Diabetes Action Canada
Preventing complications. Transforming lives.

Action diabète Canada
Prévenir les complications. Transformer les vies.

DIABETES ACTION CANADA ANNUAL REPORT

2017-2018

Submitted to CIHR June 15th, 2018

Strategy for Patient-Oriented Research
Stratégie de recherche axée sur le patient
SPOR SRAP
Putting Patients First
Le patient d'abord

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SPOR Networks – Annual Report: April 1, 2017 – March 31, 2018

Introduction

This is your guide to use in preparing your Annual Report, to be completed no later than June 15, 2018. This template is intended to provide consistent documentation of the progress towards meeting goals, milestones, and expected results.

The information provided in this report will be used to:

- Inform decisions regarding funding conditions of the grant, including its funding level and duration;
- Inform CIHR reporting on the aggregate results of the SPOR investment to federal decision-makers;
- Assist in communicating progress and results to stakeholders; and
- Support the federal evaluation of SPOR.

Reporting focuses on assessing progress towards the achievement of identified objectives, outcomes and impacts. CIHR, like other research funding organizations, seeks to demonstrate the value-added of its research investments and the return on those investments. High quality reporting is a critical input to these ends. Please be specific in your written report and complete all questions asked. Please include pertinent contextual information that will help situate your progress, especially changes in context, challenges, or obstacles that have occurred since your application.

GENERAL INFORMATION

Please select the Network for which this report is being completed.

Diabetes Action Canada

Who prepared this report?

Please provide the contact information of the person responsible for this report.

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1. EXECUTIVE SUMMARY

This section is intended to provide a description of the progress and accomplishments of your Network during the reporting period.

PROGRESS TOWARD NETWORK OBJECTIVES

1.1 – In the space below, please include a 1-2 page summary outlining the following:

- Context of the Network during the reporting period
- Summary of key accomplishments of the Network over the reporting period, including progress made in the implementation of your research program
- Challenges, opportunities and course corrections
- Focus for the upcoming year

Diabetes Action Canada is emerging as a catalyst research consortium focused on scaling-up effective health care solutions that directly improve outcomes for people living with diabetes. We are addressing the most important challenges articulated by individuals with experiential knowledge of the key barriers to prevention and treatment of complications associated with both Type 1 and 2 diabetes. Our Mission is to develop patient- and research-informed innovations in equitable health care delivery designed to prevent diabetes and its related complications and to achieve the Quadruple Aim goals (improve: patient experience; population outcomes; health professional experience; health system cost). We strategically partner with patients, charitable organizations, private industry, government and policy makers to achieve our Mission.

Diabetes Action Canada has organized its research activities into ten Programs. Six are Specific Research Goal-directed Programs: Diabetic Retinopathy Screening; Indigenous Peoples Health; Innovations in Type-1 Diabetes; Digital Health for Diabetes Research and Care; Foot Care to Prevent Amputations; and, Aging, Community and Population Health. Four are Enabling Goal-directed Research Programs: Patient Engagement; Training and Mentoring; Knowledge Translation; and, Sex and Gender. As part of a SPOR Network, each Program endeavors to learn from the patient experience and engage patients in developing and studying customized solutions for the delivery of timely and effective care related to diabetes and its complications. These Programs manage projects across the country and directly address the concerns articulated by individuals living with diabetes. In addition, Diabetes Action Canada has a mandate to improve access to health care solutions and reduce the inequities in health-care delivery among vulnerable and underserved areas, including our Indigenous Communities, to directly address the health of these at-risk populations. Therefore, a majority of our projects focus on the study of scaling up programs that are innovative in their approach to increase accessibility of diabetes care to these high needs groups.

After two years in operation, Diabetes Action Canada is already seeing meaningful contribution to preventing diabetes complications (please see **Appendix 1** for a complete progress report of all research projects). From the outset, it was clear that our Network must have a comprehensive digital health strategy. Since our last report, we have designed and implemented a pan-Canadian Proof-of-Concept Diabetes Repository of health data obtained from primary care electronic medical records of patients with diabetes from across Canada. In collaboration with the Canadian Primary Care Sentinel Surveillance Network (http://cpcssn.ca/), Dr. Michelle Greiver (University of Toronto) leads this project. Comprehensive information about patients with Type 1 and Type 2 Diabetes (T1D, T2D) are downloaded from primary care practices in Ontario and Alberta (Quebec and Newfoundland to follow) in an

encrypted and de-identified format into a data safe haven under supervision of expert data management staff. Diabetes Action Canada researchers have access to these data to conduct secondary use population based studies to address key questions about prevention of diabetes complications and health system performance. To ensure that the use of the diabetes repository data aligns with the vision and mission of Diabetes Action Canada and that research studies have received appropriate ethical reviews, a Research Governing Committee has been established under the guidance of Dr. Don Willison, Digital Health co-Investigator (University of Toronto). This is an unprecedented level of patient-oriented governance, as half of the committee members are persons living with diabetes and the other half are community-based primary care physicians and researchers. This novel approach will draw on the experiential knowledge of its members to ensure all the patient-oriented research will directly contribute to improving health outcomes for persons living with diabetes.

As part of our digital health strategy we are exploring opportunities to link patients with their personal health data, and enable health professionals to reach out proactively for preventative and follow-up care. Drs. Joe Cafazzo and Shivani Goyal (University Health Network and University of Toronto) are bridging this gap with innovations in digital communication. Their mobile app, called *bant* (after Sir Frederick Banting), originally designed for assisting the glucose monitoring in children with T1D, has evolved into a powerful tool assisting the self-management of individuals with T1D and T2D. In partnership with eHealth Innovation at the University Health Network (UHN), we are expanding *bant* beyond a self-management tool, and towards a portal for patient-driven diabetes self-care, where individuals can: 1) access other sources of related health information, such as lab results, through integration with provincial data repositories; 2) securely communicate with their providers at critical moments; and, 3) easily engage in cutting-edge research initiatives across the country. To achieve the latter, we are working to develop an e-Consent platform, and framework to enable patients to view relevant research studies, opt-in, consent, and control which data types are shared directly on their mobile device. The *bant* mobile application links all our digital health initiatives and its functionality will expand based on patient articulated needs to enhance education, community building and the connection to researchers and clinical trials.

Diabetes Action Canada listens to its patient partners and from a recent study published in November 2018 by our Patient Engagement Program co-leads Drs. Joyce Dogba and Holly Witteman titled "Diabetes-related complication: Which topics matter to diverse patients and caregivers?" we learned that blindness (diabetic retinopathy) and foot amputation are two of the most feared complications of diabetes. In response to the latter, Diabetes Action Canada has engaged the top vascular surgery, and chiropody teams at St. Michaels Hospital (Toronto) to develop an end-to-end health care delivery path from admission to hospital to rehabilitation for those who have diabetic foot ulcers and require surgical intervention. We have also partnered with the Indigenous Diabetes Health Circle (IDHC), a healthcare team that has established a community-based foot care program to prevent amputations in Indigenous and underserved areas in Ontario. We are developing plans to ripple out this program in areas with high amputation rates due to diabetic foot ulcers and evaluate the effectiveness of this community approach.

Diabetic Retinopathy (DR) is the leading cause of blindness in working age adults and accounts for 80% of diabetic-related blindness. Diabetes Action Canada recognizes DR screening as a top priority and collaborates with provincially funded telehealth authorities to establish DR screening programs that reach under-served and vulnerable populations. Telehealth retinal screening programs have the potential to scale up across the country, but to accomplish this, the capacity constraints among Canadian ophthalmologists must be considered. Together with University of Montreal (U of M), and The Montreal Polytechnique, who collaborate with the Montreal Institute for Learning Algorithms (MILA),

Diabetes Action Canada has funded a pilot project investigating the role of artificial intelligence (AI) in retinal image analytics and its potential for application in clinical contexts in Canada and beyond.

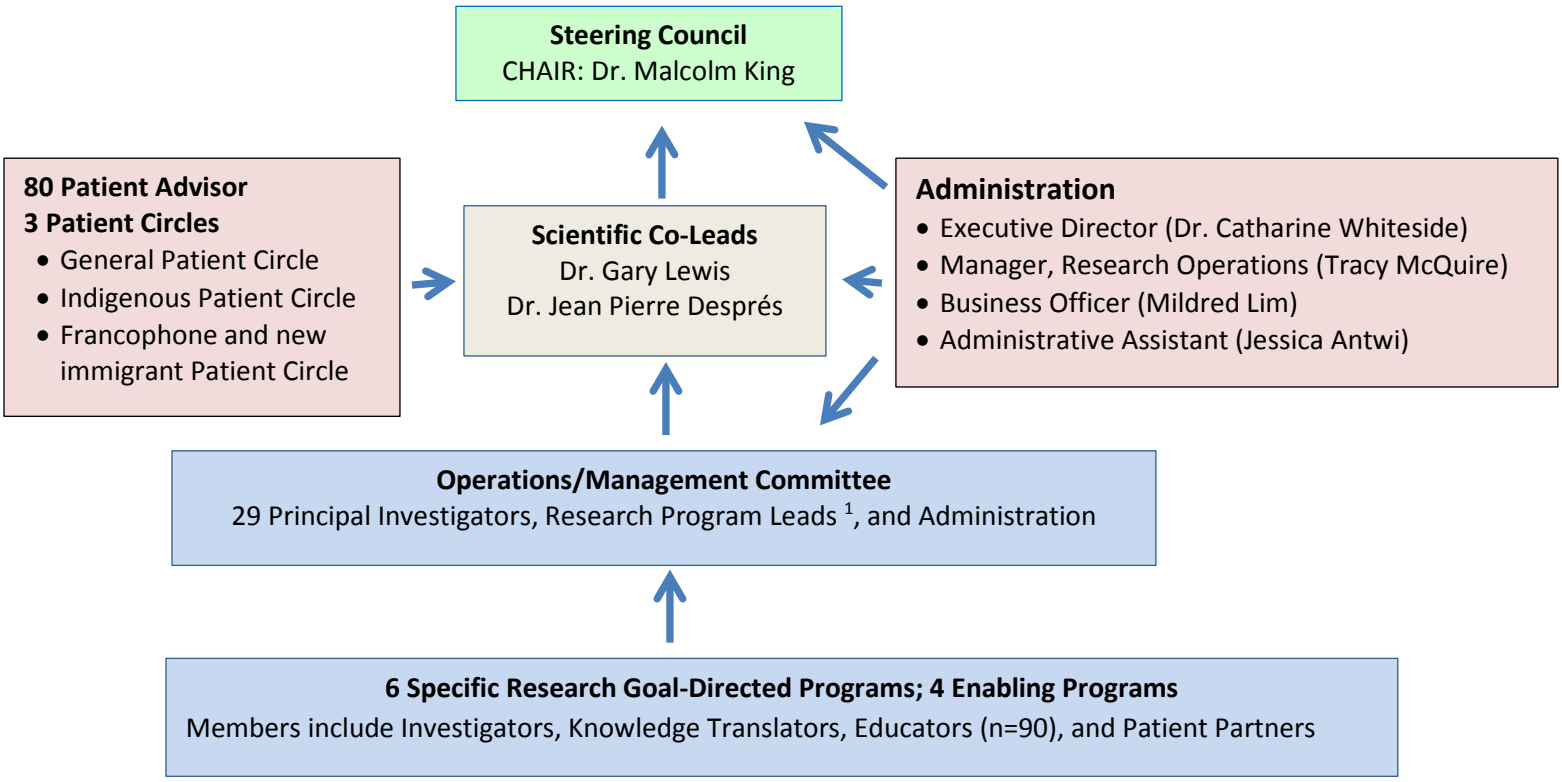
Diabetes Action Canada is also committed to Indigenous Peoples health and working with community on approaches to prevent diabetes and its complications in vulnerable populations. In collaboration with Dr. Jon McGavock at the University of Manitoba and Dr. Alex M. McComber from McGill University, member of the Mohawk community, community researcher, advisor with The Kahnewake School Diabetes Prevention program, and health promotion consultant, we are rippling out and continuing to evaluate the success of the Aboriginal Youth Mentorship Program (AYMP). This resilience-based diabetes prevention program was developed with Indigenous youth and education leaders in Winnipeg and northern Manitoba. The AYMP is an after-school program that provides physical activities, healthy snacks, games, education, and leadership activities to elementary school aged students. The Indigenous high school students who provide mentorship are supported and learn from their community Elders. The Indigenous knowledge-based activities for children build on the strengths of its participants and develop healthy inclusive communities. Building on this success, Diabetes Action Canada, in partnership with Diabetes Canada and Manulife, have rippled-out this program in the downtown Toronto First Nations School – the first inner city AYMP in Canada. Outcomes to date show that this program leads to reduction the incidence of diabetes in Indigenous youth by at least 12%. It is well documented that diabetes in Indigenous populations is a serious health concern and top priority for our governments and health care systems. AYMP has been extremely successful because of its unique relationship-based mentorship approach to encourage a wellness lifestyle among Indigenous youth.

In the upcoming year, our Steering Council has advised that our leadership undertake a cogent and timely evaluation of the projects now underway. Clear deliverables must be articulated for each activity and the outputs and outcomes must address the stated Mission of Diabetes Action Canada. The management of Diabetes Action Canada expects that our Programs and Project Leads will be producing outputs and intermediate outcomes that can be reported at our 2019 Annual Workshop. Critical evaluation of progress and deliverables over the next year will stimulate our Program leads to address the challenges of access, communication and learning, implementing quality standards and advocating for change. This evaluation will be highlighted in the 2018-2019 Annual Diabetes Action Canada Report to CIHR. Furthermore, in the SPOR Network application, we stated that a Scientific Advisory Committee composed of national and international experts would be established. The purpose of the Committee would be to provide external evaluation of the overall Network activities and recommendations for future directions. The timing for this external review mid-point in our Network activities would coincide with the planning for renewal of the SPOR Network.

2. GOVERNANCE

This section is intended to summarize the status of the overall governance structure and decision-making bodies of your Network as of the end of the reporting period.

2.1 – If there have been any changes to your governance structure since the last reporting period, please append a graphical representation.



Please see above the revised governance structure for Diabetes Action Canada. Changes of note are the addition of a Manager of Research Operations to the administrative team, the expansion of the Programs from 8 to 10 and the expansion of our Operations and Management Committee to accommodate the growing programs.

[1] Please see Appendix 2 for a complete list of all Diabetes Action Canada Principal Investigators and Co-investigators.

2.2 – In the space below, please provide a summary of the governance-related challenges / lessons learned during this reporting period, including the strategies and / or actions taken to address the challenges.

(Maximum 250 words)

Diabetes Action Canada has instituted a robust governance structure that guides all of our research activities and management. In September 2017, we hired a Manager of Research Operations to assist with administrative tasks and to develop a communication strategy and platform.

Our Operations Management Committee and Steering Council recommended that internal communication be improved for optimal coordination and collaboration among our research programs. A comprehensive communication plan was created with their feedback and additional input from our Patient Advisory Circles. The plan defines the communication requirements and delivery method for internal stakeholders and identifies the roles for all persons and committees in our Network. The plan also provides guidance for external communication and social media approaches to communicate with lay audiences. With feedback from this communication plan, we will redevelop a more interactive web site for 2018-19.

When the SPOR program was introduced, policies and procedures for patient engagement compensation were the responsibility of each Network to implement based on budget and host institution administrative practices. This caused some administrative challenges and inequities in patient engagement compensation across SPOR entities. In response, a Task Force was launched in late 2017, with representation from both patient partners and management for each of the SPOR Networks in Chronic Disease, ACCESS and PIHCI Network, to develop a harmonized approach to patient engagement compensation. A report with recommendations and proposed policy was created and a draft version was presented to the CIHR SPOR Participant Council in May 2018.

2.3 – Please provide a brief summary, including tangible examples, of the ways in which the governance structure is operating in an effective and efficient manner.

(Maximum 250 words)

The Steering Council is the highest level of governance, comprised of patient partners, healthcare providers, strategic partners and Network researchers. It ensures all Network activities align with our Mission. Our Steering Council meets quarterly and makes final decisions on Network membership, Research Program proposals and business plans. Members of the Steering Council, along with other relevant experts, serve on Standing Committees that include: 1) Strategic Partnerships and Innovation (includes major sponsor representatives); 2) Governance and Nomination; and, 3) Finance and Audit. These standing committees are in place to ensure our Network governance is operating effectively, the right stakeholders are engaged to scale successful research projects, and spending and funding commitments are on target. A Steering Council Executive, comprised of Steering Council Chair, Standing Committee Chairs, Co-Scientific Leads, and Administrative Leads, sets the agenda and reviews all the materials for the Steering Council meetings.

All of the Research Program Leads and Principal Investigators form our Operations and Management Committee. This committee meets monthly by teleconference chaired by the NPI. This Committee advises the Steering Committee about strategic directions for research, knowledge translation and training and mentoring activities based on patient feedback, outcomes and strategic partnerships. This Committee enables communication, relationship building, collaboration, and synergy among our key research KT and education leaders. Every Program is expected to have a Project Coordinator to facilitate research activities. The Project Coordinators meet monthly, chaired by the Manager of Research Operations, to discuss Network and Program operations and to identify opportunities for collaboration.

3. STAKEHOLDER ENGAGEMENT

This section is intended to summarize stakeholder engagement over the reporting period.

Note: SPOR defines "patient" as individuals with personal experience of a health issue and informal caregivers, including family and friends.

3.1 – On a scale of 1 to 5, where 1 = INFORM and 5 = EMPOWER, please indicate the level to which the Network is engaging stakeholders (check all that apply).

Level of Engagement

Inform – To provide stakeholders with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions.
Consult – To obtain stakeholder feedback on analysis, alternatives and/or decisions.
Involve – To work directly with stakeholders throughout the process to ensure that public concerns and aspirations are consistently understood and considered.
Collaborate – To partner with stakeholders in each aspect of the decision including the development of alternatives and the identification of the preferred solution.
Empower – To place final decision-making in the hands of stakeholders.

	INFORM 1	CONSULT 2	INVOLVE 3	COLLABORATE 4	EMPOWER 5	Not Applicable
Health System / Care Practitioners / Professionals[1]	☐	☐	☐	☒	☐	☐
Patients / Citizens	☐	☐	☐	☐	☒	☐
Policy-Makers[2]	☐	☐	☐	☐	☒	☐
Researchers / Academics	☐	☐	☐	☐	☒	☐
Other – Please Specify Strategic Partners	☐	☐	☐	☒	☐	☐

3.2 – Please describe the nature and extent of the Network's engagement with stakeholders in activities related to the question above, during the reporting period, using up to three examples.

(Maximum 250 words)

Diabetes Action Canada has developed many external stakeholder relationships to achieve growth and success in our Network's activities. The following are only a few examples.

Our Indigenous Peoples Health Program has partnered with Diabetes Canada and Manulife Financial to secure the necessary funding to launch the Aboriginal Youth Mentorship Program in the Toronto First Nations School in February 2018.

Our Diabetic Retinopathy Screening Program has partnered with the Ontario Telehealth Network to scale up tele-ophthalmology diabetic retinopathy screening among all Ontario Local Health Integrated Networks (LHINs). A comprehensive retinopathy screening program is established on the First Nations Reserve on Manatoulin Island (ON). In BC, tele-ophthalmology screening is established in inner city

[1] Examples of Health System / Care Practitioners / Professionals include those employed by hospitals, hospital networks, health authorities or other large healthcare systems.
[2] Examples of Policy-Makers include those employed by municipal, provincial and federal governments.

Vancouver and on First Nations reserves; previously underserviced areas. We are evaluating these programs for efficacy and effectiveness. The Diabetic Retinopathy Screening program has also partnered with University of Montreal and Polytechnique Montreal to enable development of artificial intelligence algorithms to analyze retinal images collected through the tele-ophthalmology program thereby reducing workload of Ophthalmologists.

Our Training and Mentoring Program has partnered with Diabetes Canada and the Cardiometabolic Health, Diabetes and Obesity Network (CMDO) in Quebec for capacity building in patient-oriented research training. In the 2017-18, Diabetes Canada jointly funded and adjudicated our post-doctoral fellowship award and CMDO jointly funded and adjudicated our mentorship and internship awards competition.

Our Digital Health Program received funding from SunLife Financial to further develop the mobile application, *bant*. The Canadian Primary Care Sentinel Surveillance Network has provided initial data for our National Diabetes Repository.

3.3 – In the space below, please provide a summary of the challenges / lessons learned in engaging stakeholders during this reporting period, including the strategies and / or actions taken to address the challenges.

(Maximum 500 words)

Diabetes Action Canada understands that in order to sustain transformational change in the health system, it is essential to build effective working relationships with influencers and decision-makers. Although this is not the usual activity of CIHR-funded researchers, working with all levels of government is necessary for achieving the outcomes and impact of our patient-directed activities. To this end, we are forging relationships at the regional, provincial, and federal levels with Health Ministries and their agencies.

Over the last year our Executive Director and Scientific leadership have been heavily involved with external stakeholders on two important initiatives: developing a National Diabetes Strategy and the World Economic Forum pilot project to reduce the negative impacts of Type-2 diabetes in Ontario. Both have required many hours of consultation with multiple stakeholders including, NGO, government agencies and private industry. Our challenge, as a research consortium with a limited term of funding, is that we can only contribute specific projects and evaluative expertise in the short-term. Both of these initiatives have implementation plans that exceed our funding term, and, therefore, we cannot commit definitively to the execution of long-term projects. This has become a problem as we propose projects to government agencies as we have a limited time to demonstrate the impact of our Network, but we are often waiting for the bureaucratic process. With that said, Diabetes Action Canada has established important working relationships with senior health bureaucrats, working closely with the SPOR SUPPORT Units in Ontario, Alberta, Quebec, Manitoba, British Columbia and now Saskatchewan (led by Malcolm King, the Chair of our Steering Council). On May 23, our Executive Director represented Diabetes Action Canada as a witness giving testimony to the House of Commons Standing Committee on Health at the launch of their Study of Strategies for Diabetes in Canada and Abroad, drawing from the work of Diabetes Action Canada to address the inequities in health care for persons living with diabetes across Canada.

We have established a relationship with Cancer Care Ontario (CCO) to plan a strategy for directly connecting with people living with diabetes and their primary care professionals for complications

screening and early intervention. This collaboration would use the existing surveillance infrastructure established by CCO and would enable the agency to directly contact patients as the prescribed entity. This collaboration requires a planning grant from the Ontario Ministry of Health and Long Term Care. With the provincial election in June, this proposal has been put on hold until government leadership has been determined. Nevertheless, Diabetes Action Canada has worked with CCO and submitted a proposal or establishing a comprehensive diabetes strategy for Ontario in the Fall of 2018.

Another challenge is collaborating with other SPOR Networks, each engaged in their own goals. However, our Patient Partners have led the way. The Diabetes Action Canada and Can-SOLVE CKD Indigenous Patient Partners have worked together to design a new learning pathway training platform that will help researchers and patient partners build respectful partnerships with Indigenous peoples.

4. RESEARCH PROGRAM

CHANGES

4.1 – If applicable, please provide a summary of the changes to your research program over the reporting period.

(Maximum 500 words)

Over the last year, our research program has expanded to address the complications that are most feared by those living with diabetes. In particular, foot care and prevention of amputations has been added as an area of investigation after receiving feedback from our Patient Advisory Circles. This is timely as our Executive Director, Dr. Catharine Whiteside, is working closely on initiatives with the World Economic Forum and select LHINs to launch a pilot project to reduce the negative impact of Type 2 diabetes in Ontario. This group has named diabetic foot care as a top priority area for Ontario as this province has the highest amputation rate of any other in Canada. Our Foot Care and Prevention of Amputation Goal-directed Program is jointly led by the heads of vascular surgery at St Michael's Hospital, Dr. Mohammad Al-Omran, and University Health Network, Dr. Thomas Forbes. This group is already piloting an end-to-end solution for diabetic foot ulcer patients in St. Michael's Hospital, tracking these patients from emergency room intake to rehabilitation and follow-up care; a previously fragmented process. The effectiveness of this approach will be evaluated based on the Quadruple Aim indicators. Furthermore, this group is collaborating with Dignitas International and the Indigenous Diabetes Health Circle to ripple out successful community based foot care programs in remote Indigenous regions in Ontario and evaluate the effectiveness of these programs.

Diabetic retinopathy (DR) is another feared complication of diabetes. Diabetes Action Canada is already working with telehealth retinal screening programs to screen underserved and remote populations. This approach has potential to scale up as part of a broader population-based screening program; however, diagnostic capacity constraints among Canadian ophthalmologists must be considered. To address this, Diabetes Action Canada has entered a new collaboration with the University of Montreal (UofM), The Montreal Polytechnique, and the Montreal Institute for Learning Algorithms (MILA) - a federation of UofM researchers focused on machine learning and artificial intelligence-based analytics. With funding provided by Diabetes Action Canada and UofM, these collaborators are developing algorithms for analysis of retinal fundus photo images and optical coherence tomography (OCT) images for comprehensive diagnosis of diabetic retinopathy and other eye disease. The fundamental goal is to

improve access to ophthalmological care by reducing image reading times and increasing clinician productivity. Following algorithm development and validation, this group envisions creating a national consortium that could leverage advanced technology to deliver high-value retinal and OCT image analysis across Canada.

We have also expanded our Goal-Directed Programs to include an Aging, Community and Population Health Research Program. This program will expand the previously successful diabetes self-management pilot study completed by Drs. Markle-Reid, Ploeg and Valaitis at McMaster University. This groups works with older adults with multiple chronic conditions and their caregivers to promote optimal aging at home. This group received funding from CIHR through the SPOR PICHIN Programmatic Grants competition and already has strong partnerships with primary care providers and community partners (i.e. YMCA), to scale up their diabetes community-engagement program.

PROGRAM STATUS

4.2 – Please identify if any stages of your research program are "Not on Track". Explain why and what actions will be taken to address the situation.

(Maximum 500 words)

Currently we have a number of clinical trials that are delayed:

1. **Effect of SGLT2 Inhibition on improving the glycemic performance of single and dual-hormone artificial pancreas configuration**: The JDRF-Diabetes Action Canada –funded study has not been initiated. A design modification needed to be made in view of unavailability of an industry contract for provision of drug and matched placebo in an investigator-initiated study model. Consequently, the design was modified to an open-label design and we have support to purchase commercially available empagliflozin for this trial. Application to Health Canada for clinical trial agreement was submitted in March 2018. Also, due to the nature of artificial pancreas research, which recently become one of the most explored areas in type 1 diabetes therapies, there are numerous new standards and trends. Adjustment of the study protocol of our RCT was necessary to reflect these recent advancements and standards. It included standardization of parameters reported for artificial pancreas trials, change of pump devices used in the study, as well as ongoing debate about single-hormone vs. dual-hormone artificial pancreas efficacy and safety. Negotiation of contracts between three research centers has been re-initiated in January 2018 after the design modifications. The contract was signed between the owner of the algorithm (Eli Lilly) and one of the institutions (McGill university) enabling the study teams use the algorithm in this trial. The algorithm is essential for successful execution of the trial.

2. **Comparison of dual-hormone artificial pancreas, single hormone artificial pancreas, and sensor-augmented pump therapy in outpatient settings**: This NIH-funded study has been initiated, but is delayed in reaching milestones. Similar to the previous, an algorithm developed by Eli Lilly is essential to trial execution. An agreement is almost complete between Eli Lilly and McGill University to use this algorithm. Furthermore, the automated system in the original grant proposal had to be changed from the Medtronic platform to the Oregon University platform, because in January 2018, Medtronic cancelled their support. This required a new agreement to be signed by DexCom, Tandem Diabetes Care and Oregon Health & Science

University. Since December 2017 a team of eight people are working on the automated system which is expected to be ready by April 2018. In preparation for the study, interviews have been conducted to explore participant's experiences with the artificial pancreas as well as their expectations about this technology.

3. **Topical Pirenzepine for Treatment in Type-1 Diabetes:** Phase 1 trial (Australia) was been delayed due to initial ethics concerns. The trial has been approved now and this portion of the trial has a projected completion date of 2018-19. For the Canada component of the study, ethics proposal will be submitted to Health Canada by the summer of 2018 and recruitment of patients will start in Fall 2018.

SEX AND GENDER-BASED ANALYSIS

The following questions (4.3 & 4.4) are to be completed by Chronic Disease Networks only.

Sex and Gender Champions are intended to be an integral member of the Network with the support and decision-making power required to influence the integration of SGBA throughout the research program.

4.3 – In the space below, briefly summarize the role of the Sex and Gender Champion within the Network and the impact(s) this has had on the integration of SGBA into the program of research.

(Maximum 250 words)

The relevance of sex and gender is now a core element in all of our Diabetes Action Canada research activities. In our network we have established a "sex and gender facilitator" model, whereby research programs designate one member of their group to be the point-person for regular communication with the Sex and Gender Program, co-led by Dr. Paula Rochon and Dr. Robin Mason (University of Toronto) at the Women's Xchange (SPOR SUPPORT Unit).

Facilitators have provided robust capacity building within our Network. Facilitators meet quarterly via teleconference and further discuss opportunities and strategies for comprehensively incorporating sex and gender into their research studies. These facilitators ensure their Research Programs remain well informed and gain the relevant tools for including sex and gender within their research and alert the Women's Xchange for opportunities to enhance sex and gender in project design.

The Sex and Gender facilitators also enables Research Program consultation with the 'Sex and Gender Support Service' available through Diabetes Action Canada and the Women's Xchange. This service endeavours to assist health researchers with integrating sex and gender considerations throughout the entire grant lifecycle, from proposal to post-funding phases. To date, the Women's Xchange Sex and Gender Support Service has reviewed 11 grants directly related to Diabetes Action Canada. Of those who used the service, 78% of the investigators incorporated the suggestions made by the Women's Xchange into the final draft and 100% of the respondents felt more competent in integrating sex and gender in future proposals.

4.4 – In the space below, from the perspective of the Sex and Gender Champion, please provide a summary of any successes achieved or challenges / lessons learned that can be provided as guidance to other Sex and Gender Champions.

(Maximum 250 words)

Our Sex and Gender Research Program initially faced challenges integrating and delivering key strategies in sex and gender to our Network researchers. With the introduction of the Facilitator model (see 4.3); however, we now have direct communication with each Research Program and meet quarterly to enhance uptake of sex and gender integration into all network activities. This Facilitator model provides a sustainable and ongoing method of capacity building, enabling sex and gender information sharing and additional research equality expertise and support. To assist in these efforts, our Sex and Gender Program has successfully developed a tool entitled: Essential Metrics for Assessing Sex and Gender Integration in Health Research Proposals Involving Human Participants. This tool is essential to both researchers and reviewers needing guidance on the quality of sex and gender integration into the research design.

Another obstacle was identifying opportunities for patient engagement in reviewing Sex and Gender content. Our model of service involves rapid proposal reviews and development of sex and gender tools for researchers, providing minimal opportunities for patient feedback. As our Program evolved however, we are now developing online educational modules for sex and gender integration into various research methods. Patient stories, interviews and testimonies are fundamental in developing these modules and we were able to engage our Patient Advisory Circle to gather information and additional feedback.

Finally, we are evaluating the impact of integrating sex and gender in our Network and the impact of incorporating sex and gender in research to reduce inequality in health systems.

5. INTERNAL LINKAGES

This section is to be completed by ACCESS only.

5.1 - Please describe the actions the Central Office has taken to support and facilitate links between study sites and the results or impacts of these actions.

(Maximum 250 words)

Click here to enter text.

6. SERVICE DELIVERY

This section is to be completed by ACCESS only.

6.1 – Please provide a description of progress towards your service transformation goals such as early identification, rapid access, appropriate care and continuity of care beyond age 18.

(Maximum 500 words)

Click here to enter text.

7. LINKAGES ACROSS SPOR

This section is intended to provide information related to interactions across SPOR (i.e., SUPPORT Units, other Networks, Innovative Clinical Trials, and Canadian Clinical Trials Coordinating Centre).

7.1 – With which of the following SPOR-funded entities has the Network interacted during the reporting period?

SPOR-Funded Entity	Yes	No
SUPPORT Units		
Alberta	☒	☐
British Columbia	☒	☐
Manitoba	☒	☐
Maritimes	☒	☐
Newfoundland and Labrador	☐	☒
Northwest Territories	☐	☒
Ontario	☒	☐
Quebec	☒	☐
Saskatchewan	☒	☐
SPOR Networks		
ACCESS Open Minds	☒	☐
Primary and Integrated Health Care Innovations – (PIHCI)	☒	☐
CHILD-BRIGHT: Child Health Initiatives Limiting Disability – Brain Research Improving Growth and Health Trajectories	☒	☐
Chronic Pain Network	☒	☐
Diabetes Action Canada	☒	☐
Inflammation, Microbiome, and Alimentation: Gastro-Intestinal and Neuropsychiatric Effects: the IMAGINE-SPOR Chronic Disease Network	☒	☐

Listening, Learning, Leading: Canadians Seeking Solutions and Innovations to Overcome Chronic Kidney Disease (Can-SOLVE CKD)	☒	☐
Canadian Clinical Trials Coordinating Centre (CCTCC)	☐	☒
Innovative Clinical Trial Grant Recipients	☒	☐
SPOR Evidence Alliance	☒	☐
Other (e.g., Collaboration Grant Recipients)	☒	☐

7.2 – Please describe the nature and extent of the Network's interactions with other SPOR-funded entities.

(Maximum 250 words)

Diabetes Action Canada is heavily involved with many SPOR funded entities. Every quarter our Network hosts the SPOR Network Directors meeting, which includes representatives from all the networks in chronic disease, ACCESS, PIHCIN and CIHR. This forum provides an opportunity to identify areas of collaboration and coordination of research activities and administration. It was from this regular meeting that we learned patient engagement compensation practices among our Networks were inconsistent and a Task Force was necessary to provide recommendations for a harmonized approach. Diabetes Action Canada also participates in regular Patient-Oriented Research Training meetings with the other SPOR networks to maximize training opportunities and synergize respective training strategies in POR across the country among the Networks.

Our Digital Health Program collaborates with the Ontario PIHCI Network to provide solutions for linking de-identified data for secondary use research in diabetes and primary care initiatives. Together, these groups have received funding from the Ontario SPOR SUPPORT Unit to support 3.0 FTE at the Institute for Clinical Evaluative Sciences (ICES) for their projects.

Our Indigenous Peoples Health Program works collaboratively with Can-SOLVE CKD on Indigenous patient engagement activities and together our Networks are working to complete an additional training module for the CIHR Patient Oriented Research curriculum focusing on engaging Indigenous Peoples in research activities. These collaborations also extends to the George & Fay Yee Centre for Healthcare Innovation (Manitoba SPOR SUPPORT Unit) who provide project management personnel to coordinate the research and patient engagement activities of this program.

7.3 – In the space below, please provide a summary of any challenges encountered in the Network's interactions with other SPOR-funded entities during this reporting period, including the strategies and/or actions taken to address them.

(Maximum 500 words)

Although we have had mostly positive experiences working with the SPOR-funded entities we have encountered some challenges over the reporting period. These challenges mostly arise from the structural and functional differences between the SPOR SUPPORT Units and the SPOR Networks in Chronic Disease. As a research Network, the needs of Diabetes Action Canada are project-based and the

most useful support from the SPOR SUPPORT Units would be better access to their resources to help support our research projects. Since some of these enabling functions are services for which SPOR SUPPORT Units charge other stakeholders, we have had some misunderstandings about how our Network could or should be funded. For instance, our Digital Health team requires data analytics assistance from the Institute for Clinical and Evaluative Sciences to help launch a functional diabetes repository. Prior to the Ontario SPOR SUPPORT Unit agreeing to fund 3.0 FTE for these projects, there were some discussion and delays in obtaining this assistance assigned by the Ontario SPOR SUPPORT Unit, although it was finally forthcoming.

We also encountered challenges in gathering patient engagement compensation information from the SPOR SUPPORT Units during the Task Force report process. When CIHR released the Compensation Considerations (formerly Guidelines) for Engaging Patients as Partners in Research in 2017, it directed queries from the Networks on patient compensation to local SPOR SUPPORT Units. However, in practice the Networks quickly learned that the SPOR SUPPORT Units were still in the early stages of developing their policies and procedures for patient compensation. In speaking with the Patient Engagement leads of the SPOR SUPPORT Units from different provinces, it appears that the needs for engagement of Patient Partners in research activities within the SUPPORT Units are not as defined or robust as experienced by the Networks. It appears that Patient Partner engagement in specific SPOR research projects, from planning to implementation, has been largely undertaken within the Networks and not the SUPPORT Units. This was why the SPOR Networks collaborated to launch a Task Force to propose a patient compensation guideline framework for all SPOR funded entities.

8. RESEARCH CAPACITY, TRAINING AND MENTORING

This section is intended to summarize the training and mentoring opportunities provided by the Network.

8.1 – Please identify the type and number of training and capacity building activities held by the Network during the reporting period (check all that apply).

	Number of Activities
Web-based learning	6
Participatory workshop	8
Lecture or seminar	40
Course at post-secondary Institution	1
Thesis supervision	8
Mentorship	5
Community of Practice	Click here to enter text.
Other – Please Specify Click here to enter text.	Click here to enter text.

8.2 - Please identify the type and number of individuals participating in training and capacity building activities held by the Network during the reporting period.

	Number of Activities
Network Staff	2
Patients	8
Researchers / Academics	10
Students[3]	23
Clinical Scientists	0
Health System / Care Practitioners / Professionals[4]	3
Policy-Makers[5]	2
Other – Please Specify Post-doctoral Fellows	10

8.3 – Please describe any unique and innovative training/mentoring opportunities offered by the Network.

(Maximum 500 words)

Our Training and Mentoring Program has developed many unique programs to build capacity in Patient-Oriented Research. They are as follows:

1. **Diabetes Action Canada/Diabetes Canada Joint post-doctoral fellowship award:** This competition occurs in conjunction with Diabetes Canada Annual Research Competitions and is advertised on both the Diabetes Canada and the Diabetes Action Canada website. The incumbent of this award has demonstrated that their research aligns with the principles of patient-oriented research. This award is adjudicated by Diabetes Canada during their annual competition award process.

2. **Patient Oriented Research (POR) Early Career Investigator Mentorship Awards in Diabetes and its Complications:** This award promotes networking and optimal integration of early career investigators into Diabetes Action Canada and the Canadian diabetes research community. Up to two annual mentorship awards are awarded to early career investigators to work with an internal mentor and an external mentor. The internal mentor will be affiliated to the same research centre as the early career investigator. The external mentor will be affiliated with a different research centre from that of the early career investigator. At least one mentor will be a regular member of Diabetes Action Canada.

3. **Patient Oriented Research (POR) Inter-centre Trainee Internship Awards in Diabetes and its Complications:** This award is to promote networking and optimal integration of trainees into Diabetes Action Canada and the Canadian diabetes research community. Up to two annual internships are awarded to trainees. Diabetes Action Canada invites researchers who are PI's or Co-I's of the Network to propose collaborative projects in the areas of diabetes and its complications and for which a trainee will complete his training in another laboratory (in

[3] Includes undergraduate, masters and doctoral students.

[4] Examples of Health System / Care Practitioners / Professionals include those employed by hospitals, hospital networks, health authorities or other large healthcare systems.

[5] Examples of Policy-Makers include those employed by municipal, provincial and federal governments.

another research centre). This project will involve a Diabetes Action Canada Network PI or Co-I with one or more collaborators of another Patient-Oriented Research centre.

4. **Quebec Cardiometabolic Health, Diabetes and Obesity Research Network (CMDO) Winter Camp:** This four-day interactive workshop is open to PhD students, postdoctoral fellows, residents and research professionals from Diabetes Action Canada to participate in a Winter Camp (French program). This program offers internationally renowned speakers and participants discussing research in cardiometabolic health, diabetes, obesity, knowledge translation and patient-oriented research.

5. **Patient-Oriented Research Training (French and English):** Diabetes Action Canada offers training that is continually improved based on participant feedback. This training has the curriculum as recommended by CIHR, augmented with interactive and team-building activities. This training is facilitated by both patients and co-investigators and the content includes strategies in patient engagements, POR, team-building and understanding roles within POR

6. **Trainee Day:** This session, offered in tandem with the POR training, focusses on the skills needed by postdoctoral fellows to transition to independent investigators. In particular, content includes an introduction of Sex and Gender is research with human subjects, patient engagement, knowledge translation and dissemination and tactics for working as a network.

7. **Knowledge Translation (KT) Scholarship Program:** This program is for graduate students and postdoctoral fellows supervised by members of Diabetes Action Canada. This scholarship is in partnership with KT Canada and in 2017-18, 2 PhD students and 2 postdoctoral fellows were awarded.

NOTE: New for 2017-18 are activities numbered 1, 2, 3, 6 and 7.

9. ADVANCING KNOWLEDGE

This section is intended to provide information on knowledge translation products and events. These products and events are based on research findings and are intended to transmit research findings to knowledge users.

9.1 – Please identify the number of knowledge products developed by Network team members during the reporting period – indicate 0 if none.

	Produced by the Network	Produced by Others Supported by the Network
Plain language publications	42	4
Peer-reviewed journal articles	8	19
Books / book chapters	0	1
Reports / technical reports	7	0
Educational materials	11	0
Other – Please Specify	21	19

Presentations		

9.2 – Please provide the references for your peer-reviewed journal articles, books and book chapters using the KP Report Template provided with this report.

Please see **Appendix 3** – KT Product Report _Diabetes Action Canada 2018

9.3 – Please identify the type of audience reached by the Networks knowledge translation dissemination / output activities. Check all that apply.

Not for Profit Organizations	☒
Private Organizations	☒
Family Members / Caregivers	☒
Graduate Students / Fellows	☒
Health System / Care Practitioners / Professionals[6]	☒
Patients / Citizens	☒
Policy-Makers[7]	☒
Researchers / Academics	☒
Other – Please Specify Indigenous Community Strategic Partner	☒

10. PARTNERSHIPS AND COLLBORATIONS

This section provides details on partnerships, collaborations and additional research developed or undertaken during the reporting period.

PARTNERSHIPS

Partnerships are defined as a collective venture between a SPOR Network and an external organization having a contract or other formal agreement/arrangement between the Network and the external organization.

Collaborations are defined as a collective venture between a SPOR Network and an external organization without having a contract or other formal agreement/arrangement between the Network and the external organization. This section is not to include funding partners listed in the Grant Agreement.

10.1 – How many new partnerships were entered into during this reporting period? Do not include funding partners listed in the Grant Agreement.

5

[6] Examples of Health System / Care Practitioners / Professionals include those employed by hospitals, hospital networks, health authorities or other large healthcare systems.

[7] Examples of Policy-Makers include those employed by municipal, provincial and federal governments.

10.2 – Please provide the name and details of each new partnership (if the Network has more than 10 new partnerships to report, please append a full list).

Name of Funding Partner	Amount of funding received during reporting period ($)	Estimate of amount of in-kind support during reporting period ($)
Bayer	200,000	
Diabetes Canada: Post Doc Awards*	25,000	
Koschitzky Family	50,00	
SunLife Financial	200,000	
Wolfond Chair in Digital Health		100,000

* Funding not reflected in Schedule D. Disbursement of funds dependent on continued funding at Diabetes Canada and the quality of applicants.

COLLABORATIONS

10.3 – How many new collaborations were entered into during this reporting period? Do not include partners listed in the Grant Agreement.

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10.4 – Please provide the name and details of each new collaboration (if the Network has more than 10 collaborations to report, please append a full list).

Name of Funding Partner	Amount of funding received during reporting period ($)	Estimate of amount of in-kind support during reporting period ($)
Toronto Central Local Health Integrated Network		
Ontario Telemedicine Network (OTN)		
UHN Digital		
Knowledge Translation Canada (KT)		
Cancer Care Ontario		
Indigenous Diabetes Health Circle		
Montreal Polytechnique		
Wounds Canada		
Dignitas International		
World Economic Forum		
Canadian Primary Care Sentinel Surveillance Network (CPSSCN)		

Novartis		150,000
Diabetes Canada/Manulife Financial: AYMP Site		60,000
Institute for Evaluative Clinical Sciences (ICES) via OSSU		97,586

11. FINANCIAL OVERVIEW AND WORK PLAN

11.1 – Please append your completed financial reporting template (using the template provided), updated budget, and updated work plan.

Please see Appendix 4.

12. IMPACT STORIES

12.1 – If available, please provide up to three impact case studies demonstrating patient outcomes, access to care and quality, and/or efficiency and effectiveness of health care. Please use the guide found in Appendix A .

(Maximum one page each)

IMPACT STORY #1: Rippling out the successful Aboriginal Youth Mentorship Program (AYMP) to Urban Site – Implementation Phase - Feb 2018

Type-2 diabetes (T2D) is the fastest growing pediatric chronic condition with Indigenous populations among the most affected. In Canada, nearly half of new cases of T2D reported in endocrinology clinics are among aboriginal youths and this trend is expected to continue unless changes in lifestyles and interactions with environments change. Indigenous and Aboriginal health strategies are a top priority of federal and provincial policy makers, as Canadian agencies seek to address concerns articulated in the *Truth and Reconciliation Commission of Canada: Calls to Action*. Many programs exist to engage youths in activities that promote healthy lifestyles, however not all are suited to the unique needs and traditions of indigenous peoples. This is what inspired the development of the Aboriginal Youth Mentorship Program (AYMP). This resilience-based approach to wellness was co-developed with Indigenous youth and leaders in Winnipeg and northern Manitoba along with a group of researchers and community members from Manitoba, currently under the direction of Diabetes Action Canada co-investigator Dr. Jon McGavock from the University of Manitoba. Delivered by Indigenous adolescents for Indigenous children in their communities, the AYMP builds on the strengths of its participants and helps to create healthy inclusive communities. It is guided by an Indigenous medicine wheel concept of health called the Circle of Courage from Lakota scholar Dr. Martin Brokenleg and consists of four elements; belonging, independence, mastery and generosity. The program includes after-school peer-led physical activities, healthy snacks, games, and education and leadership activities for elementary school-aged students. Each community has the opportunity to tailor components of the program to meet its own unique needs, teachings and cultural values.

The AYMP is currently offered in twelve Indigenous communities across Canada. Initial result have shown that children and youths that participated in the program have experiences increased self-esteem, reduced weight gain and healthier dietary choices, compared to those not in the program. Initial evaluation of the program indicated up to a 12% reduction in the incidence of T2D. Given this success, it is the mission of both Diabetes Action Canada and AYMP to ripple out this program more broadly in Indigenous and First Nations communities. With the help of Diabetes Canada and Manulife Financial, we are one-step closer to accomplishing this goal. With the funding received by these partners ($200,000) we have opened another AYMP site at the First Nations School in Toronto – the first urban site. Once the effectiveness of this program is evaluated we plan to open additional sites in 2018-19. As we plan for the future of AYMP we must consider the challenge of oversight and capacity, as this program is led by part-time youth leaders and volunteers. To sustain this program, the mentorship opportunities and experience of empowerment must continue and resources must be planned accordingly to deliver this program in a manner that encourages continued involvement of its participants.

The success of AYMP has been communicated by our Network though our news stories, social media and website. We have also written stories for the National Aboriginal Diabetes Association newsletter and CIHR SPOR Update. Prevention of diabetes and its complications in Indigenous populations is a serious health concern and top priority for our governments and health care systems. The unique AYMP relationship-based mentorship approach to encourage culturally sensitive healthy living among children and youth to prevent T2D has meaningful impact of the Quadruple Aim indicators and addresses a top priority to promote Indigenous health in Canada. Diabetes Action Canada will continue to work with partners to ripple out this successful program to ensure the Indigenous and Aboriginal Youths are exposed to opportunities to establish health lifestyles that will prevent diabetes.

IMPACT STORY #2: National Diabetes Repository – Preliminary Results – April 2018

By 2020, over 3 million Canadians (~10% of the population) will have diabetes, with vulnerable population including Indigenous Peoples and new immigrants, more likely to be affected. Those living with diabetes have an increased risk for heart disease, stroke, kidney failure, nerve disease, blindness, mental illness, and decreased life expectancy. All conditions that not only affect those who have disease, but the loved ones who care for them. Earlier diagnosis and effective interventions to prevent diabetes complications are needed, as is improved access to methods of chronic disease self-management. These improvement strategies must be achieved in large part through digital health solutions that improve access to patient data by clinicians, researchers and patients.

To establish a digital health solution, we have launched a proof-of-concept pan-Canadian Diabetes Repository that contains primary care electronic medical record (EMR) data of patients with diabetes. With application of privacy and security compliant methods these data reside in a data safe haven and can be safely linked with other relevant data (retinopathy screening reports, and clinical trial information) for analytics. Diabetes Action Canada investigators are now able to access this repository data for their patient-oriented observational or population-based studies. Through partnerships with the Canadian Primary Care Sentinel Surveillance Network (CPSSCN), Southern Alberta Primary Care Research Network (SAPCReN), Northern Alberta Primary Care Research Network (NAPCReN), Réseau de recherché en soins primaries de l'Université de Montréal (RRSPUM), and University of Toronto Practice-Based Research Network (UTOPIAN) this diabetes repository currently has data from Ontario, Quebec and Alberta representing over 50,000 patients with diabetes. Plans are currently underway to expand this dataset to include primary care patient data from other provinces and territories.

To ensure the use of this data aligns with the vision and mission of Diabetes Action Canada and that research studies have received appropriate ethics review, a volunteer Research Governing Committee was established. Half of the members of the committee are persons living with diabetes and the other half of primary care physicians and researchers, an unprecedented composition, truly reflecting patient engagement. On January 20th, 2018, the Research Governing Committee assembled for the first time to participate in a training workshop to learn about the specific goals of the proof-of-concept Diabetes Repository, the role of the Research Governing Committee members and how it all ties together. Since then, this Committee has met bimonthly and approved two data usage requests with more to come. This governance model will ensure that the Diabetes Repository data will be used for studies that fulfill our mission of developing patient- and research-informed innovations in health care delivery designed to prevent diabetes complications.

The proof-of-concept Diabetes Repository was a key component to our original SPOR grant proposal as it brings Canada closer to linking digital health systems and patient health data to ensure accurate surveillance of diabetes-related risk factors. The work from this repository will also inform our expanded digital health strategy, which will include a pan-Canadian Type-1 Diabetes precise registry. This registry has the initial primary purpose to facilitate timely and effective recruitment of persons living with Type-1 Diabetes for clinical trials. The launch of the Diabetes Repository has been communicated through presentations, social media, and our Network newsletter. We are currently working with our web developer to create a website specific to the Diabetes Repository to manage data usage requests and to enable investigators and members of the Research Governing Committee to login and view the status of requests. Our goal is to position the National Diabetes Repository as a necessary tool for researchers to provide evidence for health system change that will significantly improve the outcomes for Canadians living with diabetes and its complications.

APPENDIX 1: PROJECT STATUS UPDATE REPORTS– OUTPUTS, ACTIVITIES, IMMEDIATE & INTERMEDIATE OUTCOMES (APRIL 2017 – MAR 2018)

GOVERNANCE

Project Lead	:	CATHARINE WHITESIDE *($916,520)*
Project Title	:	GOVERNANCE AND NEW ADMINISTRATION
Reporting Year	:	APRIL 2017 – MARCH 2018

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
		QUALITATIVE	**QUANTITATIVE**	
IMMEDIATE OUTCOME(S) – Outcomes that are directly attributes to the outputs delivered (Please include additional information on the following: new knowledge in POR generated and disseminated, networking among SPOR element, research platforms established, capacity building in POR, stakeholder engagement in research and implementation)				
1.	**Develop appropriate agreement and memorandum documents**		• 4 Inter-institutional agreements amended • 1 inter-institutional agreement initiated	• Project summaries and budgets were compiled for all 24 projects to facilitate preparation of the Inter-institutional Agreements; • 22 Inter-institutional Agreements have been executed with 8 collaborating institutions.

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
		QUALITATIVE	**QUANTITATIVE**	
2.	**Build Administration Team**		• Admin Team increased by 1.0 FTE and position descriptions in place • Operations-Management Committee	• Recruitment of Manager, Research Operations completed in September 2017 • Operations and Management Committee expanded from 15 to 24 PI's. These additional PI's represent new Research Programs introduced in 2017-18
3.	**Establish Steering Council**		• Additional Recruitment of Steering Council Members - 2 individuals that include experts in health policy and Indigenous Peoples • Terms of reference • Administrative support for Council	• Diane Finegood (health policy expert) and Roslynn Baird (Indigenous Diabetes Health Circle) have been recruited to our Steering Council • Terms of reference revised for the Steering Council, Executive, and Standing Committees • The Executive Director, Manager of Research Operations, Business Officer and Executive Assistant provide administrative support to the Steering Council, Executive and Standing Committees

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
		QUALITATIVE	**QUANTITATIVE**	
4.	**Build effective Patient Engagement**	• Patient Engagement has now been identified as a separate Research Program in Diabetes Action Canada • Separate Patient groups have been created within the Patient Council (3 groups in total) -Separate councils for Indigenous, Francophones and Immigrants and a general patient group with members from each of the groups mentioned before • Patient Partners assigned to each research Program as co-lead		• Continuous progress being made in this area with input from the Leads of the Research Programs and the Project Coordinators
5.	**Branding and Communication (website, social media, newsletters)**		• Communication plan established for network communications	• The Steering Council approved communication plan for Network. Elements of this plan include: - Internal Stakeholder Management - External Stakeholder Management - Communication Matrix

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
		QUALITATIVE	**QUANTITATIVE**	
		• Website content augmented	• 38 News Stories published on Website • 3 Pages added to content • 10 Research Program Pages added to content • Dedicated Admin Staff	- Mechanisms and tools for outgoing communication - Social Media Guiding Principles - Guidelines for meetings • Diabetes Action Canada website (https://diabetesaction.ca) has been iteratively improved to act as a resource for all research activities with our Network • Additional Admin Staff recruited to manage all aspects of communication for Diabetes Action Canada
6.	**Budget Management**		• CIHR and match funding are assigned to network projects • Detailed expense budget for network projects submitted to CIHR	• CIHR and match funding were assigned to the respective projects based on Project Activity Reports received from the Project Teams and Letters of Attestations. • A detailed budget report, broken down by Research Program and Year, was revised and submitted to CIHR in June 2018 per Section 4.2 of the Agreement with CIHR

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
		QUALITATIVE	**QUANTITATIVE**	
			• Funds disbursed to Collaborating Institutions • Annual financial reports obtained from all project leads and reported to CIHR on June 15	• CIHR funds – funds were disbursed to the collaborating institutions per the assigned budgets in the Inter-institutional Agreements; • Match funds – Match funding were disbursed to collaborating institutions per the assigned budgets in the Inter-institutional Agreement, except for 1 project in which sponsor funds have been withdrawn (Caprion) and 1 project in which sponsor funds have been withheld (Michael Smith Foundation).
7.	**Partnership Development**		• Support from new partners towards Network expansion and productivity	• Agreement with Cardiometabolic Health, Diabetes and Obesity Research Network (CMDO) – changed in-kind contribution to match-cash contribution for Andre Carpentier's project, 5.1.20.TRN • Agreement with Sun Life in progress for support towards Clinical Trials

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
		QUALITATIVE	**QUANTITATIVE**	
8.	**Scientific panel provides external review**		• Annual review conducted in reporting year 2018-19	• In progress
INTERMEDIATE OUTCOME(S) – Outcomes that are logically expected to occur, once one or more immediate outcomes have been achieved (Please include additional information on the following: Research evidence is applied, clinical trials environment in Canada improved, Canadian capacity in POR is strengthened and maintained, stakeholders (patients, clinicians, etc.) are active partners in research and implementation)				
1.	Diabetes Action Canada communication and branding platform results in increased awareness of research initiatives	• Social media account (Twitter and LinkedIn) and Website target audience internal and external to Diabetes Action Canada	• Three electronic newsletters have been circulated to DAC members Sept, Dec 2017, Mar 2018) • Twitter followers increase 150% in 2017-18 • LinkedIn followers increased 75% in 2017-18	• Continuous progress being made in this area

PATIENT ENGAGEMENT ENABLING PROGRAM

Project Lead	:	FRANCE LÉGARÉ *($982,889)*
Project Title	:	TRANSFORMING COMMUNITY-BASED PRIMARY HEALTH CARE (CBPHC) KNOWLEDGE AND KNOWLEDGE TOOLS TO ADDRESS PATIENT-GENERATED PRIORITIES THROUGH THE INVOLVEMENT OF PATIENTS, THE PUBLIC, RESEARCHERS AND HEALTHCARE PROVIDERS
Goal Group Leads	:	Dr. Maman Joyce Dogba, Dr. Holly Witteman
Goal Group Co-investigators	:	Marie-Claude Tremblay, Jon MacGavock, Alex M. McComber and Don Willison
Reporting Year	:	APRIL 2017 – MARCH 2018

IMMEDIATE & INTERMEDIATE OUTCOMES			
OUTCOMES	**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
	QUALITATIVE	**QUANTITATIVE**	
IMMEDIATE OUTCOME(S) – Outcomes that are directly attributes to the outputs delivered (Please include additional information on the following: new knowledge in POR generated and disseminated, networking among SPOR element, research platforms established, capacity building in POR, stakeholder engagement in research and implementation)			
1. Identify patients and caregivers		At least 4 connections established with people (**Mohamed Gazarin**, clinical pharmacist; **David Sadleir**, President,	Connections have allowed recruitment of Patient Partners in underserved, remote and vulnerable communities (i.e. Mohamed Gazarin has enabled connections in rural Ontario and David Sadleir in youth communities. Continue to identify patient partners through: *a. Snowball process* – establish connections within personal networks

IMMEDIATE & INTERMEDIATE OUTCOMES			
OUTCOMES	**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
	QUALITATIVE	**QUANTITATIVE**	
		Sir Frederick Banting Legacy Foundation; **Adina Ungureanu**, Liaison officer for ACCÉSSS; **Catherine Turner**, Indigenous liaison officer for CKD Network) <u>At least 4 connections established with community organizations</u> (**Diabète Quebec, ACCÉSSS**, Polycultural Immigrant & Community services, and **Foundation Fighting Blindness**) <u>At least 1 connection established</u> with **RRSPUM** (Réseau de recherche en soins primaires de l'Université de Montréal)	*b.* *Community organizations* – Reached out to community stakeholders for assistance in establishing contact with hard to reach patient groups *c.* *Open identification* – work with health care providers and DAC network members to identify persons living with diabetes through referrals *d.* *Social Media* – Increase social media presence and communication with community living with diabetes *e.* *Scientific conference* – Connect with the greater scientific community to establish collaborative partnerships to facilitate new avenues for patient partner recruitment. This contact will allow us to gain access to doctors and clinicians working in 18 GMFs (Groupes de médecine familial) across the province of Quebec. In the short term, the goal is to help us identify "hard-to-reach" patient partners. The aim is to foster long-term recruitment collaborations.

IMMEDIATE & INTERMEDIATE OUTCOMES			
OUTCOMES	**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
	QUALITATIVE	**QUANTITATIVE**	
2. Recruit patient partners		(30) new patient partners recruited for a total of (79)	- Recruited patient partners from those identified in section 1: Coordinator contact all potential candidates identified via email and phone - Phone interviews held to assess interest in and best-fit for the councils and goal groups - Patient partners assigned to work with DAC Goal Groups in a collaborative role
3. Training provided by CIHR, the SPOR SUPPORT Units and DAC's Training and Mentoring Goal Group		(15) New patient partners trained for a total of (31)	- Arranged training in patient-oriented research for patient partners, via the CIHR training pilot project.
4. Establish a joint work plan with the Training and Mentoring Goal Group		4/4 meetings attended	- Coordinator attends monthly meetings for Training and Mentoring Goal Group. - Establish joint priorities and collaborate on training and mentorship of patient partners.
5. SPOR Networks: Synergy meetings regarding training efforts			- Meetings with other SPOR Networks (Can-SOLVE CKD, CHILD-BRIGHT, Chronic pain Network and IMAGINE) to coordinate training efforts.

6. Coordinator establishes and continues to foster working relationships with patient partners	Ongoing communication between coordinator and patient partners through phone calls, emails and in-person meetings		- Deliverables attained through:
			  - gathering constructive feedback from patient partners
			  - Planning and facilitating Patient Circle meetings
			  - Following-up with new potential patient partner leads

IMMEDIATE & INTERMEDIATE OUTCOMES			
OUTCOMES	**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
	QUALITATIVE	**QUANTITATIVE**	
			- Matching patient partners with research teams - Responding to patient partner needs - Ensure open flow of communication with patient partners - Any additional requests related to supporting active participation of patient partners
7. Recruit patient partnership advisors* with expertise in working with the most vulnerable (e.g. Indigenous community and immigrants)		Recruit two (2) patient partnership advisors	*Patient partnership advisors are community based resource individuals that are able to facilitate recruitment and participation of targeted community members: - Alex M. McComber – Indigenous Peoples - Gui Ying Wang – Chinese Community - Arshad Ali – South Asian Community - André Gaudreau – Francophone Community
8. Adapt materials to patient partners	Co-construct materials as needed to maximize patient participation and understanding		- Materials adapted to patient partners through consultation with Patient Councils, to maximize accessibility of materials for persons with disabilities, language barriers (i.e. francophone, anglophone). Additionally, materials related to technical research within project(s) are co-developed to maximize the scope with which patient partners can participate

IMMEDIATE & INTERMEDIATE OUTCOMES			
OUTCOMES	**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
	QUALITATIVE	**QUANTITATIVE**	
9. Adapt or develop materials to people likely to be underserved with respect to diabetes-related care and research (including the Indigenous communities and the immigrants)	Co-construct culturally relevant and accessible materials as needed to maximize patient participation and understanding for groups likely to be underserved		- Has been delegated to the newly formed Indigenous Goal Group in connection with the Manitoba SPOR network. Materials are being adapted or developed to be culturally relevant for Indigenous communities and people who have immigrated to Canada as adults
10. Create (3) Patient Councils **a) Draft terms of References for the Patient Council**		Establish four (4) Patient Councils (Collective, Francophone, Indigenous, Immigrant) and reconfigured into three (3) Patient Circles (Collective, Francophone & Immigrant, Indigenous) Co-construct Terms of Reference and compensation policy updated	- Collate membership list of Patient Councils* (now named Patient Circles) - Co-drafted & revised Terms of References - Drafted compensation policy - Number and composition of Patient Circles has been modified at the request of patient partners - Adjustment of specific Patient Circle name due to Patient Circle reconfiguration
11. Recruit a coordinator of the Patient Engagement Strategy (the single point of contact to Researchers)		Recruit one (1) coordinator	- Coordinator recruited and contract renewed.

IMMEDIATE & INTERMEDIATE OUTCOMES			
OUTCOMES	**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
	QUALITATIVE	**QUANTITATIVE**	
12. Consult with Goal Group Leads and other researchers to identify their vision for Patient Engagement and their needs	Ongoing consultation and collaboration via email and phone with Goal Groups to maximize patient engagement as needed		- Coordinator works as intermediary between Goal Groups and other researchers to facilitate and meet project needs requiring Patient Engagement at all stages of research
13. Planning studies **a) Focus group with Indigenous community in Winnipeg** **b) Focus group with women living in poverty in Toronto** **c) Establish a survey of Community-Based Primary Health Care stakeholders** **d) Patient partners could help define the characteristics of study participants and comment on the recruitment processes**	Plan and conduct studies as outlined by research priorities established in consultation with Patient Partners and Goal Groups		As of April 2018, work of the Patient Engagement project is ongoing. - Three studies so far have been planned, protocols co-written and approved by ethics review boards. All three studies are currently at the stage of participant recruitment and data collection. Collection, analysis and co-drafting result reports are expected to be completed by the end of fiscal year 2018. Publishing results, disseminating findings and evaluation of studies will be achieved during year 4 and 5. Status update on current projects is as follows: i. **Diabetic Retinopathy Study project** – team assembled, study co-designed, protocol written, team training on study methodology framework, ethics approval from all three institutions (UL, UofT,

IMMEDIATE & INTERMEDIATE OUTCOMES			
OUTCOMES	**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
	QUALITATIVE	**QUANTITATIVE**	
Conducting the studies **e) Patients partners will revise the protocols or participate in data analysis** **Disseminating the studies' results** **f) Patients partners will help identify relevant end-users of the results and participate in reporting the results** **g) See Knowledge Translation Work Plan for additional activity**	Identify relevant end-users of the results and participate in reporting the results		UOttawa), interview guide co-developed, participant recruitment and interviews underway **ii. Diabetes and stigma** – Protocol written and ethics approval received, participants **iii. Realist review –** Team assembled and first articles selected
14. Conduct needs assessments with researchers and those who use research findings			As of April 2018, work of the Patient Engagement project is ongoing. Conducting needs assessments with researchers will be achieved during year 4 and 5.
15. Carry out a realist review on similar platforms			As of April 2018, work of the Patient Engagement project is ongoing. A realist review will be carried out during year 4 and 5.

IMMEDIATE & INTERMEDIATE OUTCOMES			
OUTCOMES	**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
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16. Organize workshops for the co-design of the platform			As of April 2018, work of the Patient Engagement project is ongoing. Workshops will be organized during year 4 and 5.
17. Pre-test and implement the platform			As of April 2018, work of the Patient Engagement project is ongoing. Platform will be tested and implemented during year 4 and 5.
18. Organize evaluation and adaptation of the RRUPP			As of April 2018, work of the Patient Engagement project is ongoing. Evaluation and adaption of the RRUS will be done during year 5.
INTERMEDIATE OUTCOME(S) – Outcomes that are logically expected to occur, once one or more immediate outcomes have been achieved (Please include additional information on the following: Research evidence is applied, clinical trials environment in Canada improved, Canadian capacity in POR is strengthened and maintained, stakeholders (patients, clinicians, etc.) are active partners in research and implementation)			
Creation of structure to coordinate Patient Engagement throughout the network	- Materials co-developed (terms of reference, compensation policy, organizational network chart, work plan, Q&A for patient partners, etc.) Created flow charts as tools for information and engagement (Patient	- (30) new patient partners recruited for a total of (79) - (3) Patient Circles established	- Patient partners were recruited and is ongoing - Patient councils established (4 councils: collective, francophone, Indigenous and immigrant; that were later reconfigured to 3 and renamed 'Patient Circles' based on the request of patient partners) - Co-construction of informative materials to maximize patient partner engagement within the network - Collaboration between coordinators of network to co-construct materials to support Patient Engagement within Goal Groups

IMMEDIATE & INTERMEDIATE OUTCOMES			
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	Engagement service budget, requests for patient partners on projects/grants, project planned with goal groups)		
Patients as key stakeholders receive support to engage in the research and decision making process	- The Indigenous Patient Council created a work plan and road map identifying a shared vision with short, medium and long range goals.	- (57) instances of involvement of patient partners	- Consultation: PATH Exercise in Kahnawake (nov.22nd). This consultation was assisted by the help of a facilitator. - Training in patient-oriented research - Collaborating with SPOR SUPPORT unit to adapt training material that is culturally relevant (lead by Indigenous Peoples Health Goal Group) - Compensate patient partners for all involvement in Circle meetings, goal groups, research projects, training, etc.) - Patients involved in various projects within network and outside of network - Patient partners attended conferences as Scientific ambassadors

TRAINING AND MENTORING ENABLING PROGRAM

Project Lead	:	ANDRÉ CARPENTIER *($ 446,608)* & MATHIEU BÉLANGER *($ 230,000)*
Project Title	:	1. PATIENT-ORIENTED RESEARCH TRAINING & MENTORING STRATEGY; 2. TRAINING OF KNOWLEDGE TRANSLATION RESEARCHERS & CLINICAL CARE PROVIDERS
Goal Group Leads	:	Dr. André Carpentier, Dr. Mathieu Bélanger, Howard English (Patient Partner), André Gaudreau (Patient Partner)
Goal Group Co-investigators	:	Neeru Gupta, Aurel Schofield, Caroline Jose, Monica Parry
Reporting Year	:	APRIL 2017 – MARCH 2018

IMMEDIATE & INTERMEDIATE OUTCOMES			
OUTCOMES	**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
	QUALITATIVE	**QUANTITATIVE**	
IMMEDIATE OUTCOME(S) – Outcomes that are directly attributes to the outputs delivered (Please include additional information on the following: new knowledge in POR generated and disseminated, networking among SPOR element, research platforms established, capacity building in POR, stakeholder engagement in research and implementation)			
1. Build capacity for POR research	Profile of participants: - 10 researchers - 33 trainees (21 PhD students, 10 postdoctoral fellowships, 2 Masters students) - 8 patients - 1 healthcare professional	- 3 training sessions - 54 participants trained	More capacity building as SPOR Network establishes ongoing POR training (Number of training sessions Number of participants)

IMMEDIATE & INTERMEDIATE OUTCOMES			
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	QUALITATIVE	**QUANTITATIVE**	
	- 2 decision makers/ administrators in healthcare		
2. Articulation of POR teaching and learning goals, objectives and work plan	Award Competition was advertised to Diabetes Action Canada Investigators Applications were reviewed by adjudication committee	4 Mentorship Awards	More capacity building Continuation of Mentorship Awards Program Continuation of Internship Trainee Awards Program Funding of one Mentorship award by CMDO
3. Five postdoctoral fellowships established at $50k per year for a duration of 2 years to be leveraged with additional funds from partners. Awards allocated based on Diabetes Canada fellowship adjudication with scientific ranking and relevance for POR/sex-gender/equity relevance.	Competition was advertised via Diabetes Canada and Diabetes Action Canada. Applications were reviewed	1 Fellowship awarded	One new fellowship POR program designed for diabetes and its complications is ongoing. Continuation of Partnership Agreement between Diabetes Canada and Diabetes Action Canada (Training and Mentoring Group) for cost sharing which will double outcomes Patient-oriented research activities continue to be promoted among trainees

IMMEDIATE & INTERMEDIATE OUTCOMES			
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	QUALITATIVE	**QUANTITATIVE**	
INTERMEDIATE OUTCOME(S) – Outcomes that are logically expected to occur, once one or more immediate outcomes have been achieved (Please include additional information on the following: Research evidence is applied, clinical trials environment in Canada improved, Canadian capacity in POR is strengthened and maintained, stakeholders (patients, clinicians, etc.) are active partners in research and implementation)			
More researchers adhere to principles of POR			More researchers and partners are knowledgeable about POR
Patients are active partners in facilitating POR Training			More patient partners are active in POR training

Project Lead	:	MONICA PARRY *($6,000)*
Project Title	:	UTILIZING VIRTUAL INTERACTIVE CASES (VIC) TO DEVELOP TRAINEE'S DIABETES KNOWLEDGE AND CLINICAL REASONING SKILLS
Student	:	Khulood Al-Dabous, Lawrence S. Bloomberg Faculty of Nursing, University of Toronto
Reporting Year	:	APRIL 2017 – MARCH 2018

IMMEDIATE & INTERMEDIATE OUTCOMES			
OUTCOMES	**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
	QUALITATIVE	**QUANTITATIVE**	
IMMEDIATE OUTCOME(S) – Outcomes that are directly attributes to the outputs delivered (Please include additional information on the following: new knowledge in POR generated and disseminated, networking among SPOR element, research platforms established, capacity building in POR, stakeholder engagement in research and implementation)			
Development of Virtual Interactive Case (VIC) 4: Rosie, a 55yo female with Type 1 diabetes and hypoglycaemia unawareness. This case incorporated concepts of patient engagement and shared decision-making (SDM), and reflected collaboration with Dr. France Légaré.		In development	Case is still in development. We would like to incorporate short video clips from providers involved in SDM related to islet cell transplantation: patient, spouse, endocrinologist, and surgeon. Manuscript about using VIC technology to improved critical thinking/clinical decision making submitted to Clinical Simulation in Nursing Special Issue on Simulation in Advanced Practice Nursing (January 2019)

IMMEDIATE & INTERMEDIATE OUTCOMES			
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			Manuscript about using the VIC technology to generate knowledge and discussion about SDM in the management of diabetes, and the use of VIC technology for diabetes training.
The undergraduate summer research student developed.			Undergraduate taught essential skills in: a) literature searching, b) patient engagement, c) shared decision-making, d) social determinants of health, e) sex/gender, f) interdisciplinary collaboration, and f) knowledge translation.
INTERMEDIATE OUTCOME(S) – Outcomes that are logically expected to occur, once one or more immediate outcomes have been achieved (Please include additional information on the following: Research evidence is applied, clinical trials environment in Canada improved, Canadian capacity in POR is strengthened and maintained, stakeholders (patients, clinicians, etc.) are active partners in research and implementation)			
Virtual Interactive Cases 1 – 3 (reported in 2016-17) were implemented into the second year of the Nurse Practitioner Program at the Lawrence S. Bloomberg Faculty of Nursing (Winter 2017).	incorporate into Diabetes Canada Clinical Practice Guidelines into the assessment/management strategies for each of these virtual cases	These cases provided students (n=85) exposure to real-life clinical scenarios across the life span	Students were able to learn about social determinants of health as it relates to diabetes care Patient-Oriented Research curriculum for Nurse Practitioners established

KNOWLEDGE TRANSLATION ENABLING PROGRAM

Project Lead	:	FRANCE LÉGARÉ *($982,889)*
Project Title	:	TRANSFORMING COMMUNITY-BASED PRIMARY HEALTH CARE (CBPHC) KNOWLEDGE AND KNOWLEDGE TOOLS TO ADDRESS PATIENT-GENERATED PRIORITIES THROUGH THE INVOLVEMENT OF PATIENTS, THE PUBLIC, RESEARCHERS AND HEALTHCARE PROVIDERS
Goal Group Leads	:	Dr. France Légaré and Dr. Sophie Desroches
Goal Group Co-investigators	:	Michael Hillmer, Monica Kastner, Helene Lee-Gosselin, Lori MacCallum, Maureen Markle-Reid, Paul Oh, Mathieu Ouimet, Monica Parry, Jenny Ploeg, Marie Claude Tremblay, Ruta Valaitis, Catherine Yu
Reporting Year	:	APRIL 2017 – MARCH 2018

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
		QUALITATIVE	**QUANTITATIVE**	
IMMEDIATE OUTCOME(S) – Outcomes that are directly attributes to the outputs delivered (Please include additional information on the following: new knowledge in POR generated and disseminated, networking among SPOR element, research platforms established, capacity building in POR, stakeholder engagement in research and implementation)				
1.	**Network infrastructure and support services are responsive to identify patients, stakeholders, and health system needs**	• Minutes from the meetings attended • Ongoing communication between members of the network		Goal group leader and/or research coordinator have attended meetings promoted by Diabetes Action Canada executive committee: a. Monthly meetings organized by the operations/management committee, since January 2016 (FL and/or SD) b. Quarterly meetings organized by the Health Informatics groups, since September 2016 (FL and/or AF)

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				c. Monthly meetings with BeACCoN; Community-Based Intervention in T2D Older Adults working group, since January 2017 (FL and/or AF) d. Monthly meetings with DAC workshop planning committee, since March 2017 (FL and/or AF) Members of the KT goal group have had also their regular meetings to discuss projects, strategies and priorities to be aligned with the network (minutes are available from AF)
2.	**Pan-Canadian multi-network research generates evidence and advances methods in patient-oriented research**	• Ongoing communication between members of the KT group and other networks • KT business plan		The KT group has established partnerships with: a. KT goal groups has a long standing relationship with strategic networks (see point 3), reinforced the need to join forces for a more patient-oriented research with primary care centres (Centre de recherche sur les soins et les services de première ligne de l'Université Laval (CERSSPL-UL); Centre intégré universitaire de santé et services sociaux de la Capitale-Nationale (CIUSSS CN); b. Primary care networks (QPBRN; *Réseau* 1) by integrating Lyse Poisblaudin the Working

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		• Communication presenting the objectives of SWG3 sent to Collective Patients Circle • Minutes of the Collective Patients Circle of December 13, 2017		Group (WG) 3. Ms Poisblaud is the coordinator of Quebec Practice-based Research Network (QPBRN), a network for promoting primary care research from Laval University (F Légaré is scientific director and founding director), which is connected to *Réseau* 1. She is in contact with all directors of the primary care networks in the province of Quebec as well as with the international primary care network, META-LARC (cross border USA and Canada; funded by AHRQ; Université Laval PBRN is the only Canadian based PBRN that is included in a AHRQ P30 grant). She is implicated with the preparation of an initiative inspired by the James Lind Alliance methods, giving guidance for clinicians' engagement and protocol preparation. This initiative will allow people living with diabetes and clinicians in Canada to have direct input into research questions that are relevant to them. It will also provide activities of knowledge dissemination to hopefully decrease the knowledge gap between research and practice. AF presented this activity to members of the Collective Patients Circle for assessing acceptability of such initiative and for collecting feedback on potential challenges. This initiative received a very positive feedback from

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		• Minutes of communication between FL and Noah Ivers and Sophie Desroches to create WG 2 • Minutes of WG2 meetings and ongoing communication among team members • Communication among goal group coordinators and Diabetes Action Canada members • Study protocol is available online at Open Science Framework (https://osf.io/kgc4a/) since March 1st, 2018		members of the Collective Patient Circle, as they found that research prioritization on diabetes care and knowledge dissemination to patients, carers, and health providers is essential. Next steps include putting a team together to move this initiative forward. WG 2 was created to conduct an environmental scan on effective KT strategies in diabetes and its related complications that will inform different stakeholders about the state of the art in terms of methods and evidences. We aim to create an inventory of KT initiatives and tools developed in Canada to be hosted at Diabetes Action Canada website. We welcomed 4 patient-partners (including representatives of indigenous communities) from 4 Canadian provinces. We are also received support from the Sex & Gender goal group to integrate these concepts in the scan. We welcomed one PhD student (Lionel Adisso) and one postdoctoral fellow (Françoise Proust). Together team members co-construct a study protocol that is currently available on Open Science Network. By March 31st, we had requested team members and DAC members to inform us about any material that may be aware of for evaluation. The search strategy

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				for identifying any KT initiative/tool in the scientific/grey literature is completed. Around 10 000 titles from scientific literature will be screened along with the first 150 Google entries.
3.	**Enhancing training and career support in KT-oriented research**	• Minutes of WG 1 team meetings • Documents prepared for launching the initiative (April 2017) • Evaluation grid for peer-review process • Letters of award (June 2017) • KT business plan • Minutes of SWG2 team meetings	• Number of applications received and evaluated by a peer-review committee WG1 (n=11) - MSc (n= 2) - PhD (n=5) - Postdoc (n= 4) • Number of scholarships awarded WG1 (n=4) - PhD (n= 2) - Postdoc (n = 2) • Number of trainees recruited to WG2 (n=2)	WG 1 is in charge of a scholarship program within the network to foster KT in diabetes. KT goal group launched a scholarship program for graduate students and postdocs from the network to promote KT in the domain of diabetes and related complications. This initiative involves a partnership with KT Canada, a pan-Canadian network of experts in knowledge translation joining forces to provide solutions for the gap observed in the healthcare system when applying the results health research at the patient's bedside and in every day health decisions. WG1 is composed by members of KT, Patient Engagement, Sex & Gender, Training & Mentoring goal groups and 4 patient partners. They reviewed the applications received and provide feedback to the progress report prepared by scholars every 6 months. Since September 2017, scholars from Diabetes Action Canada are having access to the training provided by

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			- Françoise Proust (postdoc under the supervision of SD) - Lionel Adisso (PhD student under the supervision of FL) Number of trainees requiring external funds (n=1) - F Proust (submitted a fellowship application to Diabetes Canada under the supervision of France Légaré et Marie-Pascale Pomey – March 2018)	KT Canada during their monthly seminars. On February 2018, they have enrolled to participate in the KT Canada annual summer institute that will take place in Toronto (June 2008). In addition to the number of scholarships provided by WG1, KT goal group also recruited two other trainees who are currently contributing to the environmental scan (they are working on data collection and will be further implicated in data analysis)
4.	**Increased awareness and uptake of research by decision-makers and clinicians**	• Minutes from KT meetings and ongoing communication		As of April 2018, this point is in progress through the development of different activities. Most of them are in early stages and currently being co-constructed with different partners. In that sense, we created 2 additional WGs (WG4 and WG5). WG4 was created under the leadership of Catherine Yu and France Légaré to prepare for and achieve real-world implementation of IP shared decision making (SDM) in diabetes care. Based on Dr. Yu's previous

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				work about an interprofessional approach for shared decision making (IPSDM) intervention for patients with diabetes following a user-centered design and expertise of FL in the interprofessional approach to shared decision making as well as aligned with the initial DAC application and now broad goal, the co-leads of this WG joined forces to investigate if there is an optimal context (decision, patient, provider, setting, and interactions between each of these) to practice interprofessional SDM in diabetes care. WG5 is under the leadership of France Légaré and in collaboration with the KT component of the SPOR SUPPORT unit of Quebec (QSSU) to contribute to the science and practice of scale up and spread. A postdoctoral fellow, Ali Ben Charif worked closely with FL and AF for developing a scalability assessment tool to allow different stakeholders (patients, clinicians, researchers, decision makers) and Diabetes Action Canada members to evaluate the potential of an evidence-based practice (EBP) to be scale up. We validated this tool in collaboration with the 12 Community-Based Primary Health Care (CBPHC) teams across Canada that were funded by CIHR to improve access to CBPHC for vulnerable populations and chronic disease prevention and management, including Diabetes Action Canada members from the Aging, Community and Health Research Unit,

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			• Number of articles submitted to publication (n=1) • Number of presentation (n=1)	McMaster University. Ali Ben Charif is co-I in the 2 CIHR funding applications led by J Ploeg and M Markle-Reid. We hope that the scalability assessment tool will guide Diabetes Action Canada members interested in scaling up EBP to not only pay attention to the essential aspects that need to consider for scaling up an EBP but also facilitate their communication with stakeholders during this process. This collaboration has produced one oral presentation at a scientific congress and in one article submitted for publication. *Submitted publication:* Ali Ben Charif, Kasra Hassani, Sabrina T Wong, Hervé Tchala Vignon Zomahoun, Martin Fortin, Adriana Freitas, Alan Katz, Claire Kendall, Clare Liddy, Kathryn Nicholson, Bojana Petrovic, Jenny Ploeg, France Légaré. Scalability assessment of evidence-based innovations in community-based primary health care: a cross-sectional study (submitted to CMAJ, March 2018) Increased awareness will be achieved on years 4 and 5.
5.	**Patients are included in pan-Canadian, multidisciplinary, and**	• Minutes of team meetings and ongoing group communication		The KT goal group has included 8 patient-partners as active members for both WG1 and WG2.

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	cross-sectional partnerships, and collaborations			In addition, we have invited 2 patient-partners who are currently working with the Mentoring & Training goal group to collaborate with us in the mATrices project. *Please refer to Patient Engagement goal group for details concerning the implication of patient-partners in other goal groups of the network.*
6.	**Patients are contributing partners in the Network**			*Please refer to Patient Engagement goal group for details*
7.	**Patient engagement plan is up-to-date**			*Please refer to Patient Engagement goal group for details*
8.	**Leveraging patient engagement with other funding opportunities**		• Number of CIHR SPOR patient engagement grant obtained from DAC members of KT goal group (n=3)	**SPOR PIHCI** The Aging, Community and Health Research Unit (ACHRU) Community Partnership Program for Diabetes Self-Management for Older Adults PIs: **Légaré F; Reid P; Markle-Reid M; Valaitis R; Ploeg J** et al. Co-Is: **Lewis G; MacCallum L** et al **SPOR PIHCI** Case management in primary care for frequent users of healthcare services with

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				chronic diseases and complex care needs: implementation and realist evaluations PIs: Hudon, C et al Co-Is: **Légaré, F; Valaitis, RK** et al **SPOR REACH Network** SPOR Evidence Alliance PI: Straus SE; Tricco AC et al Co-Is: **Desroches S; Ivers N; Légaré F; Ouimet M; Rochon P** et al Collaborators: **Whiteside C; Yu C**
9.	**Leveraging KT and health services research application to funding agencies**		• Number of CIHR grant obtained (n=3) • Other grant submitted (n=1) and in progress	*CIHR grants obtained* • Strategic platform to facilitate Indigenous people engagement in research activities PI : **Tremblay MC** Co-Is: **Dogba MJ; Légaré F; McGavock J; Witteman H** KUs: **Lewis G, McComber A** • mAtrices PI: **France Légaré, Hélène Lee-Gosselin** Co-I : **Desroches S; Dogba MJ; Jose C; Ouimet M; Tremblay MC** et al Collaborator : **Bélanger M**

IMMEDIATE & INTERMEDIATE OUTCOMES				
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				• Building Capacity for Patient-Oriented Research in Clinical Trials PI: **Monica Parry**
INTERMEDIATE OUTCOME(S) – Outcomes that are logically expected to occur, once one or more immediate outcomes have been achieved (Please include additional information on the following: Research evidence is applied, clinical trials environment in Canada improved, Canadian capacity in POR is strengthened and maintained, stakeholders (patients, clinicians, etc.) are active partners in research and implementation)				
1.	**Creation of structure to coordinate KT activities throughout the network**	• Coordinator's contract • Minutes from meetings attended • KT business plan		• Research coordinator is involved in all activities of the KT group • Working Groups s were created • Sophie Desroches was appointed as co-lead of the goal group
2.	**Patients and stakeholders are implicated in the identification of research priorities in the diabetes care in Canada**	• Minutes from KT meetings and ongoing communication • Protocol for launching an initiative inspired by the James Lind Alliance methods • Communication presenting the objectives of WG3 sent to Collective Patients Circle	• Number of article published (n=1)	• Partnerships established with primary care networks • Collaboration with QPBRN and Réseau 1 is established • Consultation with the Collective Patient Circle *Published article* **Dogba MJ**, Dipankui MT, Dansokho SC, **Légaré F**, **Witteman HO**. Diabetes-related complications: Which research topics matter to diverse patients and caregivers? Health Expect. 2018 Apr; 21(2): 549–559.

IMMEDIATE & INTERMEDIATE OUTCOMES				
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		• Minutes of the Collective Patients Circle of December 13, 2017 • Collaboration with Patient Engagement goal group • Minutes from team meeting • KT business plan		• Partnership with Médecins francophones du Canada (Céline Monette, Director) established for developing a continuous professional development (CPD) activity in diabetes care involving sex & gender considerations involving a francophone context
3.	**Effective and sustainable strategies to engage patient and stakeholders as active partners for both research and implementation of KT activities in the context of diabetes care in Canada**	• Protocol for launching a James Lind Alliance initiative • Minutes of team meeting with Michele Greiver, Quebec SPOR SUPPORT Unit (QSSU), INESSS (November 2018) • Ongoing communication with M		• Partnerships established with primary care networks • Collaboration with stakeholders in Quebec (QPBRN, QSSU, INESSS, RRSPUM) to increase the contribution of Quebec's data to DAC National data repository is under development • Partnerships established with different groups: - ***BeACCoN/Retinopathy group*** – study protocol is established with the help of KT scientists (see

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		Greiver, MT Lussier and other key players in data access in the province of Quebec • Minutes of team meetings • KT business plan		patient engagement/diabetic retinopathy reports for details) - ***Interprofessional shared decision making (IPSDM) (C Yu)*** – study protocol for a pilot study aiming to investigate if there is an optimal context (decision, patient, provider, setting and interactions between each of these) to practice interprofessional shared decision making in diabetes care is currently under preparation - ***Interprofessional shared decision making IPSDM (M Parry)*** - Development of Virtual Interactive Case 4: Rosie, a 55yo female with Type 1 diabetes and hypoglycaemia unawareness. This case incorporated concepts of patient engagement and shared decision-making (SDM), and reflected collaboration with Dr. France Légaré. This case is still in development and is based on the diabetes journey of one of our patient partners at Diabetes Action Canada. *Publication Submittted* Parry et. al. Using VIC technology to improved critical thinking/clinical decision making submitted to Clinical Simulation in Nursing

IMMEDIATE & INTERMEDIATE OUTCOMES			
OUTCOMES	**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
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		• Number of articles submitted to publication (n=1) • Number of scholars attending KT Canada training (n=4) • Number of publication (n=2)	Special issue on *Simulation in Advanced Practice Nursing* (January 2018). - ***KT Canada*** – Canadian capacity building in POR is strengthened - ***T2D Older Adults/McMaster group*** *Publications* 1) Markle-Reid, M., Ploeg, J., Fraser, K. Fisher KA, Bartholomew A, Griffith L, Miklavcic J, Gafni A, Thabane L, Upshur R. (2017). Community program improves quality of life and self-management in older adults with diabetes and comorbidity. *Journal of the American Geriatrics Society, 66,* 263-273. http://doi.org/10.1111/jgs.15173 2) Markle-Reid, M., Ploeg, J., Fraser, K., Fisher, K., Akhtar-Danesh, N., Bartholomew, A., Gafni, A., Gruneir, A., Hirst, S., Kaasalainen, S., Kelly Stradiotto, C., Miklavcic, J., Rojas-Fernandez, C., Sadowski, C., Thabane, L., Triscott, J., & Upshur, R. (2017). The ACHRU-CPP versus usual care for older adults with type 2 diabetes and multiple chronic conditions and their family caregivers: Study protocol for a randomized controlled trial. *Trials, 18*, 55. doi: 10.1186/s13063-017-1795-9

IMMEDIATE & INTERMEDIATE OUTCOMES			
OUTCOMES	**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
	QUALITATIVE	**QUANTITATIVE**	
	• Plan for scaling up effective interventions on diabetes care • CIHR grant letter of notice	• Number of grant submitted (n=2) • Number of grant obtained by March 31, 2018 (n=1) • Number of articles submitted to publication (n=1) • Number of presentation (n=1)	*Grant obtained* The Aging, Community and Health Research Unit (ACHRU) Community Partnership Program for Diabetes Self-Management for Older Adults – Canada. ***PIs***: Johnson B; **Légaré F**; Mansell L; Montelpare W; Reid P; Tang F; Upshur R; **Markle-Reid M**; **Valaitis R**; Dicerni P; Fisher K; Ganann R; Graham P; Gruneir A; **Ploeg J.** (2018) SPOR - PIHCI Network - **12 CBPHC Innovation teams** Ben Charif A, Hassani K, Wong ST, Zomahoun HTV, Fortin M, **Freitas A**, Katz A, Kendall C, Liddy C, Nicholson K, Petrovic B, **Ploeg J**, **Légaré F**. (2018) Scalability assessment of evidence-based innovations in community-based primary health care: a cross-sectional study (*submitted* to CMJA, March 2018) Ben Charif A, Hassani K, Wong ST, Zomahoun HTV, Fortin M, **Freitas A**, Katz A, Kendall C, Liddy C, Nicholson K, Petrovic B, **Ploeg J**, **Légaré F**. (2017). Scalability assessment of evidence-based products in community-based primary health care. The 45th North American Primary Care Research Group Annual Meeting, Montreal, Canada

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
		QUALITATIVE	**QUANTITATIVE**	
		• Ongoing communications among team members • Minutes from team meeting December 2017		• Partnership with Médecins francophones du Canada (Céline Monette, Director) established for developing a CPD activity in diabetes care involving sex & gender considerations
4.	**Building KT capacity within the network and abroad in the context of diabetes care in Canada**	• Progress report prepared by scholars every 6 months • Report template prepared and approved by WG1 members • Letters of evaluation and feedback made by WG1 (including patient partners) (March 2018)	• Scholarships agreement fully executed • Number of progress reports received (January 2018) and peer-reviewed by WG1 members (including patient partners) (February 2018) (n=4) • Number of articles published by scholars (n= 3)	• Scholarships announcement (April 2017) - completed • Peer-reviewed committee reports (June 2017) - completed • Results of awarded individuals (June 2017) – completed • 1st progress report prepared by scholars (January 2018) – completed *Articles published in scientific journals* **Davis S**, **Roudsari A**, Raworth R, Courtney KL, & MacKay L. (2017). Shared decision-making using personal health record technology: a scoping review at the crossroads. *Journal of the American Medical Informatics Association*, 24(4), 857–866.

IMMEDIATE & INTERMEDIATE OUTCOMES			
OUTCOMES	**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
	QUALITATIVE	**QUANTITATIVE**	
		• Number of oral & poster presentations made by scholars (n= 9)	*Edited Conference Proceedings* **Davis S**, **Roudsari A** & Courtney KL (2017). Designing Personal Health Record Technology for Shared Decision Making. In F. Lau et al. (Ed.), Building Capacity for Health Informatics in the Future (Vol. 234, pp. 75–80). Victoria, Canada: IOS Press. **Davis S**, **Roudsari A** & Courtney KL (2017). Shared Decision Making via Personal Health Record Technology for Routine Use of Diabetic Youth: A Study Protocol. In Studies in Health Technology and Informatics (Vol. 235, pp. 63–67). *Oral & poster presentations* **Balla Ndegue SG**, **Kastner M**, **Dogba MJ**. L'ethnicité et la recherche participative sur le diabète au Canada. Secteur Recherche du Vice-décanat de la pédagogie et du développement professionnel continu, U Laval. February 2018. Quebec City, Canada **Ndjaboue R**, **Boudreault B**, **Dogba MJ**, Chipenda Dansokho S, **McComber A**, **Price R**, **McGavock J**, **Drescher O**, **Tremblay MC**, **Delgado P**, **Witteman H**. Patients as Teachers: Applying Patients' Expertise to Improve Diabetes Care. Annual Meeting of the North American Primary Care

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
		QUALITATIVE	**QUANTITATIVE**	
				Research Group. November 17-21, 2017. Montreal, Canada **Fazli GS**, Moineddin R, Bierman AS, **Booth GL**. Incidence of prediabetes among Immigrants and long-term residents by ethnicity: Call for Action on the Upstream Determinants of Prediabetes. The Ontario Public Health Convention, March 21-23, 2018 **Fazli GS**, Moineddin R, Bierman AS, **Booth GL**. Progression of prediabetes to type 2 diabetes among immigrants and long-term residents: A population-based cohort study. The Ontario Public Health Convention, March 21-23, 2018 **Fazli GS**, Moineddin R, Bierman AS, **Booth GL**. Does neighbourhood walkability modify the association between ethnicity and prediabetes incidence? Active Living Research, February 11-14, 2018. **Fazli GS**, Rezai R, Moineddin R, Bierman AS, **Booth GL**. The effects of ethnicity on the development of prediabetes among immigrant populations living in low vs. high walkability areas: A population-based cohort study. European Association for the Study of Diabetes, September 15-17, 2017.

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
		QUALITATIVE	**QUANTITATIVE**	
				Fazli GS, Rezai R, Moineddin R, Bierman AS, **Booth GL**. Prediabetes to Type 2 Diabetes among Recent Immigrants and Long-Term Residents in Canada. American Diabetes Association (ADA) June 9-13 2017. **Fazli GS**, Rezai R, Moineddin R, Bierman AS, **Booth GL**. Prediabetes Incidence among Recent Immigrants and Long-Term Residents: A population-based study. American Diabetes Association (ADA) June 9-13 2017. **Fazli GS**, Rezai R, Moineddin R, Bierman AS, **Booth GL**. Ethnic Variation in Prediabetes Incidence among Recent Immigrants and long-term residents to Canada: A Competing Risk Analysis. Canadian Society of Epidemiology and Biostatistics May 30-June 2017. • 2nd and final progress report to be prepared by scholars (July 2018)
5.	**Integrating KT strategies to improve diabetes care in Canada**	• Minutes from working groups (T2D Older Adults) • Email communication with partners		• Plan for scaling effective interventions is prepared (May 2017) • Different stakeholders (Ministry of Health, Health organizations, provincial networks, key opinion leaders, patient-partners) from 4 provinces (ON,

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
		QUALITATIVE	**QUANTITATIVE**	
		• Plan for guiding members of the network to scale up effective interventions (T2D Older Adults) • Letter of notice • Minutes from team work • Letter of notice • Abstracts submitted to scientific conferences	• Number of abstracts submitted (n=2)	QC, PEI, AB) are active partners in research for an innovation implementation across Canada (November 2017) • SPOR PIHCI grant obtained for Jenny Ploeg et al. • CIHR funds obtained in the previous year to develop a navigation guide for diabetic patients to improve their engagement in their self-management. - 3 focus groups with health care providers and patients were conducted - A preliminary version of the decision guide is developed following recommendations of those focus groups *Abstracts submitted* Vachon, B; Gaboury, I; Rhéaume, C; Savard, V; **Freitas, A**; Pomey, M-P ; Breton, M, **Légaré, F**. Development of a navigation guide to improve diabetic patients' empowerment and interprofessional collaboration in primary care. *Submitted* to the 46th North American Primary Care Research Group Annual Meeting, Chicago, IL, USA Vachon, B; Gaboury, I; Rhéaume, C; Savard, V; **Freitas, A**; Pomey, M-P ; Breton, M, **Légaré, F**.

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
		QUALITATIVE	**QUANTITATIVE**	
				Développement d'un guide de navigation pour les personnes diabétiques de type 2 : Comment mieux comprendre les rôles des professionnels de la 1ère ligne pour mieux répondre à ses besoins d'autogestion. *Submitted* to Journée Scientific du Réseau-1, QC, Canada
6.	**Patients are engaged in the whole SPOR Network activities** **Creation of structure to coordinate patient engagement throughout the network**			• *Please refer to Patient Engagement goal group for details*
7.	**Patients as key stakeholders receive support to engage in the research and decision making process**	• Minutes from team meetings • WG1 scholars' reports • WG2 study protocol available at Open Science Framework (https://osf.io/kgc4a/)		• 8 patient-partners from at least 4 Canadian provinces are active partners in most KT activities (WG1; WG2) *For information concerning patient engagement in research and decision making at the network level, please refer to Patient Engagement goal group report.*

Project Lead	:	GARY LEWIS / LORI McCALLUM *($ 83,333)*
Project Title	:	DELIVERY OF PRECONCEPTION CARE EDUCATION BY PHARMACISTS TO WOMEN WITH DIABETES

IMMEDIATE & INTERMEDIATE OUTCOMES			
OUTCOMES	**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
	QUALITATIVE	**QUANTITATIVE**	
IMMEDIATE OUTCOME(S) – Outcomes that are directly attributes to the outputs delivered (Please include additional information on the following: new knowledge in POR generated and disseminated, networking among SPOR element, research platforms established, capacity building in POR, stakeholder engagement in research and implementation)			
Design and development of linked educational programs on preconception care for pharmacists and women with diabetes	• Development of an online learning module • Feedback about the quality of the content presented	• 67 video plays • 28 post-tests completed • 25 certificates of participation issued • Received a rating of 'Very Good' from over 64% of respondents	• Launched an online learning module entitled, 'Preconception Care in Women with Diabetes: What Do Pharmacists Need to Know?', featuring Dr. Denice Feig, MD, MSc, FRCPC, consisting of a patient case, pre-test, educational video, resources for pharmacists, post-test, and a discussion section. There is an increase in the number of women with diabetes becoming pregnant without adequate preconception care. Optimal preconception care is critical to ensure healthy outcomes for mother and child. As pharmacists see people with diabetes more than any other health care professional, pharmacists have an opportunity to provide this important education to all women with diabetes of child bearing potential. This learning module will educate pharmacists across Canada on the unique requirements for this population and how to identify and counsel these women. •

IMMEDIATE & INTERMEDIATE OUTCOMES			
OUTCOMES	**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
	QUALITATIVE	**QUANTITATIVE**	
INTERMEDIATE OUTCOME(S) – Outcomes that are logically expected to occur, once one or more immediate outcomes have been achieved (Please include additional information on the following: Research evidence is applied, clinical trials environment in Canada improved, Canadian capacity in POR is strengthened and maintained, stakeholders (patients, clinicians, etc.) are active partners in research and implementation)			
Online educational program launched that can be delivered to pharmacists within the Diabetes Pharmacists Network and the design of a linked educational program for women with diabetes	• Received comments from members acknowledging their role in preconception care, which were posted on the web page of the learning module		
Development of a pharmacist-facing module	• Review of the literature and identification of key learning objectives for the module • Development of a patient case • Development of self-reflection questions for pharmacists • Development of pre- and post-test questions	• Identified five learning objectives • Developed five pre- and post-test questions to assess knowledge of preconception care and five self-reflection questions for pharmacists to consider their own practice • One healthcare provider tool • One guideline • One patient resource	• All of these objectives have been addressed in the learning module: 1. Discuss the risks of pregnancy in women with diabetes 2. Review the safety of commonly used diabetes medications 3. Discuss the effects of glycemic control and weight on pregnancy 4. Summarize the various components of preconception care 5. Learn about ways to initiate the conversation with women with diabetes of childbearing age • The interactive learning module allows pharmacists to self-reflect on their current knowledge, identify gaps, and assess their change

IMMEDIATE & INTERMEDIATE OUTCOMES			
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	QUALITATIVE	**QUANTITATIVE**	
	• Development of questions for experts and key messages for the video • Video shoot and editing • Animation of key messages • Selection of resources for pharmacists • Choice of topic to generate discussion • Content reviewed by experts (Dr. Denice Feig) for accuracy • Content reviewed by pharmacists to assess applicability and usability • Development of dissemination strategies including	• Issued one press release	in knowledge and behaviours after completing the program. • Providing additional resources with the learning module assists pharmacists in applying their new knowledge in their practice • Provided a chapter entitled, 'Diabetes and Pregnancy' from the Canadian Diabetes Association 2013 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada as a suggested reading • Provided a patient resource entitled, 'Good Health Before Pregnancy: Preconception Care' by The American College of Obstetricians and Gynecologists • A jointly released press release was issued by the Banting & Best Diabetes Centre at the University of Toronto and Diabetes Action Canada to announce the launch of the learning module • By using social media, we were able to reach more pharmacists including those that are not already members and ultimately expand our network

IMMEDIATE & INTERMEDIATE OUTCOMES			
OUTCOMES	**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
	QUALITATIVE	**QUANTITATIVE**	
	newsblasts and social media posts • Quality assurance testing on the test site prior to going live		
Development of a strategy to recruit pharmacists for practice-based research			• Completed 2016-17 reporting

Project Lead	:	GARY LEWIS / LORI MACCALLUM *($ 83,333)*
Project Title	:	SUPPORTING AND EMPOWERING PHARMACISTS TO IMPROVE THE CARE OF PEOPLE WITH DIABETES ACROSS CANADA

IMMEDIATE & INTERMEDIATE OUTCOMES			
OUTCOMES	**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
	QUALITATIVE	**QUANTITATIVE**	
IMMEDIATE OUTCOME(S) – Outcomes that are directly attributes to the outputs delivered (Please include additional information on the following: new knowledge in POR generated and disseminated, networking among SPOR element, research platforms established, capacity building in POR, stakeholder engagement in research and implementation)			
Knowledge Translation- promote best practice through publications and the development of original educational initiatives to support pharmacists in the care of people with diabetes	• Collaboration with pharmacists • Collaboration with other researchers/ experts/ authors	• One journal issue • One perspectives in practice publication • Two editorials	1) Journal Issues • Guest Editor for an issue of the *Canadian Journal of Diabetes* 2017;41(6), dedicated to pharmacy practice and diabetes care • Reached out to and received several manuscripts authored by members of the Diabetes Pharmacists Network, which were published in the *Canadian Journal of Diabetes* 2017;41(6) issue 2) Journal Articles • MacCallum L, Lewis G. Creation of a Diabetes Pharmacists Network in Canada. *Can J Diabetes* 2017;41(6):571-575. 3) Editorials • MacCallum L, Dolovich L. Follow-up in community pharmacy should be routine, not extraordinary. *Can Pharm J* 2018;151(2):79-81.

IMMEDIATE & INTERMEDIATE OUTCOMES			
OUTCOMES	**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
	QUALITATIVE	**QUANTITATIVE**	
		• Reached over 6,200 users across Canada with the continued sales of the 1st edition	• Simpson SH, MacCallum L, Mansell K. Pharmacy practice and diabetes care. *Can J Diabetes* 2017;41(6):549-550. 4) *Banting & Best Diabetes Centre (BBDC) Guidebook for Pharmacists on Diabetes Management*
	• Collaboration with authors	• Entered into an agreement with four authors to contribute to the 2nd edition to be published in 2018-2019	
	• Received comments from health care providers who viewed the practice tool as a great resource to	• Developed one practice tool • Reached over 2,400 downloads in the first	5) Practice Tool • Launched a practice tool designed to help health care providers safely and effectively use SGLT2 inhibitors in their practice

IMMEDIATE & INTERMEDIATE OUTCOMES			
OUTCOMES	**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
	QUALITATIVE	**QUANTITATIVE**	
	be shared with colleagues • Shared with diabetes health care providers through an online community hosted by Diabetes Canada • Featured in multiple presentations as part of continuing education programs delivered to health care providers in Winnipeg, MB	month post-launch	
Community of Practice- develop a network of pharmacists across Canada that are interested in improving the care of people with diabetes	• Engagement of members in the online community, newsletters, social media and events	• Reached over 1,200 members • Surpassed 70,100 page views of the network's website	1) Diabetes Pharmacists Network – The Banting & Best Diabetes Centre (BBDC) at the University of Toronto launched the Diabetes Pharmacists Network to bring together pharmacists from across Canada who are interested in advancing diabetes care. We recognize the value of pharmacists in improving outcomes for people with diabetes and want to empower and support pharmacists who exemplify best practices through networking, education, and knowledge translation initiatives.

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	QUALITATIVE	**QUANTITATIVE**	
		• Reached over 4,500 plays of the educational videos • 164 Certificates of Participation issued to members upon submission of a post-test evaluation following completion of a learning module • Reached over 1,300 newsletter recipients • Surpassed 10,000 social media followers	

IMMEDIATE & INTERMEDIATE OUTCOMES			
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	QUALITATIVE	**QUANTITATIVE**	
	• Accomplishments of invited keynote speaker and recognition of the speaker's work nationally and internationally	• Hosted the 5th annual event held at the 20th Annual Diabetes Canada/ CSEM Professional Conference and Annual Meetings in Edmonton, AB • Attended by 32 guests consisting of health care providers, researchers, and industry partners • Featured an invited speaker	2) Networking and Continuing Education Events – An annual Diabetes Pharmacists Network event is held at the Diabetes Canada (formerly Canadian Diabetes Association)/ Canadian Society of Endocrinology and Metabolism (CSEM) Professional Conference and Annual Meetings. The event includes networking followed by a presentation by invited speakers who are leaders in the field, and a panel discussion moderated by Dr. MacCallum. • Dr. Ross Tsuyuki BSc(Pharm), PharmD, MSc, FCSHP, FACC from the University of Alberta, was invited to give a presentation entitled, 'Unlocking Pharmacists' Full Potential: Learning from Alberta'. The presentation was followed by an interactive panel discussion moderated by Dr. MacCallum.

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	QUALITATIVE	**QUANTITATIVE**	
		• Published an online article	• The online article entitled, 'Lessons from Alberta' provided a summary of the event, presentation, and panel discussion
Stakeholder Engagement- collaborate and partner with other diabetes and pharmacy organizations to achieve common goals	• Developed new partnerships/ collaborations	• Five new collaborations	Dr. MacCallum was invited to contribute to the following: • Expert Committee Member and Co-author, Diabetes Canada 2018 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada • Dolovich L, Waite N, Austin Z, Houle S, McCarthy L, MacCallum L, et al. Pharmacy in the 21st century: enhancing the impact of pharmacy on people's lives in the context of health care trends, evidence and policies. Prepared for the Ontario College of Pharmacists • Member, Diabetes Canada's Diabetes 360° Target Working Group for Screening, Risk Awareness and Early Diagnosis – Diabetes 360° is a strategy for the optimal prevention and management of diabetes and its related chronic conditions and complications in Canada, with an emphasis on early detection of both diabetes and prediabetes, early access, and early interventions. The strategy will also promote health equity and access to care for all Canadians by making screening, diagnosis, and support for self-management of diabetes more uniformly available to those affected. • Participant, Ontario Pharmacy Evidence Network (OPEN) Quality Improvement in Pharmacy Event – Through this meeting, OPEN is bringing together

IMMEDIATE & INTERMEDIATE OUTCOMES			
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	QUALITATIVE	**QUANTITATIVE**	
		• Six presentations	stakeholders to discuss a research agenda for embedding quality improvement (QI) thinking into Canadian pharmacy culture to improve medication use, management, and outcomes for people living in their communities. • Member, University of Toronto, planning meeting for the 100th Anniversary of the Discovery of Insulin Scientific Meeting 2021 Dr. MacCallum was an invited speaker at the following conferences/academic rounds: • How the Banting & Best Diabetes Centre is Supporting and Empowering Pharmacists to Improve Diabetes Care. Sunnybrook Health Sciences Centre Endocrinology Rounds, Toronto, ON, February 2018. • Optimizing the Benefits and Minimizing the Risks of New Antihyperglycemic Agents. Canadian Society of Hospital Pharmacists 49th Professional Practice Conference, Toronto, ON, February 2018; also given as an encore presentation. • Cardiovascular Outcomes of Antihyperglycemic Agents. Toronto General Hospital Clinical Foundations Pharmacy Rounds, Toronto, ON, November 2017. • Unlocking Pharmacists' Full Potential: Learning from Alberta. 20th Annual Diabetes Canada/ Canadian Society of Endocrinology and Metabolism Professional

IMMEDIATE & INTERMEDIATE OUTCOMES			
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	QUALITATIVE	**QUANTITATIVE**	
			Conference and Annual Meetings, Edmonton, AB, November 2017; panel discussion moderator. • Cardiovascular Outcomes of Antihyperglycemic Agents. Pri-Med Canada, Toronto, ON, May 2017. • Optimizing the Care of a Patient with Diabetes and Cardiovascular Disease. Canadian Cardiovascular Pharmacists Network 20th Annual Contemporary Therapeutic Issues in Cardiovascular Disease, Toronto, ON, April 2017.
Academic Research –contribute to new knowledge on the role of medications in diabetes and the role of pharmacists in diabetes care	• Impact factor of journal publications	• Recipient of an Innovation Fund Grant from the Canadian Foundation for Pharmacy • Publication of nine original manuscripts	Primary Investigator: • MacCallum L, Dolovich L, Kellar J, Moore J, Straus S, Lewis G. Strategies to encourage pharmacist routine follow-up after initial medication review in people with diabetes in primary health care. ($60,500 CAD funded by the Canadian Foundation for Pharmacy Innovation Fund Grant, 2017-2019) Authored the following manuscripts: • MacCallum L, Senior P. Safe use of metformin in adults with type 2 diabetes and chronic kidney disease – lower doses and sick day education are essential. Can J Diabetes 2018; accepted for publication. • MacCallum L, Dolovich L. Follow-up in community pharmacy should be routine, not extraordinary. *Can Pharm J* 2018;151(2):79-81.

IMMEDIATE & INTERMEDIATE OUTCOMES			
OUTCOMES	**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
	QUALITATIVE	**QUANTITATIVE**	
			• Lipscombe L, Booth G, Butalia S, Dasgupta K, Eurich DT, Goldenberg R, Khan N, MacCallum L, et al. Diabetes Canada 2018 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada: pharmacologic glycemic management of type 2 diabetes in adults. *Can J Diabetes* 2018;42:S88-S103. • Meneilly GS, Berard LD, Cheng AYY, Lin PJ, MacCallum L, Tsuyuki RT, et al. Insights into the current management of older adults with type 2 diabetes in the Ontario primary care setting. *Can J Diabetes* 2018;42(1):23-30. • MacCallum L, Consiglio G, MacKeigan L, et al. Uptake of community pharmacist-delivered MedsCheck Diabetes medication review service in Ontario between 2010 and 2014. *Can J Diabetes* 2017;41(3):253-8. • MacCallum L, Lewis G. Creation of a Diabetes Pharmacists Network in Canada. *Can J Diabetes* 2017;41(6):571-575. • Simpson SH, MacCallum L, Mansell K. Pharmacy practice and diabetes care. *Can J Diabetes* 2017;41(6):549-550. • Verweel L, Gionfriddo MR, MacCallum L, Dolovich L, Rosenberg-Yunger ZRS. Community pharmacists' perspectives on a decision aid for managing type 2

IMMEDIATE & INTERMEDIATE OUTCOMES			
OUTCOMES	**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
	QUALITATIVE	**QUANTITATIVE**	
			diabetes in Ontario. *Can J Diabetes*, 2017;41(6):587-595. • Rosenberg-Yunger ZRS, Verweel L, Gionfriddo MR, MacCallum L, Dolovich L. Community pharmacists' perspectives on shared decision making in diabetes management. [published online ahead of print December 26, 2017]. Int J Pharm Pract. https://doi.org/10.1111/ijpp.12422.
Education	• Evaluations from students	• Precepted one PharmD candidate from the Leslie Dan Faculty of Pharmacy at the University of Toronto • Lectured at the Leslie Dan Faculty of Pharmacy and the Lawrence S. Bloomberg Faculty of Nursing at the University of Toronto	Preceptor of Advanced Pharmacy Practice Experience (non-direct patient care) Rotations • Brenda Yee Mei Li (May – June 2017) • "Diabetes" lecture presented at the Pharmacotherapy 3: Endocrinology, Nephrology and Urology (PHM 202-PCT 3) in the Doctor of Pharmacy Program (October 2017) • "Non-insulin Antihyperglycemics" lecture presented at the Advanced Health Assessment and Therapeutic Management II – Adult, Pediatric and Primary Health Care-Global Health (NUR1215H/16H/17H) for second year students of the Master of Nursing – Nurse

IMMEDIATE & INTERMEDIATE OUTCOMES			
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	QUALITATIVE	**QUANTITATIVE**	
			Practitioner Field and the Post-Master Nurse Practitioner Diploma Programs (March 2018) • "Cardiovascular Outcomes of Antihyperglycemic Agents" lecture presented at the Advanced Health Assessment and Therapeutic Management II – Adult, Pediatric and Primary Health Care-Global Health (NUR1215/16/17) for second year students of the Master of Nursing – Nurse Practitioner Field and the Post-Master Nurse Practitioner Diploma Programs (March and May 2017)

Project Lead	:	HOLLY WITTEMAN *($ 30,000)*
Project Title	:	RISK CALCULATOR

1. IMMEDIATE & INTERMEDIATE OUTCOMES			
OUTCOMES	**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
	QUALITATIVE	**QUANTITATIVE**	
IMMEDIATE OUTCOME(S) – Outcomes that are directly attributes to the outputs delivered (Please include additional information on the following: new knowledge in POR generated and disseminated, networking among SPOR element, research platforms established, capacity building in POR, stakeholder engagement in research and implementation)			
Risk Calculator that can rapidly translate evidence, answer questions related to complications of people with diabetes and optimize patient and health care provider understanding of individual risk reduction to guide customized care path options.	New findings about patient partners' views of how diabetes care and self-management might be improved	1 manuscript under review; 1 emerging scholar (postdoctoral fellow) trained in patient-oriented research	The outputs for this project have changed to reflect the increased role of patient-led priorities in the project design. Specifically, patient partners indicated that before developing new content to be communicated with patients, we should focus on the way health professionals communicate about risks, benefits, and other issues now with people with diabetes. Led by a postdoctoral fellow who was trained in patient-oriented research through the network, we have completed a qualitative study of recommendations for improving diabetes health care and self-management to reduce risk of complications. (Manuscript under review.)
INTERMEDIATE OUTCOME(S) – Outcomes that are logically expected to occur, once one or more immediate outcomes have been achieved (Please include additional information on the following: Research evidence is applied, clinical trials environment in Canada improved, Canadian capacity in POR is strengthened and maintained, stakeholders (patients, clinicians, etc.) are active partners in research and implementation)			
Development of a synthesis of existing risk models for complications of diabetes and a preliminary set of design			Staff (1 postdoc and 2 research assistants) are currently conducting a systematic review of all existing models to guide this further work.

1. IMMEDIATE & INTERMEDIATE OUTCOMES			
OUTCOMES	**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
	QUALITATIVE	**QUANTITATIVE**	
specifications, including specifications for tailoring according to personal characteristics			

DIABETIC RETINOPATHY SCREENING GOAL-DIRECTED PROGRAM

Project Lead	:	MICHAEL BRENT *($ 455,400)*, DAVID MABERLEY *($ 177,500)*
Project Title	:	RURAL-URBAN COMMUNITIES - PREVENTING BLINDNESS WITH A NATIONAL TELEMEDICINE RETINAL SCREENING AND RESEARCH PROGRAM
Goal Group Leads	:	Dr. Michael Brent, Dr. David Maberley, Debbie Sissmore (Patient Partner)
Goal Group Co-investigators	:	Marie Carole Boucher, Melanie Campbell, Varun Chaudhary, Alan Cruess, Sherif El Defrawy, Mahyar Etminan, Bernard Hurley, Stephen Kosar, Jason Noble, Valeria Rac, Chris Rudnisky, Sanjay Sharma, Tom Sheidow, Matthew Tennant, David Wong
Reporting Year	:	APRIL 2017 – MARCH 2018

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
		QUALITATIVE	**QUANTITATIVE**	
IMMEDIATE OUTCOME(S) – Outcomes that are directly attributes to the outputs delivered (Please include additional information on the following: new knowledge in POR generated and disseminated, networking among SPOR element, research platforms established, capacity building in POR, stakeholder engagement in research and implementation)				
1.	Network Diabetic Retinopathy Screening Goal Group established			New members joined the Diabetic Retinopathy (DR) Goal Group. Teleconference group meetings are scheduled quarterly and on-going. Collaboration among ophthalmologist across Canada is ongoing. The Ontario Tele-Retina working group meeting was held in Toronto September 23, 2017.
2.	Detailed analysis of tele-ophthalmology best practices to detect and treat DR	Submitted Report, possible publication	Literature Review	Environmental scan of Canadian and International Tele-ophthalmology (TOP) programs was completed but not yet published (expected 2018-19)

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3.	Integration of tele-ophthalmology services and data management	Researcher perceptions of how well systems are integrated and easy to use	Internal annual report for the Ontario Tele-Retina working group meeting held on 21 Sept.2017 in Toronto (ALT hotel)	*iVision,* a teleretina software provided by Retina Labs, was fully integrated into OTN. The Ontario Tele-Retina working group evaluated the program and suggested changes to improve end-user functionality.
4.	Analysis of health determinants for DR based on survey of patients in urban and rural settings	Survey completion and subsequent report	Surveys as completed by 64 patients	An on-line survey for diabetic patients in urban and rural settings with the title: "Understanding the Impact of DME and Barriers to Treatment" was completed by patients and a brief report written and currently under review.
5.	Evaluations include sex/gender, vulnerable population determinants for DR	Interviews of vulnerable populations belonging to different cultural minority groups (immigrants from South Asia or China and Francophone immigrants of African descent) living with diabetes in Canada		A detailed study protocol was customized based on feedback from the Patient Circle and all collaborators. The research study was REB approved at 3 different centers in Quebec and Ontario and commenced with structured patients individual interviews and focus groups to identify barriers and enablers to attending DR screening.
6.	Indigenous Peoples' needs are recognized through customized models of DR screening services	Customized screening models in Indigenous Peoples' communities		A goal for future 2018-19 is to expand the project of ethno-cultural minorities to other vulnerable population and customize towards need of Indigenous Peoples' communities.

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7.	Self-management tools in DR screening are created and evaluated: - New app for development of patient-centred engagement and better access to DR screening and preventions - New web based program(s) developed and evaluated	Adherence and adoption of mobile application to increase promote self-management practices for diabetic retinopathy	Number of App users will be quantified	*Bant*, a new app for hand held devices, is under development. The diabetic retinopathy screening and self-management component is expected to promote compliance with current recommendations on diabetic retinopathy screening
8.	New human subjects protocols established for population-based studies and clinical trials for DR (and other diabetes complications)	Evidence generated that supports improved health systems efficiency at reduced cost		A cost effectiveness analysis on pilot Diabetic Retinopathy Teleophthalmology screening data was conducted by Dr. Rac from THETA. The new model using portable retina cameras might reduce cost, improve outcomes, access, and patient satisfaction on a bigger scale. The model will be implemented across Canada, reaching from heavily populated areas into rural regions with a focus on the most vulnerable. Our next step will be to perform cost-effectiveness analysis to evaluate scale up Tele-retina screening in Ontario through Family health team data.
9.	New Urban and Rural Urban screening sites in British Colombia		Two additional Imaging nodes in Vancouver's Downtown Eastside	These newly placed cameras have been procured through funding/donations from the Vancouver Coastal Health Authority and the 625 Powell St. Foundation. We are also in the process of hiring an imaging research technician

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			and Bella Bella are in operation.	who will be: (1) developing broader provincial planning for supplemental node sites; (2) building DR connectivity between the BC Mainland and Vancouver Island Teleretina programs; (3) working to integrate Optical Coherence Tomography Angiography (OCTA) protocols to enhance our current en-face imaging methodology for diabetic retinopathy; and, (4) oversee the national DR registry server which will be based in Burnaby, BC. MSFHR funds will be used for salary support for this individual ($50, 000 starting July 1, 2017) and to procure a Zeiss OCTA device ($100,000 May 2017). Funds from 2016/2017 and 2017/2018 will be needed to fund this plan.
10.	Establish diagnostic algorithms for image analysis.	The collaborative ocular imaging group ARIA (UBC/SFU), which is based at the VGH Eye Care Centre, is in the process of developing diabetic retinopathy vascular assessment algorithms for OCTA that will be used to assess the macular microvasculature. _____ We are collaborating with a group of investigators at the		Furthering our understanding of retinal perfusion in patients with diabetes using a nascent, non-invasive technology. We will also be exploring how to integrate this new technology in to broader DR screening and evaluative tele-retina protocols. This particular work will likely require the engagement of a computer programmer (MSc) (~$15, 000/year). _____ Developing new algorithms using advanced technology to read retinal fundus photo images for diagnosis of diabetic retinopathy and other eye disease, with a view to

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		University of Montreal (MILA, Polytechnique, Centre universitaire d'opthalmologie Maisonneuve-Rosemont) on the AI project on reading retinal images.		improving access to high quality ophthalmological care by reducing reading times and increasing clinician productivity.
11.	Efficient strategic communications within the Network	Stakeholder perceptions of the speed and efficiency of project completion		Communication plan (prepared by Diabetes Action Canada) was used to inform and consult the Diabetes Action Canada stakeholders about all research activities and to ensure the direction of Diabetic Retinopathy projects align with strategic priorities.
12.	Begin to align with overall patient-centred informatics to screen for diabetes complications	Increased numbers of diabetics screened		Currently, collaborations are underway with Diabetes Repository Goal Group and government agencies to incorporate diabetic retinopathy screening into the Diabetes Action Canada health informatics platform.
13.	DR Steering Group understands key drivers for successful establishment of DR Registry			Data being collected from all provinces are stored at tele-ophthalmology sites in provinces.
14.	App and web based program enhances access to DR screening and Registry linkage			IT providers were chosen: Secure Diagnostic Imaging (SDI) in Western Canada (BC, Alberta, Saskatchewan, Manitoba) and Ontario Telemedicine Network (OTN) in Ontario. Imaging Software provider - *Retina Labs*- is chosen to

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				cover Ontario and Quebec and might be extend to other Eastern Provinces. The Retinopathy group has established a standardized data set collection and pathways for data transfer to the DAC Registry / Repository. Each Province's software solution is able to capture and transfer this data set. Together with DAC Informatics goal group, we are working on integration of de-identified diabetic retinopathy data into DAC repository; initially Alberta and Ontario hosted on OTN, followed by Quebec and Newfoundland.
INTERMEDIATE OUTCOME(S) – Outcomes that are logically expected to occur, once one or more immediate outcomes have been achieved (Please include additional information on the following: Research evidence is applied, clinical trials environment in Canada improved, Canadian capacity in POR is strengthened and maintained, stakeholders (patients, clinicians, etc.) are active partners in research and implementation)				
1.	Access to DR screening in both urban and rural setting improved (e.g. new model for remote communities in BC)	Increased access for diabetic patients to have DR screening		Two new screening clinics in BC, one in remote Bella Bella community and another in the east side downtown Vancouver, were set-up and are created as a valuable model to study urban and rural setting for DR screening.
2.	Patients in local provincial sites receive efficient best practice for DR prevention	With expanding number of sites and increasing accessibility to DR screening we decrease number of diabetic patients without an annual eye exam.		DR screening program is focusing continuously on the most vulnerable, under-screened population and currently have more than 500 DR TeleRetina screening programs, serving both inner cities and remote areas, operating in Ontario, Quebec, British Columbia, Alberta and Manitoba. Majority of sites are in Western Canada: BC over 250 communities, Alberta 64 rural and urban sites, Manitoba remote, fly-in and static programs, Quebec 9 remote and multiple Community Health Center sites, Newfoundland 2 remote sites.

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				In Ontario 8 active sites are operational (5 in Toronto: *South Riverdale Community Health Centre (CHC), Flemington CHC, Parkdale CHC, Anishnawbe Health Toronto, Black Creek CHC, Scarborough Academic Family Health Team),* Sudbury *(Manitoulin Island),* Hamilton at *McMaster University*, Kingston- *Queens University*). In addition, we are developing 2 new stationary screening sites in Toronto: one at Mt. Sinai Hospital and another one at Toronto General Hospital; expected to start with patient screening mid 2018.
3.	Engagement of private sector (s) in investing in this innovation	Number of companies interested in purchasing/partnering with SPOR		Continuous support from Bayer and Novartis. Exploring new partnership with IBM Health, Eyenuk, Boehringer Ingelheim.
4.	Canadian benefit from enrolment in studies that improve DR outcomes and evidence is generated to support improved health system efficiency at reduced cost	% of SPOR grants reporting contribution to improve health of Canadians		A detailed cost effective analysis of DR screening is iteratively generated as this program scales up.
5.	Vulnerable population in British Colombia have access to retinopathy screening		Number of patients screened per year	Diabetic eye disease prevented in vulnerable populations.

DIGITAL HEALTH TO IMPROVE DIABETES CARE GOAL-DIRECTED PROGRAM

Project Lead	:	MICHELLE GREIVER *($ 1,376,575)*
Project Title	:	PATIENT, PRACTICE AND POPULATION DIABETES RISK MANAGEMENT SYSTEM (PPPDRMS)
Goal Group Leads	:	Dr. Michelle Greiver, Dr. Frank Sullivan, Doug Mumford (Patient Partner)
Goal Group Co-investigators	:	Babak Aliarzadeh, Onil Bhattacharyya, Rick Birtwhistle, Gillian Booth, Neil Drummond, Arnaud Duhoux, Serge Dumont, Jean-Francois Ethier, Julie Gilmour, Eva Grunfeld, Ilana Halperin, Noah Ivers, Liisa Jaakkimainen, Peter Juni, Tara Kiran, Lorraine Lipscombe, Marie-Thérèse Lussier, Donna Manca, Geetha Mukerji, Andrew Paterson, Phil Segal, Baiju Shah, Karen Tu, Xiaolin Wei, Don Willison, Rose Yeung
Reporting Year	:	APRIL 2017 – MARCH 2018

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1.	Development of a health informatics-enabled platform for screening and early intervention in primary care settings for diabetes complications with focus on high risk populations.	Levels of acceptance of the model by a wide range of patient Partners and Diabetes Action Canada investigators.	Numbers of diabetic patients and range of data elements available for researchers. Data quality (percentage of completeness) Number of contributing data partners.	Agreements have been signed with partners contributing data to the repository. Every element has been verified for its completeness and a data quality report has been generated. Proof of concept data repository designed and REB approval received for networks in Alberta and Ontario. REB amendments were for permission to forward EMR data on patients identified as having diabetes that were collected for Practice Based Research Networks to the repository. The Networks are: UTOPIAN (Toronto); SAPCReN (Calgary) and NAPCReN (Edmonton)

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2.	Framework for diabetes complications health informatics platform is established in Ontario, Alberta and Quebec.	• Monthly Patient and investigator working group meetings take place for knowledge exchange, progress update, technical feedback and modifications. • Meeting minutes are produced and disseminated.	• 60,000 individuals with diabetes identified in the four networks (UTOPIAN, RRSPUM, NAPCReN, and SAPCReN). Presentations at conferences (6 posters and 4 presentations).	• Business plan for the Repository Completed. North York General Hospital (NYGH) assigned as Administrative hub. Agreement signed with NYGH. REB approval received for networks in Alberta and Ontario. Governance model established and implemented. Research governing members selected and trained. Agreement to share data from CPCSSN networks in Alberta and Ontario obtained. Purchase of hardware from Centre for Advanced computing in Kingston, Ontario. Service contract established between University of Toronto and the Centre for Advance Computing.
3.	Work plan established that incorporates the ability to integrate data input from a wide range of sources and to deploy 'big data' analytics.	Project charter and work breakdown plan produced.		Planning activities for National Diabetes Repository launch and implementation. Governance committee oversee progress and guide future development
4.	Data variables specified for data set and data sources identified.	Core dataset and data dictionary is developed and approved. Data variables specified and approved. Data sources identified and approved.		Project started in March 2018 to validate algorithms in CPCSSN and EMRALD to segment repository data into cohorts of study (i.e. type-1 vs type-2 diabetes).

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5.	Research Governing Committee (RGC) established.	Governance framework is developed. Workshop to train RCG members complete: - 6 patient partners - 2 data providers - 2 researchers - 1 ethics expert Training manual available to participants.	50% of the Governance Committee are patient partners. 100% of RGC members trained. 100% of RGC members received training handbook.	Standard operating procedures on data request and usage are established: - Application Form for Canadian Studies involving data use and linkage only developed. - Study Application Form for studies Involving recruitment of Patients developed. - Reviewer Questions for Data Studies developed. Key informant interviews from leading data repositories in Canada and other jurisdictions are ongoing. This work will inform an environmental scan of current data repository processes.
6.	Evaluation of the use of Patient Reported Outcome Measures (PROMs) and decision-support tools established for patients and their practitioners	Patient survey developed.	1 focus group with patient partners held. 1 focus group with providers held.	Two focus groups were held one with patients and the other with healthcare providers in order to gather feedback on the survey that was developed. Feedback from the patient focus group included: - Survey was too long - Patients need to know why information is being collected and what it is going to be used for - Patients already overwhelmed with demands on their time - How is this going to be integrated into clinic chart - One short – 5 minute- survey in the waiting room is fine but not longer than that

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				- Survey needs to be in French - Different methods of data collection need to be considered (on tablet, paper questionnaire) Feedback from healthcare providers: - Survey was too long - Worried that patients will spend appointment time asking questions regarding survey How is this going to be integrated into clinic notes
7.	Key stakeholders, including patients, are supported to engage in our goal group research and decision making Processes.	Research Governing Committee meeting bi-monthly. Minutes taken and action items held.	1 patient partner in all our working groups and committees. 50% of Research Governing Committee are patient partners	- Patient Partners increasingly knowledgeable about data governance - Patient Partners focus will be on what is in the best interest of the patients with diabetes.
8.	Pan-Canadian repository established to address health challenges.	Centre for Advanced Computing -Diabetes Action Canada Agreement signed. Necessary forms, information and documentation will be made available on the Diabetes Action Canada website.		First of its kind in Canada. Patient-oriented research is now poised to advance.

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8.	Clinical Trials Recruitment in Canada for T1D studies is is improved.	Diabetes Action Canada Diabetes Repository is available for researchers	Facilitate grant preparation and recruitment time	Earlier and more effective recruitment for clinical trials in T1D.
9.	Research evidence is applied.	Key Informants conducted using standardized survey tool (Qualtrics Survey)	2 poster presentations at national conferences 1 poster presentation at international conferences	Environmental of all registry type platforms in Canada
10.	Capacity in POR is strengthened and maintained.	Increased networking among research groups	Collaboration established among DAC research groups. Minutes and action items	Networking and availability of de-identified and encrypted patient data for ongoing and future projects
11.	Stakeholders (patients, clinicians, etc.) are active partners in research and implementation.	Bi-monthly communication with patients, researchers, data providers representatives and ethics	Bi-monthly RGC meetings	Successful Patient Partner engagement
12.	Digital assisted tools in diabetes self-management become more accessible			bant mobile application have enhanced functionality to address the patient partner needs

Project Lead	:	JOE CAFAZZO *($ 100, 000)*
Project Title	:	DIABETES PATIENT-CENTERED HEALTH INFORMATICS, *BANT* MOBILE APPLICATION FOR DIABETES CLINICAL RESEARCH

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1.	Integrating the mobile application *bant* with the diabetes repository	n/a	n/a	Over this reporting period, the concept of using *bant* to capture patient reported outcomes (PROs) to facilitate improve self-care, clinical management, and research, were socialized with the larger stakeholder groups. Overall, there is consensus that this is a valuable approach. Currently, the technical leads are developing the architecture to enable data from *bant* to be stored in the repository, but to also have data from the repository flow to patients for their own care.
2.	Develop and implement eConsent for permission to contact patients for research purposes and data sharing	n/a	n/a	The requirements for the eConsent solution have been confirmed, and the solution is currently being co-developed by the *bant* and health informatics team.
3.	Leveraging the bant-TELUS partnership for provincial deploys	n/a	n/a	This project is now out of scope, however, it has been replaced by the larger diabetes data repository initiative.

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4.	Developing a Canadian diabetes community using online platform called banter	n/a	n/a	In working with the DAC Patient Circle's, patient's consistently vocalized the need for a reliable and trust worthy social community. Diabetes information tends to be scattered, and there is currently no singular point aggregating this content for Canadians. We have completed the requirements gathering phase for this feature, and entered the design and development phase.

CLINICAL TRAILS/ INNOVATIONS IN TYPE-1 DIABETES GOAL-DIRECTED PROGRAM

Project Lead	:	BRUCE PERKINS *($ 480, 000)*
Project Title	:	EFFECT OF SGLT2 INHIBITION ON IMPROVING THE GLYCEMIC PERFORMANCE OF SINGLE AND DUAL-HORMONE ARTIFICIAL PANCREAS CONFIGURATION
Goal Group Leads	:	Dr. Bruce Perkins, Dr. Peter Senior, Kate Farnsworth (Patient Partner)
Goal Group Co-investigators	:	David Cherney, Ahmed Haidar, Benoit Lamarche, Remi Rabasa-Lhoret, Peter Senior
Reporting Year	:	APRIL 2017 – MARCH 2018

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1.	Feasibility and efficacy of combined SGLT2i therapy and AP treatment will be established using quantitative outcome measures and questionnaires. Short and potential longer term impact of this combination on cardio-metabolic risk factors and prevention of hypoglycaemia analyzed in men and women with T1D.	Feasibility of initiating the trial was at risk but has been resolved. Specifically, we encountered obstacles that required three design modifications as follows: 1. Masked Placebo Design Changed to Open-Label Empagliflozin	n/a	The study has not initiated. A design modification needed to be made in view of unavailability of an industry contract for provision of drug and matched placebo in an investigator-initiated study model. Primarily because registration trials are completing for type 1 diabetes label indications in 2017/2018, our agreement was revoked, and none of the other three SGLT2i companies were willing to accept our applications. Consequently, we have modified the design to an open-label design and we have support to purchase commercially available empagliflozin for this trial. Application to Health

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		Administration. We lost availability of our industry contract for provision of drug and matched placebo in this investigator-initiated study model. Primarily because registration trials are completing for type 1 diabetes label indications in 2017/2018, our agreement was revoked, and none of the other three SGLT2i companies were willing to accept our applications as they are also approaching submissions for label indication in type 1 diabetes and are unable to enter into this contract. Vincent Crabtree and the JDRF team were very integral to attempting to resolve this issue, but we were unable to establish a		Canada for clinical trial agreement was submitted in March 2018

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		new industry contract. Consequently, we have modified the design to an open-label design and we have support to purchase commercially available empagliflozin for this trial. We do not see this as a major methodological threat as the use of AP by definition cannot be masked either. We have received Health Canada approval and REB approvals for the CLASS15 study (initiating in Q1 2018), and have made the parallel submissions for CLASS17 with the recent protocol amendments (in progress). 2. Change of AP hardware from the Medtronic Platform to the Tandem/Dexcom Platform. Based on the leadership of Ahmad		

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		Haidar (Co-PI, Montreal team investigator) for the specific devices used in our AP systems, feasibility of administering the outpatient CLASS17 Study required a change to the Tandem platform. Health Canada Application is in progress. 3. Elimination and Re-institution of the Dual-Hormone System. The study objective is to evaluate the role of adjunctive SGLT2i therapy to overcome the limitations of the current best-available AP system with glycemic control (primarily driven by post-prandial control). We originally operationalized the best-available AP system as a dual-hormone configuration,		

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		but in Q4 2017 potential concerns were raised with chronic low-dose glucagon agonism. We required discussion with JDRF to potentially replace the dual hormone AP system in this protocol with a single-hormone system. However, these issues have been resolved, and other international research programs have also resumed protocols with dual-hormone systems.		
2.	Ensure that study conduct is reflecting the newest findings and standards in artificial pancreas medical research		Ongoing	Due to nature of artificial pancreas research which recently become one of the most explored areas in type 1 diabetes therapies there are numerous new standards and trends. Adjustment of the study protocol of our RCT was necessary to reflect these newest advancements and standards. It included standardization of parameters reported for artificial pancreas trials, change of pump devices used in the study, as well as ongoing debate about single-hormone vs. dual-hormone artificial pancreas efficacy and safety.

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3.	Prepare all regulatory documentation for approval to be able to commence the RCT		Study will receive NOL from Health Canada, approval of Research Ethics Boards of all involved institutions, trial will be registered in an internationally recognized trial database (clinicaltrials.gov), there will be bilateral contracts signed between involved research institutes enabling flow of data, bio-samples, information and funds.	Negotiation of contracts between three research centers has been re-initiated in January 2018 after the design modifications. The contract was signed between owner of the algorithm (Eli Lilly) and one of the institutions (McGill university) enabling the study teams use the algorithm in this trial. Use of algorithm is essential for successful execution of the trial.
4.	Prepare the algorithm to be fully usable, tested and safe to use at the time of starting the trial	Algorithm will provide fully functional communication between the sensor, pump and the processing unit providing the dosing feedback. This communication will be tested and proven safe, including non-standard situations (e.g. communication		Team of bioengineers at McGill University research centre prepared and materialize the concept of running the algorithm in unsupervised conditions (previous studies involved human medical professional overseeing every algorithm decision). Pumps enabling dual hormone delivery were obtained from US manufacturer and communication methods on path sensor-algorithm-pump have been programmed and prototyped. Current model requires further testing (including more exposure to multiple non-standard situations

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		problems, problems with hormone deliveries)		and more safety testing), before it can be provided to study patients.
5.	Initiate the RCT and identify feasibility of planned recruitment	Initiation delayed until 2018 Q3		
INTERMEDIATE OUTCOME(S) – Outcomes that are logically expected to occur, once one or more immediate outcomes have been achieved (Please include additional information on the following: Research evidence is applied, clinical trials environment in Canada improved, Canadian capacity in POR is strengthened and maintained, stakeholders (patients, clinicians, etc.) are active partners in research and implementation)				
1.	Initiation of the study recruitment		Q1 2019	Following the successful preparation of technical background, potential participants will be approached and recruited for participation in the trial
2.	Establish artificial pancreas system based on research in Canada usable for clinical purposes	Pilot and test artificial pancreas system, which will cater to specifics of Canadian Health care system and Canadian patients with type 1 diabetes. Establish network of researchers which expand testing clinical usability and safety of the system making it ready for clinical use.		By collaboration between researchers, patients and commercial medical device partners achieve translation of our research efforts into broader research platform and ultimately translation of research efforts into clinically viable artificial pancreas solution which will fulfil all requirements for Health Canada for pre-clinical testing needed for the device approval. Communication of research findings, challenges and safety issues between all partners to facilitate development of the artificial pancreas system.
3.	Establish use of adjunctive-to-insulin therapies in T1D clinical care.	PI Bruce Perkins is also the coordinating medical investigator for the		Potential label indications for adjunctive-to-insulin SGLT2 inhibition in T1D.

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		empagliflozin (SGLT2 inhibitor) Phase 3 program (Boehringer Ingelheim) which has completed in Q1 2018. Results will be presented in Q3, and the intention is to move toward label indication in T1D. Concurrently, two other SGLT inhibitors are completing Phase 3 programs in T1D. The result is that standard of care of T1D may involve adjunctive-to-insulin SGLT2 inhibition as soon as 2019. This current trial will inform its application in artificial pancreas systems.		

Project Lead	:	ANDRÉ CARPENTIER *($ 340,000)*
Project Title	:	DEVELOPMENT OF PROTEOMIC-BASED BIOMARKERS FOR BETA CELL AND ADIPOSE TISSUE DYSFUNCTIONS IN TYPE 2 DIABETES

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OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
		QUALITATIVE	**QUANTITATIVE**	
IMMEDIATE OUTCOME(S) – Outcomes that are directly attributes to the outputs delivered (Please include additional information on the following: new knowledge in POR generated and disseminated, networking among SPOR element, research platforms established, capacity building in POR, stakeholder engagement in research and implementation)				
1.	Assessment of beta cell and adipose tissue function suing yearly oral glucose and lipid tolerance tests over 4 years in men and women with pre-diabetes and T2D. Caprion's beta cell plasma proteome biomarker panel readout will be assessed.	Activity 1: Validate use of proteome-based biomarkers to predict change in glucose homeostasis in pre-diabetes and T2D. Samples and database in place to conduct activity 2.	Longitudinal samples from 12 pre-diabetic and 5 type 2 diabetes individuals undergoing bariatric surgery, and 70 individuals with gestational diabetes and 70 healthy controls. Samples from 55 men and women with normal glucose tolerance or pre-diabetes with PET/CT measures of dietary fat partitioning and cardiac function.	Candidate biomarkers were tested in plasma using a combination of targeted mass spectrometry and elisa based detection. Acquired data quality was assessed and protein biomarker combinations were tested using train & test regression analysis with permutation. The ability of the panels to correctly classify disease progression groups, association with diabetes indices, and prediction of disease progression was then evaluated and compared to currently used indicators. As indicated in the letter (April 11, 2018) by Caprion, the results of Activity 1 led to the invalidation of their diabetes proteomic biomarkers. They therefore retired from the SPOR activities. Imaging and metabolic phenotype database in place and samples available for testing by Caprion.

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
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		Part of funding secured from Janssen to conduct activity 3.	200k$ obtained from Janssen to conduct a proof-of-concept trial on the effect of canagliflozin in cardiac metabolism and function in subjects with type 2 diabetes	Ethics and regulatory documents submitted. Trial to be started by Summer 2018.
2.	All trial subjects will be recruited and interim analysis started	Activity 1: all samples acquired and analysed. Activity 2: all samples acquired. Biomarkers to be analysed in 2017-2018 Activity 3: trial to start by Fall 2017 and finish by Fall 2018. Biomarker analyses to be performed in 2018-2019.		Activity 2: abandoned by Caprion as the result of the failure of activity 1 (see above). Activity 3 will start by Summer 2018 with funding from Janssen. We will have functional imaging biomarkers of cardiac effects of the SGLT2 inhibitor canagliflozin in patients with type 2 diabetes and class III heart failure. Caprion's proteomic biomarkers will not be tested, but samples from these studies will be retained for future testing.

Project Lead	:	DAVID CHERNEY *($ 286,376)*
Project Title	:	THE EFFECTS OF DPP-4 INHIBITOR THERAPY ON RENAL SODIUM HANDLING & RENAL HEMODYNAMICS IN TYPE 2 DIABETES PATIENTS

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
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IMMEDIATE OUTCOME(S) – Outcomes that are directly attributes to the outputs delivered (Please include additional information on the following: new knowledge in POR generated and disseminated, networking among SPOR element, research platforms established, capacity building in POR, stakeholder engagement in research and implementation)				
1.	Analysis of renal and systemic hemodynamic function, neurohormones, and free radical mediators that are modified by DPP-4 inhibition to prevent progression of diabetic nephropathy		Measures of renal and cardiovascular function	The study procedures have been performed and are complete.
2.	Study analysis complete and manuscript submitted		The above measures were all captured successfully.	The study was published in August 2017 in academic journal Diabetes Care http://care.diabetesjournals.org/content/40/8/1073

Project Lead	:	GARY LEWIS *($ 88,856)*
Project Title	:	CNS-MEDIATED EFFECTS OF INSULIN AND GLP-1 ON INTESTINAL AND HEPATIC LIPOPROTEIN PARTICLE PRODUCTION IN HUMANS

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
		QUALITATIVE	**QUANTITATIVE**	
IMMEDIATE OUTCOME(S) – Outcomes that are directly attributes to the outputs delivered (Please include additional information on the following: new knowledge in POR generated and disseminated, networking among SPOR element, research platforms established, capacity building in POR, stakeholder engagement in research and implementation)				
1.	Endogenous glucose production and lipid concentrations evaluated during a pancreatic clamp in 10 healthy subjects receiving intranasal glucagon		yes	10 healthy men were recruited and completed 2 study arms (placebo and glucagon). Intranasal glucagon raised plasma glucose, but this route of administration attenuates the gluco-stimulatory effect of glucagon by reducing endogenous glucose production. This finding provides guidance for the use of intranasal glucagon as a treatment for hypoglycaemia. Publication: Xiao C, Dash S, Stahel P, Lewis GF. Effects of Intranasal Insulin on Endogenous Glucose Production in Insulin Resistant Men. Diabetes, Obesity and Metabolism. 2018. In Press. Senior Responsible Author.
2.	Endogenous glucose production evaluated during a pancreatic clamp in 7 overweight or obese insulin-resistant men receiving intranasal insulin lispro		yes	7 overweight or obese insulin-resistant men were recruited and completed 2 study arms. Intranasal administration of insulin did not significantly affect plasma glucose concentrations, endogenous glucose production or glucose disposal. Insulin resistance is probably associated with impairment in centrally mediated insulin suppression of endogenous glucose production.

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
		QUALITATIVE	**QUANTITATIVE**	
				Publication: Xiao C, Dash S, Stahel P, Lewis GF. Effects of intranasal insulin on triglyceride-rich lipoprotein particle production in health men. Arterioscler Thromb Vasc Biol. 2017;37(9):1776-1781. Senior Responsible Author

Project Lead	:	JON McGAVOCK *($ 109,232)*
Project Title	:	VIGOROUS PHYSICAL ACTIVITY FOR GLYCEMIC CONTROL IN TYPE 1 DIABETES TRIAL (VIGOR)

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
		QUALITATIVE	**QUANTITATIVE**	
IMMEDIATE OUTCOME(S) – Outcomes that are directly attributes to the outputs delivered (Please include additional information on the following: new knowledge in POR generated and disseminated, networking among SPOR element, research platforms established, capacity building in POR, stakeholder engagement in research and implementation)				
1.	Interim analysis of effects of vigorous exercise in controlling glucose levels in T1D	1. Completion of pilot testing of acute intervention	2. Pilot testing of 24 patients using high intensity protocol and CGM collection revealed optimal dose and variability in	- Hired a part-time RA - Hired graduate student - Project management in coordination with the Manitoba SPOR Support Unit (CHI) - Built on existing relationships/networks to create novel working group across several provinces.

IMMEDIATE & INTERMEDIATE OUTCOMES				
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			outcome measures. 3. Publication of 2 abstracts 4. 1 manuscript submitted another in preparation	
2.	Creation of a website for Canadian Diabetes Exercise Network (CaDEN)	1. Reviewed by network members for approval 2. Launch Website		Pilot tested website
3.	James Lind Alliance Survey for Exercise and Diabetes	1. Emphasis on face-to-face communication to build relationships with all patient circle 2. Capacity building for funders/associations working with patients 3. Work with JDRF and Diabetes Canada to launch survey 4. Translate survey into French	1. Pilot survey with DAC patient circle 2. Compile results over 8 months 3. Create working group to analyse data 4. Organize meetings with stakeholders and patients to finalize top 10 priorities for diabetes and exercise	- Completed survey - Connected with local SUPPORT unit for support - Created e-mail survey for circulation - Recruited graduate student - Connected with James Lind Alliance for support on the process.

IMMEDIATE & INTERMEDIATE OUTCOMES				
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			5. Plan to publish results in CJD	
4.	Create repository of patients interested in exercise and diabetes research	Created survey for patients to register for information about research studies Circulated to all member of the network Created RedCAP database to house registry for all members of the network to use to recruit participants for exercise trials.		- Need to pilot with DAC patient circle. - Need to create mail-chimp e-mail template for distribution

Project Lead	:	JEAN-PIERRE DESPRÉS *($ 1,250,000)*
Project Title	:	TARGETED LIFESTYLE MODIFICATION FOR SECONDARY PREVENTION OF DIABETES COMPLICATIONS

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
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IMMEDIATE OUTCOME(S) – Outcomes that are directly attributes to the outputs delivered (Please include additional information on the following: new knowledge in POR generated and disseminated, networking among SPOR element, research platforms established, capacity building in POR, stakeholder engagement in research and implementation)				
1.	Valid tools are available to primary care clinicians and patients for rapid and thorough assessment of diet and food behaviours identifying barriers and facilitators for healthy eating.	1) Web-based 24-h recall developed to assess diet quality. 2) Diet screener to assess diet quality in primary care. 3) Assessment of discrepancy between web-based diet assessment tools and field measures		1) A web-based 24h recall has been validated and will be used to assess diet quality in a comprehensive manner for research purpose, and for development of other, more rapid dietary assessment tools (obj 2) Publications: • Lafrenière J, Lamarche B, Laramée C, Robitaille J, Lemieux S. Validation of a newly automated web-based 24-hour dietary recall using fully controlled feeding studies. *BMC Nutrition* 2017;3:34. • Lafrenière J, Couillard C, Lamarche B, Lemieux S. Les caroténoïdes sériques comme biomarqueurs : une stratégie pour améliorer la validité de l'évaluation alimentaire. *Can J Diet Pract Res*. 2018 Mar 1;79(1):23-27 • Lafrenière J, Lamarche B, Lemieux S Relative validity of a web-based self-administered 24-hour dietary recall to evaluate adherence to

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
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				Canadian dietary guidelines. *Nutrition* 2018 in press. Abstracts: 2) A diet screener is being developed and tested for use in primary care setting to assess diet quality. This is done by using data from N>1000 from our research activities and a classification trees approach (no publication/abstract yet). Abstracts: • Lafrenière J, Harrison S, Laurin D, Brisson C, Talbot D, Couture P, Lemieux S, Lamarche B. Development and validation of a screener for diet quality in a French-Canadian population. Submitted for presentation to the Annual meeting of the American Society for Nutrition (March 2018) in Boston 3) We have used existing data from our center to validate a web-based FFQ against formal measures of energy requirements Publications: • Brassard D, Lemieux S, Charest A, Lapointe A, Couture P, Labonté ME, Lamarche B. Comparing interviewer-administered and web-based food frequency questionnaires to predict energy requirements in adults. *Curr Dev Nutr* 2017 submitted (in review). 4) Other work related to dietary assessment and tool development

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
		QUALITATIVE	**QUANTITATIVE**	
				Abstracts : • Bergeron A, Bédard A, Robitaille J, Desroches S, Provencher V, Lamarche B, Couillard, C, Vohl MC, Lemieux S. Comparison of dietary intakes between adults with normal fasting glucose, impaired fasting glucose or self-reported type 2 diabetes: results from the PREDISE study. Submitted to the Annual meeting of the Canadian Nutrition Society, to be held in May 2018, Halifax. • Lafreniere J, Couillard C, Lamarche B, Laramée C, Vohl MC, Lemieux S. Associations between self-reported vegetable and fruit intake assessed with a new web-based 24-hour dietary recall and plasma carotenoids in free living adults. Submitted to the Annual meeting of the Canadian Nutrition Society, to be held in May 2018, Halifax. • Laramée C, Brassard D, Provencher V, Vohl MC, Couillard C, Lemieux S, Lamarche B. Contribution of “Other foods” to the diet of adults from Quebec and their associations with cardiometabolic risk factors – The PREDISE Study. Submitted to the Annual meeting of the Canadian Nutrition Society, to be held in May 2018, Halifax. • Brassard D, Bégin C, Bélanger M, Bouchard L, Couillard C, Desroches S, Houle J, Langlois MF, Pelletier L, Provencher V, Rabasa-Lhoret

IMMEDIATE & INTERMEDIATE OUTCOMES				
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		QUALITATIVE	**QUANTITATIVE**	
				R, Robitaille J, Vohl MC, Lemieux S, Lamarche B. Poor adherence to dietary guidelines by the majority of adults in the province of Quebec - The PREDISE study. Submitted to the Annual meeting of the Canadian Nutrition Society, to be held in May 2018, Halifax.
2.	Valid tools available for clinicians and patients to measure physical activity and lifestyle behaviours relevant to risk of complications.	Development of simple tools to assess lifestyle vital signs in primary care	1) Validation of the relationship between leisure time and occupational levels of physical activity measured by questionnaire and directly measured cardiorespiratory fitness in men and women 2) Validation of a nonexercise algorithm to predict cardiorespiratory fitness in primary care 3) Quantification of the respective	Several abstracts have been presented at scientific conferences: 1) Buteau-Poulin D, Vallières M, Poirier P, Després JP, Alméras N. Contribution de la qualité nutritionnelle à l'amélioration du profil cardiométabolique. Poster presentation – Réunion scientifique annuelle de la Société québécoise de lipidologie, de nutrition et de métabolisme (SQLNM), du Réseau de recherche en santé cardiométabolique, diabète et obésité (CMDO) et du Congrès COLosSUS. Magog-Orford, QC, Canada. February 11, 2016. Abstract No. P-62. 2) Buteau-Poulin D, Vallières M, Poirier P, Després JP, Alméras N. Contribution de la qualité nutritionnelle à l'amélioration du profil cardiométabolique. Poster presentation – Journées scientifiques de la recherche universitaire du Centre de recherche de l'IUCPQ-UL. Québec, QC, Canada. June 3, 2016. Abstract No. F1.

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		QUALITATIVE	**QUANTITATIVE**	
			associations between physical activity levels and overall nutritional quality and various indices of cardiometabolic risk in men and women. 4) Development of a lifestyle risk score for primary care and evaluation of its relationship with traditional risk factors for cardiovascular diseases.	3) Alméras N, Vallières M, Tremblay É, Poirier P, Després JP. Contributions of leisure-time vs. occupational physical activity to variation in cardiorespiratory fitness and cardiometabolic risk profile: results from a workplace health management program. Oral presentation – 2016 Canadian Cardiovascular Congress. Montréal, QC, Canada. October 24, 2016. *Can J Cardiol*. 32(10):S241, 2016. Abstract No. 307. 4) Buteau-Poulin D, Poirier P, Després JP, Alméras N. La qualité nutritionnelle : un indicateur des habitudes de vie associé aux changements du profil de risque cardiométabolique. Poster presentation – Réunion scientifique annuelle de la Société québécoise de lipidologie, de nutrition et de métabolisme (SQLNM), du Réseau de recherche en santé cardiométabolique, diabète et obésité (CMDO) et du Congrès COLosSUS. Magog-Orford, QC, Canada. February 8, 2017. 5) Côté CE, Poirier P, Després JP, Alméras N. Cibler et évaluer les composantes du mode de vie associées à la santé cardiométabolique : impact sur la tension artérielle au repos et à l'effort. Poster presentation – Réunion scientifique annuelle de la Société québécoise de lipidologie, de nutrition et de métabolisme (SQLNM), du Réseau de recherche en santé cardiométabolique, diabète et obésité (CMDO) et

IMMEDIATE & INTERMEDIATE OUTCOMES				
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				du Congrès COLosSUS. Magog-Orford, QC, Canada. February 8, 2017. 6) Côté CE, Poirier P, Després JP, Améras N. Targeting and assessing lifestyle components in a cardiometabolic health intervention: impact on resting and exercise blood pressure. Poster presentation – 6th ICCR Congress on Chronic Societal Cardiometabolic Diseases. Québec, QC, Canada. May 15, 2017. *CMR eJ*. 8(1):26, 2017. Abstract No. 85-KFUC-142. 7) Buteau-Poulin D, Poirier P, Després JP, Alméras N. Nutritional quality: a key indicator of a healthy lifestyle associated with favorable changes in the cardiometabolic risk profile. Poster presentation – 6th ICCR Congress on Chronic Societal Cardiometabolic Diseases. Québec, QC, Canada. May 15, 2017. *CMR eJ*. 8(1):70, 2017. Abstract No. 85-WXW3-122. 8) Després JP. Chronic societal diseases: the need for an integrated approach. International Forum on Continuing Education for Chronic Diseases Management, China Health Services Congress. Co-organized by the Chinese Medical Association, the ICCR and the Editorial Board of the Chinese Journal of Health Management. Chongqing, China. September 1, 2017. 9) Després JP. Managing visceral obesity by targeting lifestyle. 39th Congress of the Japan

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OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
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				Society for the Study of Obesity. Kobe, Japan. October 8, 2017. Keynote lecture. 10) Després JP. Combattre les maladies chroniques sociétales par la promotion de la santé : un axe prioritaire pour l'Institut universitaire de cardiologie et de pneumologie de Québec. Atelier Sport santé sur ordonnance… sans frontières. Strasbourg, France. October 12, 2017. 11) Després JP. Redefining obesity as a CVD risk factor: clinical and public health Implications. Canadian Institutes of Health Research (CIHR) – Institute of Circulatory and Respiratory Health (ICRH) / Canadian Cardiovascular Society (CCS) Distinguished Lecturer Award in Cardiovascular Sciences Canadian Cardiovascular Congress. Vancouver, BC, Canada. October 23, 2017. 12) Després JP. Mangez bien, buvez bien et bougez : ce que la science a à nous dire sur le mode de vie et la santé. Congrès annuel de médecine - Médecins francophones du Canada. Montréal, QC, Canada. October 27, 2017. 13) Després JP. Overall importance of lifestyle interventions for cardiometabolic syndrome. Session Title: Managing the Complex Cardiometabolic Patient: Interactive Case Studies. American Heart Association Scientific Sessions. Anaheim, CA, USA. November 14, 2017. 14) Després JP. Visceral obesity and type 2 diabetes: time to align clinical practice/public health

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				messages to the science. 1st International DiaObesity – Diabetes & Obesity Summit 2017 (DiaObesity2017). Jerusalem. November 23, 2017. 15) Després JP. Assessing and managing cardiometabolic risk at the workplace: making lifestyle habits vital signs. 1st International DiaObesity – Diabetes & Obesity Summit 2017 (DiaObesity2017). Jerusalem. November 23, 2017. Keynote lecture. 16) Després JP. Alliance santé Québec : une mobilisation collective pour la santé? 1re Conférence Activité Physique – Innovation – Santé. Yverdon-Les-Bains, Suisse. November 27, 2017. 17) Després JP. Obesity in CVD: friend or foe? Session: Cardiovascular Risk Factors and Preventive Strategies. International Symposium on Cardiometabolic Risk and Vascular Disease: from Mechanisms to Treatment. Stockholm, Sweden. December 2, 2017. Keynote lecture. 18) Després JP. Obesity, lifestyle and cardiometabolic diseases: time to align clinical practice/public health recommendations to scientific evidence. 12th Montréal Diabetes Research Center Annual Scientific Meeting. Montréal, QC, Canada. February 2, 2018. (5th George F. Cahill Jr. Lecture)

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				19) Després JP. Moderator. Symposium IV in collaboration with the ICCR: Neighbourhoods and Cardiometabolic Health. Réunion conjointe 2018 de la Société québécoise de lipidologie, de nutrition et de métabolisme (SQLNM), du Réseau de recherche en santé cardiométabolique, diabète et obésité (CMDO) et du Congrès COLosSUS. Magog-Orford, QC, Canada. February 9, 2018. 20) Després JP. Preventive lifestyle medicine: the time is now! McGill Centre for the Convergence of Health and Economics (MCCHE). Montréal, QC, Canada. April 10, 2018. (2018 Manulife Prize for the Promotion of Active Health Lecture) 21) Després JP. Advances on the biological and clinical features of abdominal adiposity and on physical activity as lifestyle medicine prescription for diabetes and other chronic diseases. Brain-to-Society (BtS) Decision and Behavior Research Workshop. McGill Centre for the Convergence of Health and Economics. Montréal, QC, Canada. April 10, 2018. Keynote lecture.
3	Development and validation of interactive web-based tools.	Identification of needs in primary care services to assess diet and food behaviours, physical activity		Various meetings with primary care services were organized in Québec City to identify their needs and expectations regarding use of web-based tools to assess

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		Development of a web-based platform that integrate the diet assessment tools described above		The web-based tools to assess diet quality and intake are fully operational as part of the web-based FANI system at INAF. Pilot projects are being considered for testing in primary care units.
4	New data generated to assess relationship between physical activity and cardiovascular fitness related to biological cardiovascular disease for risk factors.	Feasibility of assessing lifestyle vital signs with high throughput procedures requiring minimal time	Documentation of the added value of measuring and targeting simple lifestyle vital signs (including physical activity and cardiorespiratory fitness) in a large cohort of more than 4000 individuals screened for indices of cardiometabolic health Evaluation of the capacity of changes in developed lifestyle metrics to predict changes in biological risk variables in response to a lifestyle modification	Several papers have been published related to the various dimensions of our work on lifestyle vital signs including adiposity metrics. Some relevant invited review papers are also presented. 1. Arsenault BJ, Després JP. Cardiovascular disease prevention: lifestyle attenuation of genetic risk. *Nat Rev Cardiol*. 14(4):187-188, 2017. 2. Borel AL, Nazare JA, Baillot A, Alméras N, Tremblay A, Bergeron J, Poirier DP, Després JP. Cardiometabolic risk improvement in response to a 3-yr lifestyle modification program in men: contribution of improved cardiorespiratory fitness vs weight loss. *Am J Physiol Endocrinol Metab*. 312(4):E273-E281, 2017. 3. Després JP. Overweight: the body mass index category with an identity crisis. *Ann Intern Med*. 166(9):671-672, 2017. Editorial. 4. Arsenault BJ, Lamarche B, Després JP. Targeting overconsumption of sugar-sweetened beverages vs. overall poor diet quality for cardiometabolic diseases risk prevention: place your bets! *Nutrients.* 9(6):600, 2017.

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			program designed for primary care	5. González-Muniesa P, Mártinez-González MA, Hu FB, Després JP, Matsuzawa Y, Loos RJF, Moreno LA, Bray GA, Martinez JA. Obesity. *Nat Rev Dis Primers.* 3:17034, 2017. 6. de Toro-Martín J, Arsenault BJ, Després JP, Vohl MC. Precision Nutrition: a review of personalized nutritional approaches for the prevention and management of metabolic syndrome. *Nutrients.* 9(8):E913, 2017. 7. Lévesque V, Poirier P, Després JP, Alméras N. Relation between a simple lifestyle risk score and established biological risk factors for cardiovascular disease. *Am J Cardiol*. 120(11):1939-1946, 2017. 8. Arguin H, Tremblay A, Blundell JE, Després JP, Richard D, Lamarche B, Drapeau V. Impact of a non-restrictive satiating diet on anthropometrics, satiety responsiveness and eating behaviour traits in obese men displaying a high or a low satiety phenotype. *Br J Nutr*. 118(9):750-760, 2017. 9. Neeland IJ, Poirier P, Després JP. Cardiovascular and metabolic heterogeneity of obesity: clinical challenges and implications for management. *Circulation*. 137(13):1391-1406, 2018. 10. LeBlanc S, Coulombe F, Bertrand OF, Bibeau K, Pibarot P, Marette A, Alméras N, Lemieux I, Després JP, Larose E. Hypertriglyceridemic waist: a simple marker of high-risk atherosclerosis features associated with excess visceral adiposity/ectopic fat.

IMMEDIATE & INTERMEDIATE OUTCOMES				
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				J Am Heart Assoc. 7(8): e008139. doi: 10.1161/JAHA.117.008139, 2018. Journal Articles – In Press 1. Panahi S, Doyon CY, Després JP, Pérusse L, Vohl MC, Drapeau V, Tremblay A. Yogurt consumption, body composition, and metabolic health in the Québec Family Study. *Eur J Nutr*, in press. doi: 10.1007/s00394-017-1444-9 [Epub ahead of print] 2. Maltais A, Alméras N, Lemieux I, Tremblay A, Bergeron J, Poirier P, Després JP. Trunk muscle quality assessed by computed tomography: association with adiposity indices and glucose tolerance in men. *Metabolism*, in press. doi: 10.1016/j.metabol.2018.04.003. [Epub ahead of print] 3. Panahi S, Gallant A, Tremblay A, Pérusse L, Després JP, Drapeau V. The relationship between yogurt consumption, body weight, and metabolic profiles in youth with a familial predisposition to obesity. *Eur J Clin Nutr*, in press. doi: 10.1038/s41430-018-0166-2. [Epub ahead of print] 4. Després JP, Larose E, Poirier P. Obesity and cardiometabolic diseases. In: Mann DL, Zipes DP, Libby P, Bonow RO (eds.), *Braunwald's Heart Disease: A Textbook of Cardiovascular Medicine*, 11th

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				Edition, Elsevier, Atlanta, GA, USA, pp. 998-1006, March 2018. Papers in preparation 1. Côté CE, Poirier P, Rhéaume C, Després JP, Alméras N. Excessive blood pressure response to submaximal exercise: an early marker of increased cardiometabolic risk. Submitted. 2. Côté CE, Poirier P, Després JP, Alméras N. Assessing and targeting lifestyle markers in a cardiometabolic health intervention at the workplace: Impact on resting and exercise blood pressure. Final draft. 3. Buteau-Poulin D, Poirier P, Després JP, Alméras N. Nutritional quality a " Lifestyle Vital sign" in a workplace health program. Final draft. Buteau-Poulin D, Poirier P, Després JP, Alméras N. Nutritional quality: A key lifestyle risk factor associated with favorable changes in the cardiometabolic profile. Final draft. Additional analyses are currently underway which should lead to additional abstract presentations and papers.

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		QUALITATIVE	**QUANTITATIVE**	
INTERMEDIATE OUTCOME(S) – Outcomes that are logically expected to occur, once one or more immediate outcomes have been achieved (Please include additional information on the following: Research evidence is applied, clinical trials environment in Canada improved, Canadian capacity in POR is strengthened and maintained, stakeholders (patients, clinicians, etc.) are active partners in research and implementation)				
1.	Development of diet quality assessment tools and capacity has led to the funding a new population-based study, which aim to track and study over time the dietary habits of the Quebec adult population (Nutrinet Project)	Project funded and in partnership with the Ministry of Health in Québec (MSSS)	Research tools transferred to application in public health initiatives.	Project is being developed (funded in March 2017).

Project Lead	:	PAUL FERNYHOUGH *($ 540,000)*
Project Title	:	TOPICAL PIRENZEPINE FOR TREATMENT IN TYPE-1 DIABETES

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
		QUALITATIVE	QUANTITATIVE	
IMMEDIATE OUTCOME(S) – Outcomes that are directly attributes to the outputs delivered (Please include additional information on the following: new knowledge in POR generated and disseminated, networking among SPOR element, research platforms established, capacity building in POR, stakeholder engagement in research and implementation)				
1.	Analysis of topical pirenzepine will prevent and/or reverse peripheral neuropathy in individuals with T1D	Ethics approval for Australia Phase 1 study		Phase 1 trial (Australia) was been delayed due to ethics concerns. The trial has now been approved and this portion has a projected completion date of 2018-19.

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
		QUALITATIVE	QUANTITATIVE	
				Study will be submitted to ethics at Health Canada by the summer 2018.
2.	All trial subjects will be recruited and interim analysis started		1st 2 patient cohorts of trial in Australia have gone through with no issues	Fall 2018 start is expected for recruitment to begin at University Health Network (Toronto).

Project Lead	:	REMI RABASA-LHORET
Project Title	:	COMPARISON OF DUAL-HORMONE ARTIFICIAL PANCREAS, SINGLE HORMONE ARTIFICIAL PANCREA, AND SENSOR-AUGMENTED PUMP THERAPY IN OUTPATIENT SETTINGS

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
		QUALITATIVE	**QUANTITATIVE**	
IMMEDIATE OUTCOME(S) – Outcomes that are directly attributes to the outputs delivered (Please include additional information on the following: new knowledge in POR generated and disseminated, networking among SPOR element, research platforms established, capacity building in POR, stakeholder engagement in research and implementation)				
1.	Feasibility and efficacy of Artificial Pancreas (AP) treatment will be established using questionnaires. Short and potential longer term impact of AP on cardio-metabolic risk factors and	Agreements for licensing Eli Lily artificial pancreas algorithm (developed in 2016) have be been	8 personnel recruited to develop automated system	Automated system for artificial pancreas is being developed and algorithms the have been adapted and incorporated in to the system platform Algorithm is being applied to other studies for iterative improvements.

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
		QUALITATIVE	**QUANTITATIVE**	
	prevention of hypoglycaemia analyzed in men and women with T1D.	acquired in May 2018 Agreements with DexCom, Tandem Diabetes Care and Oregon Health & Science University were signed	1 program coordinator hired for study	- Meal study published Scientific Reports (Sci Rep. 2018 Feb 8;8(1):2621). Funding CIHR - Meal study submitted on Feb 12 to Diabetes Obesity and Metabolism (revision required). Funding CIHR & J-A DeSève - An ongoing study is investigating the efficacy of single-hormone closed-loop strategy at preventing hypoglycemia during unannounced and announced postprandial exercise in adults with type 1 diabetes
2.	All trial subjects will be recruited and interim analysis started	Interviews with persons using artificial pancreas and their personal experience are underway		Published paper in *Diabetes Metabolism* detailing patient experiences and concerns with using artificial pancreas' A critical review and analysis of ethical issues associated with the artificial pancreas April 25, 2018 Recruitment for 2 week study will start in Q3 of 2018 and for the 3 month study Q2 2019. Recruitment will be jointly executed by McGill University and Institut de recherches cliniques de Montréal (IRCM)

INDIGENOUS PEOPLES HEALTH GOAL-DIRECTED PROGRAM

Project Lead	:	JON McGAVOCK *($ 161, 900)*
Project Title	:	1. DIABETES RESEARCH ENVISIONED AND ACCOMPLISHED IN MANITOBA (DREAM) 2. RURAL INDIGENOUS COMMUNITY SCREENING FOR DIABETES COMPLICATIONS FOR PREVENTION & EARLY INTERVENTION
Goal Group Leads	:	Dr. Jon McGavock and Alex McComber
Goal Group Co-investigators	:	Neil Andersson, Caroline Chartrand, Barry Lavallee
Reporting Year	:	APRIL 2017 – MARCH 2018

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
		QUALITATIVE	**QUANTITATIVE**	
IMMEDIATE OUTCOME(S) – Outcomes that are directly attributes to the outputs delivered (Please include additional information on the following: new knowledge in POR generated and disseminated, networking among SPOR element, research platforms established, capacity building in POR, stakeholder engagement in research and implementation)				
1.	Rural Indigenous Community Screening: Assess effectiveness and implementation of the Aboriginal Youth Mentorship Program (AYMP) when expanded to 7 new communities across Canada	1. Research visits to strengthen relationships and meet with parents (Spring-Fall). The research team visited communities in norther Manitoba, Alberta, Ontario and Quebec to discuss the project	1. Band Council Resolutions and Contracts Finalized (Fall 2016) All 12 communities provided band council resolutions and/or contracts with the research team outlining OCAP principals	• Hired staff. • Held several face to face meetings with stakeholders • Built on existing relationships with scientists and communities across Canada • Worked with key stakeholders to secure additional funding and support KT efforts • Created regional working groups to support provincial programs and build expertise in “doors” across Canada • First urban AYMP site opened Feb 2018 at Toronto First Nations School

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
		QUALITATIVE	**QUANTITATIVE**	
		in detail and obtain band council resolutions. 2. Team Gathering (November 2017) We gathered ~100 people from the 12 participating communities to launch the program. Elders, youth and stakeholders from each nation spent 3 days in Winnipeg meeting at one of Canada's most historic gathering places (The National Historic Park where the Red and Assiniboine rivers meet). We discuss project aims, shared experiences and life stories. Youth spent time with elders and	and governance structure. 2. Code of ethics finalized. We have finalized our code of ethics document to guide the team. 3. Ethical approval. Ethical approval was granted for AYMP from all 5 participating universities (U of Alberta, Saskatchewan, Manitoba, Laurentian, Queens). 4. Staff hired. Three regional research coordinators 12 and young adult health leaders for each community were hired to deliver the program. 5. Young adult health leader training	

IMMEDIATE & INTERMEDIATE OUTCOMES				
	OUTCOMES	**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
		QUALITATIVE	**QUANTITATIVE**	
		knowledge keepers learning traditional games/activities. Ceremonies, meals and outdoor cultural activities inspired the team for the coming school year. 3. Increase involvement from community health departments and build relationships with community health directors and mental health professionals to improve delivery of programs.	(September 2017) Young adult health leaders from 10 of 12 communities attended a 3 day training session in Winnipeg to review the program goals, theoretical, data collection procedures and receive hands-on training from other leaders from established programs. Leadership, mentoring, and ceremonial activities were also provided by young Indigenous leaders and elders. 6. Data collection completed in 8 of 12 communities.	

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
		QUALITATIVE	**QUANTITATIVE**	
			7. Program running or completed in 11 of 12 communities. 8. KT video created and circulated for AYMP	
2.	DREAM	1. Establishment of a patient advisory and stakeholder advisory committee, as well, the expectations/5-year goals for the Committees 2. Presentations by elders regarding cultural approaches to care 3. Indigenous Peoples with diabetes experience culturally sensitive and effective engagement strategies to participate in new data management system	1. Patient and stakeholder advisory for DREAM and DEVOTION activities completed. 2. Pathing exercises for both groups completed 3. Patient video released in collaboration with CAN SOLVE CKD (Jan 2017). 4. Created indigenous goal group with Indigenous stakeholders (Nanadawewigamig and NADA) 5. Hired KT-communications staff in	• Hired additional staff • Held several face to face meetings with stakeholders • Built on existing relationships with scientists and communities across Canada • Worked with key stakeholders to secure additional support KT efforts

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
		QUALITATIVE	**QUANTITATIVE**	
			collaboration with CANSOLVE-CKD	
3.	Diabetes Integration Project and the training module on trauma-informed care			• This community-based tool will assist in educating researchers and health care teams about culturally-sensitive practices when working with Indigenous Peoples to promote wellness and the healing process.
4.	Indigenous Patient Circle / Goal Group	1. Emphasis on face-to-face communication to build relationships with all members 2. Capacity building for patient partners	5. Pathing exercise to form mission, vision, and values for the group 6. Patient representatives attend and present at partner conferences including a symposium on Indigenous Health (NADA, DC, IDHC) 7. Collaboration with SPOR partners in the development of POR training in engaging Indigenous peoples and communities (Can-SOLVE, BC-	- Hired additional staff - Held several face to face meetings with patient circle and stakeholders to build on existing relationships - Invited scientists and community programs across Canada to present their research projects in order to build patient circle understanding and capacity

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
		QUALITATIVE	**QUANTITATIVE**	
			FNHA, CIHR, CHI, BC Support Unit) 8. Collaborate with Indigenous Organization on a National Strategy for Diabetes	
INTERMEDIATE OUTCOME(S) – Outcomes that are logically expected to occur, once one or more immediate outcomes have been achieved (Please include additional information on the following: Research evidence is applied, clinical trials environment in Canada improved, Canadian capacity in POR is strengthened and maintained, stakeholders (patients, clinicians, etc.) are active partners in research and implementation)				
1.	Improve representation and equity of Indigenous voices and overall health in communities	1. Involvement of all community members in development and delivery of research and healthcare (Patients, Care givers, Healthcare providers, Elders, Youth, etc.)	1. Research prioritization through survey of patient, caregivers, and other stakeholders. 2. Co-development of research question, structure, logistics, analysis, and translation. 3. Development of a national strategy for Indigenous Peoples Health and Diabetes, owned by Indigenous organizations	• Research evidence is applied: Engagement of patient partners in the development and delivery of research and healthcare • Research evidence is applied: Annually we share new emerging knowledge with patient circle and Indigenous health providers with latest research initiatives/discoveries. • Capacity for POR: Creation of new POR manual for engaging Indigenous patient partners in research • Clinical trials environment: Network of 13 Indigenous school communities with infrastructure and ethical code of conduct for intervention studies • Stakeholders/patients: Working groups of health care partners (IDHC, FNHSSM) and Indigenous patient circle that can help all members of DAC guide their research projects.

SEX AND GENDER ENABLING PROGRAM

Project Lead	:	PAULA ROCHON *($ 75,000)*
Project Title	:	SEX AND GENDER SUPPORT FOR THE SPOR NETWORK IN DIABETES AND ITS RELATED COMPLICATIONS
Goal Group Leads	:	Dr. Paula Rochon
Goal Group Co-investigators	:	Paula Harvey, Robin Mason
Reporting Year	:	APRIL 2017 – MARCH 2018

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
		QUALITATIVE	**QUANTITATIVE**	
IMMEDIATE OUTCOME(S) – Outcomes that are directly attributes to the outputs delivered (Please include additional information on the following: new knowledge in POR generated and disseminated, networking among SPOR element, research platforms established, capacity building in POR, stakeholder engagement in research and implementation)				
1.	**Develop a curriculum for sex and gender integration to be used in Women's Xchange workshops/online education modules**.	A sample of the feedback received from the community of enquiry (9 persons attended), held on January 18, 2018: "the issue of equity needs to be highlighted throughout each module—a major reason why consider sex and gender in health research matters"	• Held 1 meeting of the Community of Inquiry Working Group, followed by 2 subsequent follow-up feedback opportunities (via email) to design a workshop on sex and gender integration in health research .	To achieve these outputs, we have: • Consulted with sex and gender facilitators of DAC goal groups on their needs for and interest in a workshop on sex and gender integration. • Established a 'Community of Inquiry' working group consisting of sex and gender research experts and knowledge users (including representatives from provincial and federal health funding agencies) to help evaluate a series of e-modules on sex and gender integration.

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
		QUALITATIVE	**QUANTITATIVE**	
		"The difference between sex and gender still gets confused-need to make sure these concepts are CLEAR when viewing each module" Dissemination strategies discussed. A sample of the feedback received, "applicable to earlier learning stages-undergraduate, graduate, university level (nursing, medical, social work)" "Curriculums are moving forward strongly" "Mandate the modules and also have faculty members integrate it into courses"	• Held 2 meetings with patient partners and subsequent follow-up feedback opportunities, January 18, 19 2018 • Received 1 CIHR-IGH Planning and Dissemination Grant proposing to develop footage from the workshop into online education modules to enhance dissemination among Diabetes Action Canada.	• Established engagement with 'Patient Partners' to help evaluate one module on "Integrating Sex, Gender, and Vulnerable Populations into Health Research Proposals" incorporating patient lived experiences into the development of the module • Currently designing a resource package for patient partners to learn about Sex Differences and Diabetes • Designed, administered and analysed workshop evaluation survey to assist with planning future workshops.
2.	Manuscript title: "Measuring the Data Gap: Inclusion of Sex and Gender in Diabetes Research"	Submitted to BMC Medical Research Methodology November 2017		Evaluating the impact of the Diabetes Action Canada approach to integrating sex and gender in diabetes research

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
		QUALITATIVE	**QUANTITATIVE**	
3.	Validating the "Essential Metrics for the Assessment of Sex and Gender Integration in Health Research Proposals Involving Human Participants"	Post assessment survey was administered: Some additional comments, included here within, are: "the section asking applicants to address sex/gender was usually well done, but often the applicant cut/pasted from CIHR information. It rarely integrated with the rest of the application – which suggests applicants do not truly integrate sex/gender very well" How could the metrics be made easier to use: "It would be great if this was a fillable form, so it would be easier to complete"	• Evaluate the extent reviewers of the same research proposal differ in their assessment of the proposal's integration of sex and gender, as captured by the metrics assessment forms • What are reviewers' experiences with using the metrics as a tool for assessing sex and gender integration in health research proposals	We anticipate being able to publish the results of this validation study, thereby making the metrics widely available as a validated tool for use by reviewers of health research proposals in making funding decisions. Many funding agencies require integration of sex and gender in health research proposals as a condition of funding, including the Canadian Institutes of Health Research (CIHR) and the MOHLTC. Researchers will also benefit from having a standardized set of criteria outlining excellence in sex and gender integration, helping them to better incorporate these concepts into their research proposals.

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
		QUALITATIVE	**QUANTITATIVE**	
		"Excellent, no further changes"		
3.	**Document integration of sex and gender considerations throughout the SPOR Diabetes Network.**		• Women's Xchange has developed a set of *Essential Metrics for Assessing Sex and Gender Integration* and published in PloS one	- These metrics are designed to measure the quality of sex and gender integration across all stages of a health research project, assigning one of four ratings to the quality of integration within each project element: poor, fair, good, or excellent. We will adapt the metrics to assess DAC products; success will be indicated by an increase in the number of products that receive "good" and "excellent" ratings. - This tool enables us to review KT products (papers, presentations, etc.) of Diabetes Action Canada as they arise, assess the extent to which sex and gender are considered in these products, and track these metrics over time.
4.	**Lead, collaborate on and/or contribute to academic products as requested by network projects/individual researchers on the network (e.g. literature reviews of sex/gender issues in a given diabetes-related topic).**	• Identified opportunities for Women's Xchange to enhance or lead Diabetes Action Canada's academic products with a sex and gender lens.	• For Dr. Sophie Desroches (sex and gender facilitator, knowledge translation goal group): the Women's Xchange team reviewed and provided feedback on including sex and	Opportunities to enhance sex and gender considerations in academic products of the Diabetes Action Canada goal groups were identified through meetings with Diabetes Action Canada's sex and gender facilitators.

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
		QUALITATIVE	**QUANTITATIVE**	
			gender evaluation criteria in student-/trainee-submitted funding proposals. The score sheet quantitatively evaluated 1) research proposal (15 points) 2: self description and career goals (15 points) 3: reference letters (10points) 4: sex and gender considerations (5 points) 5: CIHR common CV (5 points) 6: post secondary transcripts (5 points) • Provided assistance in reviewing to 2 PhD applications (June 2017)	

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
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INTERMEDIATE OUTCOME(S) – Outcomes that are logically expected to occur, once one or more immediate outcomes have been achieved (Please include additional information on the following: Research evidence is applied, clinical trials environment in Canada improved, Canadian capacity in POR is strengthened and maintained, stakeholders (patients, clinicians, etc.) are active partners in research and implementation)				
1.	**Enhanced awareness of the importance of sex and gender considerations among the research teams of the SPOR Diabetes Action Canada Network, including:** • **improved awareness of the role of Women's Xchange on the SPOR Diabetes Action Canada Network** • **improved awareness of strategies for sex and gender integration**	Selected feedback about the facilitator model, TC meeting held March 20, 2018: "These meetings are informative and help facilitators connect with each other" "Powerpoint/webinars are effective, the website to disseminate resources is useful, as needs arise, one-on-one meetings could be important to establish"	7 facilitators have been identified	Progress towards these outcomes will be ongoing. To date, we have taken the following actions towards achieving these outcomes: • Established a "sex and gender facilitator" model, whereby goal groups designate one member of the group to be the point-person for regular communication with Women's Xchange (in the form of telephone meetings and emails). Facilitators in turn serve to ensure that sex and gender considerations are raised at goal group meetings, and alert Women's Xchange to any opportunities to enhance sex and gender among the goal groups' activities. • The goal of the quarterly meetings is to hear from each of the goal group facilitators on the past relationship to the sex and gender goal group and suggest ways in how to enhance that relationship • Ensured that all goal groups of DAC have identified a facilitator. • Invited all Diabetes Action Canada investigators and trainees (with special emphasis on facilitators) to a workshop we designed specifically to enhance capacity for sex and gender integration. • Building capacity for leaders (clinicians and trainees) of clinical trials in Canada

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
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2.	**Enhanced capacity among the research teams of the SPOR Diabetes Network for integrating sex and gender considerations throughout their research activities and products.**	Post support service: 1) To what extent did researchers accessing the Sex and Gender Research Support Service incorporate suggestions provided on the final draft of their proposals? Based on the feedback provided, do researchers feel more competent integrating sex and gender considerations in future proposals? What did researchers appreciate about the service, are there areas for improvement? Would this service be recommended to others (Appendix A). Some of the comments about why consult with the goal group, "The focus of the catalyst grant to which I was applying was on sex and	In a survey to those accessing the women's Xchange sex and gender support service, 56% of the respondents integrated sex and gender into their final grant applications re. study design, recruitment or retaining study participants, data collection, sharing study findings or knowledge translation	To date, the Women's Xchange Sex and Gender Support Service, reviewed **14** grants, of which **10** were directly related to Diabetes Action Canada. Of those who completed the survey (n=9/12), most of the respondents provided either a grant draft or final version. • Pre-consultation services by phone call were provided to 55% of the grant applicants • Emailed track changes were provided to all of them, • 33% opted for a follow up phone call. • 77% contacted the sex and gender goal group 2-3 times • 89% had not worked with the sex and gender goal group prior to submitting the grant • 78% of the respondents shared the results with other members of their research team (which includes 2-3 members) • 78% of the respondents incorporated the suggestions made by our goal group into the final draft • 56% of the respondents felt that our goal group impacted the final application submission "A Moderate amount" • 100% of the respondents felt more competent in integrating sex and gender in future proposals

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
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		gender differences in basic mechanisms of disease. The call recommended that I partner or consult with a champion in this research area. I was recommended to you on this basis." "To provide expertise on the inclusion of sex and gender considerations, ensuring that the research addressed these issues, and in doing so, would also fulfil the requirements of the granting agency." Some of the comments about what areas need improvement, "Very responsive. Non-judgmental about lack of sex and gender content prior to their review."		• 100% of the respondents would recommend our services to others This service, provides Canadian trialists and grant developers with support through all stages of the research design and implementation. Our enabling program strengthens research protocols and clinical trials in the development stages right through to the roll-out, improving networking and recruitment strategies for sex and gender considerations as well as publication reporting following completion of the trial.

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
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		"We appreciated the quality of the service provided and the timeline for receiving the requested feedback" "The combination of phone conversations and track change documents were quite helpful -- the track changes provided a record of very specific feedback, while the conversation allowed for further clarification and discussion. Women's Xchange personnel were also extremely friendly, flexible and helpful." "No suggestions for improvement - very helpful service" This was a wonderful service and very professional interaction, I was engaged, and the		

IMMEDIATE & INTERMEDIATE OUTCOMES				
OUTCOMES		**INDICATORS (What were the measures of the output or outcome?)**		**DESCRIPTION OF ACCOMPLISHMENTS (How were the outputs and outcomes achieved?)**
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		exchange of advice improved my knowledge and approach to thinking about and including sex and gender as important variables and outcomes in our research program "No obvious areas for improvement. I thought the interactions were very collegial and professional."		
3.	**Thematic analysis of feedback comments to grant applicants**	Here is a selection of comments which were analysed thematically, and mapped onto our metrics to identify areas that researchers need the most help with understanding sex/gender considerations: Sample size calculations: "Sample size reported may not be powered		We will be using the thematic analysis of comments the sex and gender goal group supplies to grant applicants as a way to assess how meaningfully the integration of sex and gender has been made upon receiving drafts/final versions/letters of intent. A qualitative analysis of the feedback experts from our goal group send back to the applicants is a way to measure a baseline of knowledge that principal investigators and co-investigators have before receiving our track changes.

IMMEDIATE & INTERMEDIATE OUTCOMES				
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		QUALITATIVE	**QUANTITATIVE**	
		sufficiently to report meaningful results for sex/gender differences" Recruitment strategies: "How will the participants be convened? How will you ensure adequate recruitment for this meeting?" "Drop-out rates may be higher in vulnerable populations and in women *vs.* men" Tool development: Sampling: "Perhaps in-depth interviews and piloting of questionnaires to separate and targeted groups might reveal more impactful gender differences/perspectives"		

APPENDIX 2:

DIABETE ACTION CANADA - Principal Investigators (n=16)

Name of Principal Investigator	Role and Institute
Despres, Jean-Pierre	***Co-Scientific Lead – Diabetes Action Canada*** Professor – Department of Kinesiology, Faculty of Medicine, Université Laval Director of Research in Cardiology – Québec Heart and Lung Institute Research Centre
Lewis, Gary F.	***Co-Scientific Lead – Diabetes Action Canada*** Professor, Department of Medicine and Department of Physiology, University of Toronto; Director, Banting and Best Diabetes Centre, University of Toronto; Sun Life Financial Chair in Diabetes; Drucker Family Chair in Diabetes Research
Brown, D. Adalsteinn	Interim Dean, Dalla Lana School of Public Health, University of Toronto
Bélanger, Mathieu	Associate Professor, Department of Family Medicine, Université de Sherbrooke
Brent, Michael	Associate Professor, Department of Ophthalmology and Vision Sciences, University of Toronto
Cafazzo, Joe	Associate Professor, Institute of Biomaterials and Biomedical Engineering, and Institute of Health Policy Management and Evaluation, University of Toronto
Carpentier, André	Professor, Department of Medicine, Centre de recherche du CHUS, Université de Sherbrooke
Farkouh, Michael	Professor of Medicine & Vice-Chair Research, Department of Medicine, University of Toronto
Fernyhough, Paul	Professor and Head, Department of Pharmacology and Therapeutics; Professor, Department of Physiology, University of Manitoba
Greiver, Michelle	Acting Director, University of Toronto Practice-Based Research Network (UTOPIAN); Associate Professor, Department of Family and Community Medicine, University of Toronto
Légaré, France	Professor, Department of Family Medicine and Emergency Medicine, Université Laval

Name of Principal Investigator	Role and Institute
Maberley, David	Professor, Ophthalmology and Visual Sciences, University of British Columbia
McGavock, Jon	Associate Professor, Department of Pediatric and Child Health, University of Manitoba; CIHR Applied Health Chair, Co-Lead DREAM Theme
Perkins, Bruce	Professor, Department of Medicine and Institute of Health Policy, Management and Evaluation, University of Toronto
Rochon, Paula	Professor, Department of Medicine, and Institute of Health Policy Management and Evaluation, University of Toronto
Sullivan, Frank	Professor, Department of Family and Community Medicine, University of Toronto

DIABETES ACTION CANADA - Co Investigators (n=74)

Name of Co-Investigator	Role & Institute
Aliarzadeh, Babak	Data Analytics Manager, University of Toronto Practice Based Research Network (UTOPIAN)
Ahmed, Kayssi	Assistant Professor, Department of Surgery , University of Toronto
Al-Omran, Mohammed	Head, Division of Vascular Surgery, St. Michael's Hospital; Professor, Department of Surgery, University of Toronto
Andersson, Neil	Professor and Director, CIET-PRAM Department of Family Medicine, McGill University
Bhattacharyya, Onil	Associate Professor, Department of Family and Community Medicine, University of Toronto
Birtwhistle, Rick	Professor, Department of Family Medicine and Community Health and Epidemiology, Queen's University
Booth, Gillian	Associate Professor, Institute of Health Policy, Management and Evaluation, University of Toronto

Name of Co-Investigator	Role & Institute
Boucher, Marie-Carole	Clinical Professor of Ophthalmology, University of Montreal
Campbell, Melanie	Professor, Department of Physics, University of Waterloo
Chartrand, Caroline	Clinical Assistant Professor, Université de Montréal
Chaudhary, Varun	Associate Professor, McMaster University & Associate Member, McMaster School of Biomedical Engineering
Cherney, David	Assistant Professor, Department of Medicine & Division of Nephrology, University of Toronto
Cruess, Alan	Department of Ophthalmology & Visual Sciences -Dalhousie University
De Mestral, Charles	Assistant Professor, Department of Surgery, University of Toronto
Desroches, Sophie	Assistant Professor, Department of Food & Nutrition Sciences, Laval University
Dogba, Joyce	Assistant Professor, Department of Family and Emergency medicine, Faculty of Medicine, Laval University
Drummond, Neil	Professor, Department of Family Medicine, University of Alberta
Duhoux Arnaud	Assistant Professor, University of Montreal
Dumont, Serge	Professor, School of Social Work, Laval University
El Defrawy, Sherif	Chair, Department of Ophthalmology and Vision Sciences, University of Toronto; Ophthalmologist-in-Chief – Kensington Eye Institute; Active Attending, University Health Network
Ethier, Jean-Francois	Assistant Professor, Department of Medicine, Faculty of Medicine and Health Sciences Université de Sherbrooke
Etminan, Mahyar	Assistant Professor, Department of Ophthalmology and Visual Sciences, Faculty of Medicine,

Name of Co-Investigator	Role & Institute
	University of British Columbia
Forbes, Thomas	Professor of Surgery; Chair of Division of Vascular Surgery, University of Toronto
Gilmour, Julie	Professor, International Relations Program Munk School of Global Affairs, University of Toronto
Grunfeld, Eva	Associate Professor, Department of Family and Community Medicine, University of Toronto
Gupta, Neeru	Associate Professor & Health Research Chair in Diabetes, University of New Brunswick
Haidar, Ahmad	Assistant Professor, Biomedical Engineering, McGill University
Halperin, Ilana	Assistant Professor, Department of Medicine, University of Toronto
Harvey, Paula	Assistant Professor, Department of Medicine, University of Toronto
Hillmer, Michael	Assistant Professor, Institute of Health Policy, Management and Evaluation, University of Toronto
Hurley, Bernard	Vitreoretinal Surgeon, The University of Ottawa Eye Institute; Assistant Professor, Department of Ophthalmology, University of Ottawa
Ivers, Noah	Assistant professor, Department of Family and Community Medicine, University of Toronto
Jaakkimainen, Liisa	Associate Professor, Department of Family and Community Medicine, University of Toronto
Jose, Caroline	Adjunct Research Professor, Centre de formation médicale Université de Moncton
Juni, Peter	Professor, Institute of Health Policy, Management and Evaluation, University of Toronto
Kastner, Monika	Professor, Institute of Health Policy, Management and Evaluation, University of Toronto
Kiran, Tara	Assistant Professor, Institute of Family and Community Medicine

Name of Co-Investigator	Role & Institute
Kosar, Stephen	Assistant Professor, Northern Ontario School of Medicine
Lamarche, Benoit	Professor, Institute of Nutrition and Functional Foods, Laval University
Lavallee, Barry	Director Student Support and Curriculum Development Centre for Aboriginal Health Education Section of First Nation, Metis and Inuit Health Faculty of Health Sciences, University of Manitoba
Lee- Gosselin, Héléne	Professor, Department of Management, Laval University
Lipscombe, Lorraine	Associate Professor, Division of Endocrinology and Metabolism, Department of Medicine, University of Toronto
Lussier Marie-Therese	Professor, Department of Family Medicine, University of Montreal
MacCallum, Lori	Assistant Professor, Leslie Dan Faculty of Pharmacy and Program Director, Knowledge Translation and Optimizing Care Models, Banting & Best Diabetes Centre, Faculty of Medicine, University of Toronto;
Manca, Donna	Associate Professor & Research Director, Department of Family Medicine, Faculty of Medicine & Dentistry-Family Medicine, University of Alberta
Markle-Reid, Maureen	Scientific Director, Aging, Community and Health Research Unit (ACHRU), McMaster University; Canada Research Chair in Person-Centred Interventions for Older Adults with Multimorbidity and their Caregivers; Associate Professor, McMaster University School of Nursing
Mason, Robin	Assistant Professor, Dalla Lana School of Public Health, University of Toronto
McLaren, Anne-Marie	Chiropodist Wound Care, St. Michael's Hospital
Mukerji Geetha	Assistant Professor, Institute of Health Policy, Management and Evaluation, University of Toronto
Noble, Jason	Assistant Professor, Department of Ophthalmology and Vision Sciences, University of Toronto

Name of Co-Investigator	Role & Institute
Oh, Paul	Medical Director and GoodLife Fitness Chair in the Cardiovascular Prevention and Rehabilitation Program, Toronto Rehabilitation Institute and Peter Munk Cardiac Centre, University Health Network; Associate Professor, Department of Medicine, University of Toronto.
Ouimet, Mathieu	Professor, Political Science, Laval University
Parry, Monica	Associate Professor, Nurse Practitioner Field of Study, Lawrence S. Bloomberg Faculty of Nursing-University of Toronto
Paterson, Andrew	Professor, Dalla Lana School of Public Health, University of Toronto
Ploeg, Jenny	Scientific Director, Aging, Community and Health Research Unit (ACHRU), McMaster University Professor at the School of Nursing, McMaster University
Rabasa-Lhoret, Rémi	Associate Professor, Department of Nutrition, Université de Montréal
Rac, Valeria	Assistant Professor, Leslie Dan Faculty of Pharmacy &Institute of Health Policy Management and Evaluation, University of Toronto
Rudnisky, Chris	Associate Professor, Faculty of Medicine, Department of Dentistry & Ophthalmology, University of Alberta
Schofield Aurel	Associate Dean, Faculty of Medicine, Université de Sherbrooke & Associate Dean of Medical Education, Université de Moncton
Segal Phil	Assistant Professor, Department of Medicine, University of Toronto
Senior, Peter	Professor, Department of Medicine, University of Alberta
Shah Baiju	Associate Professor, Department of Medicine & Institute of Health Policy, Management and Evaluation, University of Toronto
Sharma Sanjay	Professor, Department of Ophthalmology, Queen's University
Sheidow, Tom	Associate Professor of Ophthalmology, Ivey Eye Institute Western University

Name of Co-Investigator	Role & Institute
Tennant, Matthew	Professor, Political Science, Laval University
Tremblay, Mari-Claude	Assistant Professor, Department of Family and Emergency Medicine &Office of Education and Professional Development ,Faculty of Medicine, Laval University
Tu, Karen	Associate Professor, Department of Medicine & Institute of Health Policy, Management and Evaluation, University of Toronto
Valaitis, Ruta	Co-Scientific Director, Aging, Community and Health Research Unit (ACHRU), Associate Professor, School of Nursing at McMaster University
Xiaolin, Wei	Associate Professor, Dalla Lana School of Public Health University of Toronto
Witteman, Holly	Assistant Professor, Department of Family and Emergency Medicine, Laval University
Willison, Don	Program Director, Health Services Research, Institute of Health Policy, Management & Evaluation, University of Toronto
Wong, David	Associate Professor, Department of Ophthalmology & Vision Sciences, University of Toronto
Yeung, Rose	Assistant Professor, Department of Medicine, Faculty of Medicine & Dentistry, University of Alberta
Yu Catherine	Assistant Professor, Faculty of Medicine and Dalla Lana School of Public Health, University of Toronto

APPENDIX 3: KT REPORT

List of Peer-reviewed journal articles, books, book chapters, etc

SEPARATE ENCLOSURE:

DIABETES ACTION CANADA Financial Report for the Year 2017-18

REVENUE – 2017-18

1. Breakdown of Revenue for 2017-18

CIHR funds: $2,663,823
Match cash: $3,993,726
Match in-kind: $1,164,671

2. Sponsors of Match Cash & In-Kind for 2017-18

Sponsor	Match Cash	Match In-Kind
Alliance sante Quebec	$220,000	$30,000
AstraZeneca	$150,000	
Bayer	$200,000	
Centre de formation medicale Nouveau-Brunswick (CFMNB)	$55,000	
Caprion Proteome [a]	Withdrawn	$80,391
Cardiometabolic Health, Diabetes and Obesity Research Network (CMDO) [b]	$100,000	
Centres de recherche – Univesité de Sherbrooke	$140,000	
Centre for Global e-Health		$50,000
CIUSSS-CN		$24,876
Diabetes Canada	$200,000	
Children's Hospital Research Institute of Manitoba (DREAM)		$445,149
Foundation for Fighting Blindness		$95,000
Heart and Stroke Foundation	$91,356	
H&S/Richard Lewar Centre of Excellence in Cardiovascular Research	$250,000	
Inst de Recherches Cliniques de Montreal	$1,429,304	
Juvenile Diabetes Research Foundation (JDRF)	$240,000	
Merck	$200,000	
Michael Smith Foundation for Health Research [d]	Withheld	
New Brunswick Health Research Foundation (NBHRF)	$75,000	$100,000
North York General Hospital		$28,541
Research Manitoba	$318,066	
Sun Life	$200,000	
The Koschitzky Family [c]	$50,000	
University of Toronto – Department of Family & Community Medicine		$95,924
University of Toronto – Department of Medicine	$100,000	
Wolfond Chair in Digital Health		$100,000
TOTAL	**$4,018,726**	**$1,049,881**

3. Updates From Sponsors in 2017-18:

a. Caprion Proteome – sponsor withdrew funding as it has decided not to proceed with the Study.

b. Cardiometabolic Health, Diabetes and Obesity Research Network (CMDO) – sponsor removed in-kind match and replaced the corresponding amount as match cash contribution.

c. The Koschitzky Family – philanthropic sponsor with a contribution of $250,000 over 5 years. Funding will be used towards personnel costs of the Manager/Research Operations / Project Coordinator of the iT1D Goal Group.

d. Michael Smith Foundation in Health Research – sponsor withheld the funding during the year as Investigator failed to achieve projected milestones; funding from Year 3 is dependent on receipt of a revised research proposal from the Investigator.

4. New Funding Commitments / In the Pipeline for 2018-19

a. Donald and Gretchen Ross (AYMP) – a philanthropic sponsor who has made a one-time contribution of $50,000 towards the Aboriginal Youth Mentorship Program.

b. Boehringer Ingelheim - Boehringer Ingelheim has committed to a sponsorship of $34,800 towards a 3-day gathering in the Fall of 2018 organized by the Indigenous Peoples' Health Goal Group. The event is organized to facilitate updating of the Indigenous Diabetes Atlas.

c. University of Montreal - $100,000 match to the CIHR funding ($100,000) for the new Retinopathy Screening project with Dr. Marie Carole Boucher using artificial intelligence analytics for retinal image diagnosis of diabetes-related disease.

d. Wolfond Chair in Digital Health – Philanthropic donation from Henry and Gregory Wolfond of $200,000 per year over 10 years from December 2017, in support of the Chair in Digital Health at the Techna Institute of the University Health Network. The funding is reported as in-kind contribution to reflect salary support for the Wolfond Chair towards the *bant* project.

DISBURSEMENTS – 2017-18

5. Breakdown of Funding Disbursements and Allocation in 2017-18

Institution	Disbursement of CIHR Funds in 2017-18	Match Funds (Restricted & Unrestricted)	In-kind
Laval University	532,860	321,220	54,876
University Health Network	973,882	932,218	245,000
University of British Columbia	133,750	-	-
University of Manitoba	235,566	235,566	445,149
University of Sherbrooke	213,144	370,000	180,391
University of Toronto	459,561	416,935	124,465
Women's College Hospital	48,150	26,850	-
First Nations Health & Social Secretariat of Manitoba	-	230,000	-
Institute de Recherches Cliniques de Montreal	-	1,429,304	-
TOTAL	**2,596,913**	**3,962,093**	**1,049,881**

6. Updates to Funding Disbursements in 2017-18

a. University of Manitoba & First Nations Health & Social Secretariat of Manitoba

Administrative challenges led to the Investigator not receiving the funds from the University to the First Nations Health & Social Secretariat of Manitoba (FHSSM) where the project was to be conducted.

The inter-institutional agreement with the University of Manitoba was terminated in November 2017, and the match funds that had been sent to the University were returned to the University of Toronto.

An inter-institutional agreement was drawn up directly with FHSMM and fully-executed in February 2018. Funding for the first 2 years was disbursed to the FHSSM in March 2018.

b. University of British Columbia

The Investigator at the University of British Columbia was allocated CIHR and Matched Funds from the Michael Smith Foundation for Health Research (MSFHR) to conduct the study, 'Rural-Urban Communities in B.C. - Preventing Blindness with a National Telemedicine Retinal Screening & Research Program'.

As at end March 2018, projected milestones had not been met. The Investigator has been requested to submit a detailed research proposal and proposed budget for the utilization of the funding that has been received to-date. Diabetes Action Canada will seek CIHR's approval for these unspent funds to be carried forward and utilized towards the revised research proposed. The Investigator will not receive further funding in 2018-19. Part of the 2018-19 CIHR funding will be channeled to the University of Montreal to support a new Retina Imaging analytics project (1 year) using learning algorithms for the purpose of establishing a Canadian diabetic retinopathy curated image database.

c. McGill University

An inter-institutional agreement was set up with McGill University to facilitate the transfer of funds to Alex McComber at McGill University. Alex is the co-lead of the Indigenous Peoples Health Goal Group, and the two-year funding will go towards administrative support for the Indigenous Patient Circle.

7. Upcoming Changes to Funding Allocation

a. University of Montreal – New Funding Allocation

Diabetes Action Canada, in partnership with the University of Montreal, have agreed to fund an initial project with the Montreal Institute for Learning Algorithms (MILA) to create a unique software integrated platform for an early diagnosis and effective automatic tools aimed at ocular pathologies assessment. Diabetes Action Canada and the University of Montreal will co-fund the proof-of-concept for this project up to $200,000, as follows:

University of Montreal - $100,000
Diabetes Action Canada - $100,000

An inter-institutional agreement will be set up with the University of Montreal to facilitate the above-mentioned funding for the project.

b. Laurentian University – New Funding Allocation

Nancy Young at Laurentian University will be working jointly with Jon McGavock, the Goal Group Lead for the Indigenous Peoples Health Goal Group, to expand the Aboriginal Youth Mentorship Program (AYMP) across 4 communities in Northern Ontario. The Toronto General and Western Hospital Foundation has received a one-time funding of $50,000 and an inter-institutional agreement with Laurentian University will be set up to facilitate the transfer of these funds to Laurentian.

c. University of Manitoba – Change in Funding Allocation / Timeline

The project, 'Topical Pirenzepine for Treatment of Neuropathy in Type 2 Diabetes', led by Paul Fernyhough at the University of Manitoba has been deferred a year, and will commence on September 2018 instead of September 2017. The funding amount remains unchanged.

d. University of Manitoba – Change in Funding Allocation

The Indigenous Peoples Health Goal Group, led by Jon McGavock at the University of Manitoba, was approached by the National Aboriginal Diabetes Association to collaborate on updating the Indigenous Diabetes Atlas. The Goal Group is organizing a 3-day gathering in the Fall of 2018 as part of its efforts to gather the necessary information for the report card. Boehringer Ingelheim has committed to a sponsorship of $34,800 towards the event.

8. Funding Disbursement and Allocation 2017-18

INSTITUTION	PI	PROJECT	FUNDING SOURCE/TYPE				Total
			CIHR	Match-RES	Match-UNRES	In-kind	
UBC	David Maberley	Rural-Urban Communities in B.C. - Preventing Blindness with a National Telemedicine Retinal Screening & Research Program	133,750	withheld	-	-	133,750
		Subtotal	***133,750***	***-***	***-***	***-***	***133,750***
UHN	Gary Lewis	SPOR Network Administration	532,860	50,000	-	-	582,860
	Michael Brent	Rural-Urban Communities - Preventing Blindness with a National Telemedicine Retinal Screening and Research Program	218,551	200,000	-	95,000	513,551
	Bruce Perkins	Effect of SGLT2 Inhibition on Improving the Glycemic Performance of Single and Dual-Hormone Artificial Pancreas Configuration	222,471	240,000	17,529	-	480,000
	Joe Cafazzo	Diabetes Patient-Centered Health Informatics	-	200,000	50,000	150,000	400,000
	Gary Lewis	CNS-mediated Effects of Insulin and GLP-1 on Intestinal and Hepatic Lipoprotein Particle Production in Humans	-	91,356	-	-	91,356
	Gary Lewis	Delivery of Preconception Care Education by Pharmacists to Women with Diabetes	-		83,333	-	83,333
		Subtotal	***973,882***	***781,356***	***150,862***	***245,000***	***2,151,100***

U Laval	France Légaré	Transforming Community-Based Primary Health Care (CBPHC) Knowledge and Knowledge Tools to address patient-generated priorities through the involvement of patients, the public, researchers and healthcare providers.	532,860		71,220	24,876	628,956
	Jean-Pierre Després	Targeted Life-Style Modification for Secondary Prevention of Diabetes Complications	-	220,000	-	30,000	250,000
	Holly Witteman	Risk Calculator	-	-	30,000	-	30,000
		Subtotal	***532,860***	***220,000***	***101,220***	***54,876***	***908,956***
University of Manitoba	Jon McGavock	Rural Indigenous Community Screening for Diabetes Complications for Prevention & Early Intervention	80,950	80,950	-	-	161,900
	Jon McGavock	Vigorous Physical Activity for Glycemic Control in Type 1 Diabetes Trial (VIGOR)	54,616	54,616	-	-	109,232
	Jon McGavock	Diabetes Research Envisioned and Accomplished in Manitoba (DREAM)	-	-	-	445,149	445,149
	Paul Fernyhough	Topical Pirenzepine for Treatment of Neuropathy in Type 1 Diabetes	100,000	100,000	-	-	200,000
		Subtotal	***235,566***	***235,566***	***-***	***445,149***	***916,281***
University of Sherbrooke	André Carpentier	Development of proteomic-based biomarkers for beta cell and adipose tissue dysfunctions in type 2 diabetes	-	140,000	-	80,391	220,391
	André Carpentier	Patient-Oriented Research Training & Mentoring Strategy	213,144	100,000	-	-	313,144
	Mathieu Bélanger	Training of Knowledge Translation Researchers & Clinical Care Providers	-	130,000	-	100,000	230,000
		Subtotal	***213,144***	***370,000***	***-***	***180,391***	***763,535***

Institut de Recherche Cliniques de Montreal	Rémi Rabasa-Lhoret	Comparison of Dual-Hormone Artificial Pancreas, Single Hormone Artificial Pancrea, and Sensor-Augmented Pump Therapy in Outpatient Settings	-	1,429,304	-	-	1,429,304
		Subtotal	***-***	***1,429,304***	***-***	***-***	***1,429,304***
University of Toronto	Michelle Greiver	National Primary Care Registry for Diabetes for Earliest Detection of Complications & Analysis of Risk for Progression	459,561		66,935	124,465	650,961
	Gary Lewis	SPOR Governance	-	100,000	-	-	100,000
	Michael Farkouh	Heart & Stroke/Richard Lewar Centre of Excellence in Cardiovascular Research		250,000		-	250,000
		Subtotal	***459,561***	***350,000***	***66,935***	***124,465***	***1,000,961***
Women's College Hospital	Paula Rochon	Sex and Gender Support for the SPOR Network in Diabetes and its Related Complications	48,150	-	26,850	-	75,000
		Subtotal	***48,150***	***-***	***26,850***	***-***	***75,000***
First Nations Health & Social Secretariat of Manitoba	Barry Lavallee	National Training in Culturally Safe Diabetes Education	-	115,000	115,000	-	230,000
		Subtotal	-	***115,000***	***115,000***	-	***230,000***
		TOTAL 2017-18	**2,596,913**	**3,501,226**	**460,867**	**1,049,881**	**7,608,887**

9. Planned Funding Disbursement and Allocation 2018 – 19

INSTITUTION	PI	PROJECT	FUNDING SOURCE/TYPE				Total
			CIHR	Match-RES	Match-UNRES	In-kind	
UBC	David Maberley	Rural-Urban Communities in B.C. - Preventing Blindness with a National Telemedicine Retinal Screening & Research Program	withdrawn	withheld	-	-	-
		Subtotal	**-**	**-**	**-**	**-**	**-**
UHN	Gary Lewis	SPOR Network Administration	470,610	50,000	-	-	520,610
	Michael Brent	Rural-Urban Communities - Preventing Blindness with a National Telemedicine Retinal Screening and Research Program	193,019	250,000	-	100,000	543,019
	Bruce Perkins	Effect of SGLT2 Inhibition on Improving the Glycemic Performance of Single and Dual-Hormone Artificial Pancreas Configuration	85,987	165,000	79,013	-	330,000
	Joe Cafazzo	Diabetes Patient-Centered Health Informatics	-	200,000	50,000	250,000	500,000
	Gary Lewis	CNS-mediated Effects of Insulin and GLP-1 on Intestinal and Hepatic Lipoprotein Particle Production in Humans	-	92,356	-	-	92,356
	Gary Lewis	Delivery of Preconception Care Education by Pharmacists to Women with Diabetes	-		83,333	-	83,333
		Subtotal	***749,616***	***707,356***	***212,346***	***350,000***	***2,069,318***

U Laval	France Légaré	Transforming Community-Based Primary Health Care (CBPHC) Knowledge and Knowledge Tools to address patient-generated priorities through the involvement of patients, the public, researchers and healthcare providers.	470,610		74,020	25,498	570,128
	Jean-Pierre Després	Targeted Life-Style Modification for Secondary Prevention of Diabetes Complications	-	220,000	-	30,000	250,000
	Holly Witteman	Risk Calculator	-	-	30,000	-	30,000
		Subtotal	***470,610***	***220,000***	***104,020***	***55,498***	***850,128***
University of Manitoba	Jon McGavock	Rural Indigenous Community Screening for Diabetes Complications for Prevention & Early Intervention	80,950	115,750	-	-	196,700
	Jon McGavock	Vigorous Physical Activity for Glycemic Control in Type 1 Diabetes Trial (VIGOR)	39,905	39,905	-	-	79,810
	Jon McGavock	Diabetes Research Envisioned and Accomplished in Manitoba (DREAM)	-	-	-	490,000	490,000
	Paul Fernyhough	Topical Pirenzepine for Treatment of Neuropathy in Type 1 Diabetes	100,000	100,000	-	100,000	300,000
		Subtotal	***220,855***	***255,655***	***-***	***590,000***	***1,066,510***
University of Sherbrooke	André Carpentier	Development of proteomic-based biomarkers for beta cell and adipose tissue dysfunctions in type 2 diabetes	-	140,000	-	150,000	290,000
	André Carpentier	Patient-Oriented Research Training & Mentoring Strategy	188,244	100,000	-	-	288,244
	Mathieu Bélanger	Training of Knowledge Translation Researchers & Clinical Care Providers	-	130,000	-	100,000	230,000
		Subtotal	***188,244***	***370,000***	***-***	***250,000***	***808,244***

Institut de Recherche Cliniques de Montreal	Rémi Rabasa-Lhoret	Comparison of Dual-Hormone Artificial Pancreas, Single Hormone Artificial Pancrea, and Sensor-Augmented Pump Therapy in Outpatient Settings	-	1,398,035	-	-	1,398,035
		Subtotal	***-***	***1,398,035***	***-***	***-***	***1,398,035***
University of Toronto	Michelle Greiver	National Primary Care Registry for Diabetes for Earliest Detection of Complications & Analysis of Risk for Progression	562,821	-	-	121,419	684,240
	Michael Farkouh	Heart & Stroke/Richard Lewar Centre of Excellence in Cardiovascular Research		250,000			
	Gary Lewis	SPOR Governance	-	100,000	-	-	100,000
		Subtotal	***562,821***	***350,000***	***-***	***121,419***	***784,240***
Women's College Hospital	Paula Rochon	Sex and Gender Support for the SPOR Network in Diabetes and its Related Complications	42,525	-	32,475	-	75,000
		Subtotal	***42,525***	***-***	***32,475***	***-***	***75,000***
First Nations Health & Social Secretariat of Manitoba	Barry Lavallee	National Training in Culturally Safe Diabetes Education	-	57,500	57,500	-	115,000
		Subtotal	-	***57,500***	***57,500***	-	***115,000***
University of Montreal	Marie Carole Boucher	Enabling Expanded Diabetic Retinopathy Screening with AI	100,000	-	-	-	100,000
		Subtotal	***100,000***	***-***	***-***	***-***	***100,000***
Laurentian University	Nancy Young	Aboriginal Youth Mentorship Program in Northern Ontario	-	50,000	-	-	50,000
			-	***50,000***	***-***	***-***	***50,000***

		Subtotal					
		TOTAL 2018-19	**2,334,671**	**3,458,546**	**406,341**	**1,366,917**	**7,566,475**

ADJUSTED PLANNED AND ACTUAL EXPENDITURES AND VARIANCES – 2017-18

The total actual expenditure in 2017-18 was $4,996,545. The breakdown by type of funding and Goal Group are provided below:

NB: The figures above do not include projects that have been delayed, deferred, or are currently uncertain in terms of continuity. Therefore, the funds allocated in 2017-18 exceed the planned expenditures that were ADJUSTED during the budget year to appropriately match the actual expenditures.

CIHR: $2,119,265
Match Cash: $1,927,399
Match In-kind: $949,882

Goal Group	2017 -18 Adjusted Planned	2017-18 Actual	2017-18 Variance
Knowledge Translation & Patient Engagement	1,464,841	1,464,145	696
Training & Mentoring	374,118	189,351	184,767
Digital Health for Diabetes Research & Care	1,786,042	1,624,805	161,237
Diabetic Retinopathy	622,435	424,422	198,013
Innovations in Type 1 Diabetes	450,588	464,117	- 13,529
Indigenous Peoples' Health	161,900	170,006	- 8,106
Sex & Gender	75,000	32,083	42,917
Governance & Administration	661,210	683,616	- 22,406
Total	**5,596,134**	**5,052,545**	**543,589**

2017-18 Adjusted Planned and Actual Spending - CIHR Form 300

		2017 - 18 ADJUSTED PLANNED SPENDING				2017 - 18 ACTUAL SPENDING			
Category	**Subcategory**	**CIHR: Planned**	**Partners: Planned (cash)**	**Partners: Planned (in kind)**	**Sub-total: Planned**	**CIHR: Actual**	**Partners: Actual (cash)**	**Partners: Actual (in kind)**	**Sub-total: Actual**
Personnel Services (Trainees)	a. Undergraduate (Canadian)	$0	$0	$0	$0	$6,806	$3,281	$0	$10,087
	b. Undergraduate (Foreign)	$0	$0	$0	$0	$0	$0	$0	$0
	c. Masters (Canadian)	$36,000	$50,000	$0	$86,000	$10,800	$55,842	$0	$66,642
	d. Masters (Foreign)	$0	$0	$0	$0	-$1,220	$0	$0	-$1,220
	e. Doctorate (Canadian)	$52,500	$12,500	$0	$65,000	$27,052	$214	$0	$27,266
	f. Doctorate (Foreign)	$0	$24,000	$0	$24,000	$21,101	$0	$0	$21,101
	Sub-total: Personnel (Trainees)	**$88,500**	**$86,500**	**$0**	**$175,000**	**$64,539**	**$59,337**	**$0**	**$123,876**
Personnel Services (Non-Trainees)	a. Postdoctoral (Canadian)	$243,150	$55,427	$24,876	$323,453	$93,923	$57,889	$24,876	$176,688
	b. Postdoctoral (Foreign)	$0	$50,000	$0	$50,000	$43,147	$56,000	$0	$99,147
	c. Others	$1,371,630	$1,043,615	$644,669	$3,059,914	$1,014,730	$1,036,863	$549,656	$2,601,249
	Sub-total: Personnel (Non-Trainees)	**$1,614,780**	**$1,149,042**	**$669,545**	**$3,433,367**	**$1,151,800**	**$1,150,752**	**$574,532**	**$2,821,084**
Professional & Technical Services		$555,144	$422,592	$15,000	$992,736	$631,939	$381,122	$180,000	$1,195,231
	Sub-total: Services	**$555,144**	**$422,592**	**$15,000**	**$992,736**	**$634,109**	**$381,122**	**$180,000**	**$1,195,231**
Equipment		$100,797	$107,214	$0	$208,011	$71,635	$123,214	$0	$194,849
	Sub-total: Equipment	**$100,797**	**$107,214**	**$0**	**$208,011**	**$71,635**	**$123,214**	**$0**	**$194,849**
Supplies Materials & Expendables		$94,348	$102,231	$374,780	$571,359	$117,708	$33,960	$179,783	$331,451
	Sub-total: Supplies	**$94,348**	**$102,231**	**$194,780**	**$391,359**	**$117,708**	**$33,960**	**$70,771**	**$230,319**
Travel	Conference, Meetings	$124,625	$81,036	$10,000	$215,661	$135,474	$179,013	$15,567	$330,055
	Sub-total: Travel	**$124,625**	**$81,036**	**$10,000**	**$215,661**	**$135,474**	**$179,013**	**$15,567**	**$330,055**
	TOTAL	**$2,578,194**	**$1,948,615**	**$1,069,325**	**$5,596,134**	**$2,175,265**	**$1,927,399**	**$949,882**	**$5,052,545**

2017-18 Financial Overview by Spending Category – SPOR Requested Report

		2017-18 PLANNED SPENDING				2017-18 ACTUAL SPENDING			
Category	**Subcategory**	**CIHR: Planned**	**Partners: Planned (cash)**	**Partners: Planned (in kind)**	**Sub-total: Planned**	**CIHR: Actual**	**Partners: Actual (cash)**	**Partners: Actual (in kind)**	**Sub-total: Actual**
Personnel Services	Management/Administration	$400,010	$150,000	$0	$550,010	$352,439	$125,861	$0	$478,300
	Research staff	$1,214,770	$999,042	$669,545	$2,883,357	$799,361	$1,274,891	$479,532	$2,553,784
	Trainees	$88,500	$86,500	$0	$175,000	$64,539	$59,337	$0	$123,876
	Other compensation costs (e.g., contractors)	$527,744	$422,592	$15,000	$965,336	$561,070	$131,122	$275,000	$967,192
	Sub-total: Personnel	**$2,231,024**	**$1,658,134**	**$684,545**	**$4,573,703**	**$1,777,409**	**$1,591,211**	**$754,532**	**$4,123,152**
Supplies Materials & Services	Communication & marketing	$27,400	$0	$0	$27,400	$34,430	$0	$0	$34,430
	Information Technology	$0	$0	$0	$0	$0	$0	$0	$0
	Equipment	$100,797	$107,214	$0	$208,011	$71,635	$123,214	$0	$194,849
	Other	$94,348	$102,231	$374,780	$571,359	$100,006	$33,960	$179,783	$313,749
	Sub-total: Supplies	**$222,545**	**$209,445**	**$374,780**	**$806,770**	**$206,071**	**$157,174**	**$179,783**	**$543,028**
Miscellaneous	Stakeholder engagements (e.g. conferences, meetings)	$33,000	$28,236	$0	$61,236	$118,277	$158,282	$0	$276,559
	Governance (e.g., councils)	$8,000	$0	$0	$8,000	$11,826	$0	$0	$11,826
	Staff travel	$83,625	$52,800	$10,000	$146,425	$61,681	$20,731	$15,567	$97,980
	Other	$0	$0	$0	$0	$0	$0	$0	$0
	Sub-total: Miscellaneous	**$124,625**	**$81,036**	**$10,000**	**$215,661**	**$191,784**	**$179,013**	**$15,567**	**$386,364**
Total	**TOTAL**	**$2,578,194**	**$1,948,615**	**$1,069,325**	**$5,596,134**	**$2,175,264**	**$1,927,399**	**$949,882**	**$5,0252,544**

Actual & Projected Revenue-Expenditure (Years 1 – 6)

	2016-17			2017-18			2018-19		
	CIHR	Partners (Cash)	TOTAL	CIHR	Partners (Cash)	TOTAL	CIHR	Partners (Cash)	TOTAL
Annual Funding	4,382,123	3,143,798	7,525,921	2,663,823	4,018,726	6,682,549	2,355,958	3,873,746	6,229,704
Carried forward from previous year	-	-	-	3,403,043	1,315,633	4,718,676	3,909,753	3,209,839	7,119,592
(A) Funds Available (Funding + carryforward)				6,066,866	5,334,359	11,401,225	6,265,711	7,083,585	13,349,296
(B) Allocated + carryforward	4,226,502	2,697,797	6,924,299	5,894,335	4,756,108	10,650,443	6,185,794	6,769,608	12,955,402
(C) Actual / Projected Spending	979,080	1,828,165	2,807,245	2,157,113	2,124,520	4,281,633	3,578,054	4,463,738	8,041,792
Unspent (A - C)	3,403,043	1,315,633	4,718,676	3,909,753	3,209,839	7,119,592	2,687,657	2,619,847	5,307,504

	2019-20			2020 - 21			2021 - 22		
	CIHR	Partners (Cash)	TOTAL	CIHR	Partners (Cash)	TOTAL	CIHR	Partners (Cash)	TOTAL
Annual Funding	1,889,722	2,367,726	4,257,448	1,208,375	2,086,792	3,295,167	-	400,000	400,000
Carried forward from previous year	2,687,657	2,619,847	5,307,504	1,430,346	982,520	2,412,866	477,965	743,100	1,221,065
(A) Funds Available (Funding + carryforward)	4,577,379	4,987,573	9,564,952	2,638,721	3,069,312	5,708,033	477,965	1,143,100	1,621,065
(B) Allocated + carryforward	4,513,712	4,589,570	9,103,282	2,591,304	2,454,298	5,045,602	400,483	914,033	1,314,516
(C) Actual / Projected Spending	3,147,033	4,005,053	7,152,086	2,160,756	2,326,212	4,486,968	342,573	749,174	1,091,747
Unspent (A - C)	1,430,346	982,520	2,412,866	477,965	743,100	1,221,065	135,392	393,926	529,318

Projects with Large Carry-Forward of Unspent Balance in 2017-18 & Plans for Utilization

David Maberley - 4.2.18.RET - Rural-Urban Communities in B.C. - Preventing Blindness with a National Telemedicine Retinal Screening & Research Program

Reason for large unspent carry-forward:

Delay in project start-up

Plans for carry-forward:

1. Y3 funding that was originally allocated to UBC ($100,000) will be re-allocated to University of Montreal for a Diabetic Retinopathy AI Screening program.

2. Co-hosting of a DAC Indigenous patient learning circle in British Columbia in collaboration with the Indigenous Goal Group. The plan is to conduct patient learning circles to consider barriers to accessing retinopathy screening and to get feedback from Indigenous patients on other aspects of our National Diabetes Screening Project.

3. Payment of a research fellow to conduct a systematic review of Optical Coherence Tomography Angiography (OCTA) OCTA studies in Diabetic Retinopathy. OCTA is a technology that can image the retinal microvasculature without the need for injecting angiography dye. It is very capable of imaging the superficial and deep retinal vascular plexi and is a very sensitive device for the identification of macular edema, retinal ischemia, and changes in the foveal avascular zone that occur as retinopathy advances.

4. A PlexElite OCTA unit has been placed in British Columbia with research beginning on the early detection of pre-clinical diabetic retinopathy. We have a post-doctoral lead on this project – Dr. Sonja Karst, and a Research Technician. As part of this research program, we have also submitted a grant proposal to Novo-Nordisk for supplemental DAC funding that will allow us to lead a large project looking at the microvascular changes that accompany the initiation of intensive blood sugar management in early diabetic retinopathy. A second project involves the integration of adaptive optics in OCTA for increased image quality and reduced optical aberrations.

5. Payment for personnel working with DAC Co-Investigator Dr. Mahyar Etminan and the BC SPOR Support Unit on a study to evaluate the frequency of DR exams for patients with diabetes in BC. Our goal is to determine factors associated with poor screening metrics – looking at risks such as patient geographic location, age, gender, type of DM therapy, distance to nearest ophthalmologist (optometrist). This work will inform our siting of node cameras as we look to broaden our program to non-indigenous, remote communities.

6. Further meetings are planned with the Can-SOLVE CKD SPOR group in Vancouver. Our current DR screening program will engage Indigenous partners to learn how to best provide renal function data results to their group.

Barry Lavallee - 5.2.21.TRN - **National Training in Culturally Safe Diabetes Education**

Reason for large unspent carry-forward:

Initial administrative challenges in executing a third party transfer to FNHSSM from University of Manitoba.

Plans for carry-forward:

Direct inter-institutional agreement set up with FNHSSM; funding for the first two years have since been disbursed to FNHSSM.

Bruce Perkins - 2.1.5.NT - **Effect of SGLT2 Inhibition on Improving the Glycemic Performance of Single and Dual-Hormone Artificial Pancreas Configuration**

Reason for large unspent carry-forward:

Uncertainty over continuity of funding from match sponsor, JDRF; delay in obtaining regulatory approval and issues with Intellectual Property rights

Plans for carry-forward:

Pending decision from match sponsor

Andre Carpentier - 5.1.20.TRN - **Patient-Oriented Research Training & Mentoring Strategy**

Reason for large unspent carry-forward:

Carry forward of unspent funds was due to a late start of our training sessions and Mentorship and Internship programs which were mostly put in place in year 2. Furthermore, since we collaborated with many partners to offer training sessions, such as the Chronic Pain Network, Diabetes Canada, CMDO and the Université de Moncton, the costs for our training sessions were less than first anticipated.

Plans for carry-forward:

Addition of a new postdoctoral program and training of Module 4: Indigenous Peoples Learning Pathway co-developed with our Indigenous Peoples Health Group and Can-SOLVE CKD.

France Legare: 1.1.1.KT - **Transforming Community-Based Primary Health Care (CBPHC) Knowledge and Knowledge Tools to address patient-generated priorities through the involvement of patients, the public, researchers and healthcare providers.**

Reason for large unspent carry-forward:

As a cross-cutting goal group, the KT group was implicated in many activities within the network (please see details described in the scientific report) which required a change in the KT plan initially proposed. Our Network's first years were dedicated to patient engagement activities and a patient engagement group, was created to carry on those activities. Meanwhile, co-leads and coordinator from the remaining KT group were dedicated to identify Network needs, and to establish strategic partnerships. Those changes led the KT group to restructure their own research activities in order to be more aligned with Network needs. In addition, the delays experienced in receiving funds and arranging inter-institutional agreements have caused delays in expending funds, leading to a carry forward higher than expected.

Plans for carry-forward:

Schedule for performing some of the proposed activities has been changed. For example, the inter-professional shared decision-making approach in diabetes care, initially planned to be executed during years 1 to 3 has been postponed to years 3 to 5. Same thing for the James Lind Alliance inspired initiative to research prioritization in diabetes. It is also important to notice that the network has established its own policy for patients/professional financial compensation for those engaged in Network activities. These were taken into consideration for the new revised budget. The carry-forward from year one and two will be used for the realization of planned activities that were postponed to years 3 to 5.

Holly Witteman - 3.4.25.REG - **Risk Calculator**

Reason for large unspent carry-forward:

This project adjusted its work plan as we could not find a PhD student in epidemiology to take on the planned analyses. We recruited a postdoctoral fellow with a PhD in epidemiology instead. During year 2 of the budget, the postdoctoral fellow obtained a one-year award that meant we reallocated some funds to year 3, during which time we have hired two Master's-level research assistants to work during summer 2018 with the postdoc and with the project leader to complete the planned systematic review of available models.

Plans for carry-forward:

Hiring of two Master's-level research assistants to work during summer 2018 with the postdoc and with the project leader to complete the planned systematic review of available models.

Paula Rochon - 6.1.23 SG - Sex and Gender Support for the SPOR Network in Diabetes and its Related Complications

Reason for large unspent carry-forward:

Low-spending was due to challenges with recruitment of a postdoctoral fellow.

Plans for carry-forward:

A postdoctoral fellow has since been recruited. A second postdoctoral fellow will be recruited to a full-time position to both fill the project coordinator role for DAC, as well as design and implement a qualitative research study with the Sex and Gender patient partners. Over the course of the next three years, the emphasis will be to continue developing knowledge translation and academic products including publications, while also working to ensure that all DAC researchers fully incorporate sex and gender considerations into their anticipated publications. The Project Team hopes to do this by fostering new collaborations between DAC researchers and the Sex and Gender Research Support Service. To achieve the goal of incorporating sex and gender considerations into research, we will be reviewing draft manuscripts against a set of criteria based on The Essential Metrics for Assessing Sex and Gender Integration in Health Research Proposals Involving Human Participants we developed and which were published in 2017.

Paul Fernyhough - 2.1.6.NT -Topical Pirenzepine for Treatment of Neuropathy in Type 1 Diabetes

Reason for large unspent carry-forward:

Project start-up deferred to September 2018

Plans for carry-forward:

Deferred to start a year later.

Remi Rabasa-Lhoret - 2.7.11.NT - Comparison of Dual-Hormone Artificial Pancreas, Single Hormone Artificial Pancrea, and Sensor-Augmented Pump Therapy in Outpatient Settings

Reason for large unspent carry-forward:

Initial delay in start-up.

Plans for carry-forward:

Per planned budget