboration within UNB.

# CONTINUING THE CONVERSATION

The Cardiovascular and Diabetes Health Rapid Innovation Challenge is the third social innovation challenge led by PDC and its most prolific so far. At the 100-day mark, some teams had generated not just one prototype but two or three.

This abundance of ideas enabled PDC and the McKenna Institute to select, compile, and refine rough concepts into six targeted, doable initiatives—one of which is already on the path to implementation.

This is what accelerating system change in New Brunswick looks like. When you bring together stakeholders with different perspectives, provide the right tools, and facilitate intentional conversations, progress becomes possible, one practical step at a time.

> **As we work to reduce chronic disease in New Brunswick, our greatest resource is our people. The collaboration among multiple centres and institutes at UNB including PDC, the McKenna Institute, and Data NB has shown how much we can achieve when we purposefully break down siloes and tap into local resources.**

We hope that the connections and discussions ignited during the Challenge will carry on, and we invite you to contribute to that ongoing conversation. One opportunity will be the upcoming showcase on the Cardiovascular and Diabetes Health Rapid Innovation Challenge. To register for this virtual event, please sign up for the PDC newsletter for more information.

# Appendix A: Challenge Participants

# Appendix A: Challenge Participants

A total of 30 people participated in the Challenge, including system leaders, participants, and facilitators and designers. Together, these people represented a wide range of stakeholders from healthcare, industry, academia, not-for-profits, and the population of people with lived experience of CVD and/or diabetes.

## System leaders

System leaders came from the following organizations:

| |
|---|
| NB Pharmacists Association |
| Heart & Stroke Foundation |
| Can Health |
| UNB, Institute of Population Health |
| UNB, DataNB |
| Université de Moncton |
| YMCA Saint John |
| McKenna Institute |
| NB Medical Society |
| NB Physiotherapy Association |
| Shoppers Drug Mart |
| Research NB |

## Team 1: Underserved individuals diagnosed with CVD and/or diabetes

| | |
|---|---|
| Joel Mazerolle (Co-lead) | Boehringer Ingelheim Canada Ltd |
| Dr. Krystyna Edwards-Lee (Co-lead) | New Brunswick Heart Centre |
| Dana El-Mughayyar | New Brunswick Heart Centre |
| Dr. Stephan Dombrowski | UNB, Faculty of Kinesiology |
| Chris Roberts | YMCA Southwestern New Brunswick |
| Dr. Myles O'Brien | Centre de formation médicale du Nouveau-Brunswick |
| Vanessa Paesani (Facilitator) | PDC |
| Esther Ibang (Designer) | PDC |

## Team 2: Underserved individuals with undiagnosed CVD and/or diabetes

| | |
|---|---|
| Sam Lanctin (Co-Lead) | Sam Lanctin Consultant |
| Madeline E. Shivgulam (Co-Lead) | Centre de formation médicale du Nouveau-Brunswick |
| Mike Reithmeier | McKenna Institute |
| Dr. Yuliia Bosova | Internationally trained physician |
| Dr. Negar Rezaei | Government of NB |
| Melanie McCarthy | Person With Lived Experience |
| Deborah (Debbie) McCormack, RN | Senior Advocate |
| Ivan Okello (Facilitator) | PDC Associate |
| Courtney Ivey (Designer) | PDC Associate |

## Team 3: Women at critical life stages (pregnancy and perimenopause/menopause)

| | |
|---|---|
| Stephanie Percival (Lead) | Government of Canada |
| Dr. Maya Laham | Université de Montréal |
| Nathalie LeBlanc-Boswell | Department of Health |
| Dr. Teri Emrich | Government of NB |
| Josée Rioux-Walker | PDC Associate |
| Vincent-Luc Brouillard | PDC Associate |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