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## **Innovation. Inspiration. Integration:**

Co-designing for health and wellbeing with individuals and communities

In association with the 6th World Congress on Integrated Care



# Poster Presentations

**BOOK OF ABSTRACTS  
NACIC 2021**

## Adaptive Strategies & Change Management

Abstract ID: 102

### Barriers and Facilitators of Cost Awareness in Aortic Valve Replacement (AVR) Surgery

Presented by: Ryan Gainer

Co-Authors: Ryan Gainer, Greg Hirsch, Sophia Roy

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**Conference Track:** Workforce capacity and capability, Aligned payment systems, Transparency of progress, results & impact

**Introduction:** The awareness of cost drivers surrounding aortic valve replacements (AVR) has been shown to be low among cardiac health care providers. We sought input from cardiac health care providers about their level of intraoperative cost awareness, cost decision making and potential motivators that would encourage cost decision-making in the OR in an effort to reduce overall costs in AVR surgery.

**Aims and Objectives:** From May 2017-May 2019 data was collected on cost drivers for AVRs (n=216). There were three phases of data feedback to HCPs, with the third phase including a qualitative approach through focus groups. Separate focus groups were held for cardiac surgeons (n=5), cardiac anesthesiologists (n=5), cardiac perfusionists (n=8), OR nurses (n=5) and cardiac residents (n=4). Semi-structured interviews were used to elicit provider perspectives on the barriers and facilitators to implementing intraoperative cost decision making. Transcribed audio data was iteratively analyzed through the use of thematic analysis to develop a core set of common and comprehensive themes.

**Highlights/Results/Key Findings:** Data collection demonstrated marked inter-surgeon variation around the surgical costs of isolated AVR procedures, and identified the cost drivers of this variation. After data feedback to HCPs, cost variation did not decrease and the median cost for AVRs actually increased.

Five main themes were identified across qualitative focus groups: cost awareness, intraoperative decision making, influence surrounding intraoperative cost decision making, provider-based motivation for implementing intraoperative cost decision making, and cost drivers for an AVR. Providers had low cost awareness, but expressed a willingness to engage in cost decision making. Non-surgeon groups felt they had minimal influence on intraoperative decisions. Providers suggested motivators to encourage intraoperative cost decision making.

**Conclusions:** There was no difference in cost or variation before and after data feedback was given to cardiac HCPs. This alone was evidently insufficient to impact surgeon's behaviour in case costing, which motivated our approach to identifying the barriers and facilitators of incorporating cost considerations in intraoperative decision making

**Implications:** This work is an important first step in evaluating avenues towards cost awareness and containment in a tertiary cardiac surgery centre in Halifax, NS.

## Adaptive Strategies & Change Management

Abstract ID: 108

### Adaptive Strategies to Building a Sustainable Workforce: Health Care Support Worker (HCSW) and the Health Career Access Program (HCAP)

Presented by: Francisco Velazquez

*Co-Authors: Francisco Velazquez, Suzanne Fox, Dee Chatha*

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**Conference Track:** Population health needs and local context, Resilient communities and new alliances, Workforce capacity and capability, System wide governance and leadership

**Introduction:** The COVID-19 pandemic has had a tremendous impact on organizations. Health care in particular has been affected in many ways. Health care professionals have been working around the clock to support patients and families during these tumultuous times. It is well known that these demands have taken a significant toll on staff which has led to burnout. To ensure that the health care workforce remains strong, the British Columbia Government has implemented the Health Career Access Program (HCAP). Fraser Health coordinates the management of HCAP in the region that it serves (1.8 million people, 1 out of 3 British Columbians).

**Aims and Objectives:** The British Columbia Government opted to introduce a new career building strategy in the midst of a pandemic. Through HCAP, individuals have the opportunity to apply to become a Health Care Support Worker (HCSW). The HCSW role is an entry-level position that provides non-direct care to residents in AL and LTC. While working, HCSWs are afforded the opportunity to go to school to become health care assistants, with all costs covered by the Government, including their salary. The Return of Service agreement ensures that staff remain and there is stability and sustainment in the workforce.

**Highlights/Results/Key Findings:** Through the use of key change management principles, the Fraser Health HCAP Project Team has been supporting the HCSW, the care team, as well as residents and families. Focused on building a team-based care environment the project team creates opportunities for open dialogue and engagement. This supports building "Awareness" and "Desire." Preparing resources such as the "HCSW Can Do-Can Not Do" list in addition to the shadow-shifts and buddy-pairing amongst other tactics, allow for the "Knowledge" and "Ability" to show up. By investing in, and supporting the growth of an individual, there is emphasis on sustainment and longevity (Reinforcement).

Although early in the implementation phase, the feedback has been positive from both the provider- and resident-experience. A Logic Model is being built to measure the true impact of the program, and how the model can inform the future of the provision of AL and LTC services.

**Conclusions:** While working in health care this past year has certainly brought its challenges, there have also been opportunities. The broad interest in HCAP has shown that rather than shying away from health care, the opposite appears to be true in that people want to be part of the field.

**Implications:** While having taken a system-wide engagement approach, HCAP focuses on current and immediate future needs. It is highly dependent on the supplementary funding from the government and questions will remain as to how long funding will be available.

## Adaptive Strategies & Change Management

Abstract ID: 109

### Factors Associated with Functional Assessment Duration in Integrated Primary Care

Presented by: Katherine Meyers

*Co-Authors: Katherine Meyers, Ron Dolgin, Daniel A. Goldstein, Amanda Long, Catalina Vechiu, Kelly A. Manser*

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**Conference Track:** People as partners in health and care, Workforce capacity and capability

**Introduction:** Integration of primary care and behavioral health has been shown to enhance engagement in mental health services, while improving experience of care (Berwick, Nolan, Whittington, 2008; Davis et al., 2016). The model for primary care-mental health integration (PC-MHI) typically champions brief session duration, which centers on optimizing availability for warm hand-offs (Larkin et al., 2016). Efforts have been made toward setting metrics for the proportion of 30 minute appointments that are delivered compared to longer sessions (e.g., 75%). However, there are no identifiable studies that examine factors contributing to session duration and the feasibility of this in clinical settings.

**Aims and Objectives:** The present study aims to delineate clinician decision-making, as well as patient and system variables that impact the duration of assessments and deviation from the 30 minute standard. Eighteen clinicians completed a brief questionnaire following functional assessments over a three month period. We utilized both quantitative and qualitative approaches to understand how providers navigate factors such as competing demands of behavioral health clinicians, complex diagnostic presentations, patient ambivalence, and mental health risk.

**Highlights/Results/Key Findings:** We examined data from 110 functional assessments coming from primary care at a VA medical center. The most common provisional diagnoses were PTSD, depressive disorders, and anxiety. The sample appeared fairly symptomatic, with depression and anxiety screen scores in the moderate range and PTSD screens well above the cut-off suggestive of PTSD (for PHQ-9,  $M = 10.45$ ,  $SD = 5.81$ ; GAD-7,  $M = 10.40$ ,  $SD = 5.77$ , for PCL-5,  $M = 41.11$ ,  $SD = 20.80$ ). In terms of session duration, 42% of all of the functional assessments fell within the target (30 minutes or equivalent CPT code). The average session duration was 42 mins ( $SD = 13.38$ , range 17-90 mins), only slightly outside the established recommended duration. We will further describe qualitative data on factors that appear to have impacted session duration including patient complexity, patient ambivalence, and suicide risk.

**Conclusions:** While PC-MHI services are generally brief in duration, there are questions related to the feasibility of a 30-minute model in some cases. Data suggests that less than half of the functional assessments fell within the recommended range. Factors that may impact duration include symptom severity, patient complexity, and patient ambivalence.

**Implications:** This study helps to elucidate factors involved in conducting brief, functional assessments in integrated care. This has implications for understanding time needed for assessment which can impact clinic development, staffing, and warm hand-off availability. This study highlights the need for flexibility in clinic structure and time allotted for patients.

## Adaptive Strategies & Change Management

Abstract ID: 147

### A collective impact approach to co-designing an improved health care system for older adults with frailty and their caregivers in Southwestern Ontario

Presented by: Kelly McIntyre Muddle

*Co-Authors: Kelly McIntyre Muddle*

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**Conference Track:** Population health needs and local context, People as partners in health and care, System wide governance and leadership

**Introduction:** In the South West (SW) region, there were a number of programs and initiatives focused on providing care for older adults at risk of/with frailty. Due to different funding streams, sectors and disease specific initiatives; the capacity to coordinate these efforts has been limited. This resulted in a disjointed experience of care for older adults with frailty and their caregivers, as they navigate a complex system. Through the regionally coordinated approach of the SW Frail Senior Strategy, the resources of the combined initiatives and programs are being leveraged to build an integrated, equitable, high quality system of care

**Aims and Objectives:** In the place of multiple committees supporting separate initiatives, one regional steering committee was formed using a cross sector, cross regional matrix for proper representation, including older adults and caregivers. A regional team was hired to provide backbone support.

Building on discovery research, the regional team co-designed with communities across the region to validate evidence-based recommendations, understand current state and identify change ideas.

Solutions generated were sorted and grouped to inform the development of five strategic priorities for 2019-2022. Implementation of these priorities has included expansion of the governance structure to include regional advisories and local design and implementation groups.

**Highlights/Results/Key Findings:** The 5 priorities of the Strategy include local and regional system redesign, planning and evaluation, education, advocacy, and communication/access to information.

By sunsetting the various committee of related initiatives, and replacing with one structure with cross-sectoral and cross-regional representation, the Strategy has been effective in supporting alignment across primary care, specialized care, community support services and local communities. To extend alignment locally and to support best-practice standardization, with local contextualization, the governance structure now includes regional advisory committees and local design and implementation groups.

With the regional scope and focus of this work requiring high levels of community engagement, the use of a collective impact framework, including backbone support provided by a dedicated team, and the employment of co-design and quality improvement tools and approaches has been instrumental in engaging providers and community members in all aspects of planning and implementation.

**Conclusions:** The SW Frail Senior Strategy provides a structure through which all initiatives with a focus on frail older adults can be reviewed for alignment with regional priorities – as identified through co-design - and strategically coordinated to optimize the creation of a more integrated and efficient system of care.

**Implications:** Best practice geriatric care requires system coordination and integration and collaboration across sectors. The regional collective impact approach employed by the SW Frail Senior Strategy will be of high interest to others who are interested in undertaking this work with a diverse population, urban/rural mix, and variable resources.

## Adaptive Strategies & Change Management

Abstract ID: 170

### Scoping review of instruments for measuring the integration of mental health and addictions services within primary care

Presented by: Matthew Menear

*Co-Authors: Matthew Menear, Ariane Girard, Genève Caron, Michèle Dugas, Jean-Sébastien Renaud*

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**Conference Track:** Transparency of progress, results & impact

**Introduction:** The past decade has seen major interest in Canada and internationally to better integrate mental health and addictions (MHA) services within primary care. However, implementation of integrated care remains a challenge and MHA service delivery and care experiences in primary care remain uneven. Establishing a clear portrait of the situation would be important to guide policy and quality improvement efforts and improve service user outcomes. Yet multiple definitions of integrated care co-exist and there is a lack of clarity about how to best to measure and collect data on this multidimensional concept.

**Aims and Objectives:** This study aimed to identify instruments designed to evaluate the integration of mental health and addictions services within primary care. We conducted a scoping review of published and grey literature. We searched Medline, Embase and PsycINFO using keywords related to the concepts of “primary care”, “mental health”, “addictions”, “integrated care” and “instrument”. We also performed keyword searches in Google and examined the websites of international organizations interested in integrated care. Multiple team members participated in study selection and our data extraction and analysis is guided by a conceptual framework, the Rainbow Model of integrated care.

**Highlights/Results/Key Findings:** This scoping review is ongoing. So far we have identified 56 instruments measuring MHA care integration from the perspective of clinicians and 15 instruments measuring integration from the perspective of patients. The integrated care dimensions most represented in the instruments were clinical integration (e.g. screening practices, case management, referrals) and professional integration (e.g. interprofessional communication and collaboration, co-location) whereas fewer items related to the systemic (e.g. regulations, advocacy) and normative (e.g. shared values, leadership for integrated care) dimensions of integrated care. Few tools targeting clinicians included items related to the person-centered care (e.g. engagement in care planning, supports for self-management, coordination of family supports) and authors rarely developed their tools in partnership with MHA service users.

**Conclusions:** This scoping review provides valuable information on the range of instruments and measures that can be used to assess the integration of mental health and addictions services in primary care, and will inform the development of more comprehensive instruments that cover more dimensions of care integration.

**Implications:** We have identified a number of instruments that can be used to measure integrated mental health care in diverse primary care settings. It may also encourage the development of new tools that can address current gaps, such as instruments to assess integrated addictions care and tools co-designed with service users.

## Adaptive Strategies & Change Management

Abstract ID: 199

### Understanding Interprofessional Practice Challenges for Advancing Integrated Care

Presented by: Gayle Halas

*Co-Authors: Gayle Halas, Miray Eskandar, Jamie Penner, Daniel Nagel, Laura MacDonald, Alexandra Cooper, Moni Fricke*

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**Conference Track:** Workforce capacity and capability

**Introduction:** Interprofessional collaborative practice is a key strategy for strengthening a system of integrated, coordinated care and improving health outcomes. The healthcare system is faced with greater demands, particularly with the growth in chronic conditions, highlighting the need for multi-provider expertise and well-designed collective action that will meet diverse patients' needs. But interprofessional collaboration is not a simple solution. Clinically integrated care, as the goal of interprofessional team-based approaches, has been described as conceptually ambiguous with little understanding of what success looks like in different practice settings or in various situations.

**Aims and Objectives:** The goal of this project is to understand the factors influencing interprofessional collaborative practice among newly practicing primary health care providers, specifically: 1) their experiences of transitioning from education to interprofessional practice, and 2) the opportunities and barriers for operationalizing interprofessional practice. We will administer a survey to individuals who have completed the Interprofessional Education (IPE) curriculum at the University of Manitoba and are within the first five years of practice. Descriptive statistics will be used to analyze survey responses. We will examine these findings in relation to IPE training outcomes, and domains such as organization, team composition and functions.

**Highlights/Results/Key Findings:** We present this work in progress, which seeks to identify the micro- and meso-level challenges and facilitators that influence the capacity for integrated and interprofessional collaborative practice. The survey responses will provide insights on the more concrete experiences and broad factors affecting interprofessional performance and with potential to enhance the development of IPE to equip the health workforce with knowledge and skills that can be transferred into 'real world' settings. The current competency frameworks guiding interprofessional education and collaboration are relatively new. This research will identify the critical determinants of interprofessional practice, and as a product of the complex interplay of training, evidence, organization and operations.

**Conclusions:** Understanding gaps in capacity and transferring learning from IPE to practice is key to building workforce capacity and nurturing a culture of interprofessionalism. Identifying concrete actions and context will illustrate the reality of interprofessional practice, and inform future curricula for preparing the health workforce for interprofessional and integrated care.

**Implications:** These findings will be important for understanding the challenges presented to new practitioners who face different practice contexts and situations. The lessons learned may contribute to the ongoing development of IPE curricula and practice-oriented strategies that will advance collaborative primary health care practice and optimize integrated care.

Can E-mails Affect Decision Making? The Effects of a Behavioral Economic Strategy on Antipsychotic Prescribing Behavior

Presented by: Liliane DeAguiar-Rocha

Co-Authors: Liliane DeAguiar-Rocha

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**Conference Track:** Transparency of progress, results & impact

**Introduction:** Despite the lack of evidence supporting its practice, antipsychotic polypharmacy (APP), is widely used<sup>1,2,3</sup>. To change the outcomes that are directly related to doctors' decisions, it is important to understand the decision-making process and the factors which affect it. Behavioral Economics is a field that blends social psychology and economics, and it seeks to understand how biases affecting the human decision-making process. Strategies based on Behavioral Economics principles have been successful in addressing many issues in healthcare. This paper describes a quality improvement project designed with the aim of reducing APP prescribing behavior in a large psychiatric hospital in Brazil.

**Aims and Objectives:** Nineteen units participated in this case study. The intervention targeted all prescribers and it involved the use of norms and peer comparison, behavioral economics principles which indicate that individuals are more likely to adjust their behavior if they perform below the average performance of their peers. After baseline, where the APP prescribing rate for the whole hospital and for each unit in particular were assessed, a weekly email was sent to each prescriber with information about the hospital-wide APP prescribing rate, feedback related to the APP prescribing rates in their units, and how they compared to other units.

**Highlights/Results/Key Findings:** The intervention was successful in reducing hospital-wide APP prescribing rate. After the second e-mail, we observed a steep drop in the APP prescribing rate, and the rate never returned to pre-intervention levels. The weekly emails with feedback and peer comparisons yielded an average statistically significant difference of about 8.02% ( $t(10) = 4.7491$ ,  $p < 0.008$ ) over a brief 11-week period. This study demonstrated that e-mails designed according to a Behavioral Economics strategy can affect prescribing behavior.

**Conclusions:** Information about the lack of evidence for the use of antipsychotic combinations, about the rates in other parts of the world, and information about the rates in hospitals with a similar population within their own state was enough to yield statistically significant results.

**Implications:** Future quality improvement projects targeting prescribing behavior should consider a combined use of guidelines and training with norms and peer comparison.

## Acupuncture for Pain Management in Evidence-based Medicine

Presented by: TAQEE ANSARI MOHAMMED

Co-Authors: TAQEE ANSARI MOHAMMED, Mohammed AL Bassir Rahamani

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**Conference Track:** People as partners in health and care

**Introduction:** Pain is an enormous and prevalent problem that troubles people of all ages worldwide. The effectiveness of acupuncture for pain management has been strongly verified by large randomized controlled trials (RCTs) and meta-analyses. Increasing numbers of patients with pain have accepted acupuncture treatment worldwide. However, some challenges exist in establishing evidence for the efficacy of acupuncture. A more applicable and innovative research methodology that can reflect the effect of acupuncture in the settings of daily clinical practice needs to be developed

**Aims and Objectives:** Pain is “an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage. The previous experience of acupuncture research studies are invaluable for researchers to recognize the limitations and challenges of research designs and would help to move the field forward in future research. For example, the design of an adequate sham control, involvement of skilled and experienced acupuncturists, adequate outcome measures in the clinical trials, and the discovery of physiological effects of acupuncture in basic science are all important tasks for acupuncture researchers to address and solve.

**Highlights/Results/Key Findings:** Challenges and future directions of acupuncture research for pain conditions in EBM  
High-quality RCTs and meta-analysis have increasingly produced robust evidence of the effectiveness of acupuncture for pain conditions, although nonspecific physiologic response to the needle insertion and the nature of holistic character of acupuncture treatment lead to many challenges in the research designs that reflect the daily clinical acupuncture practice

Individual patient data meta-analysis and large RCTs of acupuncture for pain conditions

In recent years, studies have increasingly provided some evidence for using acupuncture for pain management. In 2012, an individual patient data meta-analysis was conducted by Andrew et al to evaluate the effectiveness of acupuncture for four types of chronic pain: back and neck pain, osteoarthritis, chronic headache, and shoulder pain. The result reflects that acupuncture was superior to sham acupuncture controls and to the usual care controls in all four chronic pain conditions

**Conclusions:** In recent years, large RCTs and meta-analysis of the effectiveness of acupuncture have greatly advanced our knowledge of acupuncture. Increasingly more patients worldwide now accept acupuncture treatment. Challenges remain in the course of establishing evidence on acupuncture,

And have no conflicts of interest and no financial interests related to the material

**Implications:** As the newest revolution in the field of medical science, EBM has converted the classic authoritarian expert-based medicine and become the fundamental basis for clinical practice

## Cutting Edge Technology and Innovations Contributing to Integrated Care

Abstract ID: 6

### Use of technology during the Covid-19 pandemic in a program for re-enrolling high school dropouts

Presented by: Rolf Wynn

Co-Authors: Rolf Wynn, Gro Ramsdal

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**Conference Track:** Digital solutions

**Introduction:** Students that drop out of high school have a much larger chance of becoming unemployed and of health problems than those who complete high school [1]. A re-enrollment program (AFTung) is currently ongoing in North Norway. The program is a collaboration between the Norwegian Labour and Welfare Administration and a local not-for-profit company (INKO) and offers individualized guidance, job training and other interventions to improve the participants' chances of succeeding at school and at work.

**Aims and Objectives:** We briefly describe a Norwegian program for re-enrolling students and how the Covid pandemic lead to adjustments in the program with the increased use of technology. One frequent challenge in re-enrollment programs has been problems with absenteeism. When the Covid-19 pandemic reached North Norway in the winter of 2020 and the entire society was closed down [2]; the program's participants were particularly vulnerable being left alone in their homes. Social workers involved with the youth participating in the program worried that the participants would lose their motivation during the pandemic and not come back to the program later on.

**Highlights/Results/Key Findings:** An important development was that the program participants took the initiative to meet up on Microsoft Teams and continue the program. Through their technological competence, the participants became active co-entrepreneurs in the development of this new version of the re-enrollment program. The increased use of technology counteracted earlier attendance issues and gave the program a new impetus. Thus, when the Covid-related changes unfolded and technology was given a larger space, the attendance rate rose to 100%, according to staff members.

Those who struggled with social anxieties found participation in group meetings more manageable when technological solutions were used. Solving the new challenges together increased feelings of belonging and self-efficacy. New digital learning platforms were also applied, thus participants could access their learning videos when they felt like it and could watch them repeatedly and then ask questions at later group meetings.

**Conclusions:** In spite of problems with absenteeism and the added stress of the Covid pandemic during the winter-time, the use of digital learning and communication platforms instigated by the participating youth empowered the participants and improved the program attendance rate.

**Implications:** References

[1] Ramsdal G, Bergvik S, Wynn R. Long-term dropout from school and work and mental health in young adults in Norway. *Cogent Psychol.* 2018;5:1455365.

[2] Wynn R. E-health in Norway before and during the initial phase of the Covid-19 pandemic. *Stud Health Technol Inform.* 2020;272:9-12.

## Cutting Edge Technology and Innovations Contributing to Integrated Care

Abstract ID: 14

### A Randomized Controlled Trial of a Medication Dispensing System to Support Individuals on Multiple Medications

Presented by: Stephanie Hastings

*Co-Authors: Stephanie Hastings, Lorena Kembel, Mubashir Arain, Armghan Ahmad*

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**Conference Track:** Digital solutions

**Introduction:** Medication adherence is challenging for older adults due to factors such as the number of medications, dosing schedule, and the duration of drug therapy. The objective of this study was to examine the effectiveness of an in-home electronic medication dispensing system (MDS) on improving medication adherence and health perception in older adults with chronic conditions.

**Aims and Objectives:** A pilot Randomized Controlled Trial (RCT) was conducted using a two-arm parallel assignment model. The intervention group used the MDS as their medication management method. The control group continued to use their current methods of medication management. Block randomization was used to assign participants into the intervention or control group. The inclusion criteria included 1) English speaking 2) age 50 and over 3) diagnosed with one or more chronic condition(s) 4) currently taking five or more oral medications 5) City of Calgary resident. Participants were recruited from a primary care clinic in Alberta, Canada.

**Highlights/Results/Key Findings:** A total of 91 participants were assessed for eligibility and 50 were randomized into the two groups. The number of participants included in the intention-to-treat (ITT) analysis were 23 and 25 in the intervention and control group respectively. Most of the demographic characteristics were comparable in the two groups except mean age of the intervention group, which was higher compared to the control group ( $63.96 \pm 7.86$  versus  $59.52 \pm 5.93$ ,  $p$ -value=0.03). The average recorded adherence over 26 weeks was significantly higher in the intervention group than the control group ( $98.35\% \pm 2.15\%$  versus  $91.17\% \pm 9.76\%$ ,  $p < 0.01$ ). The self-rated medication adherence in the intervention group also showed a significant increase from baseline to 6-month ( $7.63 \pm 1.63$  versus  $9.13 \pm 0.81$ ,  $p < 0.01$ ). The control group showed a non-significant increase ( $7.20 \pm 1.74$  versus  $8.27 \pm 2.09$ ,  $p = 0.07$ ).

**Conclusions:** The findings from this clinical trial indicate the potential of the medication dispensing technology to improve adherence for individuals taking multiple medications and living with chronic conditions. The technology induces better consistency and improvement in medication taking behaviour than simple, non-technological intervention.

**Implications:** The results suggest that using a medication dispensing device could replace or supplement current practice of using home care nurses for medication administration, significantly reducing costs to health care system. Results will need to be validated in other populations with a larger sample.

## The integration of home-based interventions for psychiatric care

Presented by: Rolf Wynn

Co-Authors: Rolf Wynn, Martin Bystad

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**Conference Track:** Digital solutions

**Introduction:** In recent years, we have seen a development in technology that draws on the brain's use of electric signals for diagnostics or treatment [1-2]. A range of medical devices have been constructed and priced so that they may be suitable for home-based use. Integrating this type of home-based care in psychiatric treatment may represent an important step forward as it may increase the availability of new diagnostic and treatment options and reduce costs. This may be especially important for elderly and frail patients. We will in the following focus on the promising method of transcranial Direct Current Stimulation (tDCS).

**Aims and Objectives:** tDCS is a non-invasive neurostimulation tool that works by inducing a low direct current in the cortical brain. Electrodes are placed directly above the targeted brain area. This stimulation aims to facilitate neuroplasticity. tDCS may be administered at home. Regular sessions during a longer period are required. Studies have suggested that tDCS can lead to significantly lower chronic pain, reduced depressive symptoms, and improved memory function, compared to placebo. tDCS has been associated with minor adverse effects (mainly itching or redness under the electrode), but more long-term studies are needed to fully assess effects/adverse effects.

**Highlights/Results/Key Findings:** The use of tDCS home devices are still in their infancy and there is clearly a need for studies that investigate long-term interventions of tDCS in this setting. A typical protocol may be 20 minutes daily tDCS stimulation for three months. tDCS has a broad range of applications, including for common disorders such as depression and chronic pain. Should future studies support the promising findings, this may prove to be a cost-effective way of increasing the treatment options for many patients in the future.

**References:**

1. Bystad M, Rasmussen ID, Grønli O, Aslaksen PM. Can 8 months of daily tDCS application slow the cognitive decline in Alzheimer's disease? A case study. *Neurocase*. 2017;23(2):146-148.
2. Wahlström V, Åhlander F, Wynn R. Auditory brainstem response as a diagnostic tool for patients suffering from schizophrenia, attention deficit hyperactivity disorder, and bipolar disorder: protocol. *JMIR Res Protoc*. 2015;4(1):e16.

**Conclusions:** It is reasonable to conclude that tDCS has the potential to be an effective intervention in integrative care. There is clearly a need for more clinical trials to investigate the effect home application of tDCS. The promising results from previous studies combined with minor adverse effects warrant further investigation.

**Implications:** We have discussed one of the promising cutting-edge technologies that may be used in psychiatric home-care in the future. More research is needed to examine the usability, effects and adverse effects of this and other technologies in home-based settings.

## Cutting Edge Technology and Innovations Contributing to Integrated Care

Abstract ID: 28

### Information and Communication Technologies (ICTs) Enabling Integrated Primary Care for Complex Patients: A Scoping Review

Presented by: Farah Tahsin

*Co-Authors: Farah Tahsin, Alana Armas, Carolyn Steele Gray, Apery Kirakalaprathapan, Mudathira Kadu, Heather Cunningham, Jasvinei Sritharan*

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**Conference Track:** Population health needs and local context, Digital solutions

**Introduction:** Information and communication technologies (ICTs) are recognized as a critical enablers of integrated primary care to support patients living with multiple chronic conditions. Although ICT-enabled integrated primary care hold promises to support complex patients through team-based and continued care, critical implementation factors regarding what ICTs are available and how they enable the integrated model are yet to be mapped in the literature. This scoping review addresses this current knowledge gap in order to identify opportunities and gaps to help guide future implementation of the ICT-enabled integrated primary care model.

**Aims and Objectives:** Objective: This study systematically scoped the literature on ICT-enabled integrated healthcare delivery models for patients with complex care needs to identify which technologies have been used in integrated primary care settings. Method: The Arksey and O'Malley method was used to guide this scoping review. Four electronic medical databases were accessed: MEDLINE, EMBASE, CINAHL, PsycINFO, collecting studies published between January 2000 - December 2020. Identified peer-reviewed articles were screened in two stages: 1) title and abstract screening; and 2) full-text review. Relevant studies were charted and analyzed using the Rainbow Model of Integrated Care and the eHealth enhanced Chronic Care model.

**Highlights/Results/Key Findings:** A total of 46,736 articles were screened at the title and abstract level of which 37 met the eligibility criteria of the review. A large number of the studies originated from North America (62.5%) and used a quantitative method as a study design (51%). 70% of the studies used technology to enable professional and clinical level integration through clinical information sharing among a multidisciplinary team or across multiple organizations. There were fewer studies focused on the organization or system-level integration of care through technologies. A range of technologies was used in these models including web-based platforms, mobile applications, and telemonitoring being the most frequently used. Multiple implementation factors were identified that could enable or hinder the successful implementation of technologies including patient health/digital literacy and training; provider workload, attitudes, and beliefs; usability and interoperability of technologies; and system factors such as incentives, technical and human resource support.

**Conclusions:** To maximize technological benefits in primary care, the literature suggests system-level support and favourable implementation climate are required. Future research is needed to explore how to integrate technologies at an organization and system level to create a health system that is well-prepared to optimize technologies to support patients.

**Implications:** The study findings benefit system leaders in showing the implementation factors and the types of technologies they need to consider when applying technology to optimize their integrated care models. Due to time constraints, gray literature was excluded in the review which may limit the findings of the study.

## Cutting Edge Technology and Innovations Contributing to Integrated Care

Abstract ID: 64

### A Mhealth co-evaluated by physicians and patients integrated to the medical consultation through decision support

Presented by: Luigi Flora

*Co-Authors: Luigi Flora, David Darmon, Jean-Charle Dufour*

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**Conference Track:** Shared values and vision, People as partners in health and care, Digital solutions

**Introduction:** Context: A research project funded by the French National Research Agency (ANR) consists in a decision support system and medical prescription of applications and mobile objects for health from applications co-evaluated by doctors and patients. The choices of use were organized, from series of literature reviews, by a double accessibility of mobile applications called MHEALTH at the service of the physician-patient relationship with the aim of improving the health of patients through an integration of digital solutions in the computerized medical record on the one hand, and on a platform of general public access on the other hand.

**Aims and Objectives:** the objective of ApiAppS is to identify, explore and eliminate existing scientific barriers so that general practitioners can use a system to help them prescribe mHealth applications/devices adapted to the patient's profile within the framework of a system that is interoperable with the information sources used. The implementation is organized in the patient care partnership approach that takes into account the psychosocial context and patient choices in prescribing and to do so has allied with the new Patient and Public Partnership Innovation Center created in late 2019 at the University Côte d'Azur Medical School to mobilize patients in the evaluation

**Highlights/Results/Key Findings:** The decision support system for the prescription of mobile health technologies covers various areas of health and participates both in the relationship of care and empowerment of the patient, or even his relatives in life with the disease for several diseases but we need to know better on the one hand its contributions and on the other hand to accompany a selection in the multitudes of connected tools that are evaluated for example to some 170,000 in late 2020 in Canada (Dumez, Flora, 2021) .

**Conclusions:** ApiAppS is entering its final phase and aims to provide targeted assistance using 3 sources of information: mHealth store, medical knowledge bases, EMR so that the prescription of mHealth applications adapted to the patient's profile is relevant for the doctor-patient relationship and for the overall care process.

**Implications:** ApiAppS can be technically deployed in computerized medical records, several theses are in progress and in the modes of evaluation and their systems of updates, the limits are related to the capacity of provision of tools co-evaluated according to the methodology given the entropy of their production

## The psychosocial impacts of e-care technology use for long-term care recipients and informal carers

Presented by: Lea Lebar

*Co-Authors: Lea Lebar, Mateja Nagode, Simona Hvalič Touzery, Vesna Dolničar, Izidor Natek*

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**Conference Track:** Digital solutions

**Introduction:** With longevity and shortages in formal and informal care provision, e-care solutions are considered an important approach to support people in their own homes. ICT-based assistive services have the potential to improve the quality of life, safety, well-being and interpersonal relationships for long-term care recipients and their informal carers. However, little evidence is available about the potential of e-care services in relation to the reported psychosocial impact of end-users. The study aims to identify the psychosocial impact of e-care technology use among long-term care recipients.

**Aims and Objectives:** Data from a national project “Evaluating pilot projects in the field of long-term care in Slovenia” is used. The evaluation uses a mixed-methods design. E-care services were tested in 6-12 month intervention study using a one-group post-test only design. Long-term care services were available to adults that have applied and reached the eligibility threshold. Surveys were administered to care recipients and informal carers using standardized survey inventories (PIADS-10). The qualitative phase involved semi-structured interviews among e-care recipients and informal carers in the times of physical distancing measures during the COVID-19 pandemic, which is an important external factor in the study.

**Highlights/Results/Key Findings:** A total of 131 end users tested various e-care services, namely base unit with SOS button, wearable SOS button, fall detector, movement and door sensors, smoke detector, flood detector. Factor analysis of the indicators revealed two factors: 1. effects on perceived competencies (i.e. feeling competent and effective, being independent) and self-esteem (perceived higher self-confidence and well-being, feelings of happiness, security, feelings of power and control); 2. effects on perceived adaptability (ability to cooperate, try new things, and seize opportunities). The qualitative study revealed important positive and negative psychosocial effects on end users and informal carers. The main effects seem to be of psychological nature, especially for informal carers (i. e. a greater sense of security, certainty, calmness, relaxation and improved general well-being, less frequently also increased anxiety and fear).

**Conclusions:** The presentation will focus on the analysis of psychosocial impacts of e-care technology use for long-term care recipients. A mixed-method design is used, combining questionnaires and semi-structured telephone interviews with users of e-care services in the community setting in the time of physical-distancing measures due to COVID-19 pandemic.

**Implications:** The study has large sustainability potential. By testing proposed solutions in pilot activities and by studying their value, we might increase the likelihood of the inclusion of e-care services to Long-term care law, which represents a major step forward in the field of uptake of e-care technologies in Slovenia.

## The wicked problem of implementing ethics in AI-based healthcare applications: a scoping review

Presented by: Magali Goirand

*Co-Authors: Magali Goirand, Elizabeth Austin, Robyn Clay-Williams*

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**Conference Track:** People as partners in health and care, Digital solutions, Transparency of progress, results & impact

**Introduction:** While there is a strong culture of medical ethics in healthcare applications, AI-based Healthcare Applications (AIHA) are challenging the existing ethics and regulatory frameworks. While views on the benefits of AI in healthcare vary, the ontological and epistemic consequences of AIHA on its users are likely to be significant. For example, AIHA has potential to reshape the patient-doctor relationship. Understanding how ethics are implemented in AIHA is critical, yet it is still unclear how it is done. We will present the findings of a review that explored how ethics have been operationalised in AIHA.

**Aims and Objectives:** This review aimed to survey how AI ethics frameworks have been implemented and evaluated in healthcare applications, and map the scope, challenges and practices of these initiatives. We conducted a systematic scoping review, searching OvidMEDLINE, Scopus, EMBASE, Web of Science and grey literature related to the implementation of ethics frameworks in AI applications in healthcare published between 2015 and 2020. This scoping review followed the Joanna Briggs Institute's (JBI) guidance for systematic scoping reviews and the preferred reporting items for systematic reviews and meta-analyses statement (PRISMA).

**Highlights/Results/Key Findings:** 4444 peer-reviewed and grey literature articles were title and abstract screened, 480 underwent a full-text review. Narrative synthesis was performed on the 33 included articles. AIHA included Clinical Decisions Support Systems, drones, and Intelligent Assistive Technologies, such as virtual bots and robots. Operationalising ethics frameworks is a complex endeavour with challenges at different levels: ethics principles, design, technology, organisational, and regulatory, which calls for an interdisciplinary approach to AIHA. Among identified strategies, some offered proactive, contextual and organisational approaches involving stakeholders' consultations. Crucially, the balance of power between producers and users of AIHAs is unclear in the identified strategies and the decision-making process lacks transparency. While critical for achieving transparency and clarity, clear measures of success of the implementation of an ethics frameworks could not be found. Because the more widely adopted an AI system is, the safer it becomes, establishing trust in the system is a wicked issue.

**Conclusions:** Operationalising an ethics framework in AIHA requires contextual, proactive and inclusive approaches. Transparency of the process is needed, especially in light of the power imbalance between the consumers and the providers. Cross-pollination between computer, medical and social sciences promises to yield the most comprehensive ways to tackle this wicked issue.

**Implications:** There is a need to establish a dialogue for a shared meaning and understanding of AIHA to provide wholesome ethical foundations for its implementation.

While the review strived to include grey literature, private sector initiatives are likely underrepresented. Because of the language barrier, Chinese, Korean and Japanese initiatives are likely underrepresented.

## Cutting Edge Technology and Innovations Contributing to Integrated Care

Abstract ID: 135

### Telehealth in the COVID Era

Presented by: Audrey Devaney

*Co-Authors: Helena Ferris, Audrey Devaney*

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**Conference Track:** Population health needs and local context, Digital solutions

**Introduction:** There has been an unprecedented growth in the use of telehealth throughout the COVID 19 pandemic. Telehealth has enabled the delivery of essential healthcare services via remote consultations, while reducing physical contact with healthcare providers. Although the advantages of delivering healthcare to patients in their own home are undeniable, it is important to be mindful of the associated risk to the quality of care and the need for robust clinical governance.

**Aims and Objectives:** Telehealth provides accessible patient centred care through the use of video consultations, telephone calls, email or text messaging systems. It overcomes geographical barriers and is time efficient for both patients and clinicians alike. Its use is widespread in primary care, secondary care and in the community. However, implementation may be challenging as it requires changes to clinical processes, information technology, data protection and administrative processes. It is also important to recognise that telehealth is not appropriate for all consultations due to clinical need or patient preference. Some patient groups may be less digitally literate and may require more assistance.

**Highlights/Results/Key Findings:** It is essential that clinicians adopt a comprehensive framework for the clinical and operational use of telehealth, to ensure patient safety and quality of care are maintained. Several frameworks have been devised for the best practice use of telehealth. For example the

American Telemedicine Association Standards Framework,

American Medical Association Digital Health Implementation Playbook,

National Health Service (NHS) Guide to Good Practice for Digital Health and Data Driven Health Technologies or the

Irish Medical Council Telemedicine Phone and Video Consultations Guide for Doctors.

Irrespective of the framework used, the fundamental principles of professionalism, consent, confidentiality, record keeping and accountability are common to all.

**Conclusions:** Telehealth enables healthcare providers to maintain continuity of care while reducing unnecessary visits to healthcare environments. This supports public health mitigation measures and minimises the risk of transmission of COVID 19 to patients and healthcare providers.

**Implications:** Moving forward the challenge will be to integrate telehealth into existing health infrastructure in a secure manner.

## Cutting Edge Technology and Innovations Contributing to Integrated Care

Abstract ID: 151

### Timely access to Canadian primary care electronic medical record data for secondary use

Presented by: Noah Crampton

*Co-Authors: Noah Crampton*

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**Conference Track:** Population health needs and local context,Digital solutions

**Introduction:** To enable population-wide research and quality improvement, practice-based research networks (PBRNs) across Canada have been extracting and aggregating patients' Electronic Medical Records (EMR) data from primary care clinics to their servers in a privacy-preserving way. These PBRNs have the capability of producing quarterly extractions of de-identified data from multiple EMR vendors. However, current EMR data extraction processes only include limited data fields, and are manual and laborious, time-consuming and costly. As such, projects using PBRN-processed data are often less comprehensive and time-lagged, making project findings not as actionable for policymakers as they could be.

**Aims and Objectives:** To improve the timeliness and comprehensiveness of PBRN data acquisition processes, we developed and implemented a novel frequent, extract-transform-load (ETL) tool. The tool extracts patient EMR data from six OSCAR EMR-using clinics and automatically loads the data onto one of five target PBRN servers in either Ontario or B.C. A four-step method of Design, Develop, Test and Deploy was used. This encompassed building a fit-for-purpose system architecture, connectivity, tooling, and ETL application logic. Queries to validate the business logic were regularly executed against the transformed data. At project end, loaded data were then human-validated for completeness, accuracy, and timeliness.

**Highlights/Results/Key Findings:** Two types of deployment options were developed: 1) Distributed deployment, where an ETL server is located at a clinic's site; and 2) Centralized deployment, where an ETL server is located at the PBRN, with Virtual Private Network connections to a clinic's server. For each of the six clinics, the ETL tool was deployed in the production or back-up server environment using one of the two deployments options and has since been scheduled to automatically run daily. For one test clinic, the results indicate that with 22,122 patients included in the extract, 100% of all intended data fields were captured, including the progress note data tables, and data quality was significantly improved as compared to the previous manual extraction process. In this test clinic, extraction runtime dropped from 240 minutes to 54 minutes to extract all records, and to 9.5 minutes for the novel daily incremental extract.

**Conclusions:** We have succeeded in demonstrating a real-world ETL proof-of-concept that enables access to timely, high-quality primary care EMR data for secondary use in select clinics associated with the following PBRNs: UTOPIAN, NOSM-PBRN, EON, MUSIC and BC-PHCRN. Since operationalized, one research group has already requested access to the tool's data.

**Implications:** Primary care EMRs contain rich clinical data for health services research unavailable anywhere else. For this project, EMR vendor cooperation was limited. Ideally in the future, using this privacy-compliant, automated ETL tool at scale for all PBRN-affiliated clinics and EMR vendors could make project findings more comprehensive and timely.

## Implementing Integrating Care: Top-down Policies and Local Bottom-up Innovations

Abstract ID: 7

### Implementing a centralized assessment model for Foot and Ankle patients: An exploratory analysis

Presented by: Tamara Gotal

*Co-Authors: Tamara Gotal, Marsha Alvares, Johnny Lau, Samra Mian-Valiante*

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**Conference Track:** System wide governance and leadership, Transparency of progress, results & impact

**Introduction:** Foot and Ankle (FA) is an over-exhausted orthopedic service. In 2019 alone, over 1000 FA patients in Ontario were waiting for orthopedic consult with wait times around 127 days (1). Established centralized assessment models integrating advanced practice providers have emerged within UHN's orthopedic program to improve access to the right care for patients with complex musculoskeletal conditions. Our aim was to explore whether the FA patient population presenting to UHN was suited to a centralized assessment model to improve access to care and the integration of care delivered across the care continuum.

**Aims and Objectives:** Qualitative and quantitative data on FA patients from 2018-2019 seen within UHN's orthopedic program was obtained. Gender, age, and geographic location of patients was reviewed. Complexity was determined by need for surgery, surgery procedure type, and ASA level. Acute length of stay and weightbearing status were also captured. The care pathway was tracked from initial consultation to post-operative follow up. Process maps were developed to compare current and ideal states to identify current gaps and requirements of the FA population.

**Highlights/Results/Key Findings:** UHN's FA surgical population is 47% female and 53% male averaging 51.4 years of age, largely residing in the Greater Toronto Area region (73%). At least 39% (121) were deemed complex. The average acute length of stay was 8.3 days with 31% who were discharged needing supports: 21% to homecare, 6% to inpatient rehabilitation and 4% to convalescent care.

Key care gaps and challenges were identified:

- No centralized referral process resulting in significant delays in access to care with limited supports and guidance for patient while waiting for surgical consult.
- No follow-up on compliance or outcomes on 65% patients who were discharged home with outpatient rehabilitation recommendations.
- Lack of standard patient education, particularly around post-surgical recovery expectations, including prolonged periods of non-weightbearing resulting in surgical delays and extended acute hospital stay.
- Review of UHN ED visits identified that 7.5% returned to ED within 30 days of discharge with 4% readmitted.

**Conclusions:** The findings support expansion of a centralized assessment model to improve care for complex FA population by streamlining referrals for timely triage of surgical cases, supporting non-conservative management of non-surgical candidates, enhancing patient education for post-acute recovery, and assisting with effective care transitions for complex care needs of these patients.

**Implications:** A centralized assessment model with patient collaboration and co-design has the potential to decrease wait times for consult, support early identification of complex issues and comorbidities, and enhance delivery of a standardized care pathway to improve the care trajectory of these patients including reducing ED visits and readmissions.

## Implementing Integrating Care: Top-down Policies and Local Bottom-up Innovations

Abstract ID: 21

### Oral health in inpatients with psychiatric or substance use disorders

Presented by: Rolf Wynn

*Co-Authors: Rolf Wynn, Kristina Kantola, Elin Hadler-Olsen, Jan-Are Johnsen*

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**Conference Track:** Population health needs and local context

**Introduction:** There is an increasing focus on the co-occurrence of psychiatric and somatic disorders. People suffering from schizophrenia or severe substance use disorders have a shortened life expectancy, partly because they have an increased occurrence of somatic disorders. Patients with severe psychiatric disorders or substance use disorders often have a reduced ability to attend to their own care, including their diet, hygiene and the regular use of dental services. Social and financial challenges may contribute to the problem. The use of medication may result in oral dryness and subsequently in tooth decay and gum disease.

**Aims and Objectives:** While some prior studies from other countries have pointed to the challenges related to oral health in patients suffering from severe psychiatric or substance use disorders, we lack recent data from Norway that may inform us about the scope of the problem. There is a lack of information regarding which disorders and symptoms that are strongest associated with poor dental status. We also lack information about how the patients perceive the existing dental services and accordingly how one can adapt the services to increase their use and patients' satisfaction.

**Highlights/Results/Key Findings:** In our study, we will distribute a questionnaire and perform an examination of the participants' oral health to assess oral health and quality of life. We aim to include at least 200 participants. We will examine socioeconomic, structural and health related factors associated with oral health in patients with severe psychiatric disorders or substance use disorders. We will assess the use of dental services in these patient groups as well as any barriers they perceive in receiving necessary dental health services, including any lack of integration of services. The participants will be asked for suggestions regarding how to improve access and use of the dental services.

**Conclusions:** Prior research has suggested that many people suffering from severe psychiatric disorders and substance use disorders have poor dental health. In our study, set in Norway, we will collect data from questionnaires and clinical examinations to obtain up-to-date knowledge that might be used to improve the services.

**Implications:** We hope the findings of our study might be used to improve the access and use of the dental health services. Updated knowledge concerning the associations between psychiatric and substance use disorders and poor dental health might be used to adjust provider-patient communication and treatment strategies to patients' needs.

## Implementing Integrating Care: Top-down Policies and Local Bottom-up Innovations

Abstract ID: 49

### Improving Urgent Mental Health Care Pathways With Patients Rather Than For Patients: An Experience Based Co-Design Approach

Presented by: Michael Dunn

*Co-Authors: Katherine McCleary, Paula Blackstien-Hirsch, Michael Dunn, Susan Lalonde Rankin, Nadiya Sunderji, Sherrie Fournier, Cyndi Rowntree*

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**Conference Track:** People as partners in health and care

**Introduction:** Urgent psychiatric care programs are hospital- or community-based outpatient services that expedite access to mental health care for high-risk individuals, yet these services are rarely evaluated from the perspectives of clients (Bergmans, Ninkovic, Sunderji (2019)). Currently patients follow a standardized carepath from emergency departments (EDs) to inpatient psychiatry (Form 1) for those in acute mental health (MH) crisis. The process has not significantly changed since 2007. Experience based co-design (EBD), an inclusive approach that meaningfully engages both service recipients and providers, is being used to identify solutions and improve service pathways for those in crisis accessing urgent MH care.

**Aims and Objectives:** By improving the efficiency and efficacy of the existing urgent MH care pathway and reducing inpatient admissions for those who wouldn't require it if there were more timely access to community MH supports we will improve both patient and provider experiences in urgent MH care.

EBD aims to capture and understand perspectives of those with lived experience to identify process issues through a patient lens, in parallel with QI processes that identify issues through a provider lens. Patients and providers then co-design solutions. This initiative will generate solutions/care pathways that bridge system-level gaps between MH crisis services in Simcoe Muskoka.

**Highlights/Results/Key Findings:** This initiative is in progress, and thus outcomes are not yet available. However, the highlights of the process to date includes 6 service recipient interviews conducted by a patient experience leader with lived experience (see Contributions below). The team is still recruiting and interviewing patients to ensure a representative sample from both regions. 12 interviews were conducted with local ED and Crisis Agency leadership staff, 11 ED physicians responded to our survey, and 11 ED leaders and Crisis Response Workers participated in process mapping.

The Improvement Event (September 30th, 2021) is to be attended by providers and patients from both regions. Goals of the event include:

- Validate the current state process and the identified issues, consolidated through interviews (above) (EBD methodology Capture and Understand phases)
- Create a shared understanding of opportunities for improvement, and
- Co-design change ideas and develop plans for prototyping and testing the changes. (EBD methodology Improve Phase)

**Conclusions:** Both region's teams will test the changes and measure the ongoing impact (EBD methodology Measure phase), and report to the planning committee on a regular basis. Once targets are achieved for improved efficiency and patient experience, teams will implement sustainability plans, including ongoing feedback loops from providers and patients.

**Implications:** Building on successful change ideas and using the EBD methodology in a range of other projects, we intend to replicate the process throughout Simcoe Muskoka. The systems integration this initiative represents fully aligns with, and is supported by the work of Central Ontario Health Team for Specialized Populations.

## Implementing Integrating Care: Top-down Policies and Local Bottom-up Innovations

Abstract ID: 55

### Utilizing a novel model of care to improve wait-times and diagnosis of patients with upper-extremity pain

Presented by: Christopher Hawke

*Co-Authors: Christopher Hawke, Christian Veillette, Timothy Leroux, Leslie Soever*

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**Conference Track:** Population health needs and local context, Workforce capacity and capability

**Introduction:** The upper extremity is a complex joint prone to recurrent pain<sup>1</sup>. Historically, diagnostic accuracy in the community is poor (<50%)<sup>2</sup>, leading to a high number of referrals to specialists. Concurrently, this has increased wait times for patients to initiate appropriate treatment. The Extended Scope Physiotherapist (ESP) shoulder and elbow clinic started in 2014 to improve wait times, reducing time to surgery (for patients requiring surgery), and provide a collaborative, shared care model. Patients with shoulder and elbow pain are referred from primary care and other medical specialists, within Ontario, to two upper extremity specialist orthopaedic surgeons.

**Aims and Objectives:** The ESP clinic is staffed by an Advanced Clinician Practitioner in Arthritis Care (ACPAC) Program-trained physiotherapist who provides specialist upper extremity assessment, education and management within an inter-professional team. All referrals to the two orthopaedic surgeons are triaged and then assessed by the ESP independently or in a tandem clinical format with the ESP and the surgeon. The ESP completes a comprehensive history and physical examination and orders imaging and laboratory investigations as indicated. Wait times, patient satisfaction and diagnostic agreement was collected.

**Highlights/Results/Key Findings:** The clinic has received an average of 116 referrals per month over the past 12 months. In that time, 778 new patients have been assessed, with average wait times, by assigned priority(P); P1=2.5 days, P2=11.5 days, P3=21.5 days, P4=23 days. The historical average wait time for patients to be assessed by orthopaedic surgeon was 6 months. Patient satisfaction with ESP Clinic has been rated as very good-excellent. Diagnosis was collected at the independent ESP assessment and the again at subsequent surgical assessments. Results show that over a 12-month period the diagnostic agreement was 86% between the ESP and surgical team.

**Conclusions:** The ESP clinic was established to reduce patient wait times while improving diagnostic accuracy for patients with upper extremity pain. The ESP clinic has shown high diagnostic agreement with the specialist surgeons and has reduced wait times, while showing high patient satisfaction.

**Implications:** Utilizing ACPAC trained ESP clinicians shows strong potential for improving patient care in Ontario. The results from a 12-month analysis of the clinic are promising and show that an ESP working closely with the surgical team is an effective model of care.

## Implementing Integrating Care: Top-down Policies and Local Bottom-up Innovations

Abstract ID: 81

### Bringing Integrated Care Home: Piloting a Patient Care Navigation Role for Total Joint Replacement Patients

Presented by: Sandralee Rose

*Co-Authors: Samra Mian-Valiante, Silvi Groe, Christian Veillette, Michael Zywiell, Rajiv Gandhi, Sandralee Rose*

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**Conference Track:** People as partners in health and care

**Introduction:** Over 137,000 patients in Canada receive life-changing hip and knee replacement surgeries at an annual cost of \$1.4B . Due to the significant personal and system impact, ensuring patients achieve the best outcomes and experience from their surgery is critical. Patients have expressed they want connected care, delivered at the right time and place. Early assessments by University Health Network's Schroeder Arthritis Institute identified that key care and communication gaps in transitions across the total joint replacement (TJR) journey lend themselves to implementing a patient care navigator (PCN) role to meet patient expectations.

**Aims and Objectives:** The aim was to improve the quality and value of perioperative care for TJR patients within a high volume orthopaedic program, through the introduction of a PCN role. This quality improvement initiative used an iterative plan-study-do-act approach. The PCN supported patients who underwent joint replacement surgery by one of two orthopedic surgeons starting in July 2020. This involved a PCN call to patients 48 hours pre- and post-surgery to review surgery/recovery planning, provide education, and address patient questions. Data were collected between July 2020- January 2021, including qualitative interviews, retrospective chart reviews, and patient satisfaction surveys. REB exemption was obtained.

**Highlights/Results/Key Findings:** Of the 249 patients recruited, 162 patients completed both pre-op/post-op PCN calls. Patients reported high satisfaction (99.5% (n= 162)). Qualitative interview evaluations revealed that patients felt the PCN helped to reduce their anxiety, reassured them, and better connected them to their care team. Patients also reported that the education/information across their patient journey was overwhelming. About 88 patients were found to have risks to their recovery: educational material misplaced/not provided (58%), misunderstood surgery instructions (32%), no co-pilot arranged (6%), lack of equipment (6%), communication barriers (5%) and other (4%). The PCN worked with patient to address these issues prior to surgery. During post-operative calls, patients concerns were: pain (20%), gastrointestinal symptoms (17%), swelling/numbness (13%), medication (7%), fever (4.2%), surgical site (6%) and other (3%). These were largely managed by the PCN (64%), with some requiring an interdisciplinary approach for resolution [surgeon (17%), physiotherapist (12%), family physician (4%) and other (3%)].

**Conclusions:** The findings highlight the benefits of a PCN in improving care quality of patients undergoing TJR and enabling their recovery at home. This is especially important as hospital stays for TJR becoming exceedingly shorter. PCN roles are an ideal opportunity to integrating hospital care with a patient's recovery at home.

**Implications:** The patient value for a PCN in our TJR program suggests an important role in enabling integrated care models. Sustainable system level PCN care models that support patients with transitions to the home and community are needed. Further work will be explored to understand the equity aspects of the model.

## Implementing Integrating Care: Top-down Policies and Local Bottom-up Innovations

Abstract ID: 127

### Impact of assessment of long-term care insurance management and financial incentives for local governments: The three years experience of Japanese-style Managed Care to Promote Integrated Care

Presented by: Takako Tsutsui

*Co-Authors: Takako Tsutsui*

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**Conference Track:** System wide governance and leadership

**Introduction:** Japan launched its long-term care insurance system (LTCIS) in 2000. Since then, over the past 20 years the number of beneficiaries and costs continued to rise, particularly sharply in the last few years. For this reason, in 2018, the central government of Japan introduced "financial incentives to enhance insurer's functions" in order to evaluate management capabilities of different levels of local governments; municipalities (direct insurers of LTCIS) and prefectures, in regard with their contribution to the community-based integrated care system (CBICS) and financial incentives were provided to each government based on the result of the evaluation.

**Aims and Objectives:** To find out the limitations in governance of the Ministry of Health, Labor and Welfare (MHLW) during the three years (2018-2020) of implementation of the first financial incentive program for local governments in Japan based on their management capacities as insurers, and to discuss possible future measures to solve these limitations.

**Highlights/Results/Key Findings:** There were high expectations when the financial incentive program was introduced. However, due to MHLW's illogical action in which they changed the items of evaluation indicators every year, it was impossible to measure progress and effectiveness of CBICS and caused confusion among local governments. Moreover, MHLW launched a new financial incentive program for local governments in 2020 and it was based on an old-fashioned health promotional population-based scheme for elderly people, even though there were no evidence to support effect of this type of scheme. This led local governments to further distrust MHLW and to question the validity of the incentive program itself - it was revealed for the first time in a research project commissioned by MHLW in 2020. In this report, they call for a fundamental review of the current indicators and establishment of a new top-down policy.

**Conclusions:** This program which was aimed at minimizing regional disparities in integrated care by means of financial incentives resulted in creating even greater regional disparities than those in three years ago. For this reason, a revised financial incentive program that would support local government initiatives was launched in 2021.

**Implications:** Despite MHLW's mismanagement, some local governments succeeded in establishing effective CBICS through their own bottom-up innovation. This is a new trend of integrated care policy making in local governments in Japan and it is considered particularly important for decision makers to discuss improvements in the future policies and governance.

## Implementing Integrating Care: Top-down Policies and Local Bottom-up Innovations

Abstract ID: 137

### Co-Designing Patient Care Pathways for Population Health Management

Presented by: Alexander Smith

*Co-Authors: Alexander Smith, Amber Alpaugh-Bishop, Vala Gylfadottir, Jacobi Elliott, Robert McKelvie, Sarah Jarmain, Matthew Meyer*

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**Conference Track:** Population health needs and local context

**Introduction:** The Western Ontario Health Team (WOHT) is a newly formed entity aiming to support the primary and secondary healthcare needs of a population of over 514,000 in London-Middlesex, Canada. Adopting a population health management approach, the WOHT “strives to address health needs at all points along the continuum of health and well-being through participation of, engagement with, and targeted interventions for the population” by building (and implementing) integrated, patient-centred care pathways for Chronic Obstructive Pulmonary Disease (COPD) and Congestive Heart Failure (CHF).

**Aims and Objectives:** The key purpose of developing care pathways is to build the foundations of a population health management strategy. Specific objectives will be guided by a co-design process [refer to Abstract: A Co-Design Approach for System Transformation], and will include building care pathways with a sustained care relationship, informing the development of a shared care record, and laying the infrastructure for patient individualized care plans. The process of developing the care pathways will have a secondary objective of building relationships and partnerships which can support implementation efforts across stakeholders.

**Highlights/Results/Key Findings:** Care pathways leverage Business Process Model and Notation, which is an emerging standard being used in healthcare. The result will be an end-to-end care pathway including identification, prevention, assessment/diagnosis, management, and rehabilitation. Care pathways are being focused on COPD and CHF patients, but will be inclusive of holistic elements of care including screening and managing social determinants of health. Care pathways will also be iteratively co-designed with patients, from their perspectives, so they can both be a part of the design process and use the pathway as a self-management tool. Additional results from this exercise will include:

- A patient-centred pathway including a minimum standard set of activities to inform individualized care plans and patient education/self-management;
- A capacity planning resource which can be used to make system decisions on resource allocation and acquisition;
- A quality improvement tool which can be regularly evaluated to promote standardization, integration, and/or transformation where appropriate.

**Conclusions:** Developing care pathways is a foundational step in designing a broader population health management approach, which will include system evaluation and digital health solutions. Both the process and end-product of care pathway development have tangible outcomes which can support system transformation and population health management.

**Implications:** Care pathways are focusing initially on the minimum standard set of activities which should be considered for all patients, which makes them scalable to other jurisdictions regardless of regional variation.

## Implementing Integrating Care: Top-down Policies and Local Bottom-up Innovations

Abstract ID: 138

### Health System Modelling and Notation: A Method for Standard Care Pathway Design

Presented by: Alexander Smith

*Co-Authors: Alexander Smith, Nancy Dool-Kontio, Adam Dukelow, Sarah Jarmain, Matthew Meyer*

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**Conference Track:** Population health needs and local context

**Introduction:** Care pathways and process maps are a common tool in health system planning and transformation, but approaches vary significantly making existing care pathways difficult to compare and scale. Health system modelling and notation (HSMN) aims to standardize a method of capturing care pathways by leveraging Business Process Model and Notation (BPMN), a standard “consolidated graphical notation used to outline process activities, their logical and temporal ordering, and the resources responsible for their execution.” HSMN further expands on this standard notation by describing a specific approach to healthcare care pathway design and application.

**Aims and Objectives:** Care pathways can be used for a variety of purposes, including: documenting and standardizing disease pathways, clarifying healthcare provider roles, developing patient individualized care plans, and as a quality improvement tool for making collaborative adjustments to current models of care. The HSMN approach also includes capacity for simulation, whereby health systems can simulate patient flow and resource utilization through a developed care pathway by inputting process data such as activity-based timing, patient distribution, available resources, and activity-based costs. These simulations can inform system capacity planning.

**Highlights/Results/Key Findings:** The HSMN approach builds pathways through a layered method within each disease group. HSMN begins with building a co-design team to include all perspectives and guide pathway development (refer to Abstract: Co-Designing Patient Care Pathways for Population Health Management). Information is added to pathways including:

- Examining available literature and best practice guidelines to seek alignment
- Co-designing a series of “always for everyone events”, or a minimum standard set of care activities that should be completed for all patients on any given step of the pathway
- Defining and prioritizing which roles can fulfill each activity
- Simulating the proposed future state system to assess impact on patient flow, capacity planning, and resource utilization
- Iterating design through a process of continuous quality improvement

At each step through the HSMN approach, Delphi panel surveys can be used to develop consensus through a co-design method with patients, caregivers, providers, and system administrators.

**Conclusions:** Care pathways are a powerful tool for system transformation and planning. HSMN differs from traditional pathways in that it focuses on the patient’s perspective, can be expanded/minimized to the appropriate level of detail for each user, includes administrative and non-clinical flow elements, and has capacity planning functionality.

**Implications:** The use of the BPMN notation and HSMN methodology are key enablers towards transferability. A standard approach to care pathways allows for the sharing of pathways across health system jurisdictions as well as the comparison of pathways for different disease groups.

## Implementing Integrating Care: Top-down Policies and Local Bottom-up Innovations

Abstract ID: 153

### Regional, standardized approach to the development of processes within primary care for proactive identification and intervention of frailty and guidelines for accessing specialty geriatric physicians

Presented by: Jody Glover

*Co-Authors: Jody Glover, Kelly McIntyre Muddle*

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**Conference Track:** Population health needs and local context, Workforce capacity and capability, Digital solutions

**Introduction:** The South West Frail Senior Strategy is improving care for older adults and caregivers in Southwestern Ontario. Through literature review, clinical expert interviews, and broad engagement of providers, older adults, and caregivers, processes to proactively identify frailty and intervene and guidelines for access to specialty geriatric physicians were identified as needs. Despite the evidence to support proactive identification and intervention, there is little guidance in the literature in outlining determinants of access to geriatric physicians. Through the development of these processes and guidelines, decision making across the region will be more standardized to support equitable and evidence-based care.

**Aims and Objectives:** The South West Frail Senior Strategy is improving care for older adults and caregivers in Southwestern Ontario. Through literature review, clinical expert interviews, and broad engagement of providers, older adults, and caregivers, processes to proactively identify frailty and intervene and guidelines for access to specialty geriatric physicians were identified as needs. Despite the evidence to support proactive identification and intervention, there is little guidance in the literature in outlining determinants of access to geriatric physicians. Through the development of these processes and guidelines, decision making across the region will be more standardized to support equitable and evidence-based care.

**Highlights/Results/Key Findings:** In alignment with the literature, frailty is not well recognized in its earlier stages by primary care providers across the region. To support proactive identification, they are identifying a need for tools/resources to be built in their daily processes and Electronic Medical Record with a range of options to suit their setting. Additionally, for those older adults with no primary care support, processes also need to be tailored for acute care hospitals and their emergency departments.

As there is little literature on guidelines for accessing geriatric physicians, experience and expert opinion have primarily informed the creation of these guidelines. The guidelines include: determinants of access, considerations for rural/urban settings and local resources, and conditions for consulting in-person versus leveraging technology.

Together, these process for primary care and guidelines to access specialty geriatric physicians will provide a more coordinated and standardized approach to ensure equity and best practice across the region.

**Conclusions:** The development of standardized processes and guidelines that reflect and consider the unique needs/resources across the region will support older adults with frailty and their caregivers in receiving the right care, in the right place, and at the right time.

**Implications:** These processes and guidelines will assist other regions in their pursuit of developing a system of integrated care that will serve older adults living with frailty and their caregivers. Considerations for urban/rural settings, variety of primary care settings, as well as the use of technology will have broad applicability.

## Implementing Integrating Care: Top-down Policies and Local Bottom-up Innovations

Abstract ID: 155

### Identifying Older Adults with Changing Care Needs: A Co-designed Community-Based Screening Tool

Presented by: Kaitlin Siou

*Co-Authors: Kaitlin Siou, Jocelyn Charles, Catherine Convery, Teri Henderson*

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**Conference Track:** People as partners in health and care, Resilient communities and new alliances, Workforce capacity and capability

**Introduction:** Older adults 65 years and older are the fastest-growing age group in Ontario. Older age increases the likelihood of living with a chronic illness or disability, which are key demographic drivers of healthcare utilization. There is a need for more integrated care pathways in the community for older Ontarians to receive timely access to care earlier in an illness and/or disability trajectory to reduce dependence on hospital visits for acute care and improve quality of life. Importantly, this means novel collaborative approaches to help with early identification of new or changing care needs.

**Aims and Objectives:** The aim of our quality improvement project is to improve early identification of changing care needs in older adults in the North Toronto Ontario Health Team region. The development of a community screening tool was based on a review of the literature, clinical experience, and co-design with patients and families, community organizations and agencies, and interprofessional healthcare providers. Planning also included identifying pathways for communicating results of the screening tool within a patient's circle of care. The screening tool was then piloted in quality improvement cycles from April 2020 to January 2021 in two community settings.

**Highlights/Results/Key Findings:** Early identification of changing needs is enabled by a novel screening tool made up of three screening questions about acute changes in health, functional decline, and social isolation, with the goal of considering different dimensions of health to help identify older adults who may benefit from earlier care assessments. The questions are written in non-clinical language, with the view that they could be asked by anyone in the community. This could include building superintendents, meal deliverers, community volunteers, outpatient pharmacists, etc. The screening questions are designed for community members, recognizing that they may have different relationships and that their interactions may also be more frequent, which may help ensure that changing needs are recognized earlier. In our pilot study, 14% of 109 screening tools completed identified older adults requiring follow-up by the healthcare team. Of these identified adults, 64% required virtual or in-person follow up.

**Conclusions:** This simple, co-designed three-question screening tool to identify older adults in the community with changing care needs represents a valuable step in geriatrics and palliative care pathways. It highlights opportunities for further partnerships between interprofessional clinicians and non-clinician community members to improve the health of their community.

**Implications:** There are ongoing plans for the scale-up of this screening tool. This project was piloted in environments where some level of healthcare connectedness was already established. Maximum efficacy of this tool would likely occur with identification of older adults with care needs who do not have such existing contact.

## Implementing Integrating Care: Top-down Policies and Local Bottom-up Innovations

Abstract ID: 156

### The integrated intimate partner violence education in DMS program: policymaker, health facilities and health provider

Presented by: yong jun yang

Co-Authors: yong jun yang

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**Conference Track:** System wide governance and leadership

**Introduction:** IPV (Intimate partner violence) is a critical public health issue that causes morbidity and mortality worldwide. DMS (Diagnostic Medical Sonographer) can play a crucial integrated role in assisting radiologists providing IPV services. Because radiologists have limited personal contact during Virtual Health, but DMS encounters patients directly.

Health facilities include Education institutes, clinics, health care networks for integrating-coordinating of delivering IPV services. However, Patient-centred teams have health care providers, families, and patients responsible for engaging people-centered, comprehensive, continuous, and coordinated IPV services.

Educating prospective DMS about IPV presents challenges, as DMSs have limited knowledge and guidelines for integrated IPV services.

**Aims and Objectives:** Explore the feasibilities that Policymakers provide integrated IPV care guidelines for DMS education. Health facilities (Educational institutes and clinics) accommodate integrated IPV care guidelines into the DMS curriculum. As a result, health providers (DMS) are aware of IPV's risks and health consequences against women and participate in integrated healthcare proactively.

**Methods:**

The comprehensive literature search for PubMed/MEDLINE, Scopus, Google Scholar, and DMS association website from Jan 2018 to June 2021 was conducted. Varying combinations of keywords "domestic violence" "intimate partner violence" "Diagnostic medical sonographer curriculum" was searched. Publications were collected manually and meticulously reviewed for contained data relevant for

**Highlights/Results/Key Findings:** First, DMS professional standards from CPSO, practice parameters from ARDMS, Sonography Canada, and guidelines from CMRITO reveal no DMS educational contents to address integrated IPV care strategies.

Second, the DMS association website does not contain integrated IPV information, which is already underreported.

Third, the DMS program from college tends to de-emphasize the IPV issue, which is not necessarily included in the DMS curriculum according to the National competency profile.

Fourth, IHF (Independent Health Facilities) hire Virtual Health that requests radiologist's off-site consultation, limiting the opportunity to see bruises or other signs of IPV physical trauma. In addition, remote telemedicine hampers the ability of radiologists to gather nonverbal cues.

Fifth, without knowing the risks and health consequences of IPV against women, DMS cannot proactively participate in integrated IPV first-line support, assist the radiologists in identifying victims, and refer them to the radiologist for appropriate support services.

**Conclusions:** Policymakers should update essential DMS educational guidelines to address integrated people-centered IPV services.

Health facilities and DMSs must overcome inconsistently screening due to limited time and resources, reluctance to possibly offend the patient, insufficient training, and strained reimbursement. Furthermore, it is essential to acquire adequate government and institutional policymaker's support.

**Implications:** This single institute research has limitations to address full-view integrated people-centred IPV services. Further multiple institute study needed.

Integrating guidelines and Health facilities policies into the DMS curriculum need widely accepted for IPV's screening and intervention.

## Implementing Integrating Care: Top-down Policies and Local Bottom-up Innovations

Abstract ID: 159

### Co-designing and implementing tools for an integrated approach to managing mental and occupational health issues in primary care

Presented by: Matthew Menear

*Co-Authors: Matthew Menear, Cynthia Cameron, Kathleen Lemieux, Marie-Thérèse Lussier, Jean-Daniel Carrier, Patrick Ayotte, Alessandro Pozzi, Chantal Sylvain*

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**Conference Track:** System wide governance and leadership, Digital solutions

**Introduction:** Mental and stress-related disorders such as depression, anxiety and burnout are highly prevalent and often managed in primary care. These conditions often impact people's ability to work and are a primary cause of sick leave. Family physicians are the main prescribers of sick leave and play a critical role in managing their patients' mental health problems and deciding on the timing and conditions for a return to work. Yet, family physicians receive little training in work-related issues and their practices related to mental and occupational health issues can vary widely.

**Aims and Objectives:** The aims of our study were to co-design new digital tools to support a person-centered, evidence-based and integrated approach to the primary care management of mental health-related sick leave and to evaluate the implementation of these tools. This study is taking place in three primary care clinics in Quebec, Canada. In study phase 1, our interdisciplinary team used a user-centred design approach to develop EMR templates that could be used to improve the management of sick leave at the point of care. In phase 2, we are conducting a multiple case study examining implementation of the tools by family physicians.

**Highlights/Results/Key Findings:** Our co-design approach involved five design cycles that took place over an 18-month period. We have developed two digital tools (EMR templates): a) a tool to support the initial assessment and treatment of common mental disorders and the need for a sick leave from work, and b) a tool to support a systematic follow-up of the patient's sick leave and the preparation for a return to work. Phase 2 involves family physicians at each study site testing the tools with 10 of their patients experiencing a common mental disorder and work-related issues (e.g. sick leave, return to work). We are assessing organizational readiness for knowledge translation at each site and are performing ongoing interviews and follow-ups with physicians to collect data on their adoption of the tools, their acceptability, and the barriers and facilitators to their use in routine care. Phase 2 is currently ongoing.

**Conclusions:** This study emerged from the concerns of family physicians and other primary care providers who recognized a need for greater supports to manage mental health-related sick leave and to improve the integration of mental health and occupational health care in primary care.

**Implications:** The digital tools that our team has created are available in both French and English and can be adapted to various electronic medical record (EMR) platforms. They can thus be easily integrated within the busy practices of family physicians and offer an evidence-based source of support at the point-of-care.

## Implementing Integrating Care: Top-down Policies and Local Bottom-up Innovations

Abstract ID: 182

### Systematic Review of Neonatal Risk Evaluation Scales

Presented by: Ruth Jimbo

*Co-Authors: Ruth Jimbo, Xavier Sanchez, Luciana Armijos, Betzabé Tello, Ivan Dueñas Espín*

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**Conference Track:** Population health needs and local context

**Introduction:** In Ecuador, according to the National Institute of Statistics and Census Institute, in 2018 the infant mortality rate was 12.2 deaths per 1,000 live births and the neonatal mortality rate was 6.0 deaths per 1,000 live births. Infant mortality is a useful indicator of the health's state of a population and allows inferring the state of socioeconomic conditions of a country. Several tools have been developed to reduce infant and neonatal mortality, among them the measurement of mortality risk through a scoring system are the most used. These tools allow the timely attention, management, and treatment of groups according to

**Aims and Objectives:** To carry out a systematic review of the available scientific literature of neonatal mortality risk scales in order to determine their usefulness for the Ecuadorian context. A literature search was performed in MEDLINE, EMBASE, The Cochrane Library and gray literature sources, to identify studies published up to December 2018. Data were selected and extracted by two reviewers independently. The main outcome is mortality evaluated through risk scales applied to neonates. Other secondary outcomes considered were hospitalizations, hospital readmissions, unscheduled consultations, and emergencies. The PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) flow chart of the study identification and selection.

**Highlights/Results/Key Findings:** A total of 7448 studies were identified, which resulted in a final selection of 3 studies that met the inclusion criteria. The selected studies included scales that used laboratory parameters and were carried out in neonatal care units and made comparisons between different SNAPPE II and CRIB II scales of neonatal risk prediction. The two scales include both clinical and laboratory variables. The results regarding the prediction of mortality in neonates were similar for the SNAPPE II scale and the CRIB II scale with AUC of 0.913, (SE) 0.014; SNAPPE-II AUC 0.907, (SE) 0.012 for mortality prediction. A meta-analysis was not possible due to heterogeneity in the results of the identified studies. No studies were found regarding to the secondary outcomes. There were no scores to determine the neonatal risk that could be apply in the country because not all of the blood markers are available in the

**Conclusions:** Neonatal risk scales can be used to predict risk of neonatal mortality, however there is limited evidence on which scale is best for the purpose. Several proposed scales include variables related to laboratory markers that are not always included in the management of patients in the Ecuadorian context, making its

**Implications:** Integrated newborn care should include elements of risk assessment. Existing scoring systems are unsuitable for resource-limited settings which lack investigations like pH, pO<sub>2</sub>/FiO<sub>2</sub> ratio, base excess, and other laboratorial inputs. After a systematic review of the published scientific literature, it was not possible to identify a risk scoring system that

## Implementing Integrating Care: Top-down Policies and Local Bottom-up Innovations

Abstract ID: 191

### Understanding Your Integration Journey: Overview and Lessons Learned from HSO's Integrated Care Assessment Tool

Presented by: Samantha Laxton

*Co-Authors: Samantha Laxton, Jennifer Wilkie, Kasia Bruski*

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**Conference Track:** Shared values and vision, Population health needs and local context, People as partners in health and care, Resilient communities and new alliances, Workforce capacity and capability, System wide governance and leadership, Digital solutions, Aligned payment syst

**Introduction:** In May 2021, Health Standards Organization (HSO) launched the HSO Integrated People-Centred Health Systems (IPCHS) Standard. It is intended to guide implementation of integrated care initiatives.

When engaging stakeholders in developing the IPCHS Standard (including patients, policy makers, and service providers), HSO heard that many systems around the world that given its aspirational nature and the maturity of many integration initiatives, there is a need for a process and/or tool that can help health systems identify their current state towards implementing integrated care and therefore clarify next steps for implementation.

**Aims and Objectives:** In response to this need, HSO has developed a pilot Integrated Care Assessment Tool (ICA) informed by the IPCHS Standard. The aim of the ICA is to help systems understand their integration progress to date on a spectrum from "Co-exist" to "Integrated" and therefore clarify their goals and priority next steps for implementation. Other anticipated benefits of the tool include understanding roadblocks and closing the gap between design and practice.

The development of the pilot ICA was guided by a cross disciplinary expert panel that included balanced representation from patients, policy makers, service providers, health professionals, and researchers.

**Highlights/Results/Key Findings:** To pilot the ICA, HSO has convened a collaborative of six integrated networks across Canada aimed at improving integrated care for youth mental health and addiction services. Each network is at a different state of maturity and scale, ranging from small community start-ups to provincial programs that have been in place for several years. The ICA is being piloted with the networks from June-October 2021.

Anticipated areas of feedback and lessons learned include:

- Common network integration challenges and roadblocks
- Identification of integration leading practices among the networks
- Techniques for how to effectively engage clients and patients in the assessment
- Tool design and functionality
- Appropriate assessment delivery methods (via conversational facilitation or self-assessment)
- Capacity building techniques for self assessment
- Assessment content

It is anticipated that at the time of the NACIC conference, HSO will be able to share these lessons learned.

**Conclusions:** Becoming a learning system is an important function of an integrated care network. This requires regular assessment against evidence informed practices as part of continuous improvement activities. Therefore, HSO's ICA provides networks with an opportunity to further the successful implementation of their integration goals through regular evidence-informed assessment of integration.

**Implications:** HSO's ICA is intended to be customizable to a network's needs. As such, it is neutral in nature with respect to population focus, geography, and local context. Also, it can be utilized by policy makers, and/or service providers.

HSO is intending to finalize and launch the ICA for use internationally.

## Implementing Integrating Care: Top-down Policies and Local Bottom-up Innovations

Abstract ID: 213

### Improving care, services and supports for older adults living with frailty in the KW4 community: Integration an enabler; co-design an imperative

Presented by: Jane McKinnon Wilson

*Co-Authors: Don Wildfong, Jane McKinnon Wilson, Christine McLellan, Caitlin Agla*

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**Conference Track:** Shared values and vision, Population health needs and local context, People as partners in health and care, Resilient communities and new alliances, Workforce capacity and capability, System wide governance and leadership, Transparency of progress, results & im

**Introduction:** Since 2019, the Waterloo Wellington Older Adult Strategy (WWOAS) has worked collaboratively with the KW4 OHT, representing Kitchener, Waterloo, and the Townships of Wellesley, Wilmot and Woolwich to plan, implement and evaluate activities in support of the Frail Elderly priority population. Both share an ongoing commitment to optimize the health of an aging population, strengthen the performance of our health system and achieve balance across the Quadruple Aims. Together, they have demonstrated an authentic commitment to advancing co-design approaches with patients, caregivers, healthcare and community support service organizations and providers. A number of ongoing improvement initiatives are currently under evaluation.

**Aims and Objectives:** Since 2018, the WWOAS has worked to address health system improvements that promote and support healthy aging; prevent and manage chronic disease; promote optimal aging at home for older adults with multiple chronic conditions; provide specialized care for those living with frailty; and, support caregivers.

For over two years, the WWOAS and KW4 OHT have successfully advanced strategic and operational efforts to better support older adults living with frailty by: leveraging subject matter expertise at the system/service delivery levels; harnessing momentum on shared priorities across the system; thoughtfully aligning with ongoing/future initiatives; and, adopting, adapting and building on evidence-informed recommendations.

**Highlights/Results/Key Findings:** Working groups, with integrated care as a key goal, have begun this work through intentional and thoughtful co-leadership, recruitment, terms of reference, and priorities to lay a foundation for true engagement.

Expanding partnerships between healthcare and community-based service organizations has also proven pivotal to ensuring service stability, supporting caregivers, decreasing hospitalization for conditions best managed in the community; reducing premature onset of frailty; and improving wait times to specialized geriatric services.

Key learnings include deepening engagement with older adults and caregivers, co-design practices at system/service levels, strengthening collaborative leadership and inter-professional practice, anchoring change management and team building on shared norms and values, and continuing quality improvement.

**Conclusions:** Normalizing an integration and co-design framework offered common language to address potential barriers and opportunities to deepen integration, serving as a basis for improvement and innovation at multiple levels (system, vertical and horizontal) and the appropriate targeting of interventions (i.e. normative, professional, functional, service, clinical and organizational) for system strengthening.

**Implications:** As a learning health system, we have shared in reflection, growth, adaptation and innovation — critical through the pandemic response/recovery — sharpening our ability to implement integrated service delivery models; support frontline providers; support older adults at risk; engage older adults and caregivers; and, participate in health system transformation at provincial/local levels.

## Meaningful Partnership with Patients, Families and Citizens

Abstract ID: 3

### VALUECARE: CO-DESIGNING AN ICT SUPPORTED INTERVENTION PLAN FOR FRAIL OLDER PEOPLE IN VALENCIA, SPAIN

Presented by: Mirian Fernández

*Co-Authors: Rachael Dix, Mireia Ferri-Sanz, Mirian Fernández, Elena Rocher, Tamara Alhambra-Borrás*

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**Conference Track:** Shared values and vision, People as partners in health and care, Digital solutions

**Introduction:** ValueCare is an EU H2020 funded project (No 875215) which applies the principles of 'value-based care' using an integrated health and social care approach, and is supported by a robust, secure, and scalable digital solution in line with the nine pillars of Integrated Care. In the Valencia pilot (Spain), the aim is to improve the quality of life of both older people (over 65 years old) suffering from frailty, and that of their families. It also aims to improve staff satisfaction and greater efficiency in the use of resources and coordination of care.

**Aims and Objectives:** From October 2020 to February 2021, the Valencia pilot researchers conducted a process of co-design to develop the integrated value-based concept and digital solution to support a personalised care pathway for frail older people. A total of 52 participants were engaged in 28 different co-design activities. All agents participating in the delivery of care were involved (older people, formal and informal caregivers, social and health care professionals, ICT experts, hospitals Managers, municipal social care services, among others). Co-design activities were adapted to the Covid-19 situation, combining in-person and virtual meetings with a reduced number of participants. All activities were recorded.

**Highlights/Results/Key Findings:** The results of the co-design activities were analysed to define the value-based integrated care concept and requirements for the ICT solution. Regarding the value-based concept, specific outcomes for frailty were discussed with professionals. Older people's psychosocial needs are not being met under the current siloed health and social care systems, due to lack of coordination and personnel. A stronger emphasis should be placed on preventative actions and patient empowerment. An integrated social and health care system would minimise the effort and time needed to receive a more personalised and improved care plan. Regarding the ICT solution, for the older person, the solution must be intuitive, easy to manage, with minimum text and more use of images and icons, voice controlled, and friendly. For professionals, the solution must not imply a duplication of tasks and its benefits must be clear.

**Conclusions:** An integrated intervention plan for frail older people and a supportive ICT solution have been developed based on the co-design results. Both will be tested during 12-months in a group of 120 older people (plus 120 control group).

**Implications:** The co-design results can be used to develop other digital solutions for integrated care in other settings addressing the same target group (frail older people). Moreover, the methods applied to engage agents during the pandemic can be transferred to other researchers willing to develop co-design with the current social restrictions.

## Meaningful Partnership with Patients, Families and Citizens

Abstract ID: 13

### Vivir Con Voz Propia

Presented by: Patxi del Campo

*Co-Authors: Patxi del Campo*

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**Conference Track:** Population health needs and local context, Resilient communities and new alliances

**Introduction:** Vivir Con Voz Propia is a non-profit project carried out in the city of Vitoria-Gasteiz. It is made up of professionals and volunteers committed to the comprehensive care of people in situations of vulnerability, with advanced illness and/or loneliness. To this end, it fosters a person-centred approach, promoting integral development, strengthening all capacities and needs, with special emphasis on psycho-socio-affective and spiritual aspects.

**Aims and Objectives:** From the commitment to the integral care of people, it seeks to develop actions open to the community that promote awareness of the needs of people in vulnerable situations and the desirability of community involvement by promoting a Compassionate Neighbourhood. The main objective of the initiative is to promote a citizens' movement in Vitoria-Gasteiz that is more aware of the importance of caring for others, enhancing all psycho-socio-affective capacities and needs. In short, to contribute to creating a city that is more aware and prepared to care

**Highlights/Results/Key Findings:** VVP encourages the participation of citizens as caregiving agents and facilitators of encounter, support and creation of friendly environments. Promoting activities such as spaces for reflection and dialogue (the last Wednesday of every month since 2014, with an average number of participants between 20-50 people); Death Café, open spaces for reflection and debate on issues surrounding death (once a month since 2016 with an average of 20 participants); Awareness-raising sessions in schools (2014 sessions since 2015) and training activities.

The work carried out involves the creation of a group of volunteers who, by listening to people's wishes, beliefs, desires and decisions, offer support to support their own voice through accompaniment. To this end, 83 volunteers have accompanied 123 people at the end of life and in solitude over the last year.

**Conclusions:** Vivir Con Voz Propia is a simple promoter of spaces and activities that promote the integral care of the citizens of Vitoria-Gasteiz. Supporting and promoting the community itself as an agent of care through compassionate initiatives.

**Implications:** The VVP project and its initiatives are applicable to neighbourhoods, communities, cities and towns. The citizens themselves are the driving force and committed to care. The objective is therefore based on listening to the voices that help to form meeting spaces and friendly environments necessary to facilitate the proposals of

## Meaningful Partnership with Patients, Families and Citizens

Abstract ID: 16

### Sounding the Alarm: Firefighter Behavioral Health and Suicide Prevention

Presented by: Diane Scott

*Co-Authors: Diane Scott, Billie Ratiliff, Cara English*

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**Conference Track:** Population health needs and local context, People as partners in health and care

**Introduction:** The relationship between occupational exposure to traumatic situations and an increase in mental health concerns for firefighters/EMS/paramedics has only recently begun to be studied. The average suicidal ideation rate of North American first responders is 47% with almost two times the number of completed suicides compared with the general population. Following the suicide of a peer support fire fighter in 2019, the Rio Rancho Fire Department located in the southwestern state of New Mexico, US, partnered with Cummings Graduate Institute (CGI) to design an integrated curriculum for firefighters regarding their own mental health.

**Aims and Objectives:** This project aims to meet the need for increased knowledge concerning suicide, developmental and event trauma, and self-care and resiliency among firefighters/EMS/paramedics. The curriculum will include training to recognize symptoms of trauma, reduce stigma in first responder culture related to identification of mental health symptoms, increase help-seeking behaviors in the population, and improve first responders' levels of competence and confidence when responding to mental health emergencies in the community. The curriculum will be delivered in a hybrid online/in-person model. Outcomes related to knowledge gains, stigma reduction, and help-seeking behavior will be measured.

**Highlights/Results/Key Findings:** Rio Rancho Fire Department Chief identified the need for this training and consulted with CGI to design this curriculum to ensure acceptability among firefighters/EMS/paramedics. Four levels of certification, used in all department professional development, were mirrored in this curriculum, building in rigor of information and skills at each level. Each certification level includes modules regarding Suicidology, Trauma, and Self-Care/Resiliency. A pre- and post-survey will capture first responders' understanding of suicide, trauma, and self-care and resiliency, and a training evaluation will capture perceptions of value and areas in need of improvement or further training. This professionally-normed curriculum design strategy encourages firefighters/EMS/paramedics to move from awareness of the harmful impacts of workplace-induced trauma to an action-orientation in which mental health becomes as important as physical health. An evaluative survey will provide qualitative measurement of the value of the course material and will provide feedback to curriculum designers for quality improvement.

**Conclusions:** This project is taking a unique approach in filling a gap in training and education for first responders in the neuroscience behind trauma, suicidology, and mental health. By closing the gap and reducing stigma around mental health in the population, our aim is to prevent future first responder suicides.

**Implications:** This training is primarily online, and as videoconferences are now commonplace due to the COVID-19 pandemic, our curriculum is easily transferable, sustainable, and applicable to other fire departments. We believe there is great potential for this program to be expanded to include additional first responder professions.

## Optimising the multimedia design of a user-facing mHealth app for older individuals

Presented by: Nicola Goodfellow

*Co-Authors: Maureen Spargo, Nicola Goodfellow, Michael Scott, Glenda Fleming, Claire Scullin, Bárbara Guerra, Marco Manso*

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**Conference Track:** People as partners in health and care,Digital solutions

**Introduction:** The SHAPES (Smart and Healthy Ageing through People Engaging in Supportive Systems) Innovation Action aims to create an open technological platform allowing the deployment of secure and reliable digital solutions for supporting older people to live longer and healthier lives. The Medicines Optimisation Innovation Centre (MOIC) in Northern Ireland is preparing to pilot a set of digital solutions aimed at optimising medicines' use and control for older people with multimorbidity. The user-facing components of those solutions, one of which a mHealth app, are being developed using a co-design process.

**Aims and Objectives:** This study envisioned to collect feedback on the design and layout provided by an mHealth app to optimise its usability and acceptability by older people. Participants were recruited via local community support providers and known contacts of the investigators. Mock-ups (i.e., simplified visual representations) of the app were presented to specific user groups and feedback on the app's visual appearance was sought via interview. Feedback was analysed using the ISO Standards for multimedia design (ISO 14915) which refer to the suitability of the design with respect to its communication objective, perception and understanding, exploration and user motivation.

**Highlights/Results/Key Findings:** Mock-up presentations with recruited participants were conducted remotely via video conferencing software between 22nd March and 13th April 2021. Seven participants consented to take part in the study: two participants were aged  $\geq 65$  years and were multimorbid; two participants were healthcare providers; and three participants provided social support to older people. Findings revealed that improvements to the design and layout of the app could be performed to better meet the four design objectives listed in ISO 14915. Participants commented that communication would be facilitated if the size of the text was larger and if pages proposed a singular content or activity instead of multiple sections. The inclusion of simple, direct instructions was also suggested to make the app more suitable for exploration. Overall, participants provided valuable insight into the relevance of mHealth apps' design to encourage the acceptance and adoption of digital solutions as envisioned by the upcoming pilot.

**Conclusions:** This study collected valuable feedback on the design of a mHealth app aimed at optimising medicines' use and control for older people. By involving users from an early stage, it was possible to identify specific adaptations deemed relevant to improve the app's usability and the users' acceptance for new technologies.

**Implications:** The recommendations in this study are relevant for the development of digital solutions targeting older individuals, following standards on user interfacing and accessibility. These findings add to the knowledge base on multimedia design and user experience for older populations.

SHAPES is an EU Horizon 2020 co-funded programme (grant agreement 857159).

## Meaningful Partnership with Patients, Families and Citizens

Abstract ID: 34

### Healthcare specialists and communities working together to improve health for children and young people in London, UK

Presented by: Phoebe Rutherford

*Co-Authors: Arpana Soni, Phoebe Rutherford, Alex Weston, Mando Watson*

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**Conference Track:** Population health needs and local context, People as partners in health and care, Resilient communities and new alliances, Digital solutions

**Introduction:** The collateral impact of the Covid-19 pandemic and prolonged school closure on children and young people's (CYP) physical and mental health is a huge concern. (1) The complex consequences of the pandemic for CYP can only be addressed with community engagement. (2) Young Healthwatch Westminster (YHWW), was set up to amplify young people's voices in meetings with decision makers in health and to connect CYP with the requisite support.

**Aims and Objectives:** By working in close partnership with a paediatric hospital team that supports an integrated care collaborative, Connecting Care for Children, foundations were laid for sustained change in health services, with young people at the centre, driving change.

Place-based work from this partnership in the past year included:

- co-produced webinars delivering health information and support for local CYP
- findings from the YHWW mental health survey (written entirely by the YHWW volunteers) shared with health commissioners
- a local community radio show hosted by young people
- co-produced health and wellbeing literature

**Highlights/Results/Key Findings:** This partnership provided professional healthcare and peer-to-peer support for 'hard to reach' groups. It championed a 'joined up' approach and shaped plans for health provision as part of Covid-19 recovery and continues to influence design and delivery of regional health care.

Empowering young people to have a meaningful stake in services boosts the confidence of the individual and provides a brilliant resource for health and care systems. Cate Latto, from One Community Radio said "Huge thank you, you guys were just amazing. It is a tough and desolate landscape sometimes for the young and now is perhaps tougher than ever but they are also resilient, courageous and innovative."

Together we learnt that health promotion materials work best when requested by and designed with families/CYP and distributed through their networks. Webinars for citizens work best when hosts have experience delivering community workshops and when hospital teams have experience of community engagement.

**Conclusions:** Hospital teams have specialist resource that can be used well beyond the walls of the hospital. Teams that have taken the time to build relationships with community groups deliver the best results for citizens.

This hospital partnership with YHWW has strengthened the health care offer to the local population.

**Implications:** Sustainable models of health and care place citizens as equal partners, with systematic 'listening' to understand what matters to communities and interventions that build on these insights.

Real change for CYP will happen when young people are embedded in all local authority and local paediatric teams.

References:

1. ADC 2021;106:111-113
2. BMJPO 2020;4:e000848

## Meaningful Partnership with Patients, Families and Citizens

Abstract ID: 35

### Using Patient Engagement to Inform the Delivery of Equitable Care for Patients with COPD and Other Chronic Diseases – A Literature Review

Presented by: Jalesa Martin

*Co-Authors: Jalesa Martin, Shannon Sibbald*

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**Conference Track:** Shared values and vision, Population health needs and local context, People as partners in health and care

**Introduction:** Patient engagement focuses on the relationship between patients and health care providers to promote active involvement in healthcare decisions. Social determinants of health can lead to inequities in the implementation of care in populations of patients with various chronic diseases. Patient engagement supports equitable approaches to care in disadvantaged communities, while aiding in the improvement of health outcomes for patients with COPD through active involvement.

**Aims and Objectives:** The aim of this literature review was to explore how patient engagement has been used to inform the delivery of equitable care for patients with COPD. A literature search was done on Scopus, PubMed, and Nursing and Allied Health, followed by title, abstract, and full-text screening. 25 articles were selected for data extraction.

**Highlights/Results/Key Findings:** The literature demonstrates that socioeconomic and environmental inequities such as increased exposure to environmental toxins and inadequate access to housing are significant contributors to inequitable care for patients with COPD. Patients who live in areas with increased exposure to environmental toxins and have inadequate access to housing are more likely to have a lower income, which leads to inequities in accessing healthcare. In addition, the risk of being diagnosed with COPD is the highest in occupations where most workers have low income, leading to various disparities in care. Patient engagement optimizes condition management and is desired by some patients. While health equity strategies should involve all individuals who are affected by inequities when developing health interventions. Furthermore, approaches should consider whether patients are equal in the case of research decision making. Improving collaborative capacity is needed to ensure that patients with COPD receive the best care possible.

**Conclusions:** Healthcare resources and tools that support these patients must be provided to individuals with low SES because they face the most disparities regarding health outcomes. Furthermore, it is important to decipher how to provide care to patients in a way that is meaningful to them through using patient engagement.

**Implications:** Care plans should actively include patients, while patient perspectives from various social backgrounds should be explored to deliver effective care. This can be done through promoting active care involvement. Finally, approaches to care should not only focus on self-management, but consider the social factors that influence health.

## Meaningful Partnership with Patients, Families and Citizens

Abstract ID: 52

### The Art of Care and Cure developed by the Center for Innovation in Patient and Public Partnership and the Public (CI3P) in teaching, care and research

Presented by: Luigi Luigi Flora

*Co-Authors: Luigi Luigi Flora, Luigi Flora, Jean-Michel Benattar, David Darmon*

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**Conference Track:** Shared values and vision, People as partners in health and care, Resilient communities and new alliances, Digital solutions

**Introduction:** Context : In the wake of the creation of health city , at the patient university and patient expertise office partners in France and Canada (Flora, 2013) within the patient revolution (Richards et al, 2013) identified as a social fact (Flora 2012; toy, 2014 ), the partnership between a citizen association developing popular health learning and a medical school have recently created a Center for Innovation of Partnership with Patients and the Public (CI3P) that involves patients in partnership in teaching, care and research.

**Aims and Objectives:** The opening of a medical school to non-academic citizens through the House of Medicine and Culture (MMC) allows federating patients, relatives, medical and health science students, to act from teaching to both inpatient and outpatient care settings through research (Ghadi et al, 2019) according to the patient care partnership approach (Karazivan et al, 2015). It is from a recruitment methodology and co-design processes that will be presented that these different organizations develop a patient partnership culture.

**Highlights/Results/Key Findings:** While CI3P is in its second year of existence, it has participated in the involvement of patients with more than 1200 medical students (from the 2nd to the 8th year) in 2 years, in the constitution of two interdisciplinary research groups in partnership with patients (RETinES and CHERPA) by involving patients in medical theses up to the participation in defense juries, to accompany hospital services and general medicine networks as well as multi-professional networks in the territory, despite the Covid-19 pandemic, thanks to the adaptability of patients and their families.

**Conclusions:** The Innovation Center of the Partnership with Patients and the Public (CI3P) demonstrates the relevance of constituting an entity dedicated to the culture of partnership co-directed by the patient and medical experience working with citizens in a systemic dynamic (Flora et al, 2020).

**Implications:** The methodological foundation mobilized from the expertise of the University of Montreal and adapted to the local context, through the introduction of Art with, for example, the contribution of bibliotherapy in family medicine or movies in popular education, demonstrates the transferability of the Montreal model

## Meaningful Partnership with Patients, Families and Citizens

Abstract ID: 74

### Nothing about me without me: Co-creating healthcare innovations for people with Parkinson's disease and their caregivers

Presented by: Willanka Kapelle

*Co-Authors: Willanka Kapelle, Angelika van Halteren, Bart Post, Marjan Meinders*

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**Conference Track:** Shared values and vision, Population health needs and local context, People as partners in health and care, Transparency of progress, results & impact

**Introduction:** Research has increasingly emphasized the importance and necessity to involve patients and their informal caregivers in the development, planning, provision and evaluation of health care innovations. Enabling them to play an active and influential role in the decision-making process by bringing their own lived experience is essential to ensure that new health innovations meet their current needs and preferences, and enhances the excitement and commitment for the innovations. However, there is a lack of a comprehensive guidance on how to engage patients, their informal caregivers and professional caregivers in the co-creation process.

**Aims and Objectives:** This study seeks to explore the experience of co-creation among people with Parkinson's Disease, informal and professional caregivers during the design and implementation within two Parkinson-related health care innovations "Care-for-Parkinson" and "Young-and-Parkinson", and to assess the barriers and facilitators. We will employ a sequential mixed methods approach involving a quantitative survey followed by qualitative in-depth interviews. Moreover, focus group discussions will take place to identify opportunities for improvement in the co-creation process. As the study will be based on participatory action research, insights gained from the study results will directly be shared with and implemented by the innovation team.

**Highlights/Results/Key Findings:** We present a novel approach for supporting, establishing and evaluating co-creation involving people with Parkinson's Disease, informal and professional caregivers right from the start of the innovation planning based on an iterative process in which research and implementation system work hand in hand to optimize the co-creation process. Research revealed that current health care systems do not optimally meet the needs of people with chronic diseases, including Parkinson's Disease. A more personalized care approach is needed in which patients and their caregivers are actively involved in the care management process, resulting in a higher commitment of to self-manage their disease, increased ability to cope with disease symptoms and impact, and better health outcomes. In our study, we will not only ensure that the patient's perspective is represented, but our aim is also to get the most out of the skills, resources and connections provided by each individual.

**Conclusions:** There is no single framework for establishing and evaluating co-creation processes. This study will yield important insights into the design of co-creation processes and provide future directions for engaging patients and caregivers during health care innovation. A set of recommendation for co-creating health care innovations will be given.

**Implications:** This study seeks to provide a framework for establishing co-creation processes which can be adapted to other settings. Although it will take into account the different innovation contexts, it will ask some flexibility and time investment to fit the framework to one's own setting.

## Meaningful Partnership with Patients, Families and Citizens

Abstract ID: 76

### Patient engagement process implemented by the Center for Innovation in Patient and Public Partnership (Ci3P) in education, care and research

Presented by: Luigi Flora

*Co-Authors: Luigi Flora, Jean-Michel Benattar, David Darmon*

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**Conference Track:** Shared values and vision, People as partners in health and care, Resilient communities and new alliances, System wide governance and leadership

**Introduction:** The Center for Innovation in Partnership with Patients and the Public (Ci3P) involves patients in partnerships in teaching, care and research. It is within this framework that it has developed the Montreal Model recruitment methodology to the local context (Pomey, Flora, Dumez et al, 2015)

**Aims and Objectives:** The opening of a medical school to non-academic citizens through the Maison de la Médecine et de la Culture (MMC) allows to federate patients, relatives of medical students, in the health sciences, in the care environments research and in popular health education (Flora, Darmon, Benattar, 2020). To allow the double objective of creating optimal processes and partnerships and to put patients in a successful situation, an ethical approach, patients are oriented following a long interview with a physician-patient tandem either towards the missions that is most suitable for them, or towards training that will allow them to acquire the critical

**Highlights/Results/Key Findings:** The approach developed from the medical school of the Côte d'azur University adapts the methodology initially designed by the patient co-director of the Ci3P in Montreal to the local context into a tandem physician-patient leadership model

**Conclusions:** The Innovation Center of the Partnership with Patients and the Public (Ci3P) demonstrates the transferability and therefore the robustness of the recruitment methodology from the Montreal model.

**Implications:** The methodological foundation mobilized from the expertise of the University of Montreal (Pomey et al, 2015) adapted to the local context with the addition of the art medium, demonstrates the transferability of the Montreal model while learning about the contextual limitations of environments and cultures and thus the added values

## Meaningful Partnership with Patients, Families and Citizens

Abstract ID: 77

### Process of creating a community of concerned people to work in partnership within the National Resource and Resilience Center.

Presented by: Luigi Flora

*Co-Authors: Luigi Luigi Flora*

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**Conference Track:** Shared values and vision, Population health needs and local context, Resilient communities and new alliances, System wide governance and leadership

**Introduction:** A National Resource and Resilience Center for Psychotrauma (CN2R) with the particularity of wishing to work in partnership with people experiencing psychotrauma exists as a result of the will of six ministries in France (health, education, justice, higher education and research, interior, army,) since 2019 in France.

**Aims and Objectives:** The CN2R was created in order to deepen the knowledge on psychotrauma and resilience processes according to a global approach. In order to work as closely as possible to the expectations of patients and citizens, a community of concerned persons was recruited according to the patient recruitment approach of the Montreal model (Flora, 2015, DCP, 2015) adapted to the situation. That is to say, at a citizen level and not only a patient level including a trajectory of the person experiencing psychotrauma, beyond the only health dimension.

**Highlights/Results/Key Findings:** the coordinator, who has experience in the partnership between scientific and professional knowledge on the one hand (Flora, 2021) and experiential knowledge on the other hand (Toy, Flora, Las Vergnas, 2010), according to a methodology that he participated in implementing in Montreal, and then in Nice with the center of innovation of the partnership with patients and the public (Flora, Darmon, Benattar, 2020), has adapted the Montreal approach to allow members of a community of people experiencing psychotrauma to generate partnerships with health professionals, but also with the judiciary, the police, the national education system, higher education and research, as well as with the armed forces, many of whose soldiers in operation are affected by this problem.

**Conclusions:** the partnership approach between the persons concerned and the professionals of the CN2R remains an innovative approach and the chosen methodology demonstrates its transferability beyond the health field.

**Implications:** The perspective of transferability of this approach is a real contribution to the participative approaches that it would be, and it is one of its current limits to be experimented in other fields, these limits reside indeed in the youth of this large-scale project.

## Meaningful Partnership with Patients, Families and Citizens

Abstract ID: 91

### Exploring Stakeholders' Experiences with COVID Rehabilitation: A Qualitative Study

Presented by: Marina Wasilewski

*Co-Authors: Marina Wasilewski, Larry Robinson, Sander Hitzig, Christine Sheppard, Amanda Mayo, Jacqueline Minezes, Maria Lung, Robert Simpsons*

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**Conference Track:** People as partners in health and care

**Introduction:** Introduction: Rehabilitation is a key component of the care pathway and a pivotal aspect of the post-acute COVID-19 (COVID) response. Rehabilitation facilitates recovery and community reintegration by improving COVID patients' functional capacity and providing psychosocial supports. However, the COVID care pathway is complicated by a lack of clarity around eligibility for rehabilitation; accelerated care transitions; variability in rehabilitation facility preparedness; and physical distancing restrictions. Presently, there is little evidence (especially from Canada) on how these challenges have been met in practice and what the experiences of providers, patients, and families have been.

**Aims and Objectives:** Objectives: To broadly explore patients', family caregivers', and care providers' experiences and needs across the COVID care pathway, and their experiences with inpatient COVID rehabilitation specifically.

**Methods:** We used a qualitative descriptive approach to gain in-depth insight into stakeholders' (i.e. HCPs, patients, and families) experiences and conducted a thematic analysis of data.

**Highlights/Results/Key Findings:** Findings: In total, we interviewed N=11 care providers, N=10 patients, and N=5 family caregivers. Three overarching themes were identified:

- (1) Physical and social isolation are challenging for all stakeholders: Patients felt isolated and families felt disconnected from their loved ones. This put added pressure on providers to support patients and liaise between them and their families;
- (2) Compassionate care is of primary importance throughout the COVID care pathway: 'Humanizing' both patients and providers was described as important. Patients and families felt interpersonal and emotional care were key features of COVID rehabilitation;
- (3) Continuity of care requires improvement: Participants described a need for greater continuity of clinical information, communication, and relationships across settings.

Cross-cutting themes: Preventing spread of COVID underpinned several themes (e.g. required physical isolation and ban on family visits) and social, economic and social factors influenced the nuances of the themes (e.g. cultural sensitivity enhanced compassionate care).

**Conclusions:** Conclusions: Our study highlights the important role rehabilitation plays in supporting COVID patients' physical and psychosocial recovery. Better system navigation and support would improve continuity across the COVID care pathway. Enhancing family-patient interaction in the context of infection prevention and control would further optimize the rehabilitation experience.

**Implications:** Our findings can potentially be transferred to other COVID rehabilitation populations—including patients, family caregivers, and care providers. Our findings point to individual-, organization-, and system-level considerations that can be addressed to improve the quality and continuity of COVID care from acute settings, to rehabilitation, and back to the community.

## Meaningful Partnership with Patients, Families and Citizens

Abstract ID: 100

### Addressing Caregiver Needs in Community Care

Presented by: Banu Sundaralingam

*Co-Authors: Banu Sundaralingam*

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**Conference Track:** Population health needs and local context, People as partners in health and care, Resilient communities and new alliances

**Introduction:** Caregivers play a critical primary role in a patient's healthcare journey. They fulfill an unpaid role which saves Canada's healthcare system nearly \$31 billion annually. They report concerns about feeling lost in the healthcare system, having insufficient knowledge on community resources, and are unaware how to cope with caregiver burn out. As a result, they experience adverse physical, psychological, social and financial hardships for which they are generally unprepared to address themselves. Healthcare Providers (HCPs) encounter burnt out caregivers daily, however they have limited time, funding and limited readily available resources and knowledge on how to best address caregiver needs.

**Aims and Objectives:** VHA Home Healthcare is a not-for-profit organization that offers interdisciplinary home and community healthcare services to patients. "Addressing Caregiver Needs in Community Care" is a project that aims to enhance VHA's HCPs' confidence level and access to resources to address caregiver needs. A literature review on best practice caregiver assessments and interventions was conducted to inform the evaluation plan. Four caregivers were interviewed about their experience working with HCPs. HCPs were led through focus groups to discuss the barriers in addressing caregiving needs. They also completed a pre-intervention survey which measured their confidence level in addressing caregiver needs.

**Highlights/Results/Key Findings:** Themes emerging from the needs assessments were collected and analyzed. HCPs reported that they had limited knowledge and resources to support caregivers in the community. Caregivers reported feeling overwhelmed in the healthcare system; and reported having limited knowledge of community resources. The results of the needs assessment and evidence-based literature were used to inform and pilot the following interventions for the project: a community resource manual for caregivers in the GTA; educational handouts for caregivers on topics such as: navigating the healthcare system and caregiver wellness; and an education session for VHA HCPs on addressing caregiver needs in the community. VHA staff also received weekly "caregiver tips" for one month. Post-intervention, feedback was collected from HCPs for intervention improvements. HCPs also completed a post-intervention survey, which measured their confidence level in addressing caregiver needs. There appeared to be a 12% increase in overall confidence in addressing caregiver needs post-intervention.

**Conclusions:** This project led to an increased awareness for the need to address caregiver needs in the community in various teams at VHA. This project additionally led to the creation of new caregiver resources and a more streamlined manner for HCPs to access caregiver resources through VHA's online HCP resource portal.

**Implications:** The next step is for caregivers to provide feedback on the interventions, and update the caregiver resources and education session. Finally, the education session will be offered permanently to all HCPs at VHA. Therefore, caregivers will be provided needed support, to optimally care for themselves and their loved ones.

## Development of Shared Decision Making Training Module for Patients Facing Preference-Sensitive Decisions regarding Major Surgical Procedures

Presented by: Ryan Gainer

*Co-Authors: Ryan Gainer, Greg Hirsch, Elias Hirsch*

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**Conference Track:** Shared values and vision, People as partners in health and care

**Introduction:** Studies of surgical decision making demonstrate poor decisional quality, especially patient comprehension and expression of preferences. Shared decision making (SDM), a formalized approach wherein patients are educated about risks, benefits to treatment options, and supported to share personal preferences, has been shown to improve comprehension, reduce decisional conflict, and better align patient expectations with outcome, however multiple systematic reviews have demonstrated almost no sustained uptake of this approach in surgery. The goal of this study is to implement SDM with relevant training aimed at the surgical team with a pre-post design that measures effectiveness through Option-5 scoring of informed-consent interactions.

**Aims and Objectives:** Five focus groups with patients (n=2) and health care providers (HCPs) (n=3) were carried out to determine barriers and facilitators of SDM and learning preferences for HCPs. Common barriers and facilitators identified in focus groups using thematic analysis were used to develop communication and logistical strategies included in the training. HCP learning preferences identified informed format and presentation style of the training to improve participant engagement. Informed consent discussions were audio recorded and analyzed using Option-5 methodology which comprises a 5 item measure of SDM used to assess the extent to which clinicians involve patients in the decision making process.

**Highlights/Results/Key Findings:** Common barriers to SDM identified in thematic analysis included; lack of time during surgeon patient interaction; authoritative imbalance between patients and clinicians; and deficits in patient comprehension. HCPs expressed preferences regarding presentation style and format specifically; synchronous short events with relevant examples. Pre-intervention OPTION-5 scoring (n=40) demonstrated low decisional quality (average score 27/100) with almost no perceptible elicitation or incorporation of patient preferences during consent discussions. Following the training of cardiac surgeons and multidisciplinary team members, 62 more informed consent discussions will be audio-recorded and evaluated using the OPTION-5 scoring metric. OPTION-5 scores before and after training will be compared by item and total score to determine change in informed consent discussion quality.

**Conclusions:** Informed consent in surgery is lacking in SDM approaches. Barriers have been identified and SDM training has been developed with a team based approach in mind. Effectiveness of the training intervention on the improvement of surgical consent discussion quality will be measured using OPTION-5 and if successful broader implementation will

**Implications:** Successful implementation of SDM training showing measurable improvement in cardiac surgery informed consent discussion quality will substantiate the implementation of SDM training modules specified for other surgical disciplines as well as subsequent evaluation of long term sustainability of the effects of SDM training.

## Meaningful Partnership with Patients, Families and Citizens

Abstract ID: 105

### Lived Experience as a Driver in Care: Investigating the Representation of Persons with Disabilities in Eastern Canadian Medical School Curriculum

Presented by: Kate Graham

*Co-Authors: Kate Graham*

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**Conference Track:** Shared values and vision, Population health needs and local context, People as partners in health and care

**Introduction:** The design of our health and care systems needs to be a process that is shared through meaningful partnerships with patients, families and citizens. Within healthcare, medicine claims expertise and definitional authority over disability. In assuming to already know disability, medical knowledge may de-center the perspectives of people with disabilities, with implications for the quality of care they receive. Disability Studies is an emerging interdisciplinary field that offers alternative knowledges and approaches to disability that center lived experience perspectives, yet it remains unclear whether and how knowledge from the field is being taken up in medical education in Eastern Canada.

**Aims and Objectives:** In order to enhance the quality of medical care that people with disabilities receive in Eastern Canada, an investigation is being conducted to determine how medical schools in Eastern Canada represent and include the perspectives of people living with disabilities within their curricula. This will contribute to the field of health research regarding accessible health services and illustrate the possibilities and limitations of existing medical education curriculum pertaining to integrated care for persons with disabilities.

**Highlights/Results/Key Findings:** As the goal of the medical model is to “cure” the disability and return the individual to a state of “normal,” the main focus of physicians is the treatment of the disability. Due to this hyper-focus on a person’s disability, people with disabilities often do not receive adequate health care, and this in turn undermines their dignity and worth as people. This gap in care has recently been identified by two physicians in the Canadian Journal of Disability Studies. Their research indicated that Canadian physicians lack knowledge of the social model of disability, as well as their legal duty to ensure accommodation for persons with disabilities to have equal access to health care.(1) The current systems in place for educating medical students are not producing physicians with the requisite competencies to care for people with disabilities.

**Conclusions:** The COVID-19 pandemic has exposed deep vulnerabilities in health and care systems, particularly for people with disabilities. Now more than ever we must work to create meaningful partnerships with patients, families and citizens. We must ensure effective representative engagement from diverse communities and uptake actionable strategies to create meaningful partnerships.

**Implications:** Collective action is required to reduce health inequities and improve population health. We must accelerate efforts towards our shared vision of universal access, by harnessing the power of multisectoral, interdisciplinary, collective action. It is time for a shift in power – to recognize lived experience as a driver in care.

## Meaningful Partnership with Patients, Families and Citizens

Abstract ID: 128

### The Family and Community Nurse (FCN) as a vehicle for co-created healthcare interventions in poorly accessible micro communities, a Tuscan case.

Presented by: chiara barchielli

*Co-Authors: chiara barchielli, Paolo Zoppi, Eleonora Salutini, Monica Chiti, Erica Gualtieri*

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**Conference Track:** Population health needs and local context

**Introduction:** This is the case of a micro community living in the woods of Tuscany, Italy, from the beginning of the 1980s called “The Elves”, that counts about 400 members on a total of 1200 inhabitants of the area. They took over abandoned houses scattered throughout the forest and have been living there since then in self-isolation, rejecting technology and living accordingly to nature. Nobody has medical knowledge and any form of prevention or disease management has to come from outside. The NHS was able to address this community’s needs through the synergistic work of a GP and a dedicated FCN.

**Aims and Objectives:** Addressing this community’s healthcare issues while improving their health and subsequently extend the protection of the whole community living in the area from communicable diseases was crucial. The Elves come in contact with society as they started little businesses. Furthermore a reducing of health inequities was needed: regardless of the causes of distancing, “The Elves” did not have access to care. After the creation of two clinics and the non-judgmental attitude of the FNC, the Elves were given access to healthcare education, prevention of diseases and medical interventions from the GP that was always interfacing with the FCN.

**Highlights/Results/Key Findings:** The strategy of approach to this micro-community was embodied by the FNC that was able to engage the members of the community by co-designing the timing and ways of treatment and education, so as to ease the effective responsiveness of the community. These communities, typically aloof, require bespoke offers of healthcare intervention: one of the major achievements in this case was represented by the vaccination of all the children of the community. In Italy strong actions are undertaken to counter the progressive decline in vaccination, both mandatory and recommended. This attitude of distrust has led to an average vaccination coverage below 95%, the threshold recommended by the WHO to guarantee the herd immunity. In this community all the children were vaccinated because they understood the importance of safety for themselves and for the rest of the population with which they now are in closer contact.

**Conclusions:** Investigations in this topic revealed the existence of a widespread phenomenon at national level, that of the communities that have isolated themselves. Delivering at the microlevel is a task of the NHS and the success of holistic value-creating interventions is key to the general welfare of the population.

**Implications:** These interventions are sustainable and transferable, as all they take belong to the soft skills’ domain: active listening, open mind, a non-judgmental attitude and the will of the management to organise the work around a societal structure that doesn’t work according to common rhythms but that has all the

## Meaningful Partnership with Patients, Families and Citizens

Abstract ID: 139

### Co-designing an integrated care pain management service in Ealing with those of lived experiences, family, carers and various healthcare professionals, to improve delivery of care.

Presented by: Sarah Kolvenbach

*Co-Authors: Nikita Shah, Lindsay Ip, Lydia Neophytou, Natalie Mark*

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**Conference Track:** People as partners in health and care

**Introduction:** In the UK, around 43% of the population experience chronic pain (BPS, 2016). Chronic pain is a complex phenomenon and can be extremely disruptive, with several emotional, social, physical and economic ramifications (Martin et al, 2020). Those affected may feel alienated from “normal life” and become dependent on healthcare services (Warth et al, 2020). Although, many have reported feeling unsupported by services due to limited understanding of chronic pain, long wait times and lack of awareness of appropriate community support. This highlights the critical need to co-design integrated care services to empower those affected and meet their biopsychosocial needs.

**Aims and Objectives:** Ealing Community Partners and We Coproduce, worked together to conduct co-design sessions in the Ealing borough. The aim was to understand people’s experiences of chronic pain, how to improve pain services and empower those with lived experience to co-design a service. In total, 30 people attended and were aged between 18-80; 33% BAME, 29% European and 38% White British. There were 3 co-design sessions on zoom, 2 hours each, and telephone sessions for those unable to attend. We invited those with lived experiences, carers and family of those with chronic pain and healthcare professionals and charities.

**Highlights/Results/Key Findings:** Preliminary analysis from the co-design sessions indicated some themes about the challenges faced by those with chronic pain and their views on improving delivery of care. These challenges included; not feeling listened to by professionals, limited access to NHS treatment and professionals' lack of understanding about their condition. Participants suggested that to improve delivery of care, services should create opportunities for peer-led activities, improve education and communication and build better connections between the NHS and community resources. A more in-depth thematic analysis will be done by a qualitative researcher at King’s College London but some participants have already mentioned that they have benefitted from the group through awareness of different community resources to support their chronic pain.

**Conclusions:** Co-designing between healthcare professionals and patients is integral to understanding what matters to patients and developing personalised and holistic care to those with chronic pain. It has highlighted the need to educate other professionals, empower people to self-manage, integrate healthcare and community services, and to value all people equally.

**Implications:** We acknowledge there will be some limitations of applicability and sustainability along the way, which includes: long waiting lists, funding for jobs/lived experience roles, professional’s attitudes and confidence with working in pain management and staff turnover. Through continual collaborative working we hope to swiftly navigate through these challenges.

## Meaningful Partnership with Patients, Families and Citizens

Abstract ID: 146

### A Co-design Approach for System Transformation in Southwestern Ontario, Canada

Presented by: Jacobi Elliott

*Co-Authors: Jacobi Elliott, Alexander Smith, Amber Alpaugh-Bishop, Vala Gylfadottir, Sarah Jarmain, Matthew Meyer, Louise Milligan, Jennifer hall, Danielle Denomme*

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**Conference Track:** Shared values and vision, People as partners in health and care, System wide governance and leadership

**Introduction:** The Western Ontario Health Team (WOHT) is a newly formed entity aiming to support the primary and secondary healthcare needs of a population of over 514,000 in London-Middlesex, Ontario, Canada. Our first year priority population are adults with a primary diagnosis of advanced Chronic Obstructive Pulmonary Disease (COPD) and/or Congestive Heart Failure (CHF) in need of system-level care coordination or navigation, with special emphasis on patients who are at risk of institutionalization. Experience-based co-design and meaningful patient/client and caregiver engagement (guided by a Patient/Client & Care Partner Council) are embedded into all WOHT activities.

**Aims and Objectives:** Through relationships with local patients/clients, caregiver partners, providers, and health system administrators, the co-design process is being used to collectively develop system improvement strategies. Co-design begins with recruiting a network of system stakeholders (i.e., patients/clients, caregivers, providers, system administrators), guided by an equity, diversity, and inclusion matrix to ensure representation aligning with the demographics of our local population. Discovery interviews are conducted with a subset of this network (n=40) to understand current health system experiences and opportunities for change. Findings from discovery interviews then inform broader co-design sessions with diverse stakeholder groups to co-define problems and co-develop solutions.

**Highlights/Results/Key Findings:** Highlights and outputs of this process will include a summary of discovery interviews describing current experiences with regional COPD and CHF care, a set of co-defined problem statements with associated co-created solutions, and an implementation plan which the WOHT will implement through a plan, do, study, act (PDSA) approach. Priorities for co-creation include, but are not limited to, ensuring patients have access to a sustained care relationship, informing the development of a shared care record, and laying the infrastructure for patient individualized care plans. The co-design methodology and supporting materials including recruitment frameworks, co-design session planning guides, engagement matrices, and workplans will also be refined through this process and published.

**Conclusions:** The WOHT embraces principles of co-design in all aspects of its system transformation agenda. This approach empowers patients/clients, care partners, providers, and administrators to drive health system change towards better outcomes. Lessons learned and materials developed through this process will inform other organizations in similar transformation activities.

**Implications:** The co-design approach being used by the WOHT in its system transformation efforts will be scaled and repeated in additional populations. Lessons learned from this first co-design plan will be incorporated into future iterations. This approach can also be used by other regions for large-scale system planning and design purposes.

## Meaningful Partnership with Patients, Families and Citizens

Abstract ID: 148

### Health Professions Education in the COVID Era – Focus on Communication

Presented by: Audrey Devaney

*Co-Authors: Helena Ferris, Audrey Devaney*

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**Conference Track:** Shared values and vision, People as partners in health and care

**Introduction:** Effective communication is fundamental to building a successful relationship with patients. However, the COVID pandemic has changed how we deliver healthcare and interact with service users. Necessary safety measures such as social distancing, wearing of personal protective equipment and the increasing use of telehealth has added to the complexity of establishing a positive therapeutic relationship.

**Aims and Objectives:** Healthcare professionals face competing demands of increased clinical productivity while being afforded less physical time with patients. The additional pressures of the pandemic can impact on key aspects of the patient consultation such as building rapport, active listening and shared decision making. Now more than ever, Clinicians need to be adaptable and flexible in their communication with patients, and this should be reflected in how we teach healthcare professionals.

**Highlights/Results/Key Findings:** Communicating with patients in an open and companionate manner enables Clinicians to elicit information to accurately diagnose and treat patients, while building trust and mutual respect. The COVID pandemic has highlighted the need for effective communication across all age groups, gender, cultural backgrounds and varying levels health literacy. The 'RESPECT' model (1) can help bridge disparities between patient and Clinicians. The RESPECT model is a widely used toolkit for patient centred care. It focuses on 7 core components: Rapport, Empathy, Support, Partnership, Explanation, Cultural Competency and Trust. Additional training in the use of this model may assist Clinicians in navigating new ways of interacting with patients. Simple measures such as planning the structure of a consultation, using an established framework for virtual consultations and encouraging patients to write down questions in advance can help focus the consultation and ensure topics important to the patient are discussed.

**Conclusions:** Effective communication is fundamental to providing high quality patient centered care. The current COVID pandemic can impede communication owing to additional time constraints, staff shortages, physical barriers such as personal protective equipment and the increasing use of telehealth.

**Implications:** It is essential that we adapt to the new healthcare environment and strive to maintain high standards of communication.

(1)Mutha, S., Allen, C. & Welch M. (2002). Towards culturally competent care: A Toolbox for Teaching Communication Strategies. San Francisco, CA. Centre for Health Professions, University of California, San Francisco.

## Meaningful Partnership with Patients, Families and Citizens

Abstract ID: 150

### A collaborative approach towards a dementia friendly community

Presented by: Janette Barrie

*Co-Authors: Janette Barrie, Meg Dougal, Judy Ewer*

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**Conference Track:** Resilient communities and new alliances

**Introduction:** One of the key outcomes of Scotland's National Dementia Strategy is that "communities throughout Scotland are as dementia friendly as possible (Scottish Government 2017). The model of dementia-friendly communities has been tried and tested and is known to improve the quality of life for people with dementia and their carers. The people of Aberfeldy and surrounding areas would benefit from the community working towards and sustaining dementia-friendly town. The overall aim is to build upon the comments and suggestions put forward by local residents at an event exploring dementia friendly communities.

**Aims and Objectives:** Aberfeldy is a small market town with a current population of 2332. It sits within the Highland Ward of Perth and Kinross Local Authority, Scotland. Highland Ward has the most ageing population within Perth and Kinross.

Objectives:

1. Implement suggestions generated from a community engagement event.
2. Using improvement methodology, implement and support a range of dementia enabled events and activities for people living with dementia and their carers.
3. Introduce monthly dementia friendly film screenings of popular films at the local cinema.
4. Create a dementia-friendly, reminiscence garden
5. Collaborate with statutory providers, organisations, businesses to become dementia-friendly.

**Highlights/Results/Key Findings:** - A reduction in social isolation and loneliness

- Reduce the stigma associated with dementia
- Create a sense of inclusion
- Informal support networks for carers
- Person-centredness due to the involvement of people with dementia and their carers
- Clearly identifiable hub for information and signposting
- A compassionate and inclusive community
- Increase confidence for the numerous visitors to the area who may live with dementia
- Increase in community confidence
- A Dementia friendly garden space created collaboratively.

**Conclusions:** There's an African proverb "It takes a village to rear a child". We believe the same principles should apply to our older population. We have a multi-layered group of activities which are aimed helping to create a climate of Dementia awareness in Aberfeldy.

**Implications:** The Dementia-Friendly Aberfeldy Collaborative is a small group of people living in Aberfeldy who have close relatives with Dementia and are also unpaid carers. We formed a larger steering group to oversee the project and to provide guidance and direction. The model is transferable.

## Meaningful Partnership with Patients, Families and Citizens

Abstract ID: 157

### Strategies for engaging patients and families in collaborative mental health care

Presented by: Matthew Menear

*Co-Authors: Matthew Menear, Michèle Dugas, Janie Houle, Nick Kates, Sarah Knowles, Neasa Martin, Michel Gervais, France Légaré*

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**Conference Track:** People as partners in health and care, System wide governance and leadership

**Introduction:** In many countries, the bulk of care for common mental disorders such as depression and anxiety disorders is delivered in primary care. Yet, despite how frequently these disorders are seen in primary care, important gaps persist with respect to their detection, treatment and long-term management. Collaborative care is an evidence-based model of care that is currently being implemented worldwide to improve the quality and integration of mental health care in primary care. Patients and families are often described as important actors in collaborative care programs. However, it remains unclear how to concretely engage them as partners in these programs.

**Aims and Objectives:** This study aimed to identify and describe the strategies used in collaborative care programs to engage patients and families affected by depressive and anxiety disorders. We performed systematic review of programs for depressive or anxiety disorders, building on a previous 2012 Cochrane review. We searched in multiple databases strategies (Cochrane CCDAN and CINAHL) and three clinical trials registers. The selection process was conducted independently by multiple review authors. Relevant articles included controlled trials of collaborative care programs and sibling articles (e.g. protocols, follow-up studies, qualitative studies) that provided additional information about engagement strategies.

**Highlights/Results/Key Findings:** Overall, the systematic review identified 150 collaborative care programs for depressive or anxiety disorders that were described in 597 trial and sibling articles. Programs adopted 15 different engagement strategies, with a median of two strategies per program (range 0-9 strategies). The most common strategies were patient education (87% of programs), supports for self-management (47% of programs), and behavioural interventions like motivational interviewing or behavioural activation (38% of programs). Strategies such as personalized care planning, shared decision making, family supports and peer supports were observed in fewer than one third of programs. Programs similarly infrequently involved patients or families in the training of professionals in collaborative care (only 4 programs) or in research or evaluation activities related to collaborative care programs (only 10 programs). Care managers (nurses, social workers, psychologists, etc.) often played a critical role in supporting patient and family engagement.

**Conclusions:** Integrating mental health care in primary care is a priority internationally. Our findings highlight gaps in the engagement of patients and families in collaborative mental health care, but also clarify the range of strategies that can be used to achieve more person- and family-centered services for common mental disorders.

**Implications:** The patient and family engagement strategies identified in our review should inform existing collaborative care programs and could be adopted in new programs implemented worldwide. The strategies align with current engagement frameworks and were validated by an interdisciplinary team that included people with lived experience of mental illness.

**Synthesizing evidence regarding hospital to home transitions supported by volunteers of third sector organizations: A scoping review**

Presented by: Alana Armas

*Co-Authors: Alana Armas, Rachel Thombs, Michelle Nelson, Oya Pakkal, Hardeep Singh*

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**Conference Track:** People as partners in health and care, Resilient communities and new alliances, Workforce capacity and capability

**Introduction:** Given the risks inherent in care transitions, it is imperative that patients discharged from hospital to home receive integrated care services to ensure a successful transition. Despite efforts by the health care sector to develop solutions to improve transitions, problems persist. To date, research on transitional support has predominantly focused on services delivered by health care professionals, and our understanding of the services provided by volunteers in this context is unclear. This scoping review will map the available literature on the engagement of volunteers within third sector organizations (TSOs) supporting adults in the transition from hospital to home.

**Aims and Objectives:** The research question for this scoping review was: How, where, and for which populations have third sector organizations engaged volunteers in programs supporting adults in the transition from hospital to home? The Joanna Briggs Institute (JBI) scoping review methodology was employed. Due to the focus on TSOs a broad search strategy of 10 electronic databases was employed (Medline, EMBASE, PsycInfo, Joanna Briggs (JBI), Social Work Abstracts, Sociological Abstracts, CINAHL, Cochrane Reviews, Ageline, and Scopus) along with a comprehensive grey literature search. Articles underwent title and abstract screening; and full-text review. Relevant articles are currently being charted, collated, summarized, and analyzed.

**Highlights/Results/Key Findings:** In the initial search 19,720 records were identified, with 42 included articles. The search was updated in May 2021 identifying an additional 6,161 records, which are currently being screened for inclusion. Preliminary results indicate that TSO transitional support programs are found in Australia, Canada, the United States, Hong Kong and the United Kingdom. These programs can include volunteers with lived experience that take on a peer support role, or trained volunteers to assist individuals with tasks once they have returned home. There is some evidence of programs that include volunteer trained health professionals. Overall, these programs are focused on older adults returning home after an acute care episode. There are few programs where TSO volunteers are a part of an interdisciplinary team supporting transitions home.

**Conclusions:** Although TSOs engagement is valuable to integrated care by improving the quality of transitions, this topic remains understudied. This scoping review will generate a high-quality synthesis of knowledge regarding the role and contributions of TSOs in supporting transitions from hospital to home.

**Implications:** Findings will be used to improve understanding of how TSOs can be integrated into transitional support models, and identify areas where further research is needed on TSO involvement in health systems. Only articles published in English were included, increasing the risk of missing relevant programs reported in other languages.

## Meaningful Partnership with Patients, Families and Citizens

Abstract ID: 205

### A novel model of consent to promote embodied safety and trust between care providers and patients

Presented by: Kyra Nabeta

*Co-Authors: Kyra Nabeta*

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**Conference Track:** People as partners in health and care, Workforce capacity and capability

**Introduction:** High-quality people-centred care involves creating an environment in which patients feel seen, heard, and cared for. While these soft skills aren't taught formally, they are integral to the patient experience and recovery process. Research into emotional health and embodiment is evolving and has attracted attention in the mental health field, but it remains obscure in Western medicine. Here, I propose a novel model of consent that encourages health care practitioners (HCPs) to recognize and clarify the power dynamics at play during treatment.

**Aims and Objectives:** For a given an action, Dr. Betty Martin's Wheel of Consent model asks FOR whom it is happening (rather than TO whom). The model identifies and explores the nuances of the different roles involved: giver vs. receiver; performer of the action vs. person on whom it is performed. By naming and discussing these roles at the outset of treatment, both the HCP and patient are empowered to notice, trust, value, and communicate what they feel as treatment progresses and to voice limits and boundaries, thus ensuring ongoing emotional safety and trust on both sides.

**Highlights/Results/Key Findings:** Dr. Martin's model is widely acclaimed in trauma-informed sexological bodywork but has not yet been formally investigated in depth or adapted for the health care field due to the limits of embodiment research methods and to the stigma surrounding its current usage. Yet, the principles of frank discussion, plain language, regular check-ins, and openness to change are foundational for involving patients in their own care regimens, as they promote feelings of inclusion, engagement, safety, and trust in the care provider. As HCPs learn to initiate these discussions, they become role models to both patients and colleagues for voicing concerns at all levels of care.

**Conclusions:** By re-framing how consent is requested and ensuring that everyone involved is clear, at all times, about what is happening and why, both patients and practitioners can avoid overstepping boundaries and leaving patients feeling disempowered, helpless, and violated.

**Implications:** This training will have profound impacts on how HCPs view their personal and professional relationships, improving self-awareness, self-care practices, and thus resilience. This model is relatively easy to teach but requires a degree of openness on the part of the medical community to unconventional and counter-normative ways of relating.

## Meaningful Partnership with Patients, Families and Citizens

Abstract ID: 208

### Creating Better Meals Options for Patients - co-design

Presented by: Helen Van deMark

*Co-Authors: Valentina Constantinescu, Helene Hamilton*

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**Conference Track:** People as partners in health and care

**Introduction:** In 2018, the results of the patient satisfaction survey revealed that food quality and food choices had the lowest score than other areas of care. When this was brought up to the Patient and Family Advisory Council, the group decided that something needed to be done. Through the engagement of the Patient and Family Advisory team alongside dietary services department, consideration of food preference, dietary restrictions and needs, and time and effort of hospitality staff was taken into place to create efficient meal plans options.

**Aims and Objectives:** Many studies indicate that food is essential to the healing process both physically and mentally. However, taste and preference of food greatly varies between households, ethnicities, dietary restrictions, and religious beliefs. Although food brings nutritional value, it also brings spiritual value which further helps our healing journey. After a great number of interviews and surveys done, the dietary department understood that listening to patient voice is crucially important to make changes that matters. To encompass all these values, the dietary department took into consideration the patient voice as it incorporates diversity perspectives and would allow some insight on what food.

**Highlights/Results/Key Findings:** 'Your Choice, Your Voice' was born and incorporates patient and family's needs and suggestions to change, adjust and alter meal plan options to best suit the patients' needs and encourage healing and recovery. This new meal plan program put forth changes which allow for more food options for patients, easier accessibility of food during mealtime, and sustainable and eco-friendly food or packaging. These changes have greatly improved the patient satisfaction score on the patient care survey. Additionally, Helen Van deMark, Director of Patient Food Services and Clinical Nutrition, says patient food and fluid intake has increased significantly since the program started in 2019, including a 50% jump in protein at breakfast. Additionally, the program caters to individual needs through sustainable measures by asking for patient preferences beforehand and providing the service in an eco-friendly manner, limiting the amount of plastic consumed and food wasted.

**Conclusions:** We believe this is only the beginning. Our work together will continue and the result to date serve as a testimony that co-design is the answer to making our programs stronger and more successful. Additionally, the program caters to individual needs through sustainable measures by asking for patient preferences beforehand and

**Implications:** Amongst others, Hélène Hamilton, a ten-year volunteer and long-term patient at St. Joes said "Being able to have choices about even basic issues, coffee or tea, an apple or a banana, a muffin for later in the day ... makes a huge difference in the world of a patient"

## Transferable Lessons in Spread and Scale of Integrated Care

Abstract ID: 89

### Strategic Communications Management During Major Healthcare Reform: Examining the Role of Public Relations in Ontario Health Teams and How East Toronto Health Partners is Transforming Communications in an Integrated Care Model

Presented by: Erica Di Maio

*Co-Authors: Tracey Turriff, Erica Di Maio, Lucy Lau*

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**Conference Track:** System wide governance and leadership

**Introduction:** In February 2019, Ontario embarked on one of the largest health care reforms in its history, including the introduction of Ontario Health Teams (OHTs). As hundreds of multi-sector partners join forces to tackle major health system reform, particularly during a global health crisis, it is pivotal that OHTs develop a parallel process for strategic communications management to build the stakeholder relationships necessary to effect real change in the health system. Communications professionals have a defining role to play in directing strategic plans that enable purposeful patient partnership, timely response to community needs, and decision making through dialogic communications.

**Aims and Objectives:** This presentation will showcase research from a Master of Communications Management capstone project examining the role of strategic communications management in OHTs. Interviews were conducted in Fall 2020 with 14 Ontario hospital CEOs representing different OHTs that were operational for 10-12 months. These interviews helped the researcher understand current OHT communications structure, engagement methods with key stakeholders and how COVID-19 impacted these efforts. Based on interviews, an extensive literature review and document analysis, the researcher developed a best practice PR and communications model for OHTs – one that is currently being employed by East Toronto Health Partners (ETHP) OHT.

**Highlights/Results/Key Findings:** While respondents identified the critical need for strategic communications and engagement, the organization of the PR function varied significantly across 14 OHTs; only 43% had a communications committee in place, while nearly 30% said communications was “ad-hoc”. Only 50% of OHTs formally acknowledged the PR function in their organizational structures. Respondents cited online engagement as a key communications method, however only 9 out of 14 OHTs had a dedicated website and just over 60% were on at least one social media platform.

ETHP’s Communications Committee offers real-world examples of how strategic communications management practices markedly contribute to an integrated OHT model, including (1) the development of an OHT brand through extensive engagement, and (2) the successful implementation of East Toronto’s COVID-19 immunization plan. These examples incorporate multiple conference themes including transferable lessons in the spread and scale of integrated care and conference tracks including system wide governance and leadership.

**Conclusions:** Healthcare communicators have a critical role to play in OHTs and guiding health system leaders on how to embed strategic communications practices and principles into the fabric of their newly formed health teams. It is recommended all OHTs formalize a communications committee made up of senior communicators from lead organizations.

**Implications:** Investment in strategic communications management will help OHTs meaningfully engage and build trust with the communities they serve. This will enable OHTs to gain a deeper understanding of community priorities and beliefs that will ultimately support the goal of creating healthcare solutions that meet the needs of their citizens.

## Transferable Lessons in Spread and Scale of Integrated Care

Abstract ID: 94

### Organizational procedures can maximize pharmacists' role in primary care teams: A multiple case study.

Presented by: Jennifer Lake

*Co-Authors: Jennifer Lake, Jan Barnsley, Aisha Lofters, Zubin Austin*

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**Conference Track:** Workforce capacity and capability

**Introduction:** Pharmacists are often included on interprofessional primary care teams. Their inclusion has led to improved clinical outcomes, reduced harms, and reduced costs to the healthcare system. However, there are concerns they are underutilized and have unexplained variations in their roles. This study explored how the role of the pharmacist is negotiated in a primary care team setting. This presentation focuses on how organizational procedures can support role negotiation.

**Aims and Objectives:** Five teams were recruited for a multiple case study completed using Yin's approach. Using Goffman's theories of self and impression management, negotiation of the pharmacist's role was explored. Goffman's theory outlines how individuals (e.g., actors) interact to achieve the object (e.g., role) of interactions. In this case study, how interprofessional team members negotiated to create the pharmacists' role, including both tasks and their delivery was examined. Both interview data and documents were analysed using the Qualitative Analysis of Leuven to create themes. Data was analyzed both deductively and inductively to characterize negotiation and its enablers.

**Highlights/Results/Key Findings:** Three cases were fully recruited. Participants described role negotiation as a smooth process without conflict. Often participants described pharmacists as willing to take on new tasks and deliver whatever was asked of them. In cases with strong organizational procedures, the pharmacists' role was more proactive and less dependent on other team members (e.g., physicians). Organizations with strong procedures tended to negotiate more tasks for the pharmacist to perform independently and allow for direct access by patients. From document analysis, it was identified that organizations who documented their strategic goals and measured their progress towards these goals had more examples of maximizing the pharmacists' role. They also discussed how the different roles on the team provided value to the team and contributed to their vision. Additionally, known organizational procedures provided a pathway for the pharmacist to ask for role changes, if needed.

**Conclusions:** Organizations that had more formal procedures discussed concerted efforts to maximize human resources within their organization and aligned them within their community. By organizations supporting or leading role negotiation, the pharmacist was able to better contribute to the organization, and independently and equitably deliver patient care.

**Implications:** Although the results are specific to the cases, they demonstrate an ability for "top-down" policies or programs to be effective for pharmacists' role change. This may help to effectively and efficiently negotiate new tasks and share best practices across organizations as a mechanism for role change.

## Transferable Lessons in Spread and Scale of Integrated Care

Abstract ID: 130

### Exploring Successful Implementation of Team-Based Care in Chronic Disease Management: A Case Study

Presented by: Madelyn daSilva

*Co-Authors: Madelyn daSilva, Shannon Sibbald, Vaidehi Misra*

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**Conference Track:** People as partners in health and care

**Introduction:** Integrated models of team-based care have become more common in Canada and are recognized as necessary to effectively manage complex chronic diseases, such as chronic obstructive pulmonary disease (COPD). Little is known on how to support the scale-up and expansion of successful models. This research explores the scale-up and spread of the Best Care COPD program (BCC), an evidence-based integrated model of team-based care for COPD that has been successfully implemented into primary care across Southwestern Ontario. BCC is delivered by trained Respiratory Therapists and is aimed to improve patient outcomes for those with COPD.

**Aims and Objectives:** The objective of this study was to explore the mechanisms that enable scale-up of and support the sustainability of integrated models of team-based care. In collaboration with BCC program designers, we conducted a case study to explore these processes within the BCC program. Through an integrated knowledge translation (IKT) approach, this research includes focus groups, interviews, and 'implementation logs'. Through iterative and continuous data analysis, this study aims to support and facilitate scale up and spread of the BCC program across the province and other similar chronic disease management sites.

**Highlights/Results/Key Findings:** BCC has been successfully implemented into 50+ primary care sites across Southwestern Ontario. Our findings identified three implementation phases; the pre-implementation phase, implementation, and the scale & sustainability phase. Our findings highlighted three foundational mechanisms integral to implementation across the different phases: 1) an evidence-based program 2) readiness to implement, and 3) peer-led implementation team. These primary mechanisms were supported through three transformative mechanisms including an adaptive delivery, provider empowerment, and embedded evaluation. Additionally, these findings were further supported through four supporting mechanisms: provider training, administrative support, role clarity, and patient outcomes. Based on the interplay between these processes across the implementation phases we developed a framework which can inform implementation of integrated, team-based care for chronic disease in various contexts.

**Conclusions:** This research can support further program expansion by placing appropriate focus on the mechanisms that matter most: an evidence-based program, readiness to implement, and a peer-led implementation team. BCC is currently used to support the management of COPD, however, findings strongly support the applicability to other chronic disease management programs.

**Implications:** Future research on this program will explore the mechanisms that enable program sustainability. We acknowledge that one limitation of our current research is the lack of patient engagement. We plan to utilize an IKT approach in the next stage of our research to co-design our study with our patient representative.