Identifying and Maximizing the Impact of the OSSU Demonstration Projects

OSSU Research Round Tables

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Introduction

The **O**ntario **S**POR (Strategy for Patient Oriented Research) **S**UPPORT (Support for People and Patient-Oriented Research and Trials) **U**nit (OSSU) ([1](#),[2](#)) funded 17 Ontario-based health research projects designed to demonstrate a meaningful approach to Patient-Oriented Research (POR) ([3](#)), hereafter referred to as the 'demonstration projects' ([4](#)). A supplement published in the Canadian Medical Association Journal (CMAJ) in 2018, titled *Engaging Patients in Healthcare Research: The Ontario Experience,* provided an overview of the POR work being executed by the demonstration project teams (click *here* to explore the CMAJ supplement).

As these demonstration projects are now generating results, OSSU developed the Research Round Table initiative to provide project teams with an opportunity to showcase the overall outcomes of their demonstration projects (including projects that stemmed from the initial demonstration projects) and identify strategies to maximize the impact of their findings on healthcare research and decision-making. The Research Round Table was designed using an integrated KT approach to engage relevant stakeholders including OSSU leadership, researchers and patient partners, and was guided by SPOR's guiding principles of mutual respect, co-building, inclusiveness, and support ([3](#)).

Objectives

Specifically, the objectives of the OSSU Research Round Tables are to:

1) Disseminate knowledge to relevant stakeholders through brief presentations by research teams about their projects.
2) Facilitate collaboration between the demonstration project research teams and relevant stakeholders through a guided discussion on the potential applications and impact of the demonstration projects, including all usable evidence, potential key messages, strategies to tailor messages and reach target audiences, and potential barriers and facilitators to dissemination and implementation.
3) Use discussions to co-create case studies describing each project including the main findings and potential avenues for impact.

The Research Round Tables

Summary of Round Table Events
The Research Round Tables included 5 events held between September 2019 and October 2021. The details of each of the events are summarized in Table 1 (see Appendix A for event agendas).

Table 1. Research Round Table Details

	Date	Time	Location	Facilitator
1	September 13, 2019	12:00 PM – 3:00 PM	St. James Cathedral *Toronto, Canada*	Dr. Adalsteinn Brown *Dean of the Dalla Lana School of Public Health University of Toronto*
2	December 13, 2019	12:00 PM – 3:45 PM	St. James Cathedral *Toronto, Canada*	

3	March 3, 2020	12:00 PM – 3:45 PM	Peter Gilgan Centre for Research and Learning *Toronto, Canada*	Ms. Sudha Kutty *Interim Vice-President, Quality Improvement Ontario Health*
4	May 27, 2021	12:15 PM – 1:45 PM	Zoom Meetings Platform *Virtual*	Anne Hayes Director of Research, Analysis and Evaluation Ontario Ministry of Health
5	October 6, 2021	12:15 PM – 1:45 PM	Zoom Meetings Platform *Virtual*	

Each Round Table event was comprised of presentations from OSSU demonstration project teams and moderated discussion. In total, 15 projects were presented across the 5 Round Table events. The details of each presenting team are summarized in Table 2.

Table 2. Overview of research teams presenting at the Research Round Tables

Brief Project Title	Principal Investigator	Research Focus
Round Table 1		
CLEANMeds	Dr. Nav Persaud	Designing a clinical trial of medicine access to assess the impact of providing free access to medicines to individuals who cannot afford them. The overall aim of this project was to inform policy changes to improve access to medicines.
YouthCan IMPACT	Dr. Peter Szatmari	Designing and implementing a 'multi-component community-based integrated collaborative care team (ICCT) model' for youth mental health and substance use challenges. The team applied a pragmatic randomized control design to evaluate this new model in comparison to hospital-based out-patient treatment.
COACH	Dr. Douglas Lee	Exploring the effectiveness of (1) a heart failure algorithm in predicting mortality for patients presenting to the emergency department (ED), and (2) a rapid heart failure clinic in providing early access to heart specialists for patients discharged from hospital.
Round Table 2		
C-Spine	Dr. Christian Vaillancourt	Identifying the impact of enabling paramedics in 12 Ontario communities to assess and transport low-risk trauma patients without immobilization using the Canadian C-Spine Rule.
MyTEMP	Dr. Amit Garg	Comparing the effect of personalized dialysis fluid (i.e., dialysate) in hemodialysis (HD) treatment on related health outcomes; Building capacity and creating recommendations for patient-oriented research with renal patients.
Diabetes in First Nations Populations	Dr. Michael Green	Characterizing the prevalence and understanding the experience of First Nations people in Ontario living with diabetes to inform related health policy and improve care.

OHIL	Dr. Noah Ivers	Developing and refining Health Quality Ontario (HQO) initiatives, with a focus on audit and feedback (A&F), and evaluating the Quality-based Procedures (QBPs) to inform hospital funding reforms.
Round Table 3		
PedCARE	Dr. Roger Zemek Dr. Nick Reed Dr. Andrée-Anne Ledoux Ms. Carol DeMatteo	Determining the comparative impact of early exercise versus rest on recovery outcomes in children post-concussion.
ACHWM	Dr. Nancy Young Mary Jo Wabano	Determining the effectiveness of a new community-embedded screening and triage process on mental health outcomes in Indigenous youth.
CCKO CMC	Dr. Nora Fayed Dr. Eyal Cohen	Evaluating the impact of the Provincial Council of Child and Maternal Health's Complex Care for Kids Ontario intervention on the care experiences of children with medical complexity and their families.
PARENT	Dr. Catherine Birken	Determining the effectiveness of an obesity prevention intervention for toddlers at risk for obesity and their families.
Round Table 4		
ARC	Dr. Simone Dahrouge	Developing and evaluating a patient-centered navigation model integrated in primary care, centered on helping French-speaking individuals in English-speaking region access community services in two Ontario Health Units.
CAST	Dr. Maureen Markle-Reid	Evaluating the impact of a nurse-led intervention to support older adults with multiple health conditions and depression transitioning from hospital to home care.
Round Table 5		
BEACON	Dr. Simon Hatcher	Assessing the feasibility and acceptability of implementing a blended electronic case management (BEACON) and face-to-face problem-solving therapy approach for men who have presented to an emergency department with self-harm, using a randomized controlled trial.
HIP ATTACK	Dr. PJ Devereaux	Determining the impact of an accelerated hip fracture care pathway (including both accelerated medical clearance and accelerated surgery) on patient mortality and post-operative complications compared to regular care.

Knowledge User Engagement

Selected key stakeholders from relevant organizations, as well as the OSSU and SPOR-EA teams attended the Research Round Tables. See Table 3 for a summary of the organizations represented at each Round Table.

Table 3. Overview of stakeholders attending the Research Round Tables

Stakeholder Type	Representative Organizations	Round Table Attended				
		1	2	3	4	5
Federal Government	Health Canada	X				
Provincial Government	Ministry of Health and Long-Term Care	X	X	X	X	X
	Ontario Health Quality			X		
	Ministry of Children, Community and Social Services			X		
	Public Health Ontario			X		
	Algoma Ontario Health Team				X	
	Government of Ontario Treasury Department				X	
Municipal Government	Toronto Public Health			X		
Patient Partners	CLEANMeds Community Guidance Panel	X				
	MyTEMP Trial Patient Partner		X			
	CCKO CMC Patient Partner		X			
	OSSU Patient Partner Working Group				X	X
	OSSU Board Patient Advisor		X	X	X	X
	Aging, Community and Health Research Unit Patient Research Partner				X	
Non-Profit Organizations	Diabetes Canada	X				
	The Change Foundation	X				
	Ontario Renal Network		X			
	Pediatricians Alliance of Ontario			X		
	Ontario Neurotrauma Foundation			X		
	Ontario Brain Institute			X		
	Children's Healthcare Canada			X		
	Provincial Council for Maternal and Child Health			X		
	Families Canada					
	Addictions and Mental Health Ontario				X	
	Alliance for Healthier Communities				X	
	Mental Health Research Canada					X
Professional Associations	Ontario Hospitals Association	X			X	
	Regional Paramedic Program for Eastern Ontario		X			
	Association of Family Health Teams of Ontario				X	
	Home Care Ontario				X	
Hospitals and Healthcare Centres	University Health Network	X				
	St. Michael's Hospital-Unity Health Toronto	X				
	Hospital For Sick Children	X				
	Centre for Addiction and Mental Health	X				X
	Ottawa Hospital Research Institute		X			X
	Women's College Hospital		X			

	Wikwemikong Health Centre			X		
	Hopital Monfort				X	
	St. Joseph's Healthcare System				X	
Industry	Medtronic	X		X		
Universities	Ryerson University	X		X		
	University of Toronto	X	X	X		
	University of Ottawa		X	X	X	X
	University of Western Ontario		X			
	Queen's University		X	X		
	Laurentian University			X		
	McMaster University				X	X
	University of Waterloo				X	
Research Networks	Ontario SPOR SUPPORT Unit	X	X	X	X	X
	Institut du Savoir Montfort				X	X
	SickKids Research Institute			X		
	Centre for Rural and Northern Health Research				X	
	Population Health Research Institute					X

Methods

In partnership with the SPOR Evidence Alliance (SPOR-EA), the Knowledge Translation Program (KTP) at St. Michael's Hospital (Toronto, Canada) facilitated the execution of the Research Round Tables data collection and analyses.

Data collection

Development of plain language case studies
Prior to each Round Table event, research teams completed a Knowledge Sharing Template (see Appendix B) that outlined their project and their results to date. The KTP used the information from the Knowledge Sharing Templates to develop one-page, plain language case studies for each of the demonstration projects. All case summaries were reviewed by a patient partner who was recruited and engaged by the KTP. All Research Round Table attendees received these case studies 1 week prior to the meeting.

Demonstration project presentations
At each event, the research teams provided a brief summary of their project using a standardized presentation template (see Appendix C).

Facilitated round table discussion
To capture diverse, individual and collective participant experiences (5), an experienced facilitator selected by OSSU moderated a large group discussion used a semi-structured discussion guide. The guide was informed by the Research Round Table objectives as well as core principles of KT and patient engagement, and was designed to provide an opportunity for research teams to receive feedback from attendees on the following topics:

- Potential project impacts from a patient to policy level
- Opportunities for future stakeholder engagement

- Potential target audiences, and key messages for each target audience
- Strategies to disseminate key messages to each target audience
- Potential challenges and opportunities to disseminating and/or implementing project findings

The guide was developed by the KTP and OSSU and reviewed by a patient partner (see Appendix D)

Members of the KTP with expertise in KT and qualitative methods attended the Research Round Table events and took detailed notes of all discussions. Additionally, Round Table discussions were audio recorded for reporting purposes only.

Data analysis

The KTP used a rapid analysis approach to analyze the Research Round Table discussion. Rapid analysis is a form of qualitative content analysis that offers a feasible and rigorous method through which to categorize qualitative data on a limited timeline (6). The rapid analysis approach for the Research Round Tables involved the following steps:

Management

1. Directly after a Research Round Table event, attending KTP researchers met to debrief, and review any points of confusion.
2. Each attending KTP researcher typed their notes from the Research Round Table, and then one designated researchers compared the individual notes and created a final consolidated version, reviewing the audio recording in the case of conflicting information.

Rapid Analysis

A coding framework was developed by the KTP team a-priori (see Appendix E). The framework was designed to directly inform the objectives of the OSSU Research Round Table. This coding framework was then used to code the data, as described below:

1. Two KTP researchers independently assigned certain pieces of text to the different parent-node categories using colour-coded highlighting directly on the consolidated interview notes. These sections were assigned to child-node categories within the parent node categories, where applicable, using tracking comments in the interview notes.
2. Two KTP researchers reviewed the coded transcripts for discrepancies, which were discussed until consensus was reached. They then inputted the coded data into a summary table, organized by node from the coding framework.
3. Categorized data were used to identify and summarize prominent project specific topics of discussion

Member Checking

After completion of the rapid analysis, the demonstration project investigators were provided with a copy of the case summary and results for their project. Investigators were asked to review the document provide any feedback they wished, to ensure their project was represented correctly.

KTP researchers used all member checking feedback received to update the case summaries and results. 11 of the 15 teams provided feedback during the member-checking phase.

Each OSSU Demonstration project differed in its topic area, project progress, and experienced or anticipated challenges and opportunities, which is reflected in the structure of the report findings. Where applicable, the theme summaries identify if information was provided by the project investigator during the Roundtable, by other Research Round Table attendees, or by the project investigator during member checking. The topics of discussion from each project were then used to modify the plain language case study summaries, as well as inform overall themes that emerged across all of the project-specific round table discussions (see Appendix F for Round Table specific themes).

The Demonstration Projects

The following sections outline the project-specific outcomes from the Research Round Table, including the plain language case studies and summaries of key themes from the presentations and facilitated discussion.

Mental Health Projects

YouthCan IMPACT

Presented by Dr. Peter Szatmari

Plain Language Case Summary

OSSU team: Dr. Peter Szatmari and colleagues.

Project name: Among at-risk youth with mental health challenges, do integrated collaborative care teams provide more benefits in reducing symptoms, improving functioning and providing greater client satisfaction than treatment as usual?

What did this demonstration project focus on?

A model of care for youth mental health and substance abuse challenges.

What did the team want to accomplish with their demonstration project?

The team aimed to develop and implement a new community-based, stepped model of care for youth mental health and substance abuse, and to execute a randomized control trial (RCT) to compare this model to hospital-based outpatient treatment on outcomes such as day-to-day functioning, symptoms, and continuity of care.

What did they accomplish?

The team engaged relevant partners including community-based services providers, agency management, youth, caregivers, and researchers to develop their community-based model of care. Three community sites have been using this model since 2016. Partners, including youth and caregivers, collaborated to choose outcome measures and data collection instruments to compare this model to hospital-based care. Recruitment and data collection is ongoing.

How did/could this project have an impact on healthcare in Ontario?

Patient/public level: Since 2016, over 1800 youth (study participants and youth in the community) have accessed care through the model and, so far, have experienced no wait-times for this access. Additional patient outcomes are being assessed through the ongoing RCT.

Healthcare provider level: Services providers engaged in this project have shown high levels of buy-in for the model of care and have integrated the community-based model into their work.

System/policy level: The Ontario Government has developed and launched a similar model of service delivery in five additional community sites across Ontario.

What can be learned from this project?

Collaborating with patients and other relevant partners was very beneficial, but did extend the team's project timelines. Timelines were additionally affected by delays in legal agreements and research ethics applications for partner organizations. The team found benefit in engaging clinical staff at different levels and working closely to support partner organizations undergoing internal change.

Who should know about these findings?

Researchers, investors, people working in healthcare systems design, community stakeholders, youth and their caregivers should be made aware of the findings of this RCT.

What is the team doing next?

The team is continuing to recruit participants for their RCT. They are actively sharing their experience with developing their community-based model to share their experience for the development of similar models

worldwide. They are also collaborating with the Government of Ontario and other teams in Canada using similar models to improve the structure and delivery of community-based care.

Research Round Table findings

Usable evidence and potential for impact

Identified by research team:

In addition to their research outcomes, the research team identified additional usable evidence and related potential for impact that arose from their project work, including:

1. **Lessons learned from executing a community-based model of care.** The research team gathered valuable lessons learned through engaging youth and families and implementing an intervention that required collaboration across many sites and sectors (e.g., the impact of different ethical and legal considerations on project timelines, such as multiple research ethics board applications and legal agreement development).

2. **Exploring impact on public-sector costs.** The research team highlighted that early intervention implementation experiences suggest that the intervention may be more cost effective than the current model of care, which they identified as a key message to government stakeholders.

Identified by Research Round Table attendees:

From the description of the research processes and outcomes shared in the research presentations, attendees identified what they perceived to be important areas of usable evidence that could be impactful for key stakeholders working in the area of youth access to mental health and addiction services including:

1. **Youth experience with access to care.** Round Table attendees emphasized the importance of the impact of the care model on access to youth mental health services. In addition to eliminating wait times for these services, the model was able to provide care for typically marginalized groups, such as youth involved in the justice system. The stepped-care component of the model for youth mental health services allowed youth to receive supports for related challenges such as conflicts with the law or homelessness that are not often available in typical out-patient care models. Additionally, youth who were not participants but were identified as in-need by advocates such as public health nurses at schools were able to receive care through the community-based model. Due to these notable changes in access to services, attendees encouraged the research team to document and communicate patient perceptions of access to care specifically in their study.

2. **Model of community access with psychiatrist.** Another notable outcome, as perceived by the attendees, was the facilitated access to a psychiatrist in community organizations where such access was not previously available. Attendees believed this would be of interest to community mental health

organizations that express a desire to work closely with psychiatrists, but are often unable to given the current out-patient care model for psychiatry.

3. **Impact of care model on community building.** The community-based stepped-model of care involves many different community organizations that work together to provide a tailored care pathway depending on the needs of youth. The attendees encouraged the research team to highlight that an important impact of their study and model of care was effective collaboration between community groups at the different intervention sites. These relationships fostered a desire for organizations to work together more formally and demonstrated that such partnerships do not threaten the health of individual organizations (i.e., their ability to secure funding). For decision makers, it would be important to highlight that the intervention has the potential to decrease fragmentation of care, and increase cross-sector collaboration.

Anticipated challenges and potential strategies to overcome challenges

Round table attendees encouraged the research team to consider strategies for mitigating challenging research outcomes:

1. **Possibility of negative trial results.** Attendees asked the team to think about how they will ensure that their work has impact, in the event that the results of the study show that their community intervention is comparable to, but not better than, traditional care on identified youth mental health outcomes. The research team had strategized that in this case, they would leverage their messaging around the potential cost- and access-benefits of the model.

Strategies for dissemination and/or implementation

Identified by research team:

The research team shared their dissemination strategy, which targeted researchers, community organizations, and youth with mental health and addiction challenges and their families. The strategy included:

1. **Development of an implementation guideline** to support communities interested in implementing the community-based stepped-care model in their own settings.

2. **Development of reports and webinars** tailored to specific stakeholder groups.

3. **Leveraging their partner organizations** involved in the model of care to help with dissemination.

4. **Engagement of youth, families, and service providers** to identify additional avenues of dissemination for their study findings.

5. **Publishing in peer reviewed journals.** The team has already published manuscripts detailing their experiences and lessons learned with youth engagement.

Identified by Research Round Table attendees:

The Research Round Table attendees offered the following additional suggestions to maximize the impact of this project:

1. **Strategies for tailoring key messages**. The attendees encouraged the team to consider the interests of their target audiences to ensure key messages were meaningful and impactful, for example, *What does it mean for a given target audience in the community if youth are going to school more often as a result of receiving treatment through this model of care?*

   a. **Decision makers:** Attendees also reinforced the importance of sharing the potential financial benefit of this revised model of care with government stakeholders.

Strategies for sustainability and spread

To ensure that the community-based care model can be feasibly spread to multiple diverse settings, the attendees highlighted the importance of assessing which components of the model must be kept to ensure program fidelity, and which can be tailored to meet the unique needs of different settings.

Additional Project Resources

- Project Website
- CMAJ Commentary
- Publication – Journal of Behavioral Health Services & Research
- Publication – BMJ Open
- Publication – Health Expectations

BEACON

Presented by Dr. Simon Hatcher

Plain Language Case Summary

OSSU team: Dr. Simon Hatcher & Dr. Marnin Heisel and colleagues.

Project name: The BEACON study: A pilot randomized controlled trial of smartphone-assisted problem-solving therapy compared to problem-solving therapy alone in men who present with intentional self-harm to emergency departments in Ontario

What did this demonstration project focus on?

The feasibility and acceptability of a randomized controlled trial (RCT) for a blended electronic case management (BEACON) and face-to-face problem-solving therapy approach for men who have presented to an emergency department with self-harm. The BEACON electronic case management system incorporates a patient-facing smartphone application and a clinician-facing dashboard.

What did the team want to accomplish with their demonstration project?

The team aimed to **(1)** determine the feasibility of running a multi-site RCT for the intervention and **(2)** assess the impact of the intervention on patient health outcomes.

What did they accomplish?

The research team has recruited approximately 30% of their target sample size for the study. They are continuing to recruit participants and conduct qualitative interviews to further understand patients' use of the blended intervention.

How did/could this project have an impact on healthcare in Ontario?

Patient/public level: Preliminary data suggest that patients using the blended intervention remain engaged, have an increased sense of connection, and have a decreased risk of future self-harm. The intervention may also support improvement in symptoms for men who have self-harmed.

Healthcare provider level: Healthcare providers involved in this study were able to build clinical experience caring for patients in the target population. A training manual and teaching program for clinicians were also developed.

System/policy level: This electronic case management system may assist in wider use of the intervention across the health system after a full RCT is completed and can potentially be repurposed for use with patients experiencing other chronic conditions.

What can be learned from this project?

The research team encountered challenges identifying potential participants and experienced staffing barriers, which were worsened by the COVID-19 pandemic. They also had to navigate significant administrative challenges, including a wide range of regulations on use of technology and research at different institutions and a lack of infrastructure that allows for participation in research in community hospital settings. These challenges resulted in the research team altering the RCT into a pilot study.

Who should know about these findings?

Hospital-based healthcare providers, hospital administrators, primary care providers, policymakers, academics, and members of the general public could all benefit from receiving the results of this study.

What is the team doing next?

The research team plans to apply for funding for a large multi-site RCT. They also plan to continue refining the electronic application to improve its stability and the overall user experience.

Research Round Table findings

Usable evidence and potential for impact

Identified by research team:

The research team shared some of the barriers they faced in implementing the BEACON study, including:

1. **Diverse privacy policies across Ontario hospitals**. The differing privacy policies across Ontario hospitals introduced multiple challenges for the research team. Each hospital had unique interpretations of privacy laws, which led to different requirements surrounding security and privacy assessments. These policies hindered implementation of the project at some sites, where additional assessments needed to be obtained or adjustments needed to be made to the project recruitment protocol, and the implementation of the intervention was stopped at some hospitals where requirements could not be met.

2. **Lack of research infrastructure at some participating hospital sites.** The research team highlighted that there was a lack of research infrastructure within some hospitals, which included insufficient human resources (i.e., staff shortages and high staff turnover), lack of prioritization of research initiatives, and confusion over who was in charge of the decision-making processes for research activities. These challenges delayed the implementation of project activities significantly at some sites and resulted in some sites being unable to participate in the study.

3. **Staffing shortages due to the COVID-19 pandemic**. As a result of the COVID-19 pandemic, the researchers faced challenges with hiring new staff and with having existing staff redeployed to support other pandemic-related efforts. These staffing constraints meant that the team had to decrease the scope of the project and pivot from a randomized controlled trial to a pilot study focused on assessing the acceptability and feasibility of the intervention.

The research team also highlighted a benefit of the application development process used in their study:

1. **Technology developed in-house can be easily adapted for other patients**. The research team identified that their decision to develop the application internally, rather than with a private-sector partner, makes it possible for the application to be adapted for use with other patient populations.

Identified by the Research Round Table attendees:

Research Round Table attendees suggested an additional benefit of the application development process:

1. **In-house application development ensures profits are not lost.** Panel members noted that developing the application internally also prevents profits from leaving the healthcare system through the involvement of private partners.

Anticipated challenges and potential strategies to overcome challenges

Identified by research team:

The research team shared a strategy for overcoming policy and research infrastructure challenges they encountered during this project, which could be applied to mitigate these barriers for future research:

1. **Strategies to reduce policy and research infrastructure barriers.** The research team noted the need to create a centralized process for research approval, moving away from the current hospital-based processes. A suggested model was the centralized approach used in New Zealand, which uses regional ethics processes and does not require each hospital or institution to have as much of their own research infrastructure. Additionally, the team highlighted the need to develop an approval process for technology use in healthcare, similar to the processes used for pharmaceuticals in Canada, as often technology and service delivery innovations such as the BEACON model are not covered by processes currently in place.

Strategies for dissemination and/or implementation

Identified by the Research Round Table attendees:

Research Round Table attendees suggested the following approach for engaging stakeholders in policy discussions:

1. **Target audiences for policy discussions.** Panel members identified Clinical Trials Ontario, Ontario Health, and the Canadian Agency for Drugs and Technologies in Health as important groups to involve to address the policy issues around privacy and technology approvals noted by the research team. Partnering with these stakeholders to resolve these policy issues may reduce barriers for future technology-based initiatives in the healthcare sector.

Strategies for sustainability and spread

The Research Round Table attendees did not discuss this item.

Additional Project Resources

- Project Website
- Protocol – BMC Trials

Indigenous Health Projects

ACHWM

Presented by Dr. Nancy Young and Mary Jo Wabano

Plain Language Case Summary

OSSU team: Dr. Nancy Young, Mary Jo Wabano and colleagues.

Project name: The effectiveness of a new community-embedded screening and triage process on health outcomes in Indigenous children.

What did this demonstration project focus on?

The effectiveness of a new community-embedded screening and triage process on mental health outcomes in Indigenous youth.

What did the team want to accomplish with their demonstration project?

The team aimed to improve pediatric screening processes in low-resource health settings by determining **(1)** the impact of implementing the Aaniish Naa Gegii Well-being Measure (ACHWM) on the identification of mental health needs in Indigenous children compared to standard referral procedures and **(2)** the impact of the ACHWM on mental health outcomes.

What did they accomplish?

The team engaged 227 Anishinabek children (8 to 18 years of age) living on-reserve to participate in the prospective cohort study. All youth completed the ACHWM survey and met with a mental healthcare worker (MHW). Youth were flagged as being at-risk based on their responses to the survey. The team found that use of the ACHWM screening process identified the needs of many children who had not been accessing support and connected them to local services where they showed good recovery. Additionally, recovery in the newly identified needs group required a reduced number of treatment sessions compared to those referred through the standard process.

How did/could this project have an impact on healthcare in Ontario?

Patient/public level: Use of the ACHWM identified youth who needed support and introduced them to a MHW, which is a protective factor for the future health of both the individual youth and their peers.

Healthcare provider level: The study provided MHWs an opportunity to gain experience using a new clinical tool which may encourage safe and open conversations with youth.

System/policy level: By developing evidence for the effectiveness of the ACHWM, key stakeholders involved in policy development have data to substantiate the work being done by community programs.

What can be learned from this project?

As many youth living on-reserve move seasonally, data collection over the one-year study period was very challenging. The use of Electronic Medical Records (EMRs) including fields for ACHWM data may alleviate this challenge in the future. Additionally, the team is finding the lack of strong support training programs for unregistered MHWs in Indigenous communities a challenge to local capacity building.

Who should know about these findings?

Indigenous health workers, educators, and youth mental health practitioners including school counselors, social workers and psychiatrists, as well as federal and provincial governmental agencies working in areas of Indigenous health and wellness could benefit from knowledge of the study findings.

What is the team doing next?

The team has secured funding to scale up and spread the ACHWM nationally and are currently engaged with more than 50 communities. They are focused on educating MHWs about this process and embedding the ACHWM results in community EMRs.

Research Round Table findings

Usable evidence and potential for impact

Identified by research team:

The research team used the following strategies to increase the feasibility and impact of their community-based intervention:

1. **Embedding immediate benefits to patient care into study designs to increase buy-in and impact.** The intervention introduced in this study was designed to offer immediate benefits to the community while specific outcomes of interest were being assessed. Through the intervention, 169 children were introduced to a mental health worker which is a known protective factor for mental health, and 35 at-risk children were connected to local supports for their wellness journey. Additionally, the screening and triage process focused on wellness and used a strength-based approach, which contributed to paradigm shift in the community from a traditional illness-based model of care.

2. **Integrating opportunities to assess and report on the impact of community supports in community-based interventions.** The research team assessed the effectiveness of mental health services in First Nations Communities in addition to their clinical outcomes of interest. The team gained an understanding of the positive impact of these workers on the mental well-being of First Nations youth, and therefore the importance of investing in these workers. This evidence can now be used by health decision makers to support future funding requests and program development. Assessing the effectiveness of these mental health services was especially important to the research team as the workers in these communities are not licensed professionals, and therefore the team needed effectiveness data to assess and advocate for their important role.

3. **Strategies for reducing stigma and increasing participant comfort in community-based mental health research.** The research team applied various strategies to ensure that their study intervention would be accessible to participants in the community without increasing stigma. These strategies included the following:

a. Use of a tablet-based survey allowed for a non-judgmental and efficient data collection process, as participants did not need to reveal their responses directly to a mental health worker, and the survey application generated median scores automatically. Additionally, the tablet had a text-to-speech survey option which allowed children with lower literacy levels to participate.

b. All children who participated in the study met with a mental health worker once they completed the survey, therefore members of the community were not aware of which participants were flagged as being at-risk for mental health issues.

c. The survey used a strength-based approach, which acknowledged where participants' strengths were in the questionnaire scores. The survey also included spirituality as a core assessment component, which was a part of wellness that participants were familiar and comfortable with.

Anticipated challenges and potential strategies to overcome challenges

Identified by research team:

The research team shared that individuals from First Nations communities experience barriers to accessing mental health training, which is a challenge to the sustainability of their intervention:

1. **Lack of access to formally trained mental health workers.** The research team shared that a lack of access to mental health support training programs for members of First Nations communities was one of the main barriers to having sufficient mental health workers in First Nations communities. They highlighted that First Nations individuals interested in pursuing the role of a mental health worker living in communities may experience various challenges inhibiting them from being able to leave the community to receive a college education (e.g., familial responsibilities), therefore there is a need for mental health training that is accessible to this group, such as distance learning options. Additionally, the team shared that not all stakeholders (e.g. licensed healthcare professional in other communities) are comfortable supporting un-licensed practitioners, despite the importance of these community-based practitioners in fostering meaningful community engagement and establishing trust among youth seeking support. While the study team has faced some resistance from government stakeholders on the external investment in un-licensed mental health practitioners and their training, they have received positive feedback from others (e.g. Ontario Telemedicine Network).

Identified by the Research Round Table attendees:

The Research Round Table attendees identified potential avenues that the team can explore to mitigate training gaps:

1. **Potential use of partnerships to increase access to education and training opportunities for First Nations mental health workers.** Research Round Table attendees suggested that the research team

explore partnering with expert organizations to deliver mental health training to individuals in First Nations communities through the following approaches:

    a. **Partnering with Ontario Indigenous Institutes (see [here](#)) to deliver training.** These institutes are experts in delivering training in a variety of disciplines, including mental health. The research team was supportive of this suggestion and highlighted that they have an educational institute on Manitoulin Island that they work with.

    b. **Exploring distance education options.** A Research Round Table attendee outlined that they had success delivering distance education on concussion through a partnership between the University of Calgary and the Université Laval. This course was free and included many educational videos on concussion-related topics. They suggested that the ACHWM research team use a similar model to reach a wide audience with their mental health worker training.

Strategies for dissemination and/or implementation

Identified by research team:

The research team outlined that they were executing the following overarching strategies to encourage the dissemination and implementation of their project findings:

1. **Pursuing diverse dissemination strategies to reach multiple target audiences.** The team is using diverse strategies to disseminate and implement their research findings to a wide audience. Strategies for dissemination include publishing academic papers and conducting education sessions about the screening and triage process with mental health workers in the community. Additionally, the team has added new ACHWM-related fields to community Electronic Medical Records (EMR).

2. **Proactive engagement of end users as a foundation for tailoring and buy-in.** The research team engaged with a variety of key stakeholders in the communities they were working with to co-design the study, guide its execution, and ensure that these key partners were supportive of the proposed intervention. Specifically, this team received support from the Ministry of Child and Youth Services and the Ontario Child Health Support Unit and worked with children, elders, chiefs, and council members in First Nations communities through advisory committees. The team also engaged mental health workers to identify which ACHWM survey items should flag the need for follow-up care. Proactively securing buy-in and engagement from these groups was critical to executing the study and disseminating and implementing study findings.

Strategies for sustainability and spread

Identified by research team:

The research team developed multiple strategies to promote the sustainability, scale-up, and spread of their screening and triage intervention:

1. **Leveraging existing medical infrastructure to support sustainability and spread.** The researchers discussed using existing EMR infrastructure to assist in scaling their intervention to additional communities. The team has placed new fields from the ACHWM into the EMR which will facilitate the spread of their screening and triage process, as they are 1 of 14 communities that use the same EMR solution.

2. **Promoting the independence of the intervention.** To spread the intervention, the research team is disseminating the ACHWM screening and triage process on their website. This will allow communities to have the resources to execute the intervention independent of the research team. The team has also received a pathway grant from CIHR to spread this intervention nationally over the next five years.

Identified by the Research Round Table attendees:

The Research Round Table attendees suggested additional avenues that could be leveraged to promote the scale up and spread of the team's intervention:

1. **Leveraging existing training infrastructure to enhance scale up and spread to mental health workers.** The Research Round Table attendees suggested that the research team leverage existing training initiatives, including those focused on training for First Nations populations, to increase the number of mental health workers that were training in the ACHWM screening and triage process. These included the two avenues identified by the Research Round Table attendees outlined in *'Anticipated challenges and potential strategies to overcome challenges'*

Additional Project Resources

- Project Website
- Publication – Canadian Journal of Public Health
- Publication – Health and Quality of Life Outcomes
- Publication – Health and Quality of Life Outcomes (2)

Diabetes in First Nations Populations

Presented by Dr. Michael Green

Plain Language Case Summary

OSSU team: Dr. Michael Green and colleagues.
Project name: Reducing the burden of diabetes on First Nations people in Ontario: Using population level data to inform policy and practice.

What did this demonstration project focus on?

Characterizing the prevalence and understanding the experience of First Nations people in Ontario living with diabetes to inform related health policy and improve care.

What did the team want to accomplish with their demonstration project?

The team aimed to **(1)** report changes over 20 years in the number of First Nations people living with diabetes, compared to non-First Nations people in Ontario, experiencing related complications and using diabetes-related health services, **(2)** describe First Nations patients' personal experience with diabetes, and **(3)** develop a framework for conducting research in partnership with First Nations communities.

What did they accomplish?

The team formed a Patient Advisory Group to guide the execution of the study. The team meaningfully engaged with First Nations communities and the Chiefs of Ontario to build a framework for access to First Nations people's data. They determined that the prevalence of diabetes continues to increase in Ontario; however, there were significant differences between sub-groups. First Nations people had higher rates of diabetes-related complications, lower access to early screening/testing and to care, and poorer control of A1C levels. First Nations patients substantiated these findings when describing their personal experiences with diabetes.

How did/could this project have an impact on healthcare in Ontario?

Patient/public level: The findings have led to public dialogue on diabetes-related concerns for First Nations people in Ontario. The findings may also inform policy that leads to better access to early screening and care for First Nations patients.

Healthcare provider level: The findings have highlighted some high-priority areas that healthcare providers caring for First Nations patients with diabetes can focus on to improve outcomes (e.g. performing retinal screening for women with diabetes).

System/policy level: The project findings can inform the prioritization of changes to diabetes-related health services for First Nations people in order to improve care. Additionally, the findings highlighted the need to address social determinants of health in system interventions. The team developed a data governance process for using First Nations' people's data that will facilitate future research.

What can be learned from this project?

The team has developed structures to support engagement of First Nations groups in research that can inform future partnerships. The team faced challenges in accessing federal and some provincial health data, suggesting a need for improved procedures for data access.

Who should know about these findings?

First Nations organizations and communities, governmental health agencies, and diabetes interest/advocacy groups could all benefit from knowledge of these findings.

What is the team doing next?

The team is currently presenting their findings at conferences and has published their findings in academic journals and public-facing reports. The project findings highlight that subsequent research efforts on diabetes care should focus on implementation and evaluation of diabetes interventions that also address social and cultural determinants of health.

Research Round Table findings

Usable evidence and potential for impact

Identified by research team:

In addition to their research outcomes, the research team highlighted how they developed important infrastructure to facilitate meaningful research with First Nations groups:

1. **Partnership with relevant stakeholders to support research with First Nations people.** The study team developed meaningful relationships with a wide range of stakeholders including First Nations groups (i.e., Chiefs of Ontario), healthcare database groups and universities. These relationships were built to create an infrastructure to conduct research in partnership with these groups in a respectful and empowering manner.
2. **Development of infrastructure to support research on First Nations health outcomes through meaningful partnership.** One of the prominent impacts of this project was the development of a data governance process that will allow researchers with access to First Nations health data through IC/ES databases. This critical infrastructure will facilitate future research on the health outcomes of First Nations people.

Identified by Research Round Table attendees:

Research Round Table attendees asked important questions that led the research team to share some challenges they experienced during project execution:

1. **Limitations of using administrative databases.** In response to Research Round Table attendees' questions about particular data trends that the study team may have seen in the data (for example the impact of health literacy or availability of health access centers), the study team reported that there were some limitations in types of data available in these databases. These data limitations restricted the study team from being able to explore additional data trends, however they were able to infer certain items (for example they were not able to access specific data on the relationship between use of Aboriginal Health Access Centres and outcomes of interest, but still saw the same gaps in care regardless of if these services were available in a specific geographic area or not).

Anticipated challenges and opportunities to leverage

The Research Round Table attendees did not discuss this item.

Strategies for dissemination and/or implementation

Identified by research team:

1. **Leveraging multiple publication types to reach diverse audiences.** In addition to publishing a series of peer-reviewed manuscripts, the study team tailored dissemination plans (e.g., development of a public-facing report) to support meaningful policy changes.

2. **Maximizing impact of research outcomes through identifying priority areas for health system change.** The study findings informed the identification of priority areas for healthcare changes in diabetes care (for example earlier screening and more control of initial risk factors for First Nations people). Identification of these priority areas for change will allow the study team to outline a concrete call-to-action for groups, such as policy makers, who can assist with executing these changes. The Research Round Tables attendees were interested in the team's recommendations on how to address social determinants of health, which were implicated in all of the clinical outcomes. The research team agreed that broad, health system-level interventions were required to address social determinants of health that impact diabetes care.

Identified by Research Round Table attendees:

1. **Development of a clinical program to target care gaps identified through the research project.** A Research Round Table attendee had previously led a government initiative focused on piloting a foot care program to address similar care gaps that were found by the study team. While this pilot is no longer running, the attendee suggested that developing a similar pilot clinical care program might be a modality to promote implementation. The research team agreed that based on their study findings, developing a pilot to increase access to foot care could be an important and high yield area to direct resources.

Strategies for sustainability and spread

The Research Round Table attendees did not discuss this item.

Additional Project Resources

- Publication – Canadian Medical Association Journal
- Publication – CMAJ

Child Health Projects

PARENT
Presented by Dr. Catherine Birken

Plain Language Case Summary

OSSU team: Dr. Catherine Birken and colleagues.

Project name: Addressing obesity in toddlers at risk: A pragmatic randomized controlled trial (RCT) comparing usual care to group-based parenting and home visits in primary care (PARENT)

What did this demonstration project focus on?

The effectiveness of an obesity prevention intervention for toddlers at risk for obesity and their families.

What did the team want to accomplish with their demonstration project?

The team aimed to **(1)** use an RCT to compare the effect of an integrated primary care and public health obesity prevention intervention with usual care on health outcomes (e.g., Body Mass Index, nutritional status) for toddlers at risk for obesity, **(2)** assess the quality of implementation of this novel approach in pediatric primary care clinics as well as barriers and facilitators to implementation through feedback sessions with parents, and **(3)** determine the cost-effectiveness of the intervention.

What did they accomplish?

The research team developed a long-term relationship with Toronto Public Health (TPH) as well as with Early Childhood Educators to assist in delivery of this RCT. To date, the research team has recruited approximately 50 participants enrolled in The Applied Research Group for Kids (TARGet Kids!) network to the PARENT RCT through two primary care practices. The study team has completed one out of two feedback sessions with parents and have updated the trial design and methods based on this feedback.

How did/could this project have an impact on healthcare in Ontario?

Patient/public level: Parents of RCT participants found the intervention to be helpful in their daily lives.

Healthcare provider level: Pediatric primary care and public health practitioners have collaborated to develop an integrated model of care for this RCT, which allows both groups to work towards their goals.

System/policy level: If successful, the intervention could provide a bridge between primary care and public health programming designed to promote healthy lifestyles and prevent obesity.

What can be learned from this project?

Due to staff turnover within the public health department, it was necessary to create a system of checks to ensure that fidelity of the intervention delivery was maintained throughout the project. The research team experienced challenges to parent participation in the public health workshops. The team found it useful to provide parents with multiple avenues to access the intervention components (i.e. in-person and teleconference attendance options). The team benefited from ensuring their program aligned with the models of care and programs delivered by primary care and public health practitioners. To ensure alignment, the program had to be adapted based on system changes to TPH.

Who should know about these findings?

Researchers, parents, governmental organizations (e.g., Public Health Ontario), and agencies delivering services for parents and children would all benefit from learning about the outcomes of this RCT.

What is the team doing next?

The research team is continuing to recruit participants for the trial at all 16 TARGet Kids! sites. Another round of feedback on the feasibility and acceptance of the intervention for parents is planned. The study team will adapt the RCT based on this feedback. They plan to publish the study protocol.

Research Round Table findings

Usable evidence and potential for impact

Identified by research team:

1. **Strategies to pro-actively establish partnerships with end users and key experts/organizations to co-design research and increase its potential for impact.** The research team engaged a diverse group of relevant stakeholders to guide the development and delivery of their intervention including parents, primary care clinics, frontline clinicians, knowledge translation experts, child health researchers, early childhood educators, and public health practitioners and leadership. They have invested in building research capacity and developing partnerships through ongoing meetings with these key stakeholders. Specifically, the research team is holding ongoing Parent Panels to solicit feedback from parents on the intervention design and methods. The first Parent Panel was conducted in 2019 before the first PARENT trial cohort was enrolled. Through this panel, parents shared feedback that shaped the study protocol to increase the feasibility and relevance of the trial. For example, parents shared that in order for them to feel comfortable with the study intervention, the research team would need share clear information about what a home visit would involve. Additionally, parents encouraged the research team to use multiple communication methods for recruitment, as emails often get lost in the many research-related communications they may receive. Proactively engaging these partners was critical to ensuring that their intervention fit the process, priorities, and needs of all of their key stakeholders.

2. **Proactive strategies for increasing the feasibility of pragmatic trials and resulting findings.** The study team consciously designed their pragmatic trial to leverage existing resources and materials being used in public health settings and by public health nurses in the community. This ensured feasibility of implementing the study intervention in primary care settings, and therefore increased the feasibility of intervention spread and scale.

3. **Benefit of leveraging existing infrastructure to conduct comprehensive and impactful clinical research.** The research team leveraged The Applied Research Group for Kids (TARGet Kids!) Network to conduct this pragmatic trial. Many children and their families were already enrolled in the TARGet Kids! Network and therefore had expressed interested in hearing about trials embedded within the network (such as the PARENT Trial). This preexisting pool of interested potential participants facilitated an efficient

recruitment process. Additionally, data routinely collected by the TARGet Kids! Network during well-child visits overlapped with some PARENT trial outcome measures, which streamlined the data collection process.

Anticipated challenges and opportunities to leverage

Identified by research team:

The research team found that collaborative partnerships with key stakeholders allowed them to create an adaptive program that could mitigate challenges with participation and system changes:

1. **Leveraging established partnerships to tailor intervention design as a means to address barriers to engagement and participation.** The research team discussed the importance of tailoring the intervention to the parent population they wanted to recruit in order to mitigate challenges with engagement and participation. For example, the team experienced challenges with compliance to attending the group sessions. To overcome this, it was essential that the team worked with parents to identify the best setting and time of day for these sessions, as well as the supports that needed to be in place (e.g., childcare). The team also tailored the number of group sessions that they were proposing to ensure the amount was perceived to be feasible for families. Additionally, the research team found that working closely with Toronto Public Health (TPH) allowed their program to be adaptable to change. For example, as they were beginning their intervention, TPH changed their parent program, however the research team was able to adapt their program to align with the new TPH programmatic focus and branding.

Strategies for dissemination and/or implementation

Identified by research team:

The research team identified the following avenues to disseminate their research findings:

1. **Establish consistent check-ins with key stakeholders to promote dissemination of research findings in a timely manner.** The researchers highlighted the importance of being able to communicate their study findings to key stakeholders including parents, health professionals, and other researchers throughout the trial period. The team will be maintaining this consistent communication through biweekly meetings with the full research team and quarterly meetings with the clinical and family teams, as well as by attending meetings and conferences.

2. **Proactive engagement of decision makers.** The research team planned to engage policy makers early in the execution of their trial to ensure that the trial outcomes are scalable and useful from a health policy perspective.

Identified by Research Round Table attendees:

1. **Leverage the networks of organizational partners to support wide dissemination.** Research Round Table attendees encouraged the research team to collaborate with relevant organizations to expand the reach and impact of their project findings; suggested organizations included:
   a. **Yummy Mummy Club.** A Research Round Table attendee from Solutions for Kids in Pain shared that they were able to achieve strong parent engagement through partnering with this group.
   b. **Families Canada**. Kelly Stone, CEO of Families Canada, expressed interest in, and support of, the PARENT trial and encouraged the research team to consider how this work can be scaled up to benefit all families across the country. The research team shared that they would be very interested in working together to learn from and leverage their large network to scale up their intervention.
   c. **Public Health Ontario**. Dr. Heather Manson (Chief of Health Promotion, Chronic Disease and Injury Prevention at Public Health Ontario) highlighted the strength of the research team's parent engagement strategies and shared that Public Health Ontario would be happy to assist with disseminating their study findings.

Strategies for sustainability and spread

The Research Round Table attendees did not discuss this item.

Additional Project Resources

- Project Website
- Publication - Trials

CCKO CMC
Presented by Dr. Nora Fayed and Nasra Smith

Plain Language Case Summary

OSSU team: Dr. Nora Fayed, Dr. Eyal Cohen, and colleagues.

Project name: Comparing the Complex Care for Kids Ontario (CCKO) province-wide integrated care intervention for children with medical complexity (CMC) to waitlist controls using a patient-engaged evaluation framework and mixed method design

What did this demonstration project focus on?

Impact of the Provincial Council of Child and Maternal Health (PCMCH) CCKO care intervention.

What did the team want to accomplish with their demonstration project?

The PCMHCH CCKO care intervention aims to improve care for CMC by increasing collaboration across CMCs' medical providers to create one integrated care plan. The team aimed to **(1)** establish complex care clinics for CMC using a 'hub and spoke' model across the province and; **(2)** evaluate the utility and sustainability of these clinics using outcome measures chosen by parents of CMC.

What did they accomplish?

The team is currently evaluating the utility and sustainability of the CCKO care intervention, using metrics and tools that were identified by and designed with families of CMC. Preliminary results suggest that institutions are increasing their capacity to coordinate care, and families using the CCKO care clinics have an improved care experience compared with families who received usual care.

How did/could this project have an impact on healthcare in Ontario?

Patient/public level: Patient families may benefit from receiving an evidence-based care intervention that has the potential to improve the care experience and decrease burden (e.g., financial) for families.

Healthcare provider level: Healthcare providers (HCPs) will be able to provide improved care to CMC and their families using the CCKO model. The evaluation suggests that HCPs may be better able to define their roles within their organization using the CCKO model.

System/policy level: This multidisciplinary project has **(1)** improved collaboration between researchers and CCKO care providers, and **(2)** created a catalyst for the initiation of a series of follow-up projects (e.g. evaluating the cost-effectiveness of the CCKO model).

What can be learned from this project?

Researchers can achieve greater impact by engaging with HCPs, families, and government partners in their research projects. Researchers can consider offering flexible methods of engagement (e.g., remote participation options) to increase the ability of the CMC population to participate. A 'hub and spoke' model of program delivery can allow regions the flexibility to tailor the program to meet local needs.

Who should know about these findings?

Families of CMC, pediatric HCPs, and government partners, especially those in the Ministry of Health and Long-Term Care, may benefit from knowing about the study findings.

What is the team doing next?
The team is continuing to collect and analyze data on all of their outcome measures of interest. Additional projects are being initiated with the objectives of expanding and evaluating care in Northern Ontario for CMC, evaluating CMC-specific home care, supporting transitions to adult care, and care improvements in areas such as feeding and emotional well-being.

Research Round Table findings

Usable evidence and potential for impact

Identified by research team:

The research team highlighted beneficial strategies that they leveraged as part of their collaborative and pragmatic approach to intervention design and evaluation, which included:

1. **Fostering collaborative partnerships to execute initiatives that directly address pre-identified pressing gaps in the field.** This study was collaborative and interdisciplinary in nature, with the research team comprised of health care providers, clinical researchers, patients and families, and policymakers. Gaining buy-in through these partnerships was critical, since the children with medical complexity (CMC) community is relatively small. By collaborating with the government and key players involved in the care of CMC (e.g., tertiary health centres), the research team was able to design an intervention that directly addressed the pressing need for a more standardized and systematic approach to care for CMC that would ensure that care was more proactive and coordinated. The team received funding from the Ontario Ministry of Health and Long-Term Care to pilot the Complex Care for Kids Ontario (CCKO) mission, which involved providing access to consistent integrated care and coordination for children and youth who persistently demonstrate the most complex medical care needs.

2. **Strategies for increasing the feasibility of health system interventions.** Through implementation of the CCKO systems intervention, the team learned that their 'hub and spoke' intervention model was advantageous as it offered the sites the flexibility to tailor the intervention to their setting, while maintaining the core components of the intervention to ensure fidelity.

3. **Leveraging methodological challenges to impact the literature.** The research team were unable to identify robust outcome measures to appropriately assess the outcomes of CMC, specifically for the outcomes of feeding and experiences with technology. The research team leveraged this challenge as an opportunity to make an additional contribution to the literature by developing these measures to ensure there was a holistic suite of research tools to validate the care of CMC. Two tools have been

developed and translated into French: "Experience with medical technology at home" and "Experience of feeding your child with medical complexity". These tools are currently being pilot tested.

4. **Partnering with key end users to co-produce research and increase its relevance and impact.** The collaborative, interdisciplinary nature of this project allowed the team to ensure that their intervention directly addressed the priorities of the CMC population. Throughout the study, the team continued to partner with key end users to co-design and execute the CCKO intervention and evaluation study, increasing its relevance to the target end users, and therefore increasing its potential impact. For example, the Provincial Council for Maternal and Child Health (PCMCH) supported the study team with early protocol design and engagement of stakeholders, including families. Additionally, families and front-line providers co-selected a variety of outcome measures spanning the individual patient/family level, the provider level, as well as the health systems level (e.g., care experience of child and patient, system efficacy, economic impact) through a systematic process (prioritization survey to identify high priority outcomes) which they published in Developmental Medicine & Child Neurology and CMAJ. This allowed the research team to determine what families with CMC value; for example, the families wanted to know if their child's health and emotional wellbeing were maintained. This early engagement also ensured that the research team did not have to make substantial changes when they were executing their pragmatic evaluation, which one of the Research Round Table attendees highlighted is typically quite common. Additionally, the collaborative nature of their funded project led to the development of increased research capacity among all of their partners including healthcare institutions and government (e.g., trained mothers with CMC to conduct interviews for the study evaluation), and the initiation of additional research for the CMC population (e.g., focus on care in Northern Ontario for CMC).

Identified by Research Round Table attendees:

Research Round Table attendees encouraged the research team to consider how their findings could be generalized to improve care:

1. **Potential generalizability of study findings to other complex care issues.** Research Round Table attendees encouraged the study team to consider if their findings may be transferrable to other study populations requiring complex care. The study team was supportive of the idea, and reported that other organizations, such as ErinoakKids' Special Needs Strategy, were interested in the intervention. The team is hopeful that what they learn through this evaluation will be transferrable to other populations.

Anticipated challenges and opportunities to leverage and strategies for sustainability and spread

Identified by research team:

Research Round Table attendees were concerned about potential challenges to the sustainability of the CCKO intervention and network. In response to these concerns, the research team shared the following anticipated challenges and mitigation strategies:

1. **Challenges to and strategies for sustaining government support of health system interventions.** The research team shared that researchers, providers, and government officials are enthusiastic about the intervention, which they hope will help with sustainability. The team sought OSSU funding to evaluate the existing CCKO health systems intervention (which was already implemented in Ontario) in order to have data to support funding renewals from PCMCH for the spread and sustainability of the intervention in Ontario. The team has also now identified areas where the CCKO model can be adapted (e.g., supplementing the original nurse practitioner model with additional allied health staff) in order to increase its sustainability.

Identified by the Research Round Table attendees:

1. **Benefit of leveraging existing infrastructure to conduct comprehensive and impactful clinical research.** A Research Round Table attendee highlighted that this evaluation study demonstrates how leveraging pre-existing networks to conduct research facilitates rapid, rigorous research.

Strategies for dissemination and/or implementation
The Research Round Table attendees did not discuss this item.

Additional Project Resources

- Publication – Developmental Medicine and Child Neurology
- Publication – Canadian Medical Association Journal Supplement

PedCARE

Presented by Dr. Roger Zemek

Plain Language Case Summary

OSSU team: Dr. Roger Zemek, Dr. Nick Reed, Dr. Andrée-Anne Ledoux, Carol DeMatteo, and colleagues.
Project name: Multicentre, randomized clinical trial of pediatric concussion assessment of rest and exertion (PedCARE): A study to determine when to resume physical activities following concussion in children

What did this demonstration project focus on?

The comparative impact of early exercise versus rest on recovery outcomes in children post-concussion.

What did the team want to accomplish with their demonstration project?

The team aimed to improve treatment interventions for children with concussion by **(1)** comparing the effect of returning to physical activity three days after concussion with usual concussion care (i.e., rest until symptom free) on symptom burden and recovery prognosis using a multi-center randomized control design, and **(2)** meaningfully engaging patients throughout all project stages.

What did they accomplish?

The study team engaged patients to guide the design and execution of the study through various activities including interviews and feedback questionnaires. The study team recruited over 400 children from three emergency departments to participate in the study, half of which followed the return to activity protocol after concussion. No participants experienced any harmful effects. Preliminary results found that early return to activity had no negative effects on symptom presentation and recovery trajectories.

How did/could this project have an impact on healthcare in Ontario?

Patient/public level: Patients may benefit from receiving improved evidence-based care following concussion that encourages re-engagement with activities of daily living, compared to full rest.

Healthcare provider level: Healthcare providers will be able to provide updated evidence-based concussion recovery care to their patients.

System/policy level: Evidence on the safety for children returning to activity following concussion can be used to inform program delivery and funding decisions.

What can be learned from this project?

The study team experienced challenges with some participants **(1)** failing to adhere to activity protocols and **(2)** not returning the activity monitoring equipment that was provided for the study. This resulted in additional costs and limited resources. Future studies could consider providing incentives for returning study equipment. Additionally, patient engagement methods required more time and resources than anticipated. Research teams are encouraged to proactively budget for these resources.

Who should know about these findings?

Patients, families, healthcare professionals and health policy makers can all benefit from being aware of these findings to ensure the best possible care is being delivered to children post-concussion.

What is the team doing next?

The study team is conducting additional analyses on the relationship between characteristics of the activity that participants engaged in (e.g., intensity) and concussion outcomes. Additionally, they are continuing to analyze activity data to identify how non-adherence to activity protocols may be impacting the study results. They plan to continue working with patients to develop key messages and approaches to share their study findings, in addition to traditional dissemination avenues.

Research Round Table findings

Usable evidence and potential for impact

The research team shared generalizable lessons that they learned through the development and execution of their pragmatic, multi-site study. The Research Round Table attendees suggested additional potential impacts of the study findings.

Identified by research team:

1. **Proactive strategies to increase the feasibility of implementing the study intervention.** The research team conducted their randomized clinical trial across three Canadian academic emergency departments (SickKids, The Children's Hospital of Eastern Ontario, and Children's Hospital London Health Sciences Centre). Use of these clinical settings encouraged the research team to ensure that their intervention could be feasibly integrated into clinical care for youth with concussion. The research team highlighted that they chose to use a self-report questionnaire to assess symptom tolerability, given that in a pragmatic setting, it would not be feasible for clinic staff to assess tolerability due to the extensive clinical care waitlists.

2. **Approaches to analyzing data.** Due to budget constraints, the research team was unable to recruit enough participants to achieve a non-inferiority trial, thus a superiority trial was conducted. Despite these restrictions, the research team used analysis methods that allowed them to determine if the intervention showed any harm compared to usual care. In addition to conducting significance tests, the research team leveraged confidence intervals to demonstrate signals of effect that the intervention showed little risk of harm, but a high chance of benefit.

3. **Importance of tailoring messaging to discuss challenging topics with research participants and end users.** Research Round Table attendees were interested in how the research team discussed challenging topics such as risk and recovery trajectories with research participants and end users. The research team shared the importance of emphasizing recovery to all youth, putting the focus instead on strategies to speed up recovery for high-risk youth.

Identified by the Research Round Table attendees:

1. **Potential generalizability of study findings to adult populations.** Research Round Table attendees encouraged the research team to reflect on how their study findings may be translated from pediatrics to the adult population. The research team was enthusiastic about the possibility of applying these findings to the adult realm, especially since concussion is one of few fields where the pediatric literature is more developed than the adult literature. The research team speculated that as children typically engage in more physical activity than adults, the intervention may have more of an impact on the adult population. The team encouraged attendees to share the information of individuals conducting this work among adults.

Anticipated challenges and potential strategies to overcome challenges

Identified by research team:

The research team experienced challenges with participant adherence and attrition throughout the execution of their study:

1. **Challenges with attrition and participant adherence to study protocols.** Not all participants adhered to the study protocol outlined by the research team, and some participants withdrew from the study before study completion. For example, while the experimental group was instructed to wait 72 hours before starting physical activity, the control group was only instructed to wait until full symptom resolution. However, many youths in the control group started performing physical activity within 72 hours of injury, likely before full symptom resolution would have occurred. Moving forward, the team will be looking to see if the accelerometer data validate the activity self-report, and if not, will assess how compliance may have influenced their results. Some participants' community doctors advised that they withdraw from the study, as they perceived the study to be unsafe. This highlighted the misconceptions of appropriate concussion recovery protocols that still exist in community practice, which the research team hopes to address through their study.

Strategies for dissemination and/or implementation

Identified by research team:

The research team is executing multiple strategies to increase the spread and impact of their project findings, including:

1. **Proactive engagement of end users as a foundation for buy-in and dissemination.** The research team proactively engaged a comprehensive range of key stakeholders and end users at the initiation of the study in order to assess their perceived acceptability of the study objectives and design, and/or to engage the groups to co-design the study methods and collaborate on the execution of the study. This proactive engagement increased the strength of their design and methodology and will support

dissemination of trial findings. Specifically, the team engaged these groups through the following strategies:

   a. They worked closely with **parents and families** to make changes to the proposed study protocol to ensure that it would be feasible and acceptable for participants.
   b. They worked collaboratively with the **three Ontario pediatric emergency department sites** and partnered with other relevant clinical sites for content expertise, allowing them to assess over 1,600 children for eligibility, with a mean time of study enrollment of ~3 hours.
   c. They received letters of support from **sporting organizations** in advance of submitting their study to ensure that these key partners were in favor their proposed intervention.

The research team also plans to engage key **brain injury organizations** (e.g., Ontario Brain Institute) prior to study end to support dissemination of study findings.

2. **Leveraging previously established relationships to promote dissemination.** A consistent pattern in the research team's dissemination strategy was to leverage strong relationships that they had already established as effective avenues for dissemination. These avenues included:

   a. **Reaching community hospitals through the PERC network and TREKK.** The Principal Investigator (Dr. Roger Zemek) is the chair of the Pediatric Emergency Research Canada (PERC) network, which works closely with TRanslating Emergency Knowledge for Kids (TREKK). Each of the PERC-associated tertiary and quaternary Emergency Departments (EDs) are associated with small and medium community hospitals to disseminate new research through TREKK. Through 'PedPack' individuals in the PERC network have a package of topics that they teach to these community hospitals. Dr. Zemek is the author of the concussion 'bottom line' in TREKK, and therefore will integrate their study results in this piece. As approximately 85% of the pediatric population will be seen in a community hospital for emergency care, the research team is planning to leverage their pre-existing partnership with TREKK to reach these centers.
   b. **Leveraging partnership with ONF to integrate results into living guidelines.** The research team shared that they work collaboratively with the Ontario Neurotrauma Foundation (ONF) and will leverage this partnership to integrate their results into the 'Living Guideline for Diagnosing and Managing Pediatric Concussion', and to disseminate findings to family physicians.
   c. **Identifying key collaborators that could support the development of new dissemination strategies.** In response to Research Round Table attendees suggestions to disseminate through the ECHO concussion group and the Canadian Society for Exercise Physiology's (CSEP) education binder, the study team shared that they had previous relationships with key stakeholders from both groups which they can leverage to pursue these strategies, including having Mark Tremblay from the CSEP as a co-author on the current study.

3. **Pursuing multimodal dissemination strategies to ensure results are accessible to all target audiences.** The research team outlined that they are planning to leverage diverse avenues for dissemination that will reach a variety of target audiences:

    a. To reach **academic audiences**, the study team will be presenting at multiple international conferences, including the International Pediatric Brain Injury Society conference.

    b. To reach **clinical audiences** and ensure that study findings are being applied rapidly, the study team is leveraging dissemination avenues that target these clinical audiences. For example, the 'Living Guideline for Diagnosing and Managing Pediatric Concussion' includes recommendations for healthcare professionals, as well as parents, teachers, and coaches, allowing the research team to reach a diverse audience through a single strategy. Additionally, the guideline is updated routinely, which will ensure research findings are disseminated promptly.

    c. Further, the team will leverage the PERC PedPack to disseminate study findings to **community hospitals** through TREKK.

Identified by the Research Round Table attendees:

Research Round Table attendees shared additional strategies that they suggested the research team explore to maximize the spread and impact of their study findings:

1. **Partnering with experts and expert organizations who have established connections and/or avenues for dissemination.** Research Round Table attendees encouraged the study team to partner with relevant expert individuals and organizations in the field to increase the reach of their findings. These strategies included the following:

    a. **Leverage established media outlets targeted at relevant end-users.** Research Round Table attendees suggested that the study team consider profiling their study findings in media outlets that target healthcare practitioners including the following:

        - The Rounds Table (webinars and podcasts focused on discussing new medical research from academic journals, targeted primarily at physicians),
        - Children's Healthcare Canada's Spark: Knowledge Mobilization network (webinars, a blog, and podcasts directed at the pediatric healthcare community, including those in community settings),
        - Solutions for Kids in Pain (SKIP) knowledge mobilization network,
        - Project ECHO concussion group (an educational interactive videoconference program that pairs an expert team of clinicians with healthcare participants),
        - The Conversation Canada (where journalists work with scientists to disseminate data in plain language to key end-users, such as parents and coaches). The attendees

highlighted that the team could consider disseminating knowledge products such as the living guideline through these avenues.

b. **Work collaboratively with individuals and organizations that are critical knowledge brokers in the field.** Dr. Heather Manson (Chief of Health Promotion, Chronic Disease and Injury Prevention at Public Health Ontario) offered to work with the research team to disseminate their study findings to a public health audience in both Ontario and beyond. Attendees suggested that the team reach out to the CSEP to see if their study findings could be integrated into the child section of the society's education binder on the gold standard of exercise.

2. **Expanding target audiences for dissemination**. The Research Round Table attendees encouraged the research team to identify additional target audiences who would benefit from these study findings, including nurse practitioners.

Strategies for sustainability and spread

The Research Round Table attendees did not discuss this item.

Additional Project Resources

- Publication – British Journal of Sports Medicine
- Conference Presentation – 6th International Consensus Conference on Concussion in Sport (Ledoux)
- Conference Presentation – Virtual World Congress on Brain Injury (Ledoux)
- Conference Presentation – Organization for Human Brain Mapping (Healey)
- Conference Presentation - International Conference on Ambulatory Monitoring of Physical Activity and Movement (Kuzik)
- Conference Presentation – Pediatric Academic Societies 2021 Conference (Ledoux)
- Conference Presentation – SPOR Summit (Ledoux)

Chronic Diseases Projects

MyTEMP

Presented by Dr. Amit Garg

Plain Language Case Summary

OSSU team: Dr. Amit Garg, Dr. Christopher William McIntyre, and colleagues.
Project name: Major outcomes with personalized dialysate temperature: the MyTEMP cluster randomized controlled trial (RCT)

What did this demonstration project focus on?

Exploring the effect of using personalized temperature of dialysis fluid (i.e., dialysate) in hemodialysis (HD) treatment on the rate of cardiovascular-related deaths and hospitalizations.

What did the team want to accomplish with their demonstration project?

The team aimed to **(1)** compare the effect of personalized-temperature reduced and standard-temperature dialysate on the rate of cardiovascular-related death and hospitalization in patients on HD, **(2)** engage patients, ethicists, healthcare providers and policy-makers to develop recommendations for ethical, innovative and patient-oriented approaches to research with patients receiving HD, and **(3)** build capacity in patient-oriented research for stakeholders in this field.

What did they accomplish?

The cluster-randomized trial was embedded into standard care at 84 Ontario HD centers. The HD intervention used novel, tailored research methods, including an altered consent procedure developed in collaboration with patients, and delivered at 84 Ontario HD centers. The trial period has ended and collection of cardiovascular-related death data is ongoing. Training in patient-oriented research was delivered to over 30 members of the renal field.

How did/could this project have an impact on healthcare in Ontario?

Patient/public level: The intervention may reduce risk of cardiovascular complications, a leading cause of death for patients on HD. Patients may also experience fewer blood pressure drops, making HD better tolerated.

Healthcare provider level: The trial outcomes will inform healthcare providers about the impact of dialysate temperature on patient outcomes. Additionally, many healthcare providers who were provided training are now better able to conduct patient-oriented research.

System/policy level: If successful, the intervention could save around $3.7 billion a year from reduced cardiovascular-related hospitalizations of patients on HD, with additional potential savings from reduced need for disability insurance. The trial has strengthened partnerships between the Ontario Renal Network (ORN) and the research community. In addition, it has built infrastructure to facilitate future research.

What can be learned from this project?

Uploading information to healthcare databases took longer than anticipated, extending project timelines. Working with research ethics boards (REBs) at multiple sites to approve innovative trial designs can also extend research timelines. The assistance of patient partners was critical to resolving ethics concerns. Having all HD sites registered with Clinical Trials Ontario may help mitigate REB delays in future HD projects.

Who should know about these findings?

Researchers, patients, families, renal guideline developers, governmental organizations focused on renal care, and REBs could benefit from an awareness of these findings. The ORN may help facilitate the dissemination of findings and help guide a new standard of care.

What is the team doing next?

The trial period ended in March 2021. The team is currently completing their data collection and analysis and will then focus on publishing and disseminating their trial findings and framework for clinical research with patients on HD. Using the learnings from MyTEMP the team has launched Dial-Mag, a cluster randomized registry trial of 127 HD units to understand what is the best concentration of dialysate magnesium for patient health.

Research Round Table Findings

Usable evidence and potential for impact

Identified by research team:

The research team identified various lessons learned and potential impacts that arose from their project work, which included:

1. **Development of novel consent procedures tailored to renal patients.** The team developed innovative research methods that allowed researchers to appropriately tailor study designs to renal patients and feasibly integrate studies into routine renal care. The study team partnered with ethicists, patients, and other key stakeholders to develop an altered consent protocol, along with other revised methods. Receiving research ethics approval for these methods took upwards of three years. The study team is using this work to inform the eventual development of a responsible ethical framework for pragmatic trials in hemodialysis care.

2. **Importance of patient partnerships in the development and implementation of new research methods.** The research team found it beneficial to engage patient partners in the development of their novel, tailored, research methods to ensure that patients would be comfortable with the altered consent procedures and other proposed methodological approaches. The team found that it was critical for research ethics boards (REBs) to hear renal patients' perspectives as they were considering the ethical implications of the team's proposed approaches. The team found it helpful to engage patient partners in meetings with REB chairs. One of the patient partners reported that this was the first clinical trial that they contributed to, and they found both the experience and the trial intervention itself to be very beneficial.

3. **Benefits of leveraging existing infrastructure to support research capacity in the renal community.** The research team discussed that renal care is traditionally an understudied area. They found that leveraging existing research and clinical infrastructure was a critical and cost-effective strategy for building this capacity. For example, partnering with the Ontario Renal Network helped achieve buy-in from the renal

centers and using healthcare databases held at IC/ES allowed for feasible collection of a wide-range of baseline characteristics and outcomes. Additionally, the study team registered 71 of the 84 participating renal centers and 82 Ontario dialysis centers to Clinical Trials Ontario. These partnerships and infrastructure will reduce future research ethics approval timelines.

Anticipated challenges and potential strategies to overcome challenges

Identified by research team:

The research team identified the following as a strategy for overcoming potential challenges with implementation:

1. **Importance of focused, high-quality evidence in facilitating implementation.** High-quality, evidence-based, information was perceived to be a critical facilitator to encourage the uptake of evidence by renal practitioners. The team shared that it may be more feasible to prioritize focused research questions to facilitate targeted implementation (as was done in the MyTEMP study), rather than to concurrently aim to develop a range of evidence to support a complex guideline with multiple recommendations.

Strategies for dissemination and/or implementation

Identified by research team:

The research team identified the following dissemination strategies:

1. **Potential avenues for dissemination.** Dissemination strategies included presenting the data as an infographic or embedding the evidence into a practice guideline. The study team perceived the latter to be a means to ensure credibility for the intervention (rather than an effective dissemination mechanism). Additionally, the team plans to prepare multiple manuscripts on the study results. The study team has published their process evaluation.

Identified by Research Round Table attendees:

The research team and the Research Round Table attendees discussed the following additional strategy to maximize the impact of the MyTEMP project:

1. **Leveraging partnership organizations for dissemination.** A representative from the Ontario Renal Network shared that all of the renal programs come together through the network multiple times a year, and that these gatherings could be a helpful avenue to disseminate knowledge to all renal centers in Ontario. Additionally, the research team saw benefit in partnering with OSSU to develop their dissemination strategies, and believed it would be helpful for OSSU to host additional capacity building workshops on research communication.

Strategies for sustainability and spread

Identified by research team:

The research team identified strategies they could use to spread their intervention, if successful:

1. **Buy-in from interconnected renal community facilitates widespread implementation.** The principal investigator described the renal healthcare community in Canada as small and interconnected, and shared that this often facilitates the uptake of new treatment methods. From the team's perspective, the renal community is responsive to strong evidence-based information and often does not show resistance to change. Additionally, the team has already engaged all relevant stakeholders from the Canadian renal community, which should facilitate uptake and spread.

Additional Project Resources

- Publication - Trials
- Publication – Canadian Journal of Kidney Health and Disease

COACH
Presented by Dr. Douglas Lee

Plain Language Case Summary

OSSU team: Dr. Douglas Lee and colleagues.
Project name: Comparison of Outcomes and Access to Care for Heart Failure (COACH) Trial

What did this demonstration project focus on?

Exploring the use of a heart failure (HF) mortality risk algorithm and a rapid HF clinic in HF care.

What did the team want to accomplish with their demonstration project?

The team aimed to assess: **(1)** the effectiveness of a HF mortality risk algorithm in predicting high versus low mortality risk (at 7- and 30-days) for patients presenting to the emergency department (ED) with HF, facilitating the decision to admit or discharge patients from hospital, and **(2)** the use of a rapid HF clinic providing early access to a heart specialist care team for individuals discharged from the ED or after a short hospital stay.

What did they accomplish?

The team tested the efficacy of the HF mortality risk algorithm and found: **(1)** the algorithm better predicted 7-day mortality risk than physician judgment, and **(2)** the overall algorithm could be used to better inform clinical-decision making. Additionally, they provided ~400 patients across 10 sites with access to the rapid HF ED or early discharge pathway.

How did/could this project have an impact on healthcare in Ontario?

Patient/public level: The HF algorithm can be used to inform patients with HF about their mortality risk and to guide shared-decision making. The rapid HF clinic provided patients with increased access to HF specialists and was well-received by participating patients.

Healthcare provider level: The HF algorithm can support clinical decision making and increase the efficiency, effectiveness, and quality of patient care. The rapid HF clinic provided an efficient process to make available appropriate evidence-based therapies.

System/policy level: Through evaluation mortality risk, the HF algorithm increased the appropriateness of HF admissions to the hospital thus improving the use of hospital resources.

What can be learned from this project?

Adoption of new procedures does not happen quickly. Ethics applications at some participating sites delayed study timelines and it was necessary to recruit backup sites as some sites could no longer be part of the trial. Inappropriate referrals were sent to the rapid HF clinic, suggesting some additional communication with staff about the protocol was necessary. Some sites had space constraints for the rapid HF clinic that needed to be considered in planning and implementation.

Who should know about these findings?

Physicians, hospital administrators, policy makers, and patients should be made aware of the findings of this study.

What is the team doing next?

The team is continuing to implement the HF mortality risk algorithm and rapid HF clinic in other regions. Further development of the risk algorithm, including consideration of other measures of risk and developing ways to identify patients at risk of re-admission, is ongoing.

Research Round Table Findings

Usable evidence and potential for impact

Identified by research team:

In addition to their research outcomes, the research team shared another area of impact of the COACH project:

1. **International impact of COACH trial.** The research team identified that a team in the United States is now implementing the risk score calculator being used in the COACH trial. Attendees reinforced the importance of sharing this international impact of OSSU-funded work.

Identified by Research Round Table attendees:

Research Round Table attendees shared what they perceived to be additional evidence with potential for impact gathered through the execution of the COACH trial:

1. **Experience with execution of a multi-site stepped wedge trial.** The research team collected information about challenges they experienced with coordinating Research Ethics Board submissions and trial activities across multiple sites, and documented important lessons learned about how to mitigate these challenges moving forward. The attendees reinforced that other researchers would highly value hearing about the process data that the team collected throughout the development and execution of their complex, 10-site stepped wedge design, and encouraged them to disseminate these data.

Anticipated challenges and opportunities to leverage

The attendees offered concrete suggestions for addressing challenges with implementing the heart failure intervention.

1. **Address potential organizational incentives to admit versus discharge patients.** Attendees encouraged the team to consider that there may be organizational-level incentives for hospitals to admit rather than discharge and refer patients. Attendees recommended incentivizing discharge of low risk patients, identified via the risk calculator.

2. **Consider implementation strategies that address the unique challenges of the ED environment.** Attendees highlighted resistance to change, time-constraints of ER physicians, and issues with hospital information technology as potential barriers to the uptake of the risk screening tool in the ED. Attendees suggested that including an automatic calculation of the heart failure risk score in a patient's electronic chart may be a potential strategy to mitigate these ED-specific barriers.

Strategies for dissemination and/or implementation

The Research Round Table attendees did not discuss this item.

Strategies for sustainability and spread

The Research Round Table attendees did not discuss this item.

Additional Project Resources

- Publication – American Heart Journal

Health Systems Projects

HIP ATTACK
Presented by Dr. PJ Devereaux

Plain Language Case Summary

OSSU team: Dr. PJ Devereaux & Dr. Mohit Bhandari and colleagues.

Project name: HIP fracture Accelerated surgical TreaTment And Care tracK (HIP ATTACK) – Randomized controlled trial of accelerated medical clearance and surgery versus standard care for hip fracture

What did this demonstration project focus on?

Determining the impact of an accelerated hip fracture care pathway (accelerated medical clearance and accelerated surgery), compared to regular care, on patient mortality and post-operative complications.

What did the team want to accomplish with their demonstration project?

The team aimed to determine the effect of using an accelerated hip fracture care pathway, compared to regular care, on risk of death, major post-operative complications, and other health outcomes for patients who had suffered a hip fracture.

What did they accomplish?

The research team demonstrated that the accelerated hip fracture care pathway was safe for patients and feasible to implement in a hospital setting. They also determined that the accelerated pathway did not reduce the risk of death or major complications for patients, except for those with some heart injuries. However, it did have positive impacts on patients' risk of delirium, sepsis, stroke, urinary tract infections, and pain. The accelerated pathway also decreased the time to first mobilization for patients and reduced the time patients spent in hospital.

How did/could this project have an impact on healthcare in Ontario?

Patient/public level: The results of this study can be used to generate interest and awareness in hip fracture as a major health concern in anaging adult population.

Healthcare provider level: Healthcare providers involved in this study were able to build greater clinical knowledge related to clinical outcomes and workflows for hip fracture patients.

System/policy level: This project can generate discussion specific to hip fractures risk factors, prevention of secondary complications, and policy changes that can minimize clinical complications. There may also be interest related to scalability of the accelerated hip fracture care pathway.

What can be learned from this project?

The team highlighted that the accelerated care pathway required buy-in from multiple departments within a hospital to ensure the pathway ran smoothly for patients and that organizing the necessary systems could be difficult, especially with the additional challenges posed by the COVID-19 pandemic.

Who should know about these findings?

Patients, families and caregivers, healthcare providers, policymakers at all levels of government, patient advocacy groups, and researchers could all benefit from receiving the results of this study.

What is the team doing next?

The research team is currently completing their analyses and publications on the study's secondary and economic-related outcomes. The results of this study have also informed a second funded study (HIP ATTACK 2), which will evaluate the impact of an accelerated surgical pathway for patients with both hip fracture and a heart condition.

Research Round Table Findings

Usable evidence and potential for impact

Identified by research team:

The research team shared the positive impacts of the accelerated hip fracture care pathway that they observed during the study, including:

1. **Positive impacts on hospital system factors.** The research team highlighted that patients in the intervention arm of the study (i.e., were provided accelerated medical clearance and accelerated surgery) had reduced pain scores, time to mobilization, and length of hospital stay. Round table attendees noted that these results would be important to highlight when disseminating results to policymaker groups who could champion wider implementation of the HIP ATTACK approach.

Anticipated challenges and potential strategies to overcome challenges

The Research Round Table attendees did not discuss this item.

Strategies for dissemination and/or implementation

Identified by the Research Round Table attendees:

Research Round Table attendees provided suggestions for disseminating project results, including:

1. **Using multiple kinds of evidence.** The panel members suggested using economic analysis results, along with clinical outcome findings and patient and family stories to convey the impact of the project to target audiences. One attendee also recommended highlighting evidence about how the accelerated pathway positively impacts current pressing health system challenges such as staffing shortages.
2. **Engaging target audiences to champion wider implementation.** The panel members identified the Ontario Hospital Association, the Ministry of Health, and Ontario Health as stakeholders who would need to be engaged as project champions to facilitate the spread of this care approach across the province. Therefore, the panel suggested that these groups should be intentionally targeted in the dissemination of project findings.

Strategies for sustainability and spread

The Research Round Table attendees did not discuss this item.

Additional Project Resources

- Publication – The Lancet
- Protocol – BMJ Open

CAST

Presented by Dr. Maureen Markle-Reid, Dr. Carrie McAiney and Dr. Rebecca Ganann

Plain Language Case Summary

OSSU team: Drs. Maureen Markle-Reid, Carrie McAiney, Rebecca Ganann and colleagues.

Project name: A pragmatic effectiveness-implementation randomized control trial (RCT) to evaluate a hospital-to-home transitional care intervention compared to usual care for older adults with multiple chronic conditions and depression.

What did this demonstration project focus on?

Aimed to determine whether a nurse-led intervention to support older adults, with multiple health conditions and depressive symptoms transitioning from hospital to home, can improve their mental health and functioning at home.

What did the team want to accomplish with their demonstration project?

The team aimed to **(1)** implement a nurse-led Community Assets Supporting Transitions (CAST) intervention designed to support older adults with multiple health conditions through hospital-to-home care transition, and **(2)** evaluate its impact on participants' mental health, physical health, social support and health system experience, as well as its impact on health service use.

What did they accomplish?

The research team engaged stakeholders to tailor their intervention to community needs and identified barriers and facilitators to implementation. The team conducted an RCT comparing this intervention to usual care and determined that the CAST intervention led to improvements in patients' healthcare experiences and perceived levels of social support.

How did/could this project have an impact on healthcare in Ontario?

Patient/public level: Use of the CAST intervention has a positive impact on the healthcare experiences and perceived social support of older adults with multiple chronic conditions and depressive symptoms.

Healthcare provider level: The CAST intervention allowed practitioners to build capacity for management of multiple health conditions and navigation of community health and support services.

System/policy level: Development of the CAST intervention engaged system stakeholders and identified recommendations for improving the quality of the hospital-to-home care transition for older adults.

What can be learned from this project?

The research team encountered challenges in recruiting, engaging and retaining older adult participants for their study, highlighting the need for further research in how such challenges can be addressed. They also encountered challenges in recruiting and retraining nurses to deliver the intervention due to resource challenges in some regions.

Who should know about these findings?

Older adults and their caregivers, community-based health service providers, hospital administrators, researchers and health system decision-makers could all benefit from receiving the results of this study.

What is the team doing next?

The research team has identified the need to conduct further research on the impact of the CAST intervention on outcomes for older adults. The team is also exploring how to address challenges with recruiting, engaging and retaining older adult participants in research.

Research Round Table findings

Usable evidence and potential for impact

Identified by research team:

The research team identified two main impacts of the Community Assets Supporting Transitions (CAST) program:

1. **CAST had a positive impact on the patient experience.** Researchers noted that CAST was very well received by patients and community-based health and social service providers. They also highlighted that it increased participants' access to information about health and social services and has the potential to significantly improved their perceived social supports compared to usual care.
2. **CAST provided capacity building opportunities for multiple groups.** CAST provided opportunities for two groups to build their research and practice skills:
   a. **Nurse Care Transition Coordinators** involved in the CAST program were provided training in patient engagement, evidence based transition care, management of depressive symptoms and multimorbidity, and system navigation support.
   b. **Researchers and trainees** were given opportunities to gain experience in pragmatic randomized controlled trials, patient engagement, engaging with older adult with multimorbidity, administrative databases economic evaluation and working with a large interdisciplinary research team.

Anticipated challenges and potential strategies to overcome challenges

Identified by research team:

The research team identified some limitations to their study during the Roundtable and member-checking that may have contributed to the modest study result:

1. **Low enrollment rates**. Only 28% of eligible participants agreed to participate in the trial. Therefore, despite an extended study recruitment period the researchers were only able to recruit 127 of the target 216 participants for the study. Researchers noted that this could be due to a few factors including:

      a.   The time commitment required to participate in the study

      b.   Potential participants not feeling well enough to participate in the study

      c.   Hesitancy to receive services in home due to fears of judgement and/or loss of independence

      d.   Lack of acknowledgement of depressive symptoms

2. **High rates of attrition.** The researchers reported challenges with retaining participants in the trial, with attrition rates of 22% at six months and 39% at one year.

3. **Lack of participation in home visits.** Only 71% of study participants received at least one home visit from nurse which was one of the key components of the study.

4. **Difficulty recruiting and training nursing staff.** The researchers noted that recruitment of nurses into the Nurse Transition Care Coordinator role was difficult, and significant time was required for the nurses to learn about relevant community-based services and build relationships with these service providers.

To address these challenges the research team implemented several strategies aimed at increasing recruitment and retention. These strategies included:

1. **Using trained recruiters** at study sites

2. **Maintaining continuity of research assistant staff** across the 3 study timepoints

3. **Maintaining contact with participants** between study time points. The study team implemented several strategies for maintaining contact with participants including:

      a.   **Interview reminder cards** left with participants at the end of each time point,

      b.   **Reminder phone calls** for interviews and appointments which were made by the research assistants one month before an interview and 1-3 days before an appointment,

      c.   **Reminder letters** sent by the Research coordinator 3 months after each timepoint interview.

4. **Include adequate time to find and train nursing staff**. The research team identified that effectively engaging Nurse Care Transition Coordinators was key for successful CAST implementation. Including adequate time to recruit and train staff can address the challenges the team faced related to recruitment and training time.

The research team also highlighted the need to do further research to identify effective strategies for recruitment and retention of older adults in research studies.

Identified by the Research Round Table attendees:

Research Round Table attendees suggested an additional strategy to assist with participant recruitment and retention in this population:

1. **Build relationships with patients prior to hospital discharge.** In order to address the hesitancy of older adults, one Round Table attendee suggested that building relationships with patients while they are in

hospital, rather than after they transition to home may help to improve recruitment and retention, because they may not be as overwhelmed in hospital as they may be during their initial transition home.

Strategies for dissemination and/or implementation

Identified by research team:

The research team shared during the Roundtable and member-check that they plan for the dissemination of CAST trial results to be guided by the Knowledge-to-Action Framework. They plan to employ several strategies to support implementation and uptake of the intervention including:

1. **Engaging with knowledge user groups** throughout all stages of the project. These groups include:
    a. Patients
    b. Caregivers
    c. Healthcare Providers
    d. Social Care Providers
2. **Disseminating results** through traditional and non-traditional avenues including:
    a. Peer-reviewed publications
    b. Academic Conference Presentations
    c. Policy Briefs
    d. Research Reports
    e. Newsletters
    f. Webinars at study sites
    g. Web postings
    h. Citizen Panel co-hosted by the study team and the McMaster Health Forum
3. **Targeting Audiences** for dissemination that include:
    a. The Ontario Health Teams
    b. Home & Community Care Organizations and Providers
    c. Ontario Ministry of Health

The study team also identified several key messages that can be shared when disseminating CAST results:

1. **Results of the trial reflect the effectiveness of CAST in a real-world setting.** The research team highlighted that the CAST program was designed to be highly pragmatic with features such recruitment of participants who represented the population in the hospital setting and flexibility in the delivery of the program by the Nurse Care Transition Coordinators that allow the results to better reflect how effective the program would be if implemented in diverse real-world settings.
2. **The importance of engagement of patients and caregivers in outcome selection.** The study team highlighted that the importance of patient and caregiver engagement in the selection of outcomes for

the study. This process can be disseminated to inform others who may conduct similar studies in the future.

3. **Alignment of CAST with healthcare reform**. The study team noted that the CAST program model is well-aligned with healthcare reform in Ontario and Canada, which is focused on exploring models that integrate and coordinate care for patients across providers to improve patient outcomes.

Strategies for sustainability and spread

The Research Roundtable attendees did not discuss this item during the Roundtable, however the study team provided some comments on this topic during the member checking process:

> The CAST intervention was designed with scale-up in mind, with the goal of developing a plan that is a systematic, detailed strategy for large-scale implementation of the intervention in each study site. The WHO (2011) checklist was used to ensure that features known to enhance the potential for scale-up were incorporated into the study's design. This includes a) engaging in a participatory process with key stakeholders (e.g., patients, providers, policymakers); b) nurturing political commitment and program champions; and c) accumulating evidence from diverse settings and populations.

Additional Project Resources

- Publication – PLoS ONE
- Publication – BMC Geriatrics

OHIL
Presented by Dr. Noah Ivers

Plain Language Case Summary

OSSU team: Dr. Noah Ivers, Dr. Jeremy Grimshaw, Dr. Adalsteinn Brown, and colleagues.
Project name: A provincial implementation science laboratory: policy-oriented evaluations of large-scale quality improvement initiatives

What did this demonstration project focus on?

Developing and refining Health Quality Ontario (HQO) initiatives, with a focus on audit and feedback (A&F), and evaluating the Quality-based Procedures (QBPs) hospital funding reform.

What did the team want to accomplish with their demonstration project?

The team worked with multiple partners including CIHR, ICES, and HQO, and aimed to **(1)** leverage research expertise and collaborate with relevant stakeholders to assess, modify, and enhance HQO's A&F initiatives to maximize their impact, as well as advance A&F work in Ontario overall, and **(2)** identify the impacts of, and challenges associated with, QBPs, to inform how to effectively and reliably deliver large-scale system funding reform initiatives.

What did they accomplish?

The team examined the impact of various A&F quality improvement initiatives and worked with partners including HQO, patients, and healthcare providers to explore methods to test and improve A&F initiatives, identify priority A&F quality of care indicators, understand contextual factors relevant to delivering A&F, and improve HQO's Practice Reports. Additionally, the team engaged with government stakeholders to evaluate if QBPs met their goals and economic targets, and applied their findings to develop lessons learned in hospital funding reforms, tailored to government and policy makers.

How did/could this project have an impact on healthcare in Ontario?

Patient/public level: Engaging patients in the improvement of A&F initiatives allowed for patient priorities to be considered in quality of care reports. Additionally, patients may benefit from improved quality of care resulting from the project initiatives.

Healthcare provider level: The team reduced inappropriate prescribing through improvements to the usability and reach of HQO's Practice Reports.

System/policy level: Through meaningful partnership with HQO, the research team built capacity for rigorous application and evaluation of quality initiatives in Ontario. Additionally, their research allowed for the identification of gaps where QBPs did not meet their goals, which may lead to adjustments in the way in which QBPs are implemented in Ontario hospitals (e.g. improved QBP implementation supports).

What can be learned from this project?

Developing strong relationships with partners (e.g., researchers, policy makers, and patients) is critical to facilitating the development of large scale, generalizable evidence, however it is an active effort that takes time and requires compromise from all parties. Research teams may benefit from engaging partners early in the research process and explicitly assessing fit and outlining roles and responsibilities.

Who should know about these findings?

Policy-makers, government personnel, researchers, clinicians, and patients could all benefit from knowing the results of this research.

What is the team doing next?

The research team is continuing to publish results from their completed studies. They are also working with key stakeholders to develop avenues for disseminating their findings, such as engagement with policymakers and workshops with the OMA and Ontario physicians. The team has secured grant funding which will allow them to continue pursuing projects related to assessing and improving the effectiveness of A&F initiatives and QBPs.

Research Round Table findings

Usable evidence and potential for impact

Identified by research team:

The research team highlighted important lessons learned and impactful outcomes of their project work, which included:

1. **Development of meaningful partnerships to support the execution of impactful implementation science research.** The research team brought together a diverse and expansive team to execute this research project, including partners at the Canadian Institutes of Health Research and Choosing Wisely, which they found very beneficial.
2. **Building capacity for continuous scientific monitoring and evaluation of quality improvement initiatives.** The team's collaboration with Health Quality Ontario (HQO, now part of Ontario Health) furthered the organization's capacity to apply rigorous scientific methods to monitor, evaluate, and improve their methods moving forward.
3. **Impact of project findings on future programs and policies.** The research team discussed the potential for their study findings to inform future HQO programs and Ontario Health funding policies. For example, future health funding reforms can address the specific areas where the OHIL project found that Quality-Based Procedure (QBP) funding did not meet its goals.

Anticipated challenges and opportunities to leverage

Identified by Research Round Table attendees:

The attendees offered concrete suggestions for addressing challenges related to implementation of healthcare quality improvement initiatives.

1. **Challenges to collaborating with key stakeholder organizations.** A government stakeholder shared that the effectiveness of submitting feedback to government can be maximized by ensuring the timing of the feedback is in-line with decision-making actions in government and ensuring the value of the suggestion is clearly communicated. The research team highlighted that the stakeholder must be open to make

changes based on feedback to facilitate a successful partnership (for instance, HQO possessed this quality, which made for an effective partnership).

Strategies for dissemination and/or implementation

Identified by research team:

The research team planned multiple dissemination strategies to increase the spread of their work, including:

1. **Publishing a manuscript on implementation science laboratories.** In addition to the OHIL study findings, the research team published on the overarching concept that guided all of their work, which will help increase the generalizability and impact of their project work.

2. **Hosting workshops with Ontario Health leads, as well as physician training through Ontario MD and Ontario Medical Association.** These workshops will aim to disseminate project findings, build capacity in implementation science, and implement audit and feedback initiatives.

3. **Collaborating with other research groups to develop the concept of an Implementation Science Laboratory internationally.** The research team described that their aim to extend their implementation science laboratory internationally is underway.

4. **Holding meetings with key decision-makers in future health-system funding reforms.** The purpose of these meetings will be to share lessons learned about QBP implementation to inform and increase the effectiveness of future policy decisions.

Identified by Research Round Table attendees:

The Research Round Table attendees offered the following suggestions to maximize the impact of the OHIL project:

1. **Engage health charities to collaborate on health systems implementation projects** as they are often an engaged stakeholder group with multiple organizations aiming to engage similar patient populations.

2. **Engage proactively with policy-makers** to ensure policy-makers have adequate time to consider and integrate study findings into future policy (for instance upcoming hospital funding reforms).

Strategies for sustainability and spread

The Research Round Table attendees did not discuss this item.

Additional Project Resources

- Publication – BMJ Quality and Safety
- Publication – Research Reporting Methodology

CLEAN Meds

Presented by Dr. Nav Persaud

Plain Language Case Summary

OSSU team: Dr. Nav Persaud and Dr. Baiju Shah, and colleagues.

Project name: The impact of providing carefully selected essential medications at no charge to primary care patients on patient experiences, medication adherence, prescribing appropriateness, health outcomes and health care costs: a randomized controlled trial (RCT)

What did this demonstration project focus on?

A potential strategy to make medicines more accessible to those who cannot afford them.

What did the team want to accomplish with their demonstration project?

The team aimed to engage community members in order to design an RCT evaluating a proposed model to increase the accessibility of medicines by providing free access. Through the RCT, the team wanted to evaluate the effect of this new model on multiple measures, including relevant health outcomes. They also wanted to use the RCT findings to inform policies to increase access to medicines.

What did they accomplish?

The team created a community guidance panel that steered the development of the RCT. Throughout the RCT, the team was able to assess the impact of their medication access model on health outcomes. Early results showed that free access increased how well participants adhered to their prescriptions and improved some health outcomes, such as diabetes control. Additionally, they were able to engage decision makers in discussions about policy implications.

How did/could this project have an impact on healthcare in Ontario?

Patient/public level: Patients who were randomized to the intervention in the RCT had increased access to medicines, reduced financial burden, and some improved health outcomes.

Healthcare provider level: Clinicians prescribed more appropriately using this new model and patient-provider relationships improved.

System/policy level: The RCT findings showed that public funding of medicines could save an estimated three billion dollars/year, improve some health outcomes and increase health equity.

What can be learned from this project?

Engaging patients and community members can ensure the design of a relevant and meaningful study for participants. The team engaged with clinicians at rural sites to make sure that participants outside of urban settings were included in the RCT. The team found that it was sometimes challenging to negotiate accessible prices for the medications they were providing in the RCT.

Who should know about these findings?

Health policy decision makers, patients, patient advocacy groups, community members (especially those who have trouble affording medicines), clinicians and clinical groups, and research funders should be made aware of the findings of this study.

What is the team doing next?

The RCT team will complete their evaluation of the new model for access to medicines in 2020. The team is also conducting various related studies using their evaluation data. They are continuing to discuss policy changes with decision makers and are planning several follow-up studies.

Research Round Table findings

Usable evidence and potential for impact

The Research Roundtable attendees did not discuss this item.

Anticipated challenges and potential strategies to overcome challenges

The Research Round Table attendees provided insight on messaging about publicly-funded medicines in Canada that has introduced challenges in the past. Attendees encouraged the research team to consider these historic challenges while planning for dissemination in order to increase the impact of their messaging.

1. **Uncertainty around financial benefits of publicly-funded medicines.** Attendees shared that the Pharmacare panel has had trouble with public engagement, which has partially been attributed to the fact that a majority of Canadians are satisfied with their private drug plans. This may limit the public's perceived value of the Pharmacare benefits. Additionally, other reports have previously shared the economic message with similar cost-saving estimates and it has not been enough to motivate change. The research team agreed that the economic analysis would most likely be the least impactful finding of their results. Instead, the research team planned to use their messaging to highlight the impact that their medicines access model had on medication adherence and other health and quality of life metrics. The attendees also highlighted that this historic ambivalence to similar economic findings could potentially be addressed by tailoring the metrics on economic savings to the individual target audiences, so that groups can appreciate the potential financial benefits to them specifically.

2. **Difficulties with sustaining long-term engagement of key stakeholders.** The attendees highlighted that it can often be a challenge to sustain awareness and engagement (e.g., of the general public, decision makers, and advocacy groups) over the long-term towards goal achievement. In order to sustain these efforts, there must be resources dedicated to ensuring continued involvement of these stakeholders.

Strategies for dissemination and/or implementation

Identified by research team:

The research team had planned multiple dissemination strategies to increase the spread of their work, including:

1. **A media engagement event** in early October 2019 around the release of a journal article to inform the general public and relevant stakeholders of their Year 1 trial findings.

2. **Engagement of key political decision-makers** to convey their trial findings ahead of the 2019 Canadian federal election.

3. **Their online website** to share their key messages in an engaging and accessible manner.

The Research Round Table attendees were supportive of these dissemination strategies, and reinforced the importance of leveraging the 2019 federal election to increase the spread and impact of their project work, specifying that publicly-funded access to medicines was an important component of the parties' electoral platforms.

Identified by Research Round Table attendees:

The Research Round Table attendees offered the following additional suggestions to maximize the impact of this project:

1. **Advocacy activities as a dissemination strategy.** Due to the pre-existing public investment in the topic of publicly-funded medicines, as well as the scale of change that this study is targeting at the political level, attendees identified advocacy work as an important avenue through which to disseminate the results of this study. The team can consider leveraging the activities and experience of multiple groups involved in this type of advocacy work (e.g., Canadian Health Coalition, Canadian Doctors for Medicare, and Better Pharmacare Coalition) who can build relationships with political decision-makers or other government stakeholders to support and spread the study messaging. Attendees also suggested building a coalition of stakeholder groups who could support a coordinated campaign through multiple outlets including social media. Engaging groups already conducting advocacy work in this area could help with sustaining long-term stakeholder engagement with project findings.

2. **Additional target audiences for dissemination.** In addition to groups involved in medicines access advocacy work, the attendees identified that dissemination to the following groups could increase the spread of their messages:

   a. Pharmaceutical companies,

   b. Patient advocacy groups (i.e., Diabetes Canada, T1 International, and HIV/AIDS groups such as ACCESS Network, HIV/AIDS Resources and Community Health, and Ontario AIDS Network),

   c. Members of Pharmacare panels or advisory councils,

   d. Researchers interested in the social determinants of health, and

   e. The general public.

3. **Strategies for tailoring key messages.** The attendees provided critical insights on how to tailor key messages to different audiences. These insights can be used to address the anticipated barrier regarding uncertainty of the financial benefit of publicly funded medicines.

a. **Decision makers:** Attendees working in government shared that it can be challenging to develop strategies to align current practices such as policies and funding platforms with new evidence-based recommendations. The attendees recommended framing policy discussions of study findings in a way that seems feasible and actionable to decision makers.

b. **General public:** As this trial is aiming to contribute to a large-scale change in the Canadian health system, attendees reinforced the importance of engaging the general public to garner support for the initiative. To promote interest and increase engagement, attendees suggested tailoring messages to the public in the following ways:

   i. Communicate the impact of free medicines access at the local and individual level rather than a national level to make the impacts more meaningful to community members. For example, put health systems savings outcomes in terms of how much money will be added to an individual's paycheck if they do not buy into/receive a company drug plan.

   ii. Ensure that messaging includes information about both the health and social outcomes from the study (e.g. the participants reported an increased ability to "make ends meet" in addition to having decreased blood pressure). Personal stories from study participants could be an effective and engaging means to communicate key study messages.

c. **Overall:** The research team can consider taking an incremental approach with their messaging in order to ensure their goals and intended impacts appear feasible to key stakeholders (i.e., start with the message that offering a few, inexpensive essential medicines for free can have a large impact on health outcomes, rather than pushing for offering all medicines for free to everyone).

Strategies for sustainability and spread

The Research Round Table attendees shared strategies on how to ensure sustainability of project funding over time. This included applying for a social bond project through the Ministry of Health and Long-Term Care, and creating a follow-up study where the team develops a mobile app about medication adherence that becomes integrated into the trial.

Additional Project Resources

- Project Website
- Publication – JAMA Internal Medicine
- Publication – PLOS Medicine

ARC

Presented by Dr. Simone Dahrouge

Plain Language Case Summary

OSSU team: Dr. Simone Dahrouge and colleagues.

Project name: Navigation implementation and support to optimize access to appropriate community services for Francophones living in minority situations

What did this demonstration project focus on?

The development and evaluation of a primary care integrated social prescribing and navigation model to assist Francophones in English-speaking regions to access community services in two Ontario regions (Ottawa and Sudbury).

What did the team want to accomplish with their demonstration project?

The team aimed to **(1)** develop and assess using a randomized control trial (RCT) an effective, scalable Access to Resources in the Community (ARC) model for equitable access to community health resources for both official language groups in Ontario, **(2)** establish a process for information exchange across primary and community care sectors, and **(3)** develop policy recommendations to address gaps in available community services.

What did they accomplish?

The research team compared the ARC model to the Ontario 211 navigation services and found the ARC model was more effective at connecting patients to community resources than Ontario 211. They also found that patients using the ARC model accessed more community resources than those using Ontario 211 services. Additionally, Francophones were more likely to access a relevant community resource compared to Anglophones, this is possibly due to accessibility of services in their language of choice. The research team also established a variety of methods to support communication between primary and community care sectors (e.g. fax, electronic patient record charting), and are currently completing analyses to identify gaps in community resource availability.

How did/could this project have an impact on healthcare in Ontario?

Patient/public level: Participants using the ARC model were more likely to access community health resources and were more satisfied with their experience than those using the Ontario 211 services.

Healthcare provider level: Primary care providers who interacted with the ARC model were satisfied with their experience and were more likely to be aware of and recommend community resources to their patients.

System/policy level: The ARC model can be feasibly integrated into primary care in Ontario, and can support patients in identifying and accessing resources to support their health and well-being.

What can be learned from this project?

The research team encountered challenges in recruitment of primary care providers due to many competing demands for providers' time. The team leveraged existing relationships to encourage practitioners to consider the potential benefits of participation and enroll in the study.

Who should know about these findings?

Governmental organizations, community health groups, continuing education organizations, networks supporting Francophone populations and the general public could all benefit from receiving the results of this study.

What is the team doing next?

The research team is currently conducting a pilot cluster RCT of the ARC model compared to regular care in Ontario to determine how the model can further support the health of all Ontarians in the context of the COVID-19 pandemic.
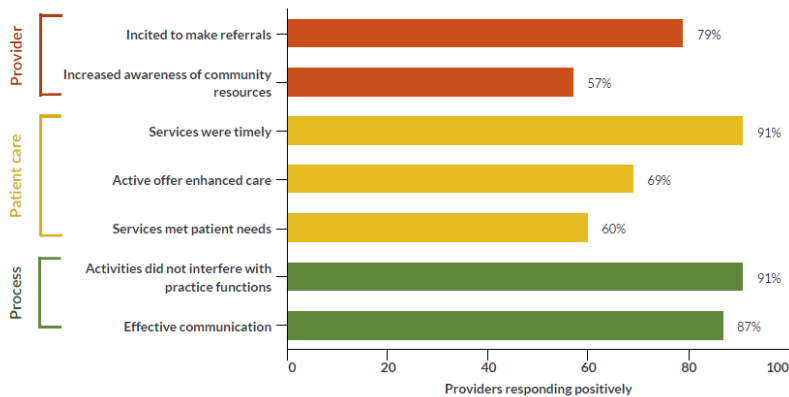
Research Round Table Findings

Usable evidence and potential for impact
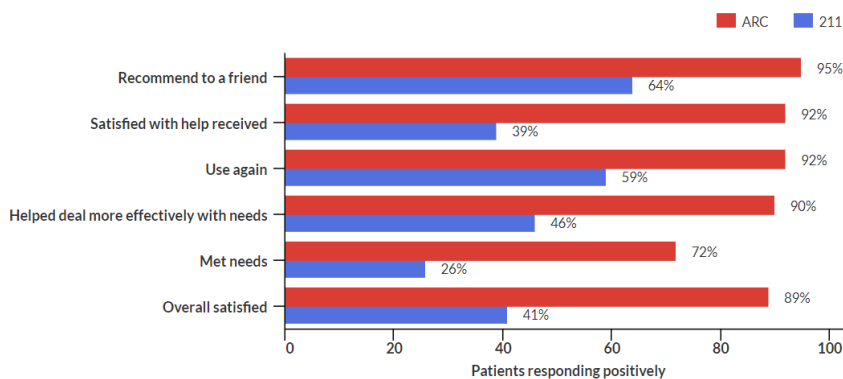
Identified by research team:

The research team shared the positive impacts of the Access to Resources (ARC) model on the patient, provider, and community-level that they observed during the study, including:

1. **Positive impacts on patients.** Patients in the intervention arm of the study (i.e., were randomized to the ARC navigator) highly valued the program and were more satisfied with their experience with the navigation services than those who participated in the control arm of the study (i.e., were randomized to Ontario 211). Patients randomized to the ARC arm were also better able to overcome barriers to accessing services compared to those randomized to the Ontario 211 arm.
2. **Positive impacts on primary care providers' practice.** The research team highlighted that primary care providers found that the ARC model was easy to integrate into their existing practice and that it eased their workload. Additionally, the ARC model increased primary care providers' awareness of community programs and led to an increase in patient referrals to appropriate community programs.
3. **Benefits for the Francophone community**. The ARC model was particularly beneficial for Francophone participants, who achieved better access to services than Anglophones during the study. In addition to patient reported experiences, primary care providers also perceived their Francophone patients had a high degree of satisfaction with their use of ARC navigators. The research team highlighted that the ARC model may reduce gaps in accessing healthcare services across social strata by helping Francophones achieve access to language concordant services.

The research team also provided these figures showcasing their results during the member checking process:

Provider
- Incited to make referrals — 79%
- Increased awareness of community resources — 57%

Patient care
- Services were timely — 91%
- Active offer enhanced care — 69%
- Services met patient needs — 60%

Process
- Activities did not interfere with practice functions — 91%
- Effective communication — 87%

Providers responding positively

"[Navigation] kind of gave me a tool of something to offer, since we don't have in our practice any interdisciplinary staff, we don't have a social worker or anything like that, it was sort of I felt like the next best thing in terms of us offering something. " - Primary Care Provider

Legend: ARC (red), 211 (blue)

	ARC	211
Recommend to a friend	95%	64%
Satisfied with help received	92%	39%
Use again	92%	59%
Helped deal more effectively with needs	90%	46%
Met needs	72%	26%
Overall satisfied	89%	41%

Patients responding positively

"Before being involved with the ARC program, … I didn't really see diverse options in the community services. I didn't know what existed but the navigator showed me just how much and how involved the community service can be if you put yourself out there" - ARC Patient

Anticipated challenges and potential strategies to overcome challenges

The Research Roundtable attendees did not discuss this item.

Strategies for dissemination and/or implementation

Identified by research team:

The research team shared their main strategy for spread of the ARC model, which included:

1. **Integrating the ARC model into Ontario Health Teams.** The research team identified Ontario Health Teams as major dissemination targets for the ARC model and highlighted the opportunity to integrate into the existing infrastructure as a means to scale up and spread the intervention across the province.

Identified by the Research Round Table attendees:

Research Table attendees provided suggestions for expanding the ARC model to reach additional target populations and audiences including:

1. **Leveraging the Francophone Ontario Health Team.** A panel member highlighted that integrating the ARC model into the Francophone Ontario Health team would be an excellent opportunity to implement its use in Ontario and ensure they are effectively reaching their program target audience. The team has developed and disseminated knowledge translation materials on project findings in both English and French and engagement efforts are underway.

Strategies for sustainability and spread

Identified by research team:

The research team highlighted that they are currently exploring strategies for sustainability and spread and highlighted important factors to consider:

1. **Adapting the program to region specific considerations.** The research team noted that expanding the ARC model into new regions would require exploring what language concordant services are already available in each region, and understanding the population differences by region, including why those differences may exist. Further, they highlighted that expanding the regional scope of the program would require adaptations to the program to ensure it fit well with the services that may be available in given region.
2. **Targeting French bilingual Ontarians as an additional population for scale up of ARC.** Panel participants highlighted that there is a group of bilingual Ontarians who generally access health services in English, but who may benefit from accessing language concordant services in French. The ARC team could engage this population and provide them with assistance in accessing French services, making them an ideal target group for further uptake of the ARC model, increasing the spread of the ARC program beyond the Francophone population.

Additional Project Resources

- Abstract – Annals of Internal Medicine
- CMAJ Commentary

The study team would like to acknowledge the navigation support that Ontario 211 provides to the wider population to enable their access to a broad spectrum of services. They thank Ontario 211 (Community Navigation of Eastern Ontario/211 East) for partnering in this study.

C-Spine

Presented by Dr. Christian Vaillancourt

Plain Language Case Summary

OSSU team: Dr. Christian Vaillancourt, Dr. Ian G Stiell, and colleagues.

Project name: A pragmatic strategy empowering paramedics to assess low-risk trauma patients with the Canadian C-Spine Rule and selectively transport them without immobilization

What did this demonstration project focus on?

Identifying the impact of enabling paramedics in 12 Ontario communities to assess and transport low-risk trauma patients without immobilization using the Canadian C-Spine Rule.

What did the team want to accomplish with their demonstration project?

The team wanted to determine if having paramedics assess patients using the C-Spine Rule impacts **(1)** number of patients immobilized, **(2)** patient care factors (e.g., patient comfort and pain and time to Emergency Department (ED) discharge), and **(3)** health system factors (e.g., time spent in field and hospital by paramedics, and cost saving per avoided immobilization).

What did they accomplish?

The team engaged a range of partners (including patients and front-line paramedics) in their study and developed recommendations for patient engagement in emergency medicine research. During the study period there was a 33% decrease in immobilizations and patients reported significantly less pain and discomfort when transported without immobilizations. Further analyses on patient and system outcomes, including on the influence of patient demographic variables (e.g., language), are ongoing.

How did/could this project have an impact on healthcare in Ontario?

Patient/public level: Use of the C-Spine Rule by paramedics may decrease patients' time to ED, patients' pain during transport, and ED length of stay due to reduced need for imaging.

Healthcare provider level: Identifying when immobilization is not required may allow paramedics to be more efficient, and may also allow ED clinicians to be more selective in their use of diagnostic imaging. All participating sites chose to continue using the C-Spine rule once their study participation ended.

System/policy level: Use of this rule may improve health system efficiency by increasing availability of paramedic staff, and may result in a cost savings of $10-18 million annually due to factors such as reduced paramedic equipment costs.

What can be learned from this project?

Challenges were encountered when working with unionized paramedics, which can be mitigated by collaborating proactively with union leadership and minimizing extra work. Using a stepped-wedged design was perceived more positively by participants than a typical randomized trial with a control group, the study team reported. During the study period, the introduction of a new protocol for spinal immobilization required clear communication with participants and an adjustment to timelines. Data in healthcare databases must be frequently updated to effectively monitor implementation.

Who should know about these findings?

Paramedic and fire services, policy makers and governmental agencies, ED clinicians, first-aid providers and teaching organizations, and the public may all benefit from knowing the results of this study.

What is the team doing next?

The team plans to disseminate their findings through peer-reviewed publications, conference presentations, traditional and social media, and communications with government agencies. Additionally, they plan to prepare material with key study results for Ontario Paramedic Services and supporting Base Hospitals. The team also plans to develop further studies aimed at reducing patient pain and discomfort during transport and ED stay, and wants to work with hospitals to update policies that support the use of practices that may cause additional unnecessary discomfort in the ED.

Research Round Table Findings

Usable evidence and potential for impact

The research team shared generalizable lessons learned through their complex, multi-site study. Additionally, the round table attendees highlighted perceived key findings of the study.

Identified by research team:

1. **Benefit of pragmatic study designs on participant engagement.** The study team used a stepped-wedge trial design as this design allowed all participants to implement the C-Spine strategy during the study period. This design was more appealing to Paramedic Services as compared to a traditional randomized control trial, where sites in the control group would not have the opportunity to implement the intervention.
2. **Considerations when working with unionized workers.** Through the study team's collaboration with Paramedic Services in Ontario, the team identified unique considerations to working with unionized bodies. For example, the unions needed to authorize that its members could complete the additional paperwork that was required as a part of study participation, which led a site to drop out of the study. The study team recommends that future research groups partnering with unionized bodies should design their studies to create minimal additional work for their participants. Research groups may also benefit from proactively engaging with union management to collaboratively identify feasible study designs.
3. **Strategies to deal with changes to clinical policies and protocols throughout study execution.** During the study period, the Ministry of Health implemented a major change to the Ontario Paramedic Service immobilization protocol. The revised immobilization protocol now supported the study team's intended implementation practice change. Through their partnership with Ontario Paramedic Services, the study team was made aware of these impending updates in advance of their implementation. The team accordingly modified their study timelines to ensure their study cross-over periods aligned with the Ministry's updates to the study protocols. Additionally, the team found it beneficial to partner with the Ministry to create communication materials, including an infographic that outlined how the study fit within the updated immobilization protocols.

4. **End user satisfaction and sustained implementation of service delivery intervention.** The study team found that none of the paramedic service groups involved in the study wanted to return to their previous immobilization practices after the intervention, which highlighted their satisfaction with the intervention and its uptake in their day-day practice. This was a meaningful incidental finding.

Identified by the Research Round Table attendees:

1. **Value of impact of intervention on emergency service response times.** Round table attendees were interested in learning more about the impact of the study intervention (i.e., use of the C-Spine decision making rule) on EMS response times. The principal investigator highlighted that the intervention could save a small amount of time in for paramedics during their initial assessment of the patient, but that this could add up to significant overall time savings. For example, if a patient is not immobilized, they can be moved from the EMS stretcher to a bed in the Emergency Department much more quickly, which in turn allows paramedics to return to the field more promptly. The round table attendees highlighted that reduced EMS response times could impact clinical outcomes at both a patient level (for example reducing time to hospital for a patient having a stroke) and systems level (for example decreasing the number of instances where there are no ambulances available).

Anticipated challenges and potential strategies to overcome challenges

Identified by the research team:

The research team outlined a challenge for their study reporting during the member checking process, which was:

1. **Mismatch between project timelines and grant reporting timelines.** The research team highlighted that their project included a significant lag time between study initiation and reporting. This creates a challenge to report study results within the end-of grant reporting period

Identified by the Research Round Table attendees:

The Round Table attendees encouraged the team to consider potential unintended consequences of implementation.

1. **Importance of proactively addressing potentially negative practice changes resulting from implementation.** The Research Round Table attendees encouraged the research team to proactively identify potentially unintended negative consequences (specifically, negative practice changes) that could result from implementation (e.g., the loss of visual cue for emergency room personnel to assess the neck for injury without immobilization) and corresponding solutions (e.g., prompts for emergency health care practitioners to ensure they do not forget to assess the neck).

Strategies for dissemination and/or implementation

Identified by research team:

The research team outlined their dissemination plan, which included:

1. **Considering the wide range of stakeholders impacted by the intended practice change when planning for dissemination.** The research team carefully identified the various knowledge users that might be impacted by their service delivery intervention and proactively aimed to develop targeted dissemination strategies for these groups, including, but not limited to:

   a. Paramedic and fire services,

   b. First aid agencies,

   c. Emergency physicians and nurses, and

   d. Mmembers of the general public.

   Additionally, the research team developed a relationship with the Medical Advisory Committee from the Ministry of Health and Long-Term care, who are interested in the study findings.

2. **Collaborating with partner organizations with public engagement expertise when planning for dissemination/implementation.** The research team saw value in collaborating with an organization like OSSU that has lots of experience in public engagement, and believed this could facilitate dissemination and implementation through better understanding of how to tailor their key messages to different groups.

3. **Leveraging outcomes of multiple complex project components to make meaningful contributions to the literature.** The study team anticipated that they will produce 9 publications from this project, including papers on their outcomes in an adult population, pediatric population, the results of their cost analyses, and a methods manuscript. The team has published on the patient engagement component of their study in the OSSU CMAJ supplement.

4. **Tailoring plan for dissemination and implementation to the current practice and policy climate.** Since the practice changes outlined in the revised Ontario Paramedic Services immobilization protocols overlapped with the study's intended practice change, the research group specified that they will increase the impact of their study findings by focusing their dissemination and implementation strategies on behaviors and target audiences that may not have been impacted by the new protocols. For example, since decreased immobilization is already happening in the province of Ontario due to the revised protocols, it may not be worth the time and money to also implement the C-Spine rule throughout the province, however implementation could be focused on regions outside Ontario that are still frequently using backboard immobilization.

Identified by the Research Round Table attendees:

1. **Identifying the role of hospitals as key dissemination partners in service delivery initiatives**. In addition to the wide scope of groups that the team identified as targets for dissemination, the attendees suggested that hospital bodies such as the Ontario Hospital Association could be critical partners in facilitating dissemination.

Strategies for sustainability and spread

The Research Round Table attendees did not discuss this item.

Additional Project Resources

- Publication – Canadian Medical Association Journal Supplement
- Publication – JMIR Research Protocols
- Conference Presentation – Canadian Association of Emergency Physicians 2021 (Vaillancourt)
- Conference Presentation – Canadian Association of Emergency Physicians 2021 (Wong)

Conclusion

Overall, all the project teams identified results from their studies that have potential to impact future healthcare research, patient outcomes, as well as healthcare provision and policy in Canada. Each team also identified several strategies for disseminating this impactful information to target groups, and most teams discussed potential solutions to anticipated challenges to implementation. The participation of representatives from a variety of stakeholders involved in Canadian healthcare provided the project teams with an opportunity to draw on a wealth of experience and expertise to tailor their plans for dissemination and maximize project impact.

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Appendix A: Research Round Table Agendas

Round Table 1 – September 13, 2019

Ontario SPOR SUPPORT Unit
Research Round Table
September 13, 2019

Agenda

12:00 - 12:30   LUNCH

12:30 - 12:45   Welcome and Introduction

12:45 - 1:25   Dr. Nav Persaud
Associate Scientist, Li Ka Shing Knowledge Institute, St. Michael's Hospital

CLEAN Meds - The impact of providing carefully selected essential medications at no charge to primary care patients on patient experiences, medication adherence, prescribing appropriateness, health outcomes and health care costs: a randomized controlled trial

1:25 - 2:05   Dr. Peter Szatmari
Chief of Child and Youth Mental Health Collaborative
The Hospital for Sick Children and Centre for Addiction and Mental Health

YouthCan IMPACT - Among at-risk youth with mental health challenges, do integrated collaborative care teams provide more benefits in reducing symptoms, improving functioning and providing greater client satisfaction than treatment as usual?

2:05 - 2:15   BREAK

2:15 - 2:55   Dr. Douglas Lee
Ted Rogers Chair in Heart Functions Outcomes, Ted Rogers Centre for Heart Research

COACH Trial – Comparison of Outcomes and Access to Care for Heart Failure

2:55 - 3:00   Concluding remarks

Ontario SPOR SUPPORT Unit
Research Round Table
December 13, 2019

Agenda

12:00 - 12:15   **Lunch, Welcome and Introduction**
NOTE: Lunch will be available starting at 11:45 am

12:15 - 1:00   **Dr. Christian Vaillancourt**
Research Chair in Emergency Cardiac Resuscitation
University of Ottawa and the Ottawa Hospital Research Institute

A Pragmatic Strategy Empowering Paramedics to Assess Low-Risk Trauma Patients with the Canadian C-Spine Rule and Selectively Transport them Without Immobilization

1:00 - 1:45   **Dr. Amit Garg**
Professor, Department of Medicine and Epidemiology
University of Western Ontario

Major outcomes with personalized dialysate temperature: the MyTEMP cluster randomized controlled trial

1:45 - 2:00 BREAK

2:00 - 2:45   **Michael Green**
Professor, Department of Public Health Sciences and Head of the Department of Family Medicine, Queen's University

Reducing the burden of diabetes on First Nations people in Ontario: using population level data to inform policy and practice

2:45 – 3:30   **Dr. Noah Ivers**
Family Physician & Chair in Implementation Science
Women's College Hospital & University of Toronto

A Provincial Implementation Science Laboratory: policy-oriented evaluations of large-scale quality improvement initiatives

3:30 - 3:45   **Concluding remarks**

Ontario SPOR SUPPORT Unit
Research Round Table
Tuesday, March 3, 2020

Agenda

12:00 - 12:15   **Lunch, Welcome and Introduction**
NOTE: Lunch will be available starting at 11:45 am

12:15 - 12:50   **Dr. Roger Zemek**
Associate Professor, Dept of Pediatrics and Emergency Medicine, Clinical Research Chair in Pediatric Concussion, University of Ottawa

Multicentre, Randomized Clinical Trial of Pediatric Concussion Assessment of Rest and Exertion (PedCARE): A Study to Determine When to Resume Physical Activities Following Concussion in Children

12:50 - 1:25   **Dr. Nancy L. Young**
Director, School of Rural and Northern Health
Canada Research Chair in Rural and Northern Children's Health
Laurentian University

Comparing the Effectiveness of a New Screening and Triage Process vs Standard Practice in Matching Mental Health Services to Needs among Aboriginal Youth Living On-Reserve

1:25 - 1:40 BREAK

1:40 - 2:15   **Dr. Nora Fayed**
Assistant Professor, Faculty of Health Sciences, School of Rehabilitation Therapy
Queen's University

Comparing the Complex Care for Kids Ontario (CCKO) Province-Wide Integrated Care Intervention for Children with Medical Complexity (CMC) to Waitlist Controls using a Patient-Engaged Evaluation Framework and Mixed Method Design

2:15 – 2:50   **Dr. Catherine S. Birken**
Associate Scientist, Child Health Evaluative Sciences, SickKids Research Institute
Associate Professor, Department of Paediatrics, University of Toronto

2:50 - 3:00   **Concluding remarks**

Ontario SPOR SUPPORT Unit
Research Round Table
Thursday May 27, 2021

ZOOM

Agenda

12:15 - 12:20   **Welcome and Introduction**
Chair: Ms. Anne Hayes, Director
Research, Analysis and Evaluation Branch
Strategic Policy and Planning Division, Ministry of Health/Ministry of Long-term Care

12:20 - 1:00   **Dr. Simone Dahrouge**
Director of Ottawa Practice Enhancement Network, Bruyère Research Institute
Associate Professor, Department of Family Medicine, University of Ottawa

Navigation implementation and support to optimize access to appropriate community services for Francophones living in minority situations.

1:00 – 1:40   **Dr. Maureen Markle-Reid**
Professor and Canada Research Chair in Person Centred Interventions of Older Adults with Multimorbidity and their Caregivers
Scientific Director, Aging, Community and Health Research Unit
Scientific Co-Lead, MIRA/Collaborative for Health and Aging (OSSU SPOR Research Centre), McMaster University

A pragmatic effectiveness-implementation randomized control trial (RCT) to evaluate a hospital to home transitional care intervention compared to usual care for older adults with multiple chronic conditions and depression.

1:40 – 1:45   **Concluding remarks**

Ontario SPOR SUPPORT Unit
Research Round Table
October 6th, 2021

ZOOM

Agenda

12:15 - 12:20   **Welcome and Introduction**
Chair: Ms. Anne Hayes, Director
Research, Analysis and Evaluation Branch
Strategic Policy and Planning Division, Ministry of Health/Ministry of Long-Term Care

12:20 - 1:00   **Dr. Simon Hatcher**
Scientist, Clinical Epidemiology Program, Ottawa Hospital Research Institute; Vice Chair Research, Department of Psychiatry, University of Ottawa

The BEACON Study: A pilot randomized controlled trial of smartphone-assisted problem-solving therapy compared to problem-solving therapy alone in men who present with intentional self-harm to emergency departments in Ontario.

1:00 – 1:40   **Dr. PJ Devereaux**
Salim Yusuf Chair in Cardiology; Director, Division of Cardiology and Scientific Leader of the Anesthesiology, Perioperative Medicine and Surgical Research Group, PHRI, McMaster University

HIP fracture Accelerated surgical TreaTment And Care tracK (HIP ATTACK) – Randomized controlled trial of accelerated medical clearance and surgery versus standard care for hip fracture.

1:40 – 1:45   **Concluding remarks**

Appendix B: Knowledge Sharing Template

OSSU Round Tables - Phase 1 Knowledge Sharing Template

OSSU has funded 17 demonstration projects across Ontario designed to showcase meaningful patient engagement in the research enterprise. OSSU would like to bring together research partners involved in these 17 demonstration projects by means of three separate, half-day roundtable discussions to identify all usable evidence, dissemination goals and key messages for each of the 17 OSSU projects.

In preparation for the roundtable discussion, please fill out the template below with information about your project. The information you share will be used to inform a structured discussion with relevant stakeholders (e.g., researchers, patient partners, health system decision-makers, research funders, Ontario government representatives, and other knowledge users) who will be invited to participate in the roundtable discussion. This discussion will be an opportunity to highlight your project (e.g., successes, challenges, findings etc.) and receive feedback from meeting attendees on certain topics (e.g., potential for impact, strategies for uptake, new areas of research, etc.).

OSSU Research Round Table Knowledge Sharing Template	
1. Project Name	
2. Project Team Members	
3. What were the objectives of this project? (describe the goals of your project in a short paragraph)	
4. What are the results of the project? (describe the study findings in relation to the objectives described above in a short paragraph)	
5. How did this project make a difference? (describe the potential/actual impact of the study in a short paragraph, per level)	• At a patient/public level? • At a healthcare provider level? • At a system/policy level? • Other?
6. What are some lessons learned from this project? (describe any challenges encountered, how they were/could have been mitigated in a short paragraph)	
7. What are next steps for this work? (describe ongoing work or future work in a short paragraph)	
8. Who would benefit from learning about this project? (describe target audiences/end users of the research who will be interested in knowing the results of this project in a short paragraph)	

9.	Please use this space to share any additional information about this project. *(Describe additional information that may be of interest to the roundtable discussion audience and/or any questions you would like to discuss with the group/get feedback on).*

Appendix C: Presentation Template

OSSU Research Round Table Presentation Template
In a 15 minute presentation, PIs/Co-Is should address the following items in a presentation to the roundtables, prioritizing the items in bold. Slides are recommended, but not required.

1	Study objectives, goals
2	**Study participants**
3	Description of the research, implementation team (including patient partners)
4	**Very brief overview of research methods**

5	Usable evidence from the project – consider:
	
	a) Process outcomes and implementation quality outcomes (e.g., fidelity to intervention)
	
	b) Short term outcomes: improved knowledge, improved self-efficacy
	
	c) Long term outcomes: changes in behavior
	
	d) **Impact**
	
	    i. **At the patient level**
	
	    ii. **Health care provider level**
	
	    iii. **Systems or organizational level**
	
	    iv. **Policy level**

6	Plan for dissemination
	a) Who are the target audiences?
	b) What are the key messages to each target audience?
	c) What strategies will you use to engage target audience (including the appropriate dissemination avenues and tools for each?)
	d) What are some contextual considerations to be mindful of when developing your dissemination strategy?
7	Plan for project next steps

Appendix D: Facilitation Guide

Context: The OSSU Research Round Table facilitator will guide the audience through the following discussion questions after **each** research team gives a 15-minute presentation of their work.

Facilitation Questions:

The facilitator will guide the participants to answer the following questions related to the project:

1. Are there any additional audiences that you think would benefit from knowing about the project research findings?

2. How should key messages be disseminated to each of the audience groups identified in Question 1 (e.g., identify dissemination strategies and avenues/messages to patients versus healthcare providers versus managers versus policy makers)?

3. What impact do you anticipate the project will have on:
   a. Patient care
   b. Health provider outcomes
   c. Systems outcomes
   d. Policy outcomes
   e. Patient oriented research

4. Are there any probable barriers the team might face when trying to disseminate, implement and sustain their project?
   a. Probe: How might these barriers differ depending on the target audience (e.g. patients in a rural vs. urban setting)
   b. Probe: How might the team overcome these barriers?

Appendix E: Analysis Coding Framework

Parent Node	Parent Node Description	Child Nodes
Overview of research project	Captures descriptions of each demonstration project, including the project objectives, participants, study team, methods, and next steps	Study objectives and goals
		Study participants
		Description of research & implementation team
		Research methods
		Project next steps
Usable evidence from research project	Captures information about all possible usable evidence resulting from each demonstration project, including process, clinical, and system outcomes This includes both the usable evidence that the research teams highlight in their presentations, as well as the audience-identified usable evidence (*capture if identified usable evidence came from researcher or panel when possible*). Impacts of the usable evidence on various groups will be captured in the Anticipated Project Impacts/Significance node	Process and implementation quality outcomes
		Clinical outcomes
		System outcomes (e.g., cost, efficiency)
		Other
Dissemination strategy – Researcher identified	Captures descriptions strategies for dissemination of the project presented by the researchers, including type of strategy, target audience(s), and any resources that may need to be acquired or developed	Target Audience(s)
		Type of Strategy (*capture target audience*)
		Avenues for dissemination (*capture target audience*)
		Strategies for tailoring (*capture target audience*)
		Resources required
Dissemination strategy – Panel identified	Captures descriptions of strategies for dissemination of the project suggested by panel members, including type of strategy, target audience(s), and any resources that may be required	Target Audience(s)
		Type of Strategy (*capture target audience*)
		Avenues for dissemination (*capture target audience*)

		Strategies for tailoring (*capture target audience*)
		Resources required
Anticipated project impacts/significance	Captures details of anticipated impacts of the project and where these impact is likely to be found This captures both the impacts that the research teams highlight in their presentations, as well as the audience-identified impacts **(capture if identified impacts came from researcher or panel when possible)**.	Patient Care
		Healthcare Provider Practice
		Healthcare System
		Healthcare Policies
		Patient Oriented Research
Challenges and opportunities for dissemination	Captures details surrounding discussion of potential barriers/facilitators for dissemination of the project within specific target groups, including the barrier/facilitator identified, the groups it may be found in and suggestions to mitigate the impact of barrier(s)	Barrier Identified (*capture target audience*)
		Facilitator identified (i.e., potential opportunities to increase impact) *(capture target audience)*
		Suggestions to mitigate barrier(s)

Appendix F: Roundtable Themes

Themes common to the discussions for multiple projects during a Roundtable were also reported in the initial report volumes. A summary of these themes is provided below:

September 13th, 2019 Roundtable

Two prominent themes related to usable evidence, challenges and opportunities, and strategies for dissemination/implementation and sustainability/spread emerged from the three project discussions. The following themes can be applied to any research project to increase its potential impact;

1. **Lessons learned through developing and executing large-scale research projects is valuable, usable evidence.** All three projects included in this Research Round Table developed and implemented a health service intervention across multiple sites in Ontario. Project teams reported that they learned various lessons through executing these complex projects. The YouthCan team intended to track their experience engaging key stakeholders to develop their community-based model of youth mental health care, and have since published on their experience with youth engagement in their trial. The Research Round Table attendees encouraged the COACH team to document and report on their experience with implementing a stepped-wedge randomized control trial design across ten sites, as they thought this information would be valuable for other researchers. The outcomes of the Research Round Table discussion suggest that researchers may benefit from using strategies to track relevant process data (e.g., reach, engagement, project changes) and lessons learned throughout the execution of their projects, as this information may have publication merit, and can inform and strengthen future research using similar methodological approaches.

2. **Tailoring key messages and dissemination and/or implementation strategies to different target audiences can increase engagement.** Research Round Table attendees encouraged all project teams to develop unique, tailored, key messages and dissemination and implementation strategies for all intended target audiences in order to mitigate potential challenges with engagement. These unique messages and strategies were informed by (1) how the project findings would positively impact a particular target audience, (2) the challenges that an audience had previously experienced, or was anticipated to experience, in relation to the use of the project findings. For example, when communicating to the public, the CLEANMeds team was encouraged to present the estimated national cost savings of publicly funded medicines in terms of how much money this would save each individual on average as a result of no longer paying into a company drug plan. Additionally, it was suggested that the COACH team implement the HF risk score calculator as an automated calculation in a patient's chart to address anticipated barriers to implementation specific to ED personnel, including resistance to change and time constraints. Researchers can reference the project-specific guidance on tailoring key messages and strategies while developing their own dissemination plans in order to increase engagement with their target audiences.

Four prominent themes related to usable evidence, potential for impact, and strategies for dissemination/ implementation and sustainability/spread emerged from the four project discussions. Research teams can consider how the content of these themes may be applied in their projects to increase its potential impact.

3. **Importance of developing meaningful relationships with groups implicated in research topic.** All four study teams invested time developing relationships with the study's target populations. The teams perceived this process (known as integrated knowledge translation) to be critical to intervention implementation and to build meaningful partnerships to facilitate future research. For example, *C-Spine* partnered with Ontario Paramedic Services and made modifications to their trial to be feasible and more appealing for this group, and the *Diabetes in First Nations Populations* project developed a meaningful relationship with the Chiefs of Ontario to develop a framework for respectful access to First Nations healthcare data for research. Research teams can leverage similar integrated knowledge translation approaches to increase the feasibility and impact of their project work.

4. **Contribution of research study to building capacity and infrastructure to support future research.** The four project teams invested in infrastructure and capacity building to facilitate future research partnerships. For example, the *Diabetes in First Nations Populations* study built a data governance framework for access to First Nations healthcare data through IC/ES, the *MyTEMP team* registered all 84 renal treatment sites on Clinical Trials Ontario and built feasible and tailored consent and data collection processes for renal research. Further, the *C-Spine* group registered multiple emergency centers on Clinical Trials Ontario, and the *OHIL* team built research capacity within healthcare organizations such as HQO. Research teams can consider embedding potential opportunities to build capacity in their research communities within their study designs.

5. **Consideration of all stakeholder groups when planning for dissemination and implementation.** The *C-Spine, Diabetes in First Nations Populations*, and *OHIL* projects used multi-faceted approaches to dissemination that considered the various knowledge users that would benefit from knowing about their study findings. Dissemination strategies included publishing manuscripts, policy reports (including in plain language) and hosting workshops with healthcare practitioners. Additionally, the *C-Spine, MyTEMP*, and *OHIL* research teams plan to publish on process lessons learned (e.g., see here), which will be of interest to other researchers and KUs interested in patient-oriented research and stakeholder engagement.

6. **Value of collaborating with OSSU.** Three of the study teams highlighted the benefit of partnering with OSSU to execute their study. The *OHIL* research team mentioned that the initial OSSU funding allowed them to successfully secure additional grants to further develop their work. The *C-Spine* project team hoped to collaborate with OSSU to plan for dissemination and implementation and maximize the impact of their work due to their experience with public engagement, and the *MyTEMP* team found the OSSU in-person meetings and workshops very beneficial for bringing together a diverse audience and promoting collaboration. For

example, the *MyTemp* team collaborated with project partners that they met at an OSSU meeting. Research teams can consider the potential value of working with SPOR organizations such as OSSU to maximize the impact of their project work.

March 3rd, 2020, Roundtable

Three prominent themes related to usable evidence, potential for impact, and strategies for dissemination/ implementation and sustainability/spread emerged from the four project discussions. Research teams can consider how the content of these themes may be applied in their projects to increase its potential impact.

1. **Strategies for increasing the feasibility of executing healthcare research and related changes to health systems and practices.** Three of the four research teams (*PedCARE, CCKO CMC, and PARENT*) outlined the benefits of using a pragmatic design for their study and/or health systems intervention; such designs reduce study burden, cost, and can be used to support rapid implementation of effective interventions. For example, the *PedCARE* team opted for a self-reported measure of tolerability instead of a clinical measure due to the typical wait-times for clinical care.

2. **Collaboration with key end users to increase the applicability and impact of study findings.** All four research teams worked very collaboratively with end users to co-design the study, and developed partnerships that will facilitate the dissemination of the study findings (known as integrated knowledge translation). These partnerships allowed teams to make meaningful changes to their study design to increase its feasibility and applicability to end users. Strategies to engage these stakeholder groups included inviting families and healthcare providers to participate in formal consensus processes to prioritize outcome measures, and eliciting input on proposed study design and methods. Research teams can leverage the strategies outlined in this report to engage stakeholders relevant to their project work.

3. **Value of OSSU's investment in patient-oriented research.** Three out of four research teams (*PedCARE, CCKO CMC, and PARENT*) cited that OSSU funding was a critical catalyst for advancing the impact that their study was able to have even beyond the initial scope of their OSSU grant as it allowed them to secure new project funding to address additional research questions (*PedCARE*), evaluate a health systems intervention to increase its potential sustainability (*CCKO CMC*), and collaborate meaningfully with key project partners to design a pragmatic trial, also resulting in securing additional funding (*PARENT*). Policy- and decision- makers, such as research funders, should consider investing in patient-oriented research to maximize the impact of health research initiatives.

May 27th, 2021 Roundtable

Three common themes related to strategies for dissemination/implementation were seen across both projects. Research teams can consider how the content of these themes may be applied in their projects to increase impact.

1. **Highlight key benefits to patients and providers.** Both research teams highlighted that their program provided benefits to patients through increased access to services and increased satisfaction, as well as to providers through reduced workload and increased awareness of community support services. These are key messages that could be used for further dissemination and implementation of these programs in additional settings.

2. **Highlight adaptability of programs to multiple settings.** Both research teams noted that their service navigation models were readily adaptable and therefore can be implemented in a wide variety of settings given appropriate time and resources.

3. **Ontario Health Teams were a key target for dissemination.** Researchers and attendees highlighted that Ontario Health Teams should be a key target for dissemination and implementation of the two service navigation programs shared during this Round Table.

October 6th, 2021 Roundtable

A common theme related to implementation challenges was seen across both projects. Research teams can consider how to navigate these barriers in their projects to increase impact.

1. **Impacts of COVID-19 on staffing**. Both research teams highlighted that the COVID-19 pandemic introduced critical challenges with regard to staff availability (e.g., shortages, redeployment). The BEACON team faced challenges in hiring staff for their project and having hired staff redeployed to support COVID-19–related activities. The HIP ATTACK team also faced challenges in staffing the additional operating room time needed for their protocol.