THE UNIVERSITY OF BRITISH COLUMBIA

Mental Health Commission of Canada | Commission de la santé mentale du Canada

Abstracts

8th Annual E-Mental Health Conference

New Generations, New Services

February 1-2, 2019

#EMH19

Financial contribution from
Avec le financement de

Health Canada | Santé Canada

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POSTER PRESENTATIONS

Poster #1. **The Use of Artificial Intelligence in Predicting Fatal Opioid Overdoses – Results of a Key Informant Survey of Psychiatrists and Family Physicians**

Presenters: *James Wong | Kiana Yazdani | Andy Man Tai | Addictions and Concurrent Disorders Group, UBC Department of Psychiatry*

Introduction: In April 2016, B.C. declared a public health emergency under the Public Health Act in response to increasing overdoses and deaths in the province. Methods like artificial intelligence (AI) have the capability to predict health outcomes based on risk factors in diseases and disorders, but there is limited knowledge on their potential to predict fatal opioid overdoses. We aimed to understand the clinical opinions of physicians on the role of AI in predicting fatal opioid overdoses. **Methods**: This key informant survey was delivered online through Qualtrics and included questions on: appropriate variables to include in an AI tool, its feasibility development, its potential applications, and outcome measures for assessing its performance. **Results**: 11 physicians completed the survey. 'Recent opioid overdose history' was rated as an 'extremely important' variable by the majority of respondents. Most agree that Canada has sufficient data to develop an AI tool, but state that the availability and validity of data and selection of variables would be major challenges. **Conclusions**: The majority of respondents agreed that it is feasible to create such a tool. The results gave insight into the appropriate variables to be included and the tool's potential implementation in a variety of settings.

Poster #2. **FeelingBetterNow.com®: a digital mental health platform for optimizing mental health in primary care**

Presenter: *Dr. Sam Ozersky | University Health Network - Toronto General Hospital*

Introduction. Canadian physicians lack a universal, standardized process to clinically address problems in patients with mental disorders. The current sub-optimal assessment and treatment planning results in poor outcomes close to 80% of mental health patients in primary care. **Methods:** FeelingBetterNow.com®, an e-mental health platform for assessment and treatment, was developed and piloted in a small population of patients from an addictions clinic and an automotive company EAP (N=16) with previously diagnosed disorders. They completed the DSM-V based assessment prior to their next appointment as part of a physician's intake process. CGI-S scores were obtained at baseline and CGI-I scores were obtained post-assessment. Changes in diagnoses and treatment were also assessed. **Results.** Preliminary results demonstrated the effectiveness of the assessment and treatment planner in facilitating the physician's adjustment of diagnosis and treatment. 15 of 16 cases had a diagnosis and treatment change. Comparisons

on the CGI-S and CGI-I scales demonstrated an average of 3 points of improvement with assessment use. **Conclusion.** A DSM-V based online assessment program has potential to improve outcomes of mental health patients in primary care. **Relevance/Implication.** Evidence-based e-mental health technologies have potential to standardize, streamline, and improve clinical practice and enhance quality of mental health care.

Poster #3. **Evaluating the Effectiveness of a Smartphone App at Improving Caregiver Mental Health**

Presenter: *Morgan Rosenberg | McGill University, Ryerson University*

Introduction: Informal caregivers (IC) are people in a circle of care who provide unpaid support such as romantic partners, family members, or friends. Informal caregiving for those with mental health issues has been on the rise with the increased prevalence of deinstitutionalization and fear of stigmatization, and is associated with both positive and negative mental health outcomes for the informal caregiver. **Methods:** The purpose of the upcoming study is to evaluate Resili, a digital mobile application that will provide psychoeducation, peer support, and DBT-informed interventions to ICs. As part of the study, ICs will be asked to report their levels of coping self-efficacy, caregiver burden, anxiety, and depression prior to and following the use of the app, as well as answer questions regarding their satisfaction with the app. **Results:** The components of the app have been shown to have tremendous mental health benefits in various populations. It is therefore expected to increase coping self-efficacy as well as decrease caregiver burden, anxiety and depression symptoms. Initial focus groups revealed a net promoter score of 75 (extremely high), with all participants signing up to use the full app when launched. **Conclusion and Relevance/implications:** If Resili is found to be acceptable and effective at enhancing IC wellbeing, it will be a cost effective and accessible resource to promote mental health allowing them to care for themselves and others more effectively.

Poster #4. **e-Mental Health Access, Literacy, and Interest among Patients with Severe and Complex Concurrent Substance Use and Mental Health Disorders**

Presenter: *Kiana Yazdani| James Wong | Andy Man Tai | Addictions and Concurrent Disorders Group, UBC Department of Psychiatry*

Introduction: We aimed to identify rates of technology access, literacy, and interest among patients at the Burnaby Center for Mental Health and Addiction (BCMHA), a tertiary care center for patients with concurrent disorders. **Methods**: We conducted brief interviews with patients at BCMHA. The survey included questions about patients' computer literacy, their access to digital devices at home and at BCMHA, and their interest in e-mental health services implemented in

their future treatment plans. **Results:** 174 participants completed the survey. They were primarily male (71%) and white (52.1%). Their mean age in years (SD) and mean years of education (SD) were 36.51 (10.5) and 12 (5) respectively. 88.39% of participants were familiar with what a smartphone is. 92.90% of the participants were familiar with what the Internet is. 57.33% and 60% of participants had access to a smartphone and the internet at home respectively. 79.74% of participants were interested in integrating computers/smartphones for the management of their health in the future. **Conclusion:** Given the level of access, literacy, and interest, our results support the feasibility of implementing e-mental health services in this patient population.

Poster #5. **Results of a Survey for Health-Promoting App for Students from Students**

Presenter: *Jonathan Uricher | Klinikum Stuttgart| DHBW Stuttgart*

Introduction: Empirical studies show that physical activity (PA) has a positive effect on mental health and cognitive performance of students. The purpose of this study was to find a concept for an app for students that could facilitate the integration of PA into daily routine. **Methods**: An online survey was sent to all students (N=8302) of the DHBW Stuttgart. The sample consists of n=2686 participants. In addition to the HEPA-Questionnaire (WHO) the interviewees made statements about their motivation of PA and the potential use of an app. **Results:** Approx. 75% meet current PA recommendations, although 87% sit for six hours/day or more. Most frequently cited reasons for physical inactivity were lack of time (n=1352) or difficulties in integrating PA into daily routine (n=1705). Functions such as exercise instructions (n=910), recipes for a healthy diet (n=887) and a faculty-related pedometer (n=743) are most frequently mentioned. **Conclusion:** The sample is above average in terms of PA compared to other universities. App interventions should be short, informative on PA and integrated into daily routine. **Implication/Relevance:** An increase in PA by the app could strengthen students' mental health and prevent mental illnesses facilitating the mission of a health-promoting university in the digital age.

Poster #6. **Using gamification to speed up knowledge translation**

Presenter: *Lillian Hung | Vancouver Coastal Health*

Introduction: This project involves using gamification (game thinking and mechanics) to support rapid knowledge uptake. This project aims to increase engagement, accessibility, knowledge, and effectiveness of research knowledge uptake in dementia care among hospital staff in British Columbia. **Methods:** A participatory action approach was taken to engage staff to co-design an online game, called the ART & SCIENCE of Person-Centred Care for learning ten techniques identified in a research study on dementia. The project was evaluated by a knowledge test and a

survey of staff experience. **Results:** A total of 70 staff members (nurses, physicians, occupational therapist, physiotherapist) in the medical and mental health programs at Vancouver General Hospital were involved in testing the game by using multiple action cycles. Staff reported that they not only gained knowledge and skills in caring for patients with dementia but also had fun and enjoyed the game competition. The second part of the project is to upscale and spread the game across health authorities in BC. In this presentation, we will illustrate what we have learned about the impact of applying gamification in knowledge translation. **Implications:** This collaborative project engages stakeholders across health authorities and offers knowledge to inform future work in dementia.

Poster #7. **Internet-delivered CBT (i-CBT) for Depression and Anxiety Disorders: Evidence and Implementation**

Presenter: *Eftyhia Helis | Canadian Agency for Drugs and Technologies in Health*

Introduction: A variety of i-CBT programs are currently available in Canada. However, awareness, availability, use, and funding for i-CBT is not uniform across the country. If appropriately integrated within the health system, i-CBT may enable more patients to access timely and effective treatment. **Methods**: CADTH and Health Quality Ontario (HQO) collaborated on a Health Technology Assessment (HTA) to evaluate available evidence and inform policy decisions around the appropriate use of i-CBT for individuals with major depressive disorder and/or anxiety disorders. **Results**: A review of the evidence assessing safety and clinical effectiveness determined that i-CBT is effective for reducing symptoms of depression or anxiety. Results of an economic analysis assessing cost-effectiveness; a qualitative evidence synthesis exploring patients' perspectives and experiences; an ethical analysis identifying and reflecting on key ethical issues; and an implementation analysis on considerations for i-CBT uptake in Canada will be also presented. **Conclusion:** This collaborative HTA work and relevant recommendations by CADTH's and HQO's expert committees may support decision-making by policy-makers, funders, practitioners and individuals seeking treatment options for depression and anxiety disorders. Relevance/Implications: Consistent with the Mental Health Commission's priorities, this work will also guide strategic and collaborative implementation support activities to improve i-CBT access in Canada.

Poster #8. **Planning for Scale: eMental Health for Youth and Young Adults**

Presenter: *Dr. Allison Bichel | Alberta Health Services*

Introduction: Communities across Canada are mobilizing to respond to the rising rates of addiction and mental health needs in youth and young adults (Y&YA). Electronic Mental Health

(eMH) has been shown to be clinically and cost-effective yet youth and clinician adoption, and integration into the care continuum lags. How do health systems plan for scaled implementation of eMH? Methods: This presentation shares Alberta's approach to business case development and implementation science including: 1) Research design; 2) Health technology assessment and procurement; 3) Engagement of Y&YA in design labs focused on the e-mental health care pathway, and advise on ongoing youth involvement 4) Indigenous considerations 5) Implementation community selection; and 6) benefits realization definition and modelling. Conclusion: The urgency to respond to Canada's Addiction and Mental Health crisis cannot be underestimated. Bold action is required to improve access to care and outcomes people with addiction and mental health needs. eMH is an important dimension of this response. Relevance/Implications: Practical approaches to health service design, business planning, and implementation science will be shared. Implications for Pan-Canadian collaboration to advance scaled adoption of eMH will also be explored.

Poster #9. Beyond Silence: A workplace mental health app for healthcare workers

Presenter: *Sandra Moll | School of Rehabilitation Science, McMaster University*

Introduction: Healthcare workers have high rates of mental health issues, but face barriers to seeking and receiving support in a timely way, particularly in small, under-resourced organizations. "Beyond Silence" is a new, evidence-based smartphone app designed to provide 'in the moment,' mental health information and support, customized for healthcare workers. It features a series of information pathways on accessing "support for me," "support to deal with co-workers," and resource links, including access to a trained peer mentor. Methods: App development began at a CIHR-sponsored hackathon, followed by a series of technical development sprints, incorporating input from professional software developers and an advisory team of knowledge users. Alpha testing was completed with 10 participants, with beta testing planned in February, 2019. Data collection includes pre/post implementation surveys, and follow-up focus groups. Results: Four weeks of initial testing generated feedback about key dimensions of the app, including usage patterns, engagement, functionality, aesthetics, subjective quality and impact. Preferred features of the app included access to customized, quality information and peer mentorship, as well as opportunities for interactivity. Suggested improvements included aesthetics of information delivery, and proactive re-engagement strategies. Conclusion/Implications: Beyond Silence is a promising, accessible tool to support mental health in healthcare workers.

Poster #10. The Online PsychoTherapy Tool (OPTT), an accessible and affordable solution for mental health care

Presenter: *Dr. Mohsen Omrani | OPTT Inc.*

Access to mental health care is limited by geographical (i.e., living in rural/remote areas), social (e.g., those with cultural and language barriers in receiving treatment, like refugees), or financial factors as well as the stigma attached to mental disorders. To bridge the gap in delivering mental health services, we utilized an innovative technology that renders mental healthcare more accessible, affordable, stigma-free, and efficient. Our Online PsychoTherapy Tool (OPTT) is a secure cloud-based platform to provide flexible online psychotherapy to clients. OPTT gives hospitals, clinics, insurance companies and EAPs the infrastructure and clinically validated content (i.e. 12 week e-CBT modules with embedded clinical questionnaires) to go instantly online and expand their reach with 1/3 of their normal operational cost. Our platform is equipped with proprietary pre-designed, interactive online CBT modules for different disorders like Depression and Anxiety, which have been clinically validated through 5 clinical trials. These evidence-based modules, streamline the therapy process, helping caregivers save time and the health care system/patients save money. We believe our platform offers a clinically validated solution to transform the lengthy, cumbersome and expensive psychotherapy process into a turn-key operation which would lower the costs and make therapy available to many more patients in need.

Poster #11. Introduction of an Online Substance Use Relapse Prevention Program at BCMHSUS

Presenter: *Kimberley Korf-Uzan | BC Mental Health & Substance Use Services, Provincial Health Services Authority*

BACKGROUND: BCMHSUS and PHSA's Office of Virtual Health are partnering on a project to implement Breaking Free Online (BFO), an online substance use recovery program for individuals with concurrent disorders (CD) at the Burnaby Centre for Mental Health & Addiction. METHODS: BFO directly addresses dependence on a wide range of substances, and is based on the principles of CBT, mindfulness, relapse prevention, reward and reinforcement, and motivational enhancement therapy. This is a small scale demonstration project involving 20 – 25 clients, with the intent to evaluate, refine and eventually scale up for broader implementation. RESULTS: The expected outcomes of this project include: (1) Providing a client-centred treatment option that enables clients to engage with the program at their own pace and develop transferrable skills for living in community, (2) Enhancing the continuum of care by providing ongoing access to support after discharge for clients with CD, (3) Evaluating the program to ensure ongoing enhancements, and to build the case for program scale-up. CONCLUSIONS & RELEVANCE/IMPLICATIONS: The

evidence base supporting the use of technology to supplement conventional forms of health care is rapidly growing. The introduction of BFO at the Burnaby Centre represents an innovative first step toward increased integration of virtual health in an inpatient CD setting.

Poster #12. **Patient, Family & Peer Support Worker Perspectives on Mental Health Patient Portal Use & Evaluation**

Presenter: *Dr. Gillian Strudwick | Centre for Addiction and Mental Health, Toronto, Canada & Institute of Health Policy, Management and Evaluation, University of Toronto*

Introduction: Although patient portals have been associated with a number of benefits for patients, most have only been implemented among acute care settings. This study aims to: (1) Understand how portals can be effectively used by patients with mental illness to engage in their own care; (2) Identify process and outcome indicators of effective patient portal use that are meaningful to patients with mental illness. **Methods**: Five focus groups were conducted, consisting of patients who have accessed mental health services, family members of patients, and Peer Support Workers affiliated with a large Canadian academic mental health hospital. Focus group transcripts were analyzed using an inductive content analysis approach. **Results**: Facilitators of portal use included ease of use and deterioration of patient health. Indicators of effective portal usage identified include patient satisfaction and patient empowerment. Additional results and desired functionalities will be shared in the presented poster. Conclusion: The identified functionalities and indicators that emerged can be incorporated into portals to support the needs of families and patients, and inform the effective use of patient portals in a mental health setting. **Relevance/implications**: The indicators identified in the study should be used in future patient portal evaluations for mental health populations.

Poster #13. **Common Characteristics of E-Health Interventions Targeting Substance Use**

Presenter: *Ava Outadi | Addictions and Concurrent Disorders Group, UBC Department of Psychiatry*

Introduction: It has been noted that stigma, high cost of mental health services, and lack of capacity are the biggest contributors to low usage of mental health services in Canada. One solution to this problem is the use of e-health interventions. The purpose of this poster is to highlight some of the common characteristics of e-health interventions targeting substance use and mental health issues. **Methods and Results**: This poster is a descriptive analysis of findings, based on a larger project using a Rapid Realist Review methodology, with a sample of 197

articles. There were 88 unique programs identified, with the most frequently used treatment approaches being Cognitive Behavioural Therapy (CBT, 26.4%) and Personalized Feedback (PF, 11.7%). Within CBT based papers, 28.8% targeted substance use, and 13.4% targeted alcohol use specifically. While in PF papers, 36.4% targeted alcohol use and 13.6% targeted cannabis. Further, the most frequently used mode of delivery of the interventions was through a website (57.9%), followed by use of software (32.0%). Conclusion and Impact: CBT and PF were the most frequently used treatment approaches, and websites were the most commonly used method of intervention delivery. This poster can contribute to the field of technology-based health innovations by characterizing the different components of some common interventions.

Accreditation statement

The University of British Columbia Division of Continuing Professional Development (UBC CPD) is fully accredited by the Committee on Accreditation of Continuing Medical Education (CACME) to provide study credits for continuing medical education for physicians. This event is an Accredited Group Learning Activity (Section 1) as defined by the Maintenance of Certification Program of the Royal College of Physicians and Surgeons of Canada, and has been approved by UBC CPD for up to 13.75 MOC Section 1 Group Learning credits. Each physician should claim only those credits he/she actually spent in the activity.

Co-Development Statement

This program was co-developed with UBC Department of Psychiatry and the Mental Health Commission of Canada and was planned to achieve scientific integrity, objectivity and balance.