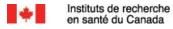# Preliminary Lay Summary Report*

COVID-19 in Mental Health and Substance Use: Knowledge Synthesis

Preliminary lay summaries of the 45 projects funded through the Knowledge Synthesis: COVID-19 in Mental Health and Substance Use Funding Opportunity

Version note: From reports submitted on Aug. 22, 2020. These projects are ongoing and this report will therefore be updated frequently to reflect current data. Current report available at https://cihr-irsc.gc.ca/e/52001.html.

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Canadian Institutes of Health Research
160 Elgin Street, 9th Floor
Address Locator 4809A
Ottawa, ON K1A 0W9
www.cihr-irsc.gc.ca

CIHR Institute of Neurosciences, Mental Health and Addiction
University of Calgary, Cumming School of Medicine
Heritage Medical Research Building, Room 172
3330 Hospital Drive NW
Calgary, AB T2N 4N1
www.cihr-irsc.gc.ca/e/8602.html

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Introduction

Mental health challenges and problematic substance use during the COVID-19 pandemic are significant, national health topics for many Canadians during this unprecedented time. In April 2020, the Government of Canada announced a $115-million investment in Canada's rapid research response to COVID-19, which includes funding for a CIHR COVID-19 and Mental Health (CMH) Initiative.

The CMH Initiative will provide urgent knowledge and evidence to support decision-making throughout the mental health and substance use responses to the pandemic, and is currently focused on rapid and near-term knowledge needs, which will be addressed through a series of funding opportunities, including the Knowledge Synthesis: COVID-19 in Mental Health and Substance Use funding opportunity.

Research funded through this competition will rapidly synthesize current evidence on mental health services needs, delivery and guidelines, practice and related issues, placed in the COVID-19 context. This report comprises the preliminary lay summaries of the 45 projects funded through this knowledge synthesis competition. It will be updated frequently, to ensure we are providing the most up-to-date information, as rapidly as possible.

Additional information on the CMH Initiative, including a searchable repository of the projects included in this report and preliminary knowledge syntheses for each, as well as the current version of this report, can be found online at: https://cihr-irsc.gc.ca/e/52001.html.

Questions, feedback and suggestions are welcome and may be submitted via the website, or by email to: COVID19MH-COVID19SM@cihr-irsc.gc.ca.

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Aging

The relationship between social connectedness and mental health for residents of long-term care homes: knowledge synthesis and mobilization

Nominated Principal Investigator: Jennifer Bethell, KITE, Toronto Rehabilitation Institute, University Health Network

Authors: Bethell, Jennifer (KITE, Toronto Rehabilitation Institute, University Health Network), Babineau, Jessica (KITE, Toronto Rehabilitation Institute, University Health Network), Bretzlaff, Monica (Behavioural Supports Ontario), Edwards, Cathleen (Family Councils Ontario), Gibson, Josie-Lee (Ontario Association of Residents' Councils), Hewitt Colborne, Debbie (Behavioural Supports Ontario), Iaboni, Andrea (KITE, Toronto Rehabilitation Institute, University Health Network), Lender, Dee (Ontario Association of Residents' Councils), McGilton, Katherine (KITE, Toronto Rehabilitation Institute, University Health Network), Schon, Denise (Lakeside LTC Family Council), Viau Aelick, Katelynn (Behavioural Supports Ontario)

For more information, please contact: Jennifer Bethell: Jennifer.bethell@uhn.ca

Target/priority population(s) in synthesis:

- Long-term care home residents, families and staff

What is the issue?

Coronavirus (COVID-19) has taken a disproportionate toll on people living in long-term care (LTC) homes; residents of LTC homes make up more than half of the COVID-19 deaths in Canada and the case fatality rate is roughly 25%. Infection control measures enacted to protect LTC residents from COVID-19, such as prohibiting visitors and restricting activities and interactions with staff and other residents, may have reduced risk of infection but they have also impacted social connectedness for residents. Social connectedness is good for health and well-being and important to quality of life in LTC homes. How might these measures have affected the mental health of the over 150,000 Canadians living in LTC homes? What can be done about it now as well as to prepare for future outbreaks?

Key messages:

- Infection control measures put in place to protect residents of long-term care (LTC) homes from COVID-19 have had a major impact on their social connectedness.

- Research evidence shows that, among people living in LTC homes, social connectedness is associated
  with mental health outcomes including depression, cognitive decline and responsive behaviours.

- Research evidence suggests strategies that might help to build and maintain social connectedness for LTC residents, including some that might be adapted in the context of COVID-19.

How was the synthesis conducted?

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We conducted a scoping review of published, English-language research that quantified some aspect of social connectedness among LTC residents. Our search was conducted in July 2019 and included MEDLINE(R) ALL, CINAHL (EBSCO), PsycINFO (Ovid), Scopus, Sociological Abstracts (Proquest), Embase and Embase Classic (Ovid), Emcare Nursing (Ovid) and AgeLine (EBSCO). For this analysis, we included studies that reported either: (1) the association between social connectedness and a mental health outcome; (2) the association between a modifiable risk factor(s) and social connectedness; or (3) results of intervention study (randomized and nonrandomized) the outcome was any measure of social connectedness.

What did the synthesis find?

We found roughly 60 studies that tested the association between social connectedness and a mental outcome health and roughly 150 observational and intervention studies that assessed some measure of social connectedness as an outcome. These studies reported associations between social connectedness and depression, anxiety, cognitive decline, negative mood and affect, and responsive behaviours as well as other mental health outcomes. Observational and intervention studies suggest strategies that might build and maintain social connectedness among LTC residents, and our team highlighted 12 that could be adapted in the context of infectious disease outbreaks, namely: manage pain; address visual impairments; sleep at night, not during the day; find opportunities for creative expression like art, music and storytelling; exercise; maintain religious and cultural practices; garden, either indoors or outside; visit with pets; use technology to communicate; laugh together; reminisce about events, people and places; and, communicate non-verbally.

What are the implications of this synthesis?

- Infection control measures put in place to protect LTC residents from COVID-19 - such as restricting family and other visitors as well as interactions with other residents and staff in the home - may have had negative impacts on residents' mental health.

- Research evidence suggests some strategies that LTC residents, families and staff might use to help build and maintain social connectedness for LTC residents, including during COVID-19.

- More research is needed to better understand the health impacts of social connectedness for residents of LTC homes as well as strategies to address it – both during and outside disease outbreaks like COVID-19.

Keywords: long-term care homes, nursing homes, mental health, social relationships, social support, social networks, social engagement, loneliness

Other Populations: Chronic Disease and/or Mental Illness

Knowledge synthesis for mechanistic and targeted in-person and digital social-connection intervention for wellness and resilience in older adults in pandemic context and beyond

Nominated Principal Investigator: Laurette Dubé, McGill University

Authors: Catherine Paquet, Université Laval, Mike Cisneros-Franco, McGill University, Laurette Dubé, McGill University

For more information, please contact: sabina.hamalova@mcgill.ca

Target/priority population(s) in synthesis:

- Older adults experiencing social isolation or loneliness as a result of physical distancing measures.

What is the issue?

Physical distancing measures may lead to increased loneliness and social isolation in older adults and can have a negative impact on their physical and mental well-being. We conducted a rapid review to identify and examine the effectiveness of social connectedness interventions aimed at reducing feelings of social isolation and loneliness and promoting well-being, resilience, and coping in the context of infection control-related social and physical distancing measures.

Key messages:

A rapid review was conducted to identify interventions tackling the mental health consequences of outbreak-related social restrictions for older people. We identified a limited number of interventions, mostly ongoing. The interventions implemented a range of strategies such as screening, use of technology to promote social connections, use of telehealth for at-risk groups, online resources for physical and psychological health, and proving reliable information and support to minimize outbreak-related worries. Similar strategies were proposed by experts who also highlighted the need to consider vulnerable groups such as those with poorer digital literacy, chronic conditions, and more disadvantaged socio-economic background.

How was the synthesis conducted?

A search strategy was developed in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines and in collaboration with knowledge users and academic librarians; and run on June 5th 2020. The search combined terms related to (1) social isolation and loneliness, (2) confinement and quarantine, and (3) infectious diseases and outbreaks, as shown in Appendix 1. The following databases were searched: Medline, American Psychological Association (APA) PsycINFO (1987-), Ageline, Cumulative Index of Nursing and Allied Health (CINAHL), Embase, Social Work Abstracts, and Cochrane Library. Pre-prints were also searched using PsyArXiv, medRxiv, and the COVID-specific database COVIDScholar to capture the rapidly evolving literature on the current pandemic situation. We also ran a Google search and examined the first 10 pages to find relevant grey literature. A two-stage screening process was undertaken in Covidence by two reviewers with disagreements resolved through discussion. Studies were excluded if they focused on younger adults or children, were

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not original studies, were not related to an outbreak context, did not report on an intervention targeting social isolation, were published prior to 2000, or not in English or French. In addition to the studies that met our eligibility criteria, commentaries, editorials, and correspondence that were related to the topic were examined to strategies proposed by experts. Studies that did not report on interventions but reported on risk or protective factors with respect to the psychological consequences of social isolation in an epidemic context were also examined. Results were managed into endnote and screened within Covidence in two stages (title/abstract and full-text), both of which involved a thorough screening of the papers by two reviewers. Any disagreements which arose were resolved through discussion.

A data extraction tool was co-developed by two authors with input from knowledge users. Extractions were done by a single reviewer with input from a second reviewer where necessary. Information extracted included (1) population characteristics in terms of socio-demographic, co-morbidities, and living arrangement. (age group, gender, socio-economic background (e.g. education, employment, income, etc.); (2) characteristics of study, intervention (e.g. type, duration, delivery mode, frequency, resources required) and control groups (if relevant), (3) the types of outcomes, measurement and follow-up; and (4) results (within and between-group differences, stratified/interactive results). Due to the heterogeneity of the studies, the results were synthesised narratively to summarize the effectiveness of the interventions.

Finally, in addition to the studies that met our eligibility criteria, commentaries, editorials, and correspondence that were related to the topic were examined to identify strategies proposed by experts. Studies that did not report on interventions but reported on risk or protective factors with respect to the psychological consequences of social isolation in an epidemic context were also examined.

What did the synthesis find?

Literature on interventions aiming to reduce the psychological impact of social isolation resulting from lockdown measures is still limited and most studies are still underway. The vast majority of studies relied on the use of technology to deliver information, coping and behavioural strategies, opportunities to connect with others and with health care professionals. Other studies reported on approaches to systematically assess individuals at risk of being psychologically affected by social distancing measures. Many excluded articles provided relevant recommendations that were either based on clinical expertise or interventions evaluated when social distancing measures were not in place, which should be examined to provide more evidence on effectiveness of specific interventions.

What are the implications of this synthesis?

Despite a widespread recognition of the consequences of social distancing measures on older people's mental health and well-being, interventions designed to minimize such consequences are still underway and it is still too early to tell which of these interventions are most effective. Studies conducted prior to the pandemic should be examined until pandemic-specific evidence is available.

Keywords: mental health, social distancing, elderly population, social isolation, social networks, knowledge synthesis, loneliness, confinement, outbreak, resilience.

Other Populations: None

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Depression In community Residing Elders (DIRE): A rapid review and network meta-analysis of depression telemedicine treatments for older adults living in the community

Nominated Principal Investigator: Dr. Zahra Goodarzi, MD, MSc, FRCPC, University of Calgary

Authors:

Investigators: Dr. Zahra Goodarzi, MD, MSc, University of Calgary, Dr. Jennifer Watt, MD, PhD, University of Toronto, Dr. Julia Kirkham, MD, MSc, Queens University, Dr. Dallas Seitz, MD, PhD, University of Calgary, Dr. Zahinoor Ismail, MD, University of Calgary, Dr. Andrea Tricco, PhD, University of Toronto, Dr. Sharon Straus, MD, MSc, University of Calgary, Dr. Areti Angeliki Veroniki, PhD, University of Ioannina

Knowledge Users: Dr. Jayna Holroyd-Leduc, MD, University of Calgary**,** Dr. Vivan Ewa, MBBS MMedEd, University of Calgary**,** Dr. Barbara Liu, MD, University of Toronto**,** Ms. Loralee Fox, RN MN, University of Calgary**,** Mr. Wayne Hykaway, Mrs. Linda Grossman**,** Ms. Charlene Retzlaff, BSW RSW, Alberta Health Services

For more information, please contact: Zahra Goodarzi: zahra.goodarzi@albertahealthservices.ca

Target/priority population(s) in synthesis:

- Older adults, ≥60 years old, living in the community

What is the issue?

Depression is the single most common mental illness in older adults and it leads to significant day to day struggles. Older adults experiencing depressive symptoms, such as low mood, are often undertreated. One reason for under treatment is difficulty in accessing treatment. Social isolation worsens low mood, and many other symptoms of depression. During the COVID-19 pandemic, older adults are even more socially isolated and less able to seek care. There are virtual or telemedicine approaches using phones or computers, which healthcare providers could use during the COVID-19 pandemic to provide treatments for depression in older adults.

Key messages:

Depression is the single most common mental illness in older adults and worsens people's day to day lives. During the COVID-19 pandemic, these conditions are exacerbated because physical distancing leaves older adults without access to treatment. Our study found 14 articles that examined the effect of telehealth interventions on depression or depressive symptoms in older adults. We will do further research to find any other telehealth treatments for depression, and determine which interventions are most effective.

How was the synthesis conducted?

Our goal was to determine what telemedicine strategies are available to reduce depressive symptoms in community-dwelling older adults. We reviewed existing studies in the literature. We looked in five literature databases and found 1966 potential articles that we reviewed to see if they met our eligibility

criteria. We found 14 studies that examined the impact of telehealth interventions on reducing depressive symptoms in community-dwelling older adults.

What did the synthesis find?

We found that treatments most commonly consisted of internet cognitive behavioural therapy, telephone cognitive behavioural therapy or telephone psychotherapy. These treatments involved patients doing weekly modules focused on developing skills to address mood symptoms. In some cases, patients received weekly phone calls or emails from psychologists or counsellors to help them work through their therapy work. Many studies noted benefit from these treatments. Knowing which treatments are best will allow us to inform patients, doctors, and health care teams about how to best use these services, which will reduce the burden of depression in older adults.

What are the implications of this synthesis?

There are telehealth treatments that we can use to reduce the burden of depression in community-dwelling older adults. The next phase of our knowledge synthesis will compare the effectiveness of these treatments to one another and identify which treatments are the best for reducing depressive symptoms in community-dwelling older adults.

Keywords: depression, depressive symptoms, mental health, mood disorders, older adults, seniors, elderly, telehealth, virtual care, cognitive behavioural therapy

Other Populations: Chronic Disease and/or Mental Illness

Children, Youth, and Families

Rapid evidence and gap map of virtual care solutions for youth and families to mitigate the impact of the COVID-19 pandemic on pain, mental health, and substance use

Nominated Principal Investigator: Kathryn A. Birnie, PhD RPsych, Department of Anesthesiology, Perioperative and Pain Medicine, University of Calgary; Assistant Scientific Director, Solutions for Kids in Pain

Authors: Melanie Noel, PhD RPsych, Department of Psychology, University of Calgary, Jennifer Stinson, PhD RN, Child Health Evaluative Sciences, The Hospital for Sick Children; Lawrence S. Bloomberg, Faculty of Nursing, University of Toronto, Isabel Jordan, Youth Patient Partner, Evie Jordan, Parent Patient Partner, Justina Marianayagam, BHSc, Youth Patient Partner; Medical Student, Northern Ontario School of Medicine, Diane Lorenzetti, PhD, Health Sciences Library & Department of Community Health Sciences, University of Calgary, Tieghan Killackey, PhD RN, Postdoctoral Fellow (July 2020), Child Health Evaluative Sciences, The Hospital for Sick Children, Fiona Campbell, MD FRCA, Department of Anesthesiology & Pain Medicine, The Hospital for Sick Children; University of Toronto, Co-chair Canadian Pain Task Force, Paul Arnold, MD PhD FRCPC, Departments of Psychiatry & Medical Genetics, University of Calgary, Chitra Lalloo, PhD, Child Health Evaluative Sciences, The Hospital for Sick Children, Alexandra Neville, MSc, PhD Student, Department of Psychology, University of Calgary, Maria Pavlova, MSc, PhD Student, Department of Psychology, University of Calgary

For more information, please contact: Kathryn Birnie, PhD RPsych: kathryn.birnie@ucalgary.ca

Target/priority population(s) in synthesis:

- Youth <18 years old and families
- Individuals with pre-existing or emerging chronic pain
- Virtual care best practices for chronic pain, mental health, substance use, and functioning (Phase 1 here)
- Evidence and gap map of stepped care virtual solutions for chronic pain, mental health, substance use, and functioning (Phase 2 forthcoming)

What is the issue?

Pain is one of the most common symptoms that youth experience when dealing with stressful events, such as the COVID-19 pandemic. At least two million Canadian youth already have pain that lasts months to years (also known as chronic pain). Youth living with chronic pain are more likely than their peers to be anxious, depressed, have traumatic stress, and trouble sleeping. They are also more likely to continue to have pain, mental health problems, and misuse drugs as adults. We need to treat new and pre-existing pain now to prevent lifelong issues for our youth. In part because of the COVID-19 pandemic, it has become necessary to deliver medical and mental health care virtually (like using apps, websites, or therapy over video call). It is critical to find out the best ways to deliver virtual care for youth who are dealing with pain and their families.

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Key messages:

- Virtual care is underutilized. Guidance and evidence exists and should be used where available to inform selection and implementation of virtual care best practices for youth with chronic pain and their families.

- There is a need for increased standardization of implementation and integration of virtual solutions into clinical care.

- Opportunities exist to further leverage stepped care virtual solutions to improve support for youth with chronic pain and their families.

How was the synthesis conducted?

Our team of patient partners (youth and parents), health professionals, and researchers conducted a rapid systematic review of relevant peer-reviewed scientific articles reporting key concepts, recommendations, and/or best practices for virtual care for youth living with chronic pain published in the past 10 years. Database searches (CINAHL, EMBASE, MEDLINE, PsycINFO, and Web of Science) conducted in May 2020 identified 4165 studies. Abstracts and full-texts articles were independently reviewed in duplicate with disagreement resolved by a third author; 16 articles were identified for inclusion.

What did the synthesis find?

Findings from our knowledge synthesis revealed guidance for leveraging and implementing virtual care, selecting virtual care platforms, and questions in need of further consideration when using virtual care to support youth with chronic pain and their families.

1. **Leveraging Virtual Care**
   Virtual care for youth with chronic pain and their families:
   - is acceptable, reasonable, and effective
   - increases access to care (particularly in rural or remote areas)
   - is underutilized (especially for real-time symptom assessment and psychological treatment)

2. **Implementing Virtual Care**
   Virtual care for youth with chronic pain and their families should:
   - be freely available across all technologies (telephone, apps, websites, videoconference)
   - include training, terms of use, and guidelines for health professionals, youth and families
   - use secure infrastructure (encrypted, password protected, authorized access)
   - be developmentally appropriate
   - meet ethical standards of care
   - be transparent in communication (therapist vs. computer-generated messaging)

3. **Creating or Selecting Virtual Care Platforms**
   Virtual care for youth with chronic pain and their families should:

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- be user-friendly and acceptable to youth and families
- be backed by science
- involve youth, families, and health professionals in their development
- be individualized or customizable
- be comprehensive in terms of pain management (address pharmacological, psychological, and physical strategies)
- use multimedia content (videos, text, images)
- meet accessibility standards
- be able to integrate social and peer support

4. **Remaining Gaps About Virtual Care**

Virtual care for youth with chronic pain and their families requires:
- standardized practice guidelines for implementation and evaluation
- evidence showing its effectiveness for all symptoms or concerns identified by youth and families
- knowledge about its limitations and suitability for all aspects of care (such as physical exam)
- consideration of potential harms and impact on therapeutic relationship
- strategies to enhance engagement
- integration into existing clinical care pathways and face-to-face care

**Detailed research priorities for virtual care for individuals with chronic pain during the COVID-19 pandemic are outlined in Eccleston et al. (2020)

What are the implications of this synthesis?

- There is a need to identify the scope of virtual care solutions available across the stepped care continuum (that is, matching intensity of treatment to each individuals' needs)

- Greater patient involvement is needed in the development, selection, and implementation of virtual care to support youth with chronic pain and their families.

Keywords: children, youth, virtual care, chronic pain, mental health, substance use, guidelines, best practices, stepped care

Other Populations: None

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Quelles sont les répercussions de la pandémie du COVID-19 sur la santé mentale des enfants de 5-12 ans, et quels sont les enjeux particuliers pour les enfants handicapés ou ayant une maladie chronique ? Une scoping review des problématiques vécues et des pistes d'intervention prometteuse.

Chercheuse principale designee : Chantal Camden, professeure à l'université de Sherbrooke, chercheure au CRCHUS et à l'IUPLSSS, Catherine Malboeuf-Hurtubise, Faculté de Psychologie, Département de Psychologie, Université Bishop's

Auteurs : Pasquale Roberge, Faculté de médecine et des sciences de la santé, Département de médecine de famille, Université de Sherbrooke, Mélissa Généreux, Faculté de médecine et des sciences de la santé, Département de médecine de famille, Département des sciences de la santé communautaire, Université de Sherbrooke, Julie Lane, Faculté d'éducation, Département de psycho-éducation, Université de Sherbrooke, Emmanuelle Jasmin, Département d'ergothérapie, Université de Sherbrooke, Jean-Claude Kalubi, Faculté d'éducation, Université de Sherbrooke, Eve-Line Bussières, Département de psychologie, Université de Québec à Trois-Rivières, Nicolas Chadi, Département de pédiatrie, Université de Montréal, Marjorie Montreuil, Département des sciences infirmières, Université McGill, Jan Willem Gorter, CanChild, Université de McMaster, Keiko Shikako-Thomas, Réseau Child-Bright, Université McGill, Karine Tremblay, patiente partenaire, Université de Sherbrooke, Jasmin Roy, Fondation Jasmin Roy Sophie Desmarais

Pour plus de renseignements, prière de contacter : coordinatrice de recherche à l'adresse suivante : elodie.herault@usherbrooke.ca ou par téléphone au 819 346-1110 poste 16174

Populations cibles/prioritaires dans la synthèse :

- bous les enfants âgés de 5 à 12 ans

- Intérêt particulier aux enfants de 5 à 12 ans présentant un handicap ou une condition de santé chronique

Quelle est la question abordée?

Quelles sont les répercussions de la pandémie de COVID-19 sur la santé mentale des enfants de 5-12 ans, et quels sont les enjeux particuliers pour les enfants handicapés ou ayant une condition de santé chronique ?

Messages clés :

Nos partenaires et les données scientifiques semblent indiquer des inquiétudes autour de la santé mentale des enfants de 5 à 12 ans, particulièrement en lien avec le sommeil, l'anxiété et les comportements difficiles. La littérature scientifique contient cependant très peu de données empiriques. Bien que les enfants ayant des troubles neurodéveloppementaux (ex. bDA) pourraient être plus à risque, il semble trop tôt pour identifier des facteurs de risque et de protection, ainsi que des interventions prometteuses pour adresser spécifiquement les impacts de la COVID-19. Il sera primordial de continuer à coordonner les multiples recherches en cours, et de mettre régulièrement à jour la synthèse des connaissances dans les prochains mois, pour prioriser les actions qui devraient être mises en place pour favoriser la santé mentale des enfants.

Comment la synthèse a-t-elle été réalisée?

Une recension a été effectuée pour identifier des documents explorant l'impact de la COVID-19 sur la santé mentale des enfants, ou des interventions prometteuses. En utilisant une liste de mots-clés déterminés avec un comité aviseur et une bibliothécaire, une recherche documentaire a été effectuée en utilisant trois bases de données (Medline, ERIC, et PsycINFO) ainsi que Open Science Framework, Research Gate et Google Scholar. Les titres et abrégés de tous les documents trouvés ont été révisés ; les documents qui semblaient pertinents ont été lus en entier. Parmi les 46 documents répondants à nos critères d'inclusion, seules 5 présentaient des données empiriques. Les informations et les résultats obtenus dans ces études ont été extraits. L'objet du présent rapport concerne l'extraction des informations contenues dans les 5 articles empiriques identifiés par cette recherche. Les données extraites rendent compte de la région de l'étude, de son but, de la population étudiée, des impacts documentés ou des résultats d'intervention, ainsi que des recommandations faites par les auteurs. Le rapport contient également les préoccupations émises par les partenaires, le plan pour maintenir à jour la synthèse des connaissances et ancrer ces connaissances dans le contexte scolaire québécois.

Quelles ont été les conclusions de la synthèse?

Des 5 articles analysés, 4 ont décrit des impacts (3 en Chine, 1 en Italie), et un a proposé une méthode d'intervention auprès des parents (États-Unis). Les populations étudiées étaient variables; bien qu'elles incluaient les enfants d'âge scolaire primaire, aucun ne les traitait spécifiquement. Un des articles rapporte des informations concernant les enfants diagnostiqués avec un bDA/H. Les impacts observés sont variés : anxiété, trouble du sommeil, du comportement, des émotions, des retards du développement voire des régressions comportementales. Cependant, peu de données comparatives ou cliniques sont disponibles pour déterminer l'impact réel de la pandémie, et les enfants qui auraient besoin d'un soutien plus intensif par des professionnels de la santé. D'ailleurs, une étude souligne que la grande majorité des enfants démontrent des signes adaptatifs. Peu d'informations sont disponibles afin d'être en mesure d'identifier les enfants qui seraient plus à risque de problèmes de santé mentale; toutefois les conditions de santé pré existantes (ex. TDAH), les relations familiales et la charge d'étude pourraient notamment être des facteurs à considérer. Des recommandations sont formulées par les auteurs pour s'assurer de dépister et prendre en charge les enfants qui pourraient avoir des difficultés de santé mentale, mais aucune intervention portant directement sur les enfants n'a été évaluée jusqu'à ce jour. La seule intervention documentée rapportent des effets positifs d'une télé-psychiatrie (OPTT), qui visait à soutenir les parents (anciens vétérans de guerre) mais a aussi démontré des effets positifs chez les enfants. Considérant le peu d'informations disponibles à l'heure actuelle, il importe de continuer nos recherches afin d'augmenter la quantité et la qualité des informations tirées de la littérature.

Les partenaires impliqués dans la consultation ont émis des propos qui vont généralement dans le sens des résultats trouvés dans les écrits. Ils ont fait ressortir plusieurs initiatives en cours pour soutenir la santé mentale des enfants, et documenter l'impact de la pandémie. Ils ont également fait ressortir des éléments peu abordés dans les écrits qui seront pourtant nécessaires à documenter afin de mettre en place des actions pertinentes, d'identifier les enfants les plus à risque, et de s'ajuster au contexte changeant qui pourrait influencer la santé mentale dans le temps. Les écrits seront mis à jour dans les prochains mois, les efforts de chacun seront coordonnés, et des collectes de données additionnelles pourraient être effectuées pour répondre aux préoccupations de nos partenaires.

Quelles sont les implications de cette synthèse?

Le nombre limité de données empiriques, ainsi que les études repérées dans nos réseaux actuellement en cours, suggèrent que la recherche à ce sujet est à ses balbutiements. Un suivi mensuel sera effectué ainsi qu'une recherche manuelle (ex. *snowballing*, références des références actuelles, inclusion des rapports préliminaires des études en cours) afin de maintenir à jour la synthèse des connaissances. Cependant, les premiers indices montrent l'importance de suivre la santé mentale et d'identifier quels sont les symptômes exacts de cet impact, les sous-groupes d'enfants les plus à risque, et les interventions prometteuses.

Mots-clés : santé mentale, enfants, déterminants socio-culturels de la santé, handicap, collaboration école-santé, maladies chroniques, COVID-19, recherche participative, revue de la portée

Other Populations: Chronic Disease and/or Mental Illness; Vulnerable or At-Risk Populations

The COVID-19 pandemic and eating disorders in children and adolescents: recommendations from the Canadian consensus panel

Nominated Principal Investigator: Dr. Jennifer L. Couturier, Department of Psychiatry & Behavioural Neurosciences, Faculty of Health Sciences, McMaster University, Hamilton, Canada

Authors:

Jennifer Couturier (McMaster University), Catherine Miller (Canadian Mental Health Association), Neera Bhatnagar (McMaster University), Melissa Brouwers (University of Ottawa), Sheri Findlay (McMaster University), Leanna Isserlin (University of Ottawa), Melissa Kimber (McMaster University), Gail McVey (University of Toronto), Mark Norris (University of Ottawa), Wendy Spettigue (University of Ottawa), Cheryl Webb (McMaster University), Wendy Preskow (National Initiative for Eating Disorders, Toronto, Canada; parent advocate), Rachel Loewen (youth advocate, Woodstock, Canada), Techiya Loewen (parent advocate, Woodstock, Canada), Elizabeth Waite (parent advocate, Woodstock, Canada), Catherine Ford (Ministry of Health and Long-Term Care, Toronto, Canada), Ahmed Boachie (University of Toronto), Cathleen Steinegger (University of Toronto), Josie Geller (The University of British Columbia), Adele Lafrance Robinson (Laurentian University), Seena Grewal (University of Toronto), Monique Jericho (University of Calgary), Gina Dimitropoulous (University of Calgary), Kerry Bourret (St. Joseph's Care Group – Thunder Bay), David Pilon (Dalhousie University), Jennifer Coelho (The University of British Columbia), Anick LeClerc (McMaster Children's Hospital), Debra Katzman (University of Toronto), Natasha Johnson (McMaster University)

For more information, please contact: Dr. Jennifer Couturier: coutur@mcmaster.ca

Target/priority population(s) in synthesis:

- Children and adolescents (<25 years of age) diagnosed with an eating disorder (ED)

What is the issue?

COVID-19 has negatively impacted children and adolescents diagnosed with eating disorders (EDs). As most programs in Canada were not prepared for a surge in telemedicine, and hospital administrators struggled to support the online platforms that are required, clinicians face challenges in offering optimal care for these vulnerable populations. As such, evidence-based guidelines focusing on the provision of virtual care and online support for children and adolescent ED treatment are required. This will ensure that clinicians, administrators, and policymakers can provide the best possible care in these unprecedented times, and ultimately help patients and families facing very real risks of morbidity and mortality should they not receive the care they require.

Key messages:

- The COVID-19 pandemic has created a demand for virtual delivery of ED care for child and adolescent patients

- Telemedicine in ED treatment can include videoconferencing and telephone services (for family-based therapy [FBT] and/or cognitive behavioral therapy [CBT]), email and text messaging therapy, smartphone applications, and guided/unguided self-help programs

- Viable options for child and adolescent ED patients include virtual FBT and CBT; other methods lack sufficient evidence

- Health care providers delivering virtual care for this population need to prepare for remote monitoring challenges, by addressing privacy concerns, being virtually present during weighing, and ensuring full family engagement in sessions

How was the synthesis conducted?

A scoping review of the literature was used to identify the best treatments and supports available in the COVID-19 context for children and adolescents with EDs and their families, which can be used to generate real-world practice recommendations. All literature on the impact of COVID-19, as well as virtual and online treatments/supports for children and adolescents with EDs including quantitative and qualitative papers from the last 20 years, and in all languages were included in the search. The literature search was completed using the following databases: Medline, PsycINFO, EMBASE, Cochrane Database of Systematic Reviews, CENTRAL, and CINAHL. The search strategy included various combinations of the following terms: anorexia nervosa, bulimia nervosa, eating disorder not otherwise specified, eating disorder, other specified feeding and eating disorder, avoidant restrictive food intake disorder, atypical anorexia nervosa, virtual care, self-help, telemedicine, telehealth, videoconferencing, COVID-19, coronavirus, or pandemic.

What did the synthesis find?

The COVID-19 pandemic has had a negative impact on ED patients and their families/clinicians. With the uncertain nature of the pandemic, child and adolescent patients are experiencing heightened anxieties and engaging in ED behaviours; parents are struggling with first-time home monitoring for their child; and clinicians are challenged with providing the same level of care virtually, while using unfamiliar telehealth techniques.

Advances in telemedicine have demonstrated promising results in regard to virtual ED care for children and adolescents. Virtual FBT is an example of a child and adolescent ED therapy that has been delivered successfully in past studies – patients have responded well, parents reported high satisfaction with care, and outcomes were comparable to in-person treatment. Virtual CBT has also demonstrated positive results in this age group, producing outcomes of improved medical condition and quality of life similar to face-to-face delivery. Other forms of telemedicine, such as email and text messaging therapy and mental health smartphone applications may be useful options for adult (>18 years) ED patients during the pandemic, but their effects on child and adolescent patients are unclear.

Despite some viable options for the virtual delivery of child and adolescent ED care, remote monitoring continues to be a challenge, and clinicians should try to combat issues using recommendations from recent clinical programs. Home weighing of the patient can be improved by the health care provider being virtually present during weighing, issues of patient privacy can be addressed by encouraging the use of headphones, families can become more engaged in sessions by arranging themselves in front of the video more openly, clinicians can ask for a more detailed description or pictures of food the child has eaten, and patients can be allowed to switch to voice-only sessions when they are uncomfortable being on video with their provider.

What are the implications of this synthesis?

- Evidence-based guidelines can be created to enable professionals to provide the most effective virtual care for children and adolescents suffering with EDs

- Virtual FBT and CBT are the forms of telemedicine with the most promising results for child and adolescent ED patients, and therefore should be implemented into practice

- Future research can investigate the impact of other telemedicine therapies, such as email and text messaging therapy, specifically in the child and adolescent ED population as treatment alternatives

- Clinicians should remain up to date on evidence-based recommendations for optimal delivery of virtual care and remote monitoring strategies

Keywords:

eating disorders, anorexia nervosa, bulimia nervosa, binge eating disorder, virtual care, telemedicine, self-help, videoconferencing, COVID-19, children /adolescents

Other Populations: Chronic Disease and/or Mental Illness

School-based suicide risk assessment using eHealth: A scoping review

Nominated Principal Investigator: Deinera Exner-Cortens, Department of Psychology, Faculty of Arts, University of Calgary

Authors: Deinera Exner-Cortens, Department of Psychology, Faculty of Arts, University of Calgary, Elizabeth Baker, Department of Psychology, Faculty of Arts, University of Calgary, Cristina Fernandez Conde, Werklund School of Education, University of Calgary, Shawna Gray, Werklund School of Education, University of Calgary, Rocio Ramirez Rivera, Faculty of Social Work, University of Calgary, Marisa Van Bavel, Werklund School of Education, University of Calgary, Elisabeth Vezina, Department of Psychology, Faculty of Arts, University of Calgary, Aleta Ambrose, Child and Adolescent Addiction, Mental Health and Psychiatry Program, Alberta Health Services, Chris Pawluk, Rocky View Schools, Kelly Schwartz, Werklund School of Education, University of Calgary, Paul Arnold, Department of Psychiatry, Cumming School of Medicine, University of Calgary

For more information, please contact: Deinera Exner-Cortens, Department of Psychology, Faculty of Arts, University of Calgary; 403-220-8871; deinera.exner2@ucalgary.ca

Target/priority population(s) in synthesis:

- Service providers (school mental health professionals)

What is the issue?

Given nationwide school closures that occurred due to COVID-19 in March 2020, schools across Canada now need to provide school-based mental health services – including suicide risk assessment – through virtual or remote technologies. However, promising practices for conducting suicide risk assessment with youth via eHealth (i.e., the use of information and communication technologies in healthcare) are not known. To fill this evidence gap, this report explores promising practices for conducting school-based suicide risk assessment with youth via eHealth.

Key messages:

- Peer-reviewed research on specific recommendations for conducting suicide risk assessments with youth via eHealth is extremely limited. The limited available research was also primarily conducted with older, female-identified, white, presumably heterosexual youth.

- The majority of specific recommendations for conducting suicide risk assessment with youth via eHealth were found in grey literature documents from key school mental health/suicide prevention websites.

- As school mental health professionals are in need of immediate guidance in the face of COVID-19, the specific recommendations detailed by grey literature sources represent the most promising practices for current implementation.

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How was the synthesis conducted?

This rapid knowledge synthesis was conducted using a systematic scoping review methodology, per the PRISMA Extension for Scoping Reviews (PRISMA-ScR) checklist. To gather the most up-to-date information, we included both peer-reviewed and grey literature in our review. To be included, documents needed to be in English and published between 2000 and 2020. Documents were selected by a multi-person team, and summarized using a standardized data charting template.

What did the synthesis find?

We found 12 peer-reviewed studies and 23 grey literature sources that provided relevant recommendations for conducting suicide risk assessments with youth via eHealth. Together, these 35 documents led to six categories of promising practices for service providers. First, steps must be taken to ensure youth engagement in the process (e.g., ensuring sessions are accessible for youth; building rapport with youth in the virtual environment). Second, grey literature sources highlighted that service providers must consider their own boundaries (e.g., letting caregivers/youth know when they are not available; arranging for coverage periods). Third, these resources discussed consent procedures in the virtual/remote environment (e.g., listing emergency contacts and multiple communication options). Fourth, a number of session logistics need to be considered. Most commonly, these logistics included ensuring the provider was competent with the technology/service delivery using eHealth; reviewing privacy guidelines with the youth at the start of the session; confirming the youth's physical location at the start of the session; having a back-up plan if technology difficulties occurred; having a list of 24/7 resources on hand; ensuring the service provider had up-to-date emergency contact information for at least one caregiver (preferably more than one); and ensuring the service provider had a plan for how they will stay connected to the youth if they need to contact emergency services. Fifth, these resources made specific recommendations around safety planning. Both peer-reviewed and grey literature sources suggested that the overall process was the same in the virtual/remote as in the face-to-face environment, but that some key changes needed to be made, including determining how the service provider would share the plan with youth and caregiver(s) virtually. Both peer-reviewed and grey literature sources also mentioned that check-ins likely need to be more frequent in the virtual/remote environment. Sixth and finally, peer-reviewed sources discussed internet privacy recommendations.

What are the implications of this synthesis?

- A set of six promising practices (with specific recommendations) for school-based suicide risk assessment with youth via eHealth were identified

- While most of the specific recommendations within these six promising practice areas came from grey literature sources, given the need for immediate guidance in the context of COVID-19, they should be considered for current implementation

- Additional research on suicide prevention and intervention – including suicide risk assessment – with youth via eHealth is needed. It is critical this research is conducted with diverse youth, and with youth in rural, remote and under-resourced settings.

Keywords: COVID-19, eHealth, school mental health, scoping review, suicide risk assessment, youth

Other Populations: None

Mental health and substance use among children and adolescents amidst COVID-19 – A systematic review

Nominated Principal Investigator: Dr. Salima Meherali, University of Alberta, Faculty of Nursing

Authors: Dr. Zohra Lassi, University of Adelaide; Jai Das, Aga Khan University Hospital; Rehana Abdus Salam, Aga Khan University Hospital; Neelam Punjani, University of Alberta, Faculty of Nursing

For more information, please contact: Salima Meherali: meherali@ualberta.ca

Target/priority population(s) in synthesis:

- Children and adolescents age (5-19 years)

What is the issue?

The COVID-19 pandemic is disrupting nearly every aspect of children's lives: their health, development, learning, behaviour, their families' economic security, and their protection from violence, substance abuse, and their mental health. Due to school closure and lockdown, younger children and adolescents are at great risk as high levels of stress and isolation can affect brain development with long-term consequences. Therefore, we aim to identify and evaluate the mental health and substance abuse issues among young children and adolescents. We also evaluated the effectiveness of different interventions employed during previous and current pandemic to promote children and adolescent's mental health and to prevent substance use; understand the approaches and strategies to successful delivery of mental health and substance use interventions during pandemic; and identify knowledge gaps in those contexts.

Key messages:

- Information is key; children and adolescents need to be educated and informed about the pandemic situations.

- Effective and rapid communication is essential.

- Most of the adverse effects come from the school closure, isolation, limited physical activities, social distancing, and imposition of a restriction of liberty.

- Parents, teachers, health care providers, and public health officials can play an important role in minimizing the impact of pandemic on mental and psychological health.

- Children and adolescents' access to mental health services should be improved and should be social-distancing and lockdown friendly.

- Mental health professionals should use existing evidence-based guidelines and also establish easy operational strategies such as mobile based applications to cope with COVID-19 pandemic-related mental health problems in children and adolescents

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How was the synthesis conducted?

This review followed rigorous methodological guidelines to synthesize diverse forms of research evidence. We supplemented the conventional approach to systematic reviews by including quantitative and qualitative study designs. The review is submitted to PROSPERO for registration. Working with a research librarian, we searched, MEDLINE, EMBASE, Web of Science Index Medicus, CINAHL, Lilacs, CENTRAL (Cochrane Library), eLENA (WHO), and WHO COVID-19 databases. We also searched for non-indexed database including Google Scholar and pre-print databases (MedRxiv (https://www.medrxiv.org) and ChinaXiv (http://www.chinaxiv.org/home.htm). To identify any missing papers, we also did hand search the bibliography of all included studies and all relevant systematic reviews. We did not employ any language and date restrictions. Search results were uploaded to COVIDENCE and duplicates were removed (see Appendix A for detailed search strategy).

Two reviewers independently screened titles and abstracts to identify relevant articles. Studies fulfilled the inclusion criteria were included as part of the review. Of 3362 papers found, 16 are included in this review (See Figure 1 PRISMA diagram). Data extraction was done for all eligible studies (see Appendix B for data extraction table).

Of all the included studies, two were interventional studies, one was qualitative, one was mixed-method, and remaining were cross sectional studies (n= 12). We were not able to perform the meta-analysis because of varied study populations and study outcomes. We synthesized our findings separately for the type of pandemic, outcomes reported, and study design employed.

What did the synthesis find?

While COVID-19 continues to affect many communities around the world and fundamentally change how people live, the everyday lives of people are taking a toll on their mental health. During times of uncertainty, it is crucial to focus on mental and emotional well-being to navigate these difficult circumstances in a healthy way. Decisions on how to manage mental health of children and adolescents should be based on the best available evidence. Therefore, we did a systematic review study to identify and evaluate the mental health and substance abuse issues among young children and adolescents. We also evaluated the effectiveness of different interventions employed during previous and current pandemic to promote children and adolescent's mental health and to prevent substance use; understand the approaches and strategies to successful delivery of mental health and substance use interventions during pandemic; and identify knowledge gaps in those contexts. Of 3377 papers found, 19 were eligible. Of those, one each was qualitative and mixed method, two interventional, and 15 cross-sectional studies. The most reported outcome was the negative impact of pandemic on psychological health which was measured as anxiety, depression, fear, stigma, and post-traumatic stress symptoms (PTSD). These studies reported that pandemics may cause stress, worry, helplessness, and also social and risky behavioral problems among children and adolescents (for e.g. substance abuse, suicide, relationships, academic issues, absenteeism from work etc.).

Interventions such as art programs, support services, and nurse led mental health, and psychosocial services are effective in decreasing those issues among children and adolescents. To summarise, mental health care is very important for children and adolescent however, however, very few studies have evaluated the impact of pandemics or crisis on children and adolescent's mental health. Majority of the intervention-based studies were conducted on population 18 years and above. The early findings from this systematic review (Work in Progress: WIP) shows that the COVID-19 pandemic may worsen existing mental health problems among children and adolescents, hence, it is imperative to focus on children and adolescent mental health. Parents, teachers, community health workers, and public agencies should receive formal training to address the children's psychological problems, recognise early manifestations of distress, and to provide intervention and referrals as needed. Also, mental health care workers should establish evidence-based guidelines and innovative technologies such as mobile applications to cope with COVID-19 pandemic-related mental health problems. Close attention must be paid to improve the mental health access to care among children and adolescents. Moreover, timely action can help lessen the effects and improve long-term capacities for mental health services for children and adolescents.

Update: During the last two months, we run a repeated search of the additional articles with the help of librarian. We screened 863 articles by title and abstracts. Full text screening of 16 more articles was done and we added 3 additional articles in the review. The 3 more studies are related to COVID 19 that included the children and adolescent's population. The outcomes observed in the studies are anxiety and depression symptoms, coping mechanism, psychological problems, PTSD, stress, loneliness, and depression. The revised systematic review table has been added as an attachment.

What are the implications of this synthesis?

The real time analysis generated through our knowledge synthesis can be useful in developing evidence-based policy and practices during current pandemic and will be transferable into future pandemic context. We hope that this knowledge synthesis findings can be useful for the global community and promote mental health of children and adolescents around the globe during the pandemic.

Keywords: children, adolescents, pandemic, COVID-19, mental health, substance abuse, anxiety, depression, isolation, psychological health

Other Populations: People Who Use Drugs (PWUD) and Substance Use

Translating knowledge for child welfare organizations across the prairies: managing the impacts of COVID-19 on the mental health of children, families, and workers

Nominated Principal Investigator: Dr. Lise Milne, Assistant Professor, University of Regina Faculty of Social Work; Co-Principal Investigator: Dr. Nathalie Reid, Director, University of Regina Child Trauma Research Centre

Authors: Dr. Lise Milne, Assistant Professor, University of Regina Faculty of Social Work and Dr. Nathalie Reid, Director, University of Regina Child Trauma Research Centre, Susana Prado, University of Regina, Program Manager, Child Trauma Research Centre, Chantelle Priel, University of Regina, Student, Faculty of Social Work, Rayna Fisher, University of Regina, Student, Faculty of Social Work

For more information, please contact: Dr. Milne: lise.mine@uregina.ca; Dr. Reid: Nathalie.reid@uregina.ca

Target/priority population(s) in synthesis:

- Child welfare organizations

- Child-serving professionals

- CIHR Priority populations: (1) *Families, children and youth* in urban and rural contexts at risk of/experiencing maltreatment, domestic and other forms of violence; substance use, mental health, criminal justice and housing issues; and those facing acute problems due to prolonged periods of isolation; (2) Marginalized populations, including *Indigenous families, diverse racial, cultural, linguistic, gender and sex groups, immigrants, refugees, and newcomers to Canada*; and (3) *Front-line workers* (e.g., case workers) and *essential personnel* (e.g., group home and foster care workers) engaged in directly responding to COVID-19

What is the issue?

The current COVID-19 global pandemic has arguably resulted in some of the most severe impacts on the area of child welfare. A rapid proliferation of pandemic-related research and resources has emerged, but organizations responsible for meeting the urgent needs of vulnerable children and families typically have little time to find, evaluate, and translate knowledge to inform services. Children involved with child welfare are typically experiencing or have histories of abuse and neglect, which are linked to a multitude of behavioural and mental health problems. Caregivers have themselves often experienced impacts of abuse and other marginalizing conditions, such as poverty, substance abuse, and mental health issues. Exacerbating the situation, the conditions brought on by COVID-19 have increased the possibility of separation, isolation, and reduced social support, education, mental, and physical health services. Thus, children and families are at heightened risk for trauma reactivation and deteriorating family conditions. Child-serving organizations and staff also face many challenges ensuring the safety and well-being of families and continuity of care during COVID-19. They have been forced to rapidly change practices to respond to increasing demands and the growing complexity of cases, feeling both the professional and personal strains of the work.

Key messages:

COVID-19 has placed significant strain on the safety, physical and mental health of children and families involved with the child welfare system. Despite a reduction in child abuse and neglect reports during this period, a substantial increase in calls to help lines demonstrates that children's removal from daycare, school, medical, social and other settings is contributing to the decrease in reports, rather than a true reduction in maltreatment. Children, youth, parents, and service providers must be armed with the knowledge and concrete strategies to manage this challenging period. Organizations must adapt their services to the current context by providing meaningful communication strategies – in many cases via digitally interactions.

How was the synthesis conducted?

Guided by a Socio-Ecological framework, we used a three-pronged search strategy to locate the knowledge included within this Synthesis: Stakeholder outreach, database searches for peer-reviewed publications, and online/website searches for relevant reports, webinars, websites, and resources. The search was an iterative process, with accumulated literature and resources pointing to other sources of knowledge. The Knowledge was then reviewed, vetted, and synthesized, reflecting emergent themes.

What did the synthesis find?

Our search revealed three major themes:

1. Mental Health and Substance Use during COVID-19 – In response to feedback from youth, parents, and service providers we found that the confirmed increase in mental health and related substance impacts of COVID-19 require heightened awareness, attention, intervention and resources as we move from response to recovery stages. This includes considerations for children, youth, families, communities, service providers, and policymakers.

2. Caring for Children and Youth In and Out of Care during COVID-19 - Increased vulnerabilities and risks such as abuse and neglect, exposure to family violence, financial strains, gender-based violence, and gaps in education and learning necessitate protective measures from multiple socio-ecological levels and the building of strength and resilience. Particular consideration must be given to youth in care, as well as youth transitioning out of care.

3. Communication during COVID-19 - Focusing on effective communication strategies with children, youth, and professionals about COVID-19 should be aimed at reducing stress and anxiety. Digital communication strategies that have come to the forefront of child welfare practice during this period will continue to be utilized as alternative means of case work, including protective interventions and counselling/therapeutic services.

As expected, we noted limitations in the availability of peer-reviewed research, given the relative recency of the declared pandemic in light of lengthy publication processes. We also noted some limitations in Prairie-specific information. However, less traditional research such as online websites, reports, resources and toolkits yielded very practical information applicable to the contexts of Alberta, Saskatchewan and Manitoba and elsewhere.

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What are the implications of this synthesis?

- Information gained from this Knowledge Synthesis and future revised versions will be shared with our stakeholder partners and will provide up-to-date, distilled information and concrete strategies aimed at improving services to children and families in vulnerable contexts.

- This project will strengthen developing and existing relationships with child-serving organizations across the Prairies, as well as assist towards developing new relationships.

- The Syntheses will inform our knowledge mobilization strategy, which as its primary feature includes the development of a *Digital Connections Hub* website at the University of Regina Child Trauma Research Centre. The Hub will provide a single point of access to a variety of accessible, consumable knowledge translation products to support organizations serving vulnerable children and families in a child welfare context across the Prairies.

- Translated knowledge produces will include bi-weekly newsletters with research updates, research summaries, infographics, and access to original, peer-reviewed material.

- The Hub will also be linked to an upcoming SSHRC partnership grant on Canadian Child and Youth Trauma, providing opportunity for even more knowledge acquisition.

Keywords: child welfare, mental health, substance misuse, abuse, neglect, social work, Canadian prairies

Other Populations: None

Supporting children and adolescents' mental health in the context of pandemic and confinement: A scoping review of interventions and ethical challenges

Nominated Principal Investigator: Marjorie Montreuil, Assistant Professor, Ingram School of Nursing, McGill University

Authors: Aline Bogossian, Université de Montréal; Chantal Camden, Université de Sherbrooke; Christine Genest, Université de Montréal; Elsa Gilbert, Université du Québec à Rimouski; Geneviève Piché, Université du Québec en Outaouais; Jessica Rassy, Université de Sherbrooke

For more information, please contact: Marjorie Montreuil: marjorie.montreuil@mcgill.ca

Target/priority population(s) in synthesis:

- Children and adolescents

What is the issue?

Children and adolescents represent a vulnerable population group and their mental health may be particularly affected by pandemic and confinement measures. For children and adolescents who already had mental health issues prior to the pandemic, the adverse effects can be exacerbated. Families therefore face numerous challenges, including ethical challenges. To date, no review has synthesized the effects of a pandemic on children and adolescents' mental health, nor the interventions to support them.

Key messages:

- Children and adolescents living in a family that is economically affected by the pandemic are more vulnerable to having negative effects on their mental health.
- The context of the pandemic and related confinement can increase maltreatment and interfamilial violence.
- Equitable access to child and adolescent mental health care is an important ethical challenge.
- Telehealth is the most widespread intervention put in place and the use of technology is the most widespread recommendation in order to offer remote services. However, technology-based services can be difficult to access for children living in families with a low socio-economic status. Privacy and confidentiality can be difficult to respect.
- Preventative care is more limited due to the pandemic, which could be problematic if sustained over time.

How was the synthesis conducted?

A rapid scoping review methodology was used to build, map and synthesize the available literature to address the review questions. We combined the methodology from the Joanna Briggs Institute Reviewer's Manual with the Rapid Review Guidebook. We collaborated with key knowledge users to develop knowledge that is aligned with their needs and readily transferable.

What did the synthesis find?

Overall, the pandemic and related confinement measures were found to have negative repercussions on children and adolescents' mental health across age groups and contexts. These include increased stress, anxiety, and fear, as well as depressive symptoms and sleep/appetite disturbances. The pandemic is likely to have long-term negative effects on children and adolescents' mental health. Groups that may be more vulnerable to detrimental mental health effects include: children and adolescents with a preexisting diagnosis of anxiety disorder, eating disorder or autism spectrum disorder (especially if co-morbid with attention-deficit/hyperactivity disorder); living in a family that is economically affected by the pandemic or that already faced economic hardships; and having parents who are distressed by the pandemic or who have preexisting mental health difficulties. Also, the context of the pandemic can increase child maltreatment and interfamilial violence.

A key ethical challenge that arises due to the pandemic is the equitable access to mental health care. Services have been significantly reduced, leading to fewer people receiving care. In-person care is reserved to the most extreme cases, with very little preventative care being offered. Another ethical challenge relates to families' varying socio-economic status, which can be a limiting factor to accessing remote services such as telehealth (for ex. access to technology and good internet connection). It can also be more challenging for children living in families with a low socio-economic status to use telehealth in an environment that allows for privacy and confidentiality. These families are also more likely to receive mental health services exclusively from school settings, which have been cut with school closures. Patient engagement can be difficult to maintain, especially with younger children and children who have particular issues such as attention-deficit-hyperactivity disorder and autism spectrum disorder. As parents try to engage their child with the remote services, it can lead to tensions within the home environment. Assessing the family environment and benefits/limitations of the use of remote means is important.

What are the implications of this synthesis?

- Healthcare providers should be aware of the possible detrimental effects of the pandemic and confinement on children and adolescents' mental health.
- For children and adolescents with a pre-existing mental health condition, it is essential to assess for changes in the condition and the apparition of new symptoms, as well as assess the family environment.
- The use of remote means such as telehealth has important limitations and leads to inequities in terms of access to quality care. Studies should be conducted on the outcomes and effectiveness of remote means to provide child mental health care. There is some support for family-based remote interventions.
- The benefits of an in-person meeting in the context of confinement should be assessed on a case-by-case basis. The concept of best interest of the child can be used to support this assessment. Remote follow-up meetings can be implemented to complement in-person care.
- Additional research should be conducted on whether healthcare providers should focus on emergency and safety during the pandemic, or whether "care-as-usual" should continue through remote means. Also, very few studies differentiated between children and adolescents.

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- Being attentive to each child's needs from children's perspective is key, as well as offering emotional support and answering children's questions. Stimulating and distracting activities are suggested to focus on things other than the pandemic. Such activities can include games, physical activities, artistic activities or other as per children's preferences.

Keywords: mental health; interventions; ethics; children and adolescents; telehealth; inequities; anxiety disorders; eating disorders; attention-deficit/hyperactivity disorder; autism spectrum disorder

Other Populations: None

Family carers and COVID-19: A rapid integrated mixed methods systematic review

Nominated Principal Investigator: Monica Parry, University of Toronto

Authors: Parry M[1], Bjørnnes AK[2], Nickerson N[3], Warkentin K[3], Burnside H[1], Hemani S[1], Norris C[4], Peter E[1], Pilote L[5], Mohammed S[1], Nylen-Eriksen M[2], Coupal A[6]

[1]Lawrence S. Bloomberg Faculty of Nursing, University of Toronto
[2]Department of Nursing and Health Promotion, Oslo Metropolitan University
[3]Patient Partner (Caregiver)
[4]Faculty of Nursing, University of Alberta
[5]Research Institute of the McGill University Health Centre
[6]The Ontario Caregiver Organization

For more information, please contact: Monica Parry: monica.parry@utoronto.ca; Phone: 416-946-3561

Target/priority population(s) in synthesis:

- Family Carers

- Unpaid Caregivers

What is the issue?

Family carers provide unpaid care and are the backbone of the healthcare system; 28% of Canadians are current carers and 46% will be carers at some point in their lives. By 2035, the annual unpaid caregiver contribution to the Canadian health care system is estimated to be $128 billion. Family carers experience a significant amount of burden and distress, and during communicable disease outbreaks, families face an increased burden of care. Family carers experience physical and mental exhaustion, insomnia, and anxiety/fear.

Key messages:

The mental health and wellbeing of family caregivers during COVID-19 is a worldwide concern. There is a growing number of family caregivers in Canada who provide critical support to children, spouses, friends, and elders/parents. However, only 11% of the published/unpublished literature is from Canada. A recent report (May 2020) from The Ontario Caregiver Organization indicates caregivers under 65 years of age are coping worse mentally and emotionally. Our review also suggests women are more likely to have poor mental health outcomes, which increase after 4 weeks of isolation. The economic implications of a distressed middle-aged work force balancing unpaid care with paid work may be devastating.

How was the synthesis conducted?

Searches were done of 8 standard databases for published literature from 2003 (outbreak of SARS) to August 8, 2020. We also did a robust search of the unpublished literature from January 1 to August 8, 2020. We used standard searching MeSH terms, CINAHL headings, and textwords for the search concepts of family caregiver, mental health/ substance use, and pandemics/coronavirus infections. A total of 4,806 titles and abstracts were screened, from which 429 papers were included for a full text review. Of these, 100 papers were included for data extraction. Selective and targeted searching of the grey literature was guided by the Canadian Agency for Drugs and Technologies in Health and the Ontario Public Health Libraries Association. We began searching Canada first and then will expand the search to include international resources.

What did the synthesis find?

The mental health and wellbeing of family caregivers is a worldwide concern. Unpaid caregivers are also an important part of the Canadian healthcare system. Most of the evidence (77%) comes from middle-aged women who care for children and parents. Women report depression, anxiety, poor sleep, stress, fear, and symptoms of post-traumatic stress disorder. Some smoke and drink to manage their anxiety. We know little about men as caregivers during disease outbreaks. Caregivers need help to know when they are at risk, and they need support to know what help will work best. Suggestions for better policies for unpaid caregivers in hospitals/long-term care and for those with low incomes and who have paid work are needed. Telephone and remote support where you can see faces help to reduce isolation. Unpaid caregivers also have thoughts of suicide so crisis supports are essential. COVID-19 has increased unpaid caregiving responsibilities. There are many general resources for unpaid caregivers, and some resources specific to COVID-19. Very few of these resources target men or visible minority populations. Although resources exist, there remains an urgent need to develop a national strategy to address the needs of unpaid caregivers. This strategy should include men and caregiver self-assessments for anxiety and depression.

What are the implications of this synthesis?

- We need to know more about middle-aged (45 to 65 years of age) caregivers, men as caregivers, and visible minority and migrant caregivers in Canada

- We need to understand how family caregivers assess and make decisions about their mental health, and how they choose and access mental health resources, supports and services

- We also need to determine if the mental health services available during COVID-19 were effective in improving the mental health and wellbeing of both women and men who provided essential unpaid care to children, spouses, friends, and elders/parents in Canada.

Keywords: knowledge synthesis, sex and gender, unpaid caregivers, mental health, anxiety, depression, stress, COVID-19, coronavirus outbreaks/pandemics

Other Populations: Chronic Disease and/or Mental Illness

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Impact of COVID-19 on the mental health and wellbeing of caregivers and families of autistic people

Nominated Principal Investigator: Dr. Jonathan Weiss, York University

Authors: Dr. Vivian Lee (York University), Carly Aubaum (York University), Paula Tablon Modica (York University), Nazilla Khanlou (York University), Farah Ahmad (York University), Jan Willem Gorter (McMaster University), Carly McMorris (University of Calgary), Jonathan Lai (CASDA), Cindy Harrison, Teresa Hedley, Pari Johnson, Connie Putterman, Margaret Spoelstra (Autism Ontario)

For more information, please contact: Dr. Vivian Lee: leev9@yorku.ca OR Dr. Jonathan Weiss: jonweiss@yorku.ca

Target/priority population(s) in synthesis:

- Autistic children and adolescents

- Caregivers

- Families

What is the issue?

Parents and families with autistic children and adolescents often experience stressors associated with providing care. Autism is a pervasive neurodevelopmental condition and varies in terms of symptom presentation and severity. Autistic people tend to have social communication challenges, sensory sensitivities, and engage in restricted, rigid, or repetitive patterns of behaviour. Given the chronic nature of clinical needs, there is a high degree of demands on caregivers. For example, they must balance their responsibilities in scaffolding the needs of the individual within the broader family context (i.e., responsibilities to their jobs, needs of siblings and other dependents). This difficult balancing act can have a significant impact on their overall mental health and wellbeing. The COVID-19 pandemic has likely influenced this balance of needs and resources. The current project uses a rapid knowledge review and synthesis, with an integrated knowledge translation approach with knowledge user and expert oversight, to better understand what has been documented regarding the impact of the COVID-19 pandemic on caregiver and family functioning, and on mental health services response, which have emerged as a result.

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Key messages:

- Caregivers and families of autistic people have experienced considerable stress as a result of the COVID-19 social distancing measures, and many endorse mental health difficulties. There are many examples of families having more demands placed on them as a result of COVID-19.
- To date, there is limited evidence for programs and supports to address caregiver mental health needs.
- Future planning should include considerations for the significant mental health needs of caregivers and families of autistic people, and plan to evaluate emerging interventions.

How was the synthesis conducted?

The initial search terms and strategies for the rapid review were developed and reviewed by a team of researchers, clinicians, and knowledge users. All searches were performed between May 25, 2020 to June 12, 2020. Our methods included three search strategies: (1) Strategy One- traditional literature search of indexed peer-reviewed databases, (2) Strategy Two- search of peer-reviewed non-indexed literature using Google Scholar, and (3) Strategy Three- search of grey literature material through newspaper indexes, hand searching using Google, and personal communication/advertisements via social media and our co-investigators and knowledge user networks. We included peer-reviewed published and in press articles from around the world that focused on the experience of parents and caregivers of autistic children and adolescents (below 25 years of age) during the COVID-19 pandemic, as well as relevant published results from organizational surveys, newspaper articles and media reports. Results were framed within the Family Adjustment and Accommodation Resource (FAAR) Model, including considerations for how caregivers and families balanced the demands (i.e., stressors, daily hassles) they are experiencing during COVID-19 with their capabilities (i.e., resources, coping skills, programs and supports). We also looked for evidence for how caregivers understand their experiences, about how they remain resilient through adversity. Information in the report was reviewed by all members of the team.

What did the synthesis find?

Using Strategy One and Two, we initially identified 210 articles, of which 13 were included in our review. Through Strategy Three, we found 2 organizational reports and 7 newspaper articles or media reports. Of the sources that we reviewed, the majority of the peer-reviewed literature and grey literature focused on the experience of caregivers and families of autistic children during this time, including descriptions of the various demands placed on them as a result of isolation policies meant to restrict the spread of COVID-19. The literature and media provided examples of the consequences of increased demands on the wellbeing of caregivers and families as they found ways to cope with these stressors. Some of the literature provided advice in the form of "tips", opinion pieces, or infographics to help caregivers and families manage their demands and to support their capabilities. We found limited literature that focused on programs or interventions designed to support caregiver and family mental health and wellbeing through the COVID-19 pandemic. Some media reports from the perspective of caregivers of autistic children underlined the protective effects of connection and close social relationships (via online communications or communities like Facebook groups) in fostering a sense of "togetherness" that helped families find meaning during the pandemic. Some reports highlighted the potential long-term impact of prolonged exposure to increasing demands on the mental health and

wellbeing of caregivers and families of autistic people and alluded to the need for the rapid development and evaluation of flexible, timely, and web-based support programs.

What are the implications of this synthesis?

Our synthesis has highlighted that caregivers and families of autistic children and adolescents have experienced increased demands (i.e., caregiver and family-related stressors and external stressors) due to the social distancing and self-isolation measures put in place to contain COVID-19, and these demands have been compounded by the pressure of managing the needs within their family and their struggles to maintain balance using their capabilities. Many caregivers and families have found the abrupt changes in their daily routines and the transition to a new "normal" emotionally and mentally draining. There is limited evidence in the literature to demonstrate adequate supports and programs to help caregivers and families manage their demands during this time, and no evidence to date of mental health supports specifically. These findings point to the urgent need for decision-makers, clinicians, researchers, and key knowledge users to mobilize adequate support programs and networks for caregivers and families.

Keywords: autism, caregivers, families, parents, mental health, wellbeing, crisis, distress, impact

Other Populations: Chronic Disease and/or Mental Illness

Additional Syntheses Relevant to This Population

Title: Valuing Indigenous emotional wellness — reviewing programs to enhance support for children in rural and remote communities

NPI: Dr. Nancy L. Young, Laurentian University

Primary Population: Indigenous Peoples and Communities

Lay Summary on Page: 94

Title: Examining the use of virtual care interventions to provide trauma-focused treatment to domestic violence and sexual assault populations

NPI: Dr. Stephanie Montesanti, University of Alberta

Primary Population: Vulnerable or At-Risk Populations

Lay Summary on Page: 131

Chronic Disease and/or Mental Illness

Examining the efficacy of evidence-based psychosocial interventions for schizophrenia-spectrum disorders delivered through virtual care

Nominated Principal Investigator: Michael Best, University of Toronto

Authors:
Michael Grossman, Centre for Addiction and Mental Health; Christopher Bowie, Queen's University; Linbo Wang, University of Toronto; Andrew Cooper, University of Toronto; Simone Arbour, Ontario Shores Centre for Mental Health Sciences; Tim Pauley, Ontario Shores Centre for Mental Health Sciences

For more information, please contact: Michael W. Best: m.best@utoronto.ca

Target/priority population(s) in synthesis:

- schizophrenia

What is the issue?

Social restrictions during the COVID-19 pandemic have reduced access to in-person clinical services. Almost all clinical services for individuals with schizophrenia are delivered in-person, and it is unclear what evidence-based interventions have evidence for delivery through virtual delivery options. The current review aimed to examine the evidence for virtual delivery of ten evidence-based psychosocial interventions recommended by the American Psychological Association for the treatment of schizophrenia.

Key messages:

- Very little research has been conducted to evaluate evidence-based interventions for schizophrenia delivered through virtual care

- Cognitive remediation, cognitive behavioural therapy, and family psychoeducation are the only interventions with sufficient studies examining their efficacy for virtual delivery.

- Cognitive remediation and cognitive behavioural therapies demonstrate preliminary efficacy for delivery through virtual care

How was the synthesis conducted?

A systematic review was conducted for each of the ten evidence-based psychosocial interventions recommended by the American Psychological Association for the treatment of schizophrenia: assertive community treatment, cognitive adaptation training, cognitive behavioural therapy, cognitive remediation, family psychoeducation, illness management and recovery, social learning / token economy, social skills training, supported employment, and acceptance and commitment therapy. For any treatments that had more than three studies examining their effectiveness through virtual care a meta-analysis was conducted to estimate effect sizes.

What did the synthesis find?

Only cognitive remediation, cognitive-behavioural therapy, and family psychoeducation have more than two studies examining their efficacy through virtual care. Virtual delivery of cognitive remediation produced moderate effects on neurocognition and functioning. Virtual delivery of cognitive behavioural therapy produced moderate effects on symptoms and small effects on functioning. There were insufficient studies of family psychoeducation with equivalent outcome measures to assess quantitatively, however, studies of virtually delivered family psychoeducation suggested that it is feasible, acceptable, and potentially effective. Of the other examined interventions, assertive community treatment, cognitive adaptation training, social skills training, and supported employment had no studies examining their effectiveness when delivered remotely.

Delivery through mobile applications was the most common virtual delivery method and few studies examined other forms of treatment such as telehealth or video conferencing. Few studies compared in person delivery to virtual delivery of the same intervention, but the studies that did examine this did not find a significant difference between in-person delivery and virtual delivery. This is likely to be dependent on the specific treatment and approach to treatment that is employed and needs to be studied more extensively.

What are the implications of this synthesis?

- Research is needed to determine which psychosocial interventions are effective through virtual care for schizophrenia-spectrum disorders

- Research is needed to examine how to optimize the effectiveness of psychosocial interventions for schizophrenia delivered through virtual care

- Cognitive remediation and cognitive-behavioural therapy have both demonstrated preliminary efficacy to be delivered virtually

Keywords:

schizophrenia, psychosis, virtual care, psychosocial, treatment

Other Populations: None

Developing a rational approach towards offering procedural interventions (ECT & rTMS) for at risk populations in psychiatry during the COVID-19 pandemic: An interdisciplinary evidence synthesis

Nominated Principal Investigator: Venkat Bhat, St. Michael's Hospital, Unity Health Toronto & Toronto Western Hospital, University Health Network

Authors:
Daniel Blumberger, Centre for Addiction & Mental Health; Alastair Flint, University Health Network; Jeff Daskalakis, Centre for Addiction & Mental Health; Sagar Parikh, University of Michigan, Ann Arbor; Melanie Anderson, University Health Network; Keyvan Karkouti, University Health Network; Karen Foley, University Health Network; Alon Vaisman, University Health Network; Sidney Kennedy, University Health Network; Salima Ladak, University Health Network; Jamie Robertson, Unity Health Toronto; Karim Ladha, Unity Health Toronto; David Koczerginski, Association of General Hospital Psychiatric Services

For more information, please contact: Jackie Jagoda: Jackie.jagoda@unityhealth.to, Administrative Assistant, Centre for Depression & Suicide Studies, St. Michael's Hospital

Target/priority population(s) in synthesis:

- Mood Disorders, Major Depressive Disorder

- Treatment-resistant Depression, Bipolar Depression

- Late-life Mood Disorders

- Schizoaffective Disorder

What is the issue?

The COVID-19 pandemic will associate with parallel mental health pandemics during and after the COVID-19 pandemic. The mental health impact of COVID-19 will be disproportionately experienced by at-risk populations, with increased prevalence of mental illness such as mood disorders where procedural neurostimulation treatments such as Electroconvulsive Therapy (ECT) and repetitive Transcranial Magnetic Stimulation (rTMS) have significant evidence. However, hospitals across the country have either discontinued or decreased ECT and rTMS offerings, procedural aspects remain arbitrary varying from hospital to hospital, and there is a lack of an understanding of the short-term and long-term impact of these changes on the at-risk population. Thus, there is a need to bring together a more systematic approach with a Canadian perspective and adopt best practices from other countries and procedural disciplines.

Key messages (Preliminary/draft):

A systematic triage system by the ECT team is required to optimize ECT caseload. Screening for COVID-19 symptoms is essential, there is possibility of asymptomatic carriers, and everyone in the ECT treatment room must consistently use Personal Protective Equipment (PPE) and adhere to protocols developed in collaboration with Anesthesia/Infection Control. A negative pressure room and/or intubation may be suggested or required for COVID-19 patients. For rTMS, consider a phase-based 11-step checklist (spanning modifying in-person protocols, using telemedicine, and addressing COVID-19

associated adverse events) and consider accelerated protocols as described in Bikson M et al, Brain Stimulation 13 (2020) 1124-1149.

How was the synthesis conducted? (Preliminary/draft)

1. Review of existing literature with a systematic search process.
2. Evaluation of position statements published by relevant organizations.
3. Critical review of applicability of rTMS details from Non-Invasive Brain Stimulation Guidelines described in Bikson M et al, Brain Stimulation 13 (2020) 1124-1149.
4. On the ground experience of 3 large hospitals offering neurostimulation treatments in Toronto.

What did the synthesis find? (Preliminary/draft)

When considering ECT for patients during the COVID-19 pandemic circumstances, classifying whether ECT is elective, urgent/essential, or an emergency is the important first step of the decision-making process by the ECT team to reduce ECT caseload. A systematic screening process for COVID-19 symptoms prior to administering ECT is important to reduce exposure risk, but there is possibility of asymptomatic carriers and everyone in the ECT treatment room must consistently use Personal Protective Equipment (PPE) and adhere to protocols for PPE use. Ventilation with the bag and mask procedure has potential to aerosolize. ECT could be avoided for COVID-19 positive patient or patient under investigation for COVID-19 unless there is imminent risk. In consultation with anesthesia/IPAC, weighing the risks/benefits, a negative pressure room and/or intubation may be suggested or required for COVID-19 patients. Depending on the phase of the pandemic, PPE availability could vary and N95 masks are considered mandatory at some locations, reducing the team members to the required minimum can help limit exposure and conserve PPEs. Further, organizing ECT schedule based on relative infection risk is optimal. Pre-procedure testing might be an option to reduce risk of infection and conserve PPE if the testing becomes rapidly available, interpretable and quick in the future. Finally, having a systematic staffing plan which includes a master list of the team, having longer intervals between team changes and creating back-up plans are ideal.

For rTMS delivery, a model based on three phases (early COVID-19 impact, current practices, and future preparation) with an 11-step checklist (spanning removing or streamlining in-person protocols, incorporating

telemedicine, and addressing COVID-19-associated adverse events) with consideration for accelerated protocols might be beneficial, further details are described in Bikson M et al, Brain Stimulation 13 (2020) 1124-1149.

What are the implications of this synthesis?

- While anesthesia and IPAC recommendations and interpretation of emerging COVID-19 information can vary across hospitals, there are several aspects of the ECT delivery process where variance across hospitals can be reduced. This includes having a systematic triage process for planning the ECT case load, COVID-19 symptom screening, minimum PPE measures, limiting team members, organization of ECT treatments based on relative risk and creating a staffing plan.

- rTMS treatments can be provided with a systematic approach to team planning and rTMS delivery with consideration for accelerated protocols.

Keywords: COVID-19, depression, mood disorders, electroconvulsive therapy, rTMS, anesthesia, day procedure/outpatient procedures/short procedures, infection prevention & control

Other Populations: None

Interventions to mitigate COVID-19 related mental health risks for those with pre-existing chronic health conditions and facing social and economic barriers: A scoping and rapid realist review

Nominated Principal Investigator: Karen Davison, Kwantlen Polytechnic University

Authors: Simon Carroll, Kwantlen Polytechnic University; Benjamin Collins, Kwantlen Polytechnic University; Marcie Dolce, Patient Advisor; Esme Fuller-Thomson, University of Toronto; Brandon Hey, Mental Health Commission of Canada; Krystal Kelly, Mental Health Commission of Canada; Marya Jaleel, Mental Health Commission of Canada; Shen (Lamson) Lin, University of Toronto; Maura MacPhee, University of British Columbia; JoAnne Marvin, Patient Advisor; Arun Ravindran, The Centre for Addiction and Mental Health; Ron Remick, Lookout Housing and Health Society and Mood Disorder Association of British Columbia; Lynda Robson, Patient Advisor; Janice Sorensen, Kwantlen Polytechnic University, Vicki Smye, Western University; Lori Stuart, Patient Advisor, Vidhi Thakkar, Kwantlen Polytechnic University

For more information, please contact: Karen Davison: karen.davison@kpu.ca

Target/priority population(s) in synthesis:

- Individuals with health conditions that present risk of contracting COVID-19

- Individuals who are homeless, underhoused

- The target/priority population must also be at risk for or have at least one of the following mental health indicators:

    o Depressive disorders/depression, anxiety disorders/anxiety, bipolar disorder/mania; schizophrenia, schizoaffective disorder; psychotic disorder, psychosis; obsessive disorders, neurosis; PTSD, trauma, stress; substance use, addictions, compulsive behaviours; disruptive, impulse-control and conduct disorders, impulsivity

- Within these groups, subgroup analysis will be for equity-seeking/priority populations that include: men/women, older adults, immigrants, refugees, newcomers, ethnocultural and racialized communities, First Nations, Inuit and Métis, 2SLGBTQ+, individuals with disabilities

What is the issue?

In the absence of a vaccine or cure for COVID-19, it is of utmost importance to address its public mental health challenges. In particular, the COVID-19 pandemic has elevated the need to assess the impact of measures such as quarantine, physical distancing, and altered health care access as well as acute mental health concerns resulting from physical distancing, extended emergency state, unexpected unemployment, and complicated grief, to minimize its societal and economic impacts. These knowledge needs are particularly critical for those with pre-existing health conditions who are at elevated risk for contracting COVID-19 and mitigating their mental health risks associated with preventative measures and acute / rehabilitative care for COVID-19. There are many shared determinants such as socioeconomic factors, health behaviours, comorbidities, and environmental factors that contribute to poor mental health, substance use, and communicable diseases, little is known about which are distal or

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proximal indicators and how they are independently or interdependently associated with these outcomes. The proposed knowledge synthesis (integrated scoping and rapid realist review) will help to address knowledge gaps about how to prevent or mitigate mental health and substance use responses for those at risk of severe COVID-19 infection. This may help to shape effective program and policy interventions that can foster resilience during future disease outbreaks.

Key messages:

COVID-19's impact has and continues to have devastating impacts, particularly among those who are at-risk and/or have challenges in functioning in a society that changed suddenly and dramatically. For many this has led to mental health effects such as depression, anxiety, uncharacteristic behavioural changes, and use of substances to help mask the pandemic's consequences. However, there is opportunity to support population health during these difficult times by offering appropriate interventions that have the flexibility to be tailored to subpopulations with unique needs. The knowledge synthesis, currently in progress, aims to help identify such interventions that will foster individual resilience and mental well-being.

How was the synthesis conducted?

The synthesis currently in programs includes the following searches:

1. Academic Databases – English Language
2. Academic Databases – Chinese Language
3. Grey Literature

What did the synthesis find?

Based on a preliminary high-level review of the literature there are many biological, social, behaviour, and environment factors that are shared between physical health conditions that present risk of COVID-19 and mental health responses. Biological contributors include one's genetics as well as immune system and hormone imbalances. Social and behavioural factors include the stresses physical distancing, being vulnerable to lowered access to food, recreation, and public transport, disturbed sleep, overloaded hospital services that lead to premature discharges, and widespread panic to the uncertainties of a new illness may lead to mental health effects such as psychiatric condition diagnosis. At wider levels, issues such as reduced health services, absence of adequate testing, poor coordination among health and social services, and lack of accepted ways to manage COVID-19 may also weigh heavily on one's consciousness. Mental health responses that have been reported include anxiety, depression, harmful use of substances, defensive and rebellious behaviour, in-home conflicts, repetitions of unresolved childhood issues, and emotional depletion. For families where a member has experienced COVID-19 infection or related death, delayed mourning and post-trauma experiences have also been documented.

Based on the COVID-19 events to date, more targeted and integrated interventions to lessen mental health impacts are needed. First, there is a need for widespread awareness-raising through common media channels that fully engages people and fosters understanding about COVID-19 and mental health. Second, for those experiencing poor mental health, diverse and flexible approaches such as shared health care planning, online counseling, and genuine social interaction and integration may be effective. Finally, rehabilitation guidelines for COVID-19 co-developed by different practitioners may also reduce

the mental health burden of recovery. In conclusion, while the current COVID-19 situation appears to be somewhat controlled, the threat of future outbreaks points to the urgent need to identify and evaluate strategies that can promote mental well-being.

What are the implications of this synthesis?

This integrated scoping and realist review, guided by a committed interdisciplinary team of researchers, knowledge users (policy experts, clinicians) and patient partners, will provide efficient, cost-effective, and relevant information that will enable a better understanding of mental health and substance use risks related to COVID-19 pandemic mitigation responses, disease spread, and course of illness. The findings will foster better understandings of how different interventions (e.g., targeted policies and education, e-health, m-health, self- management programs, adjunct treatments to standard care) and responses can foster mental health among different populations at risk for COVID-19 infection. Collectively, the project outcomes will generate timely and relevant evidence-based research, policy, and practice-relevant information that seeks to prevent negative disease trajectories for vulnerable population groups.

Keywords: COVID-19, mental health, substance use, chronic diseases, autoimmune conditions, inflammatory bowel disorders, kidney diseases, liver diseases, HIV or AIDS, neurocognitive conditions,

Other Populations: None

Approaches to support mental health of diverse patients on wait lists for procedures delayed by COVID-19

Nominated Principal Investigator: Anna R Gagliardi, University Health Network

Authors:

Research Team: Robin Green, Susan Abbey, Donna E Stewart (University Health Network); Patient Research Partners: 6 patients waiting for procedures; 4 caregivers; Knowledge Users: Barry Rubin, Heather Ross (University Health Network), Cindy Yip (Heart & Stroke Foundation); Collaborators: Brian Hodges, Mary Pat McAndrews, Shaf Keshavjee, Vivek Rao (University Health Network); James Rutka (University of Toronto Department of Surgery); Robin McLeod, Natalie Coburn, Frances C Wright (Cancer Care Ontario); Jonathan Irish (Provincial Head, Surgical Oncology; Provincial Clinical Lead, Access to Care-Surgery-Ontario Health-Cancer Care Ontario); Glendon Tait (Canadian Academy of Psychosomatic Medicine); Stuart Edmonds (Canadian Cancer Society)

For more information, please contact: Anna R Gagliardi: anna.gagliardi@uhnresearch.ca

Target/priority population(s) in synthesis:

- Patients and/or caregivers of any socio-demographic characteristics waiting any length of time for: specialist consultation to diagnose a suspected or treat a confirmed condition; or for a medical procedure, referring to tests or therapy performed in hospitals or outpatient clinics by any clinicians, therapists or technicians

What is the issue?

Patients with debilitating or potentially life-threatening conditions are waiting for procedures delayed by the focus of health system resources on COVID-19. Patients will face ongoing waits due to a backlog of procedures and anticipated ongoing outbreaks. Pandemic-imposed waits may cause anxiety or related mental/emotional issues, which can increase over time, prompt physical symptoms, and affect quality of life.

Key messages:

- Waiting for procedures caused anxiety and depression among patients and caregivers, which increased over time, and reduced quality of life and trust in the healthcare system
- Educational strategies aimed to improve coping, and did not always reduce anxiety or depression
- Patients said they did not need coping training; instead, patients wanted peer moral support or mentoring, and periodic updates about: reason for delay, wait list position, rules for patient selection, and procedure date
- Organizations (e.g. healthcare delivery, health charities) can implement these approaches concurrent with testing by researchers for effect on the mental health of patients/caregivers waiting for procedures

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How was the synthesis conducted?

We conducted a scoping review using a rapid review methodology by searching the MEDLINE database of published research [yet to search: EMBASE, CINAHL, SCOPUS, Cochrane Library, and Joanna Briggs Institute Database of Systematic Reviews] from 2010 to June 2020 for English language studies of any research design from any country involving diverse patients or caregivers (disease, type of procedure, age, sex/gender, ethnicity/culture, education) on waiting and mental health, defined as any psychological impact including but not limited to: anxiety, distress, sadness, depression, fear, frustration, etc. We reported findings using summary statistics, tables and text descriptions.

What did the synthesis find?

We included 51 studies (0.6% of 8386 screened) from 19 countries (25.5% Canada). Most surveyed (56.9%) or interviewed (23.5%) patients waiting for organ transplant (60.8%), surgery (21.6%), or cancer treatment (13.7%). Most included patients only (84.3%); fewer included caregivers (15.7%). Nearly half (47.1%) reported waiting time but measures varied (average 6 to 572 days, range 3 to 12 years). Studies reported the mental health impact of waiting (58.9%), factors related to impact (29.4%), and the effect of strategies to support mental health (11.8% of 51 studies, 0.07% of 8386 screened). Caregivers had similar levels of depression and greater anxiety than patients. Most patients had anxiety or depression, and low quality of life. Younger age, lower education level/income, being a woman or recent migrant, and longer wait worsened anxiety and depression, while older age and being female worsened quality of life. All strategies to support mental health were classes offered in-person and/or by telephone over many weeks or months to teach coping skills (how to manage waiting). Success varied: 2 studies reduced depression (2 did not), 1 study reduced anxiety (2 did not) and 2 studies improved quality of life (2 did not). Strategy duration, group versus individual classes, or class number, length, or in-person versus telephone did not lead to success. Waiting reduced patient trust in the healthcare system, and caused anger and frustration with the lack of information about length of wait and fairness of the selection process. Patients said they did not need coping skills. Instead, to help them wait, patients wanted: (1) Assurance they had not "fallen through the cracks"; (2) Recognition of and empathy for their concerns; (3) Periodic updates with reason for delay, position on the wait list, priority rules for patient selection, and possible procedure date; and (4) Peer mentors or support groups.

What are the implications of this synthesis?

- Few studies in the wait times literature addressed mental health, particularly for procedures other than organ transplant procedures, or among caregivers whose mental health is impacted similarly to patients

- Many patients and caregivers waiting for procedures had anxiety or depression, which affected all aspects of their lives, and increased over time

- Waiting also caused patients to feel angry and frustrated with the healthcare system, and reduced their trust in the healthcare system

- Strategies to teach coping skills through multiple in-person or online classes over many months did not always reduce anxiety or depression, or improve quality of life, and may not be easy to implement

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- In contrast, to help them get through long waits, patients desired help from peers (support group, peer mentors) and periodic communication about: reason for delay, their position on the wait list, in what order patients would be selected for procedures, and possible procedure date

- It is possible that, compared with patients in included studies who did not understand the reason for delays, current patients/caregivers may understand the delay is caused by COVID-19, and be less likely to feel frustration with the healthcare system; this warrants further study

- Future research should assess:

  - If the approaches that patients recommended are easy to implement, and reduce anxiety and depression

  - Whether approaches should be tailored for patients/caregivers of different age, gender, or education level/income; who are new migrants; or based on length of wait, factors found to worsen anxiety and depression among those waiting

  - If mental health impact and desired solutions differ by ethnicity/culture, which studies did not report

  - The mental health impact and related sequelae of having re-allocated health system resources to COVID-19, and the societal and health system costs of those unintended consequences

- These findings can be used by policy-makers, health system leaders, professional societies, charitable organizations, hospitals, or clinicians seeking to implement strategies that support mental health among patients/caregivers whose procedures are delayed

- These findings are relevant to patients/caregivers waiting for procedures delayed by the COVID-19 pandemic or due to other reasons

Keywords: COVID-19, elective procedures, waiting lists, delays, mental health, anxiety, interventions, implementation, scoping review

Other Populations: General Population

Digital health interventions for the detection, prevention and management of mental health problems in people with chronic diseases: A knowledge synthesis

Nominated Principal Investigator: Marie-Pierre Gagnon, Université Laval

Authors: Annie LeBlanc, Université Laval, Maxime Sasseville, Université du Québec à Chicoutimi, Maud-Christine Chouinard, Université de Montréal, Marianne Beaulieu, Université Laval, Pascale Cholette, Clinique Proactive santé, Christine Aspiros, patient partner, Alain Larouche, Groupe santé Concerto, Guylaine Chabot, Groupe santé Concerto, Nicolas Beaudet, Omnimed

For more information, please contact: Mylène Boucher, Research coordinator: Mylene.Boucher.ciussscn@ssss.gouv.qc.ca

Target/priority population(s) in synthesis:

- Adults suffering from any chronic disease AND presenting, or at risk of presenting, a concomitant mental health problem.

What is the issue?

A large number of digital health interventions have been tested and proven to be effective for mental health problems, but there is a lack of evidence synthesis for their application in the population with concomitant chronic diseases.

Key messages:

- Digital mental health interventions are effective for people with chronic disease to improve depression and anxiety symptoms.

- The most effective methods of delivery are web-based and teleconsultation.

- There is not enough evidence to support the use of these interventions in the children and youth population.

How was the synthesis conducted?

We conducted a rapid review by performing comprehensives searches in seven bibliographic databases. 6 reviewers individually performed screening for titles, abstracts and then full text using pilot-tested standardized forms. All citations were reviewed by 2 reviewers independently at the first level of screening and by a senior reviewer at the second level. We developed a standardized extraction form that included study characteristics (e.g., authors, country, design), intervention characteristics (e.g., type of digital intervention), and outcomes reported.

What did the synthesis find?

The search yielded 2320 citations and we retained 131 citations for full-text analysis. In total, 35 reviews were included in the preliminary analysis. Most reviews described interventions performed in a specialized care setting (42%), targeted mostly to an adult population (83%), looked at interventions to manage and treat participants (60%), tested web-based and internet interventions (32%) by comparing them to usual care (48%), for people affected with cancer or various chronic diseases (77%). The

included reviews were structured in 4 population clusters: 1) chronic diseases; 2) cancer; 3) mental health; and 4) children and youth. The mental health outcomes targeted by the included reviews were mainly depression and anxiety symptoms, evaluated with heterogeneous outcomes measures. For the population with chronic diseases, most of the relevant studies (13) identified improvement on depressive symptoms, but only one identified improvement on symptoms of anxiety. Web-based and internet cognitive behavior therapy (CBT) interventions were the most effective for that population. For people currently affected by, or survivors of cancer, the data (14 studies) show that digital health interventions are effective to improve depression, anxiety, distress, quality of life and mood regulation. Teleconsultation and web-based interventions were the most effective modes of delivery for the population affected with cancer. For the population with multiples mental health problems, reports (4 studies) showed improvements in anxiety symptoms for generalized anxiety disorder and disease-specific anxiety, improvements on depression symptoms and PTSD symptoms. Finally, for the children and youth population, data (4 studies) were inconclusive regarding effectiveness and effect size.

What are the implications of this synthesis?

- To help with the management of potential COVID-19 repercussions for people with chronic diseases, digital mental health interventions including internet-based therapy and teleconsultation should be implemented.

- At this moment, there is a lack of evidence to support the use of smart phone apps, online chats and forums, and text messages. Thus, teleconsultation and internet-based interventions should be prioritized.

- There is insufficient information to make recommendation regarding digital mental health intervention for children and youth with a chronic disease.

Keywords: E-health, internet, digital health, chronic diseases, mental health, anxiety, depression, comorbidity, rapid review

Other Populations: None

Remote cognitive assessment in severe mental illness: A scoping review

Nominated Principal Investigator: Martin Lepage, McGill University

Authors: Katie Lavigne, McGill University, Geneviève Sauvé, Université de Québec à Montréal, Michael Bodnar, University of Ottawa Institute of Mental Health Research, Christopher Bowie, Queen's University, Synthia Guimond, University of Ottawa Institute of Mental Health Research, Shalini Lal, Université de Montréal, Tania Lecomte, Université de Montréal, Mahesh Menon, University of British Columbia, Todd Woodward, University of British Columbia

For more information, please contact: Martin Lepage: martin.lepage@mcgill.ca

Target/priority population(s) in synthesis:

- Individuals diagnosed with a severe mental illness

What is the issue?

A large majority of individuals diagnosed with a severe mental illness (e.g., schizophrenia) present cognitive deficits and biases in decision-making that negatively impact clinical trajectories and functioning. Within the context of the current pandemic, traditional in-person assessment methods need to be adapted for remote delivery, but there is a lack of guidelines and protocols for such an endeavor.

Key messages:

The COVID-19 pandemic has highlighted the need to develop guidelines and protocols for best practices in remote cognitive assessment of individuals diagnosed with a severe mental illness to ensure they can properly receive psychological interventions delivered through digital mental health technologies. Our main objective is to map the current knowledge on remote cognitive assessment in severe mental illness. This will allow us to develop guidelines for clinicians and researchers as well as identify promising avenues for future scientific studies. Until now, we have retrieved more than 20,000 articles, from which more than 50 have been included in our scoping review.

How was the synthesis conducted?

First, the research protocol for this synthesis was registered on the Open Science Framework platform (https://osf.io/cbzq8). The scientific literature was then systematically searched using a combination of keywords and different article databases. A selection of pertinent articles based on pre-determined criteria was performed afterwards by several raters. The degree of agreement between raters was evaluated on three different occasions during the process. To this date, the extraction of relevant information found in the selected articles is still in progress and the bibliographies of selected articles will be screened for additional sources. Experts in the field have also been contacted for unpublished findings to increase the extent of our search. Once this step will be completed, the findings will be synthesized and illustrated using the logic model methodology and applicable guidelines will be developed.

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What did the synthesis find?

So far, our search retrieved 24,515 articles, from which 56 were deemed relevant after careful screening and selection procedures. The agreement between raters, which was carried out at the start, midpoint, and end of screening, was found to be excellent on every occasion. A list of the selected articles can be provided upon request. A draft version of the logic model was also developed according to our objectives and the type of information found in the selected articles. Briefly, the model will illustrate existing procedures and measures for remote cognitive assessment and indicators of their validity and reliability. In addition, the model will map out the facilitators and barriers to remote cognitive assessment identified by authors and their proposed improvements and avenues for future research. Finally, the model will culminate into concrete and applicable guidelines for clinicians and researchers interested in remote cognitive assessment for individuals with severe mental illness.

What are the implications of this synthesis?

This knowledge synthesis on remote cognitive assessment in severe mental illness will allow us to map the current knowledge of this emerging field, including existing procedures and measures as well as their reliability, sensitivity, specificity, and validity. The facilitators and barriers to remote cognitive assessment as reported by authors will also be compiled. Building on this knowledge, we will be able to develop guidelines for best practice in remote cognitive assessment and propose promising avenues for future research.

Keywords: cognitive assessment, cognitive biases, cognitive capacity, psychosis, schizophrenia, bipolar disorder, depression, severe mental illness, remote assessment, scoping review

Other Populations: None

A review of best evidence and patient preference-based options for online/virtual care of bone/joint and muscle problems that cause chronic pain and distress

Nominated Principal Investigator: Joy MacDermid (Western University)

Authors: Joy MacDermid (Western University), Pavlos Bobos (Western University), Goris Nazari (Western University)

For more information, please contact: Joy MacDermid: jmacderm@uwo.ca

Target/priority population(s) in synthesis:

- Patients who had bone, joint or muscle problems that cause long-lasting (chronic) pain and mental health symptoms.

What is the issue?

People living with chronic bone, joint or muscle pain with combined physical and mental health symptoms may be most at-risk of decline during a pandemic, and most challenging to manage virtually.

Key messages:

- The methods of intervention studies need to be improved (initial findings).

- Virtual interventions that help manage both physical and mental health symptoms had some positive effects in improving pain (initial findings).

How was the synthesis conducted?

We searched 6 different online scientific databases up to June 2020 to find published studies that tested virtual services for people with chronic bone, joint, and muscle pain and mental health symptoms. Two researchers reviewed all the relevant studies and read the entire study to determine if it is a suitable study. We recorded all the important information from all the suitable studies into a software to analyse. We also assessed the quality of the selected studies (how good / properly / accurately was the study conducted?).

What did the synthesis find?

- Our initial preliminary analysis found 16 clinical trials. Overall, studies were of acceptable quality and the virtual treatments were somewhat beneficial for patients with long-lasting (chronic) bone, joint or muscle pain and mental health conditions:

  - Small to moderate pain reduction

  - Small to moderate reduction in disability

  - Small to moderate improvement in quality of life or function

- The kinds of treatments that have been used included: telerehabilitation, home exercise programs, and telephone supervision/sessions.

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What are the implications of this synthesis?

- There is a need for higher quality studies.

- Initial Findings: For patients with long-lasting bone, joint or muscle pain and mental health conditions, virtual treatments that help manage both physical and mental health symptoms had small to moderate positive effects in reducing pain and disability, and improving quality of life and function.

Keywords: musculoskeletal, chronic pain, mental health, virtual care, knowledge synthesis, physical health, coronavirus (COVID-19), network meta-analysis, knowledge translation

Other Populations: None

Additional Syntheses Relevant to This Population

Title: The relationship between social connectedness and mental health for residents of long-term care homes: knowledge synthesis and mobilization

NPI: Jennifer Bethell, KITE, Toronto Rehabilitation Institute, University Health Network

Primary Population: Aging

Lay Summary on Page: 6

Title: Depression In community Residing Elders (DIRE): A rapid review and network meta-analysis of depression telemedicine treatments for older adults living in the community

NPI: Dr. Zahra Goodarzi, MD, MSc, FRCPC, University of Calgary

Primary Population: Aging

Lay Summary on Page: 10

Title: Quelles sont les répercussions de la pandémie du COVID-19 sur la santé mentale des enfants de 5-12 ans, et quels sont les enjeux particuliers pour les enfants handicapés ou ayant une maladie chronique ? Une scoping review des problématiques vécues et des pistes d'intervention prometteuse.

NPI: Chantal Camden, professeure à l'université de Sherbrooke, chercheure au CRCHUS et à l'IUPLSSS, Catherine Malboeuf-Hurtubise, Faculté de Psychologie, Département de Psychologie, Université Bishop's

Primary Population: Children, Youth and Families

Lay Summary on Page: 16

Title: The COVID-19 pandemic and eating disorders in children and adolescents: recommendations from the Canadian consensus panel

NPI: Dr. Jennifer L. Couturier, Department of Psychiatry & Behavioural Neurosciences, Faculty of Health Sciences, McMaster University, Hamilton, Canada

Primary Population: Children, Youth and Families

Lay Summary on Page: 19

Title: Family carers and COVID-19: A rapid integrated mixed methods systematic review

NPI: Monica Parry, University of Toronto

Primary Population: Children, Youth and Families

Lay Summary on Page: 33

Additional Syntheses Relevant to This Population (continued)

Title: Impact of COVID-19 on the mental health and wellbeing of caregivers and families of autistic people

NPI: Dr. Jonathan Weiss, York University

Primary Population: Children, Youth and Families

Lay Summary on Page: 35

General Population

A rapid review of the effects of epidemics or pandemics on suicide, suicidal behaviours and suicidal thoughts

Nominated Principal Investigator: Dr. Simon Hatcher, The Ottawa Hospital Research Institute

Authors: Zortea T, Brenna C, Joyce M, McClelland H, Tippett M, Tran M, Arensman E, Corcoran P, Hatcher S, Heisel M, Links P, O'Connor R, Edgar NE, Cha Y, Guaiana G, Williamson E, Sinyor M, Platt S

For more information, please contact: Nicole Edgar: nedgar@ohri.ca

Target/priority population(s) in synthesis:

- Populations exposed to pandemics and epidemics.

What is the issue?

How does being exposed to a pandemic or epidemic public health emergency affect suicide rates?

Key messages:

- There is very little evidence to address the issue of how being exposed to a pandemic or epidemic impacts suicide rates.

- Older adults may have an increased rate of suicide after pandemics and epidemics and should be considered a priority group for prevention strategies during the currently pandemic.

- The biggest influence on suicide rates are likely to be the socioeconomic changes that coming during and after a pandemic/epidemic.

How was the synthesis conducted?

We conducted a systematic review by searching all relevant bibliographic databases: MEDLINE, EMBASE, PsycInfo, CINAHL, Scopus, and Web of Science. In total, 3973 articles were identified through the main search of which 694 remained after duplicates were removed. After full text screening, eight primary articles and one preprint were ultimately selected for inclusion in the systematic review.

What did the synthesis find?

The eight primary studies were of relatively low methodological quality, and with minimal previous evidence, in addition to challenges inherent in studying public health emergencies (that is the absence of baseline data and lack of experimental controls). As such, we cannot draw a firm conclusion regarding a direct relationship between epidemics and suicide related outcomes.

Evidence exists however to suggest a possible impact of the SARS epidemic on older adult suicide deaths in Hong Kong. More specifically, suicide rates among older adults (particularly women) increased both during and following the epidemic. Although of poorer quality, data from the Great Influenza Pandemic and Russian influenza (1889-1893) also suggest an association with suicide deaths. Furthermore, Ebola infection history and influenza B seropositivity were both associated with attempted suicide and preprint data for the COVID-19 pandemic suggest increases in both suicidal thoughts and attempted suicides.

Four of the studies included in this review provided some, albeit limited, insight into the possible pathways leading to suicide-related outcomes. Several psychosocial mechanisms have been reported or hypothesized, including existential anxiety or 'dread' associated with media reports during the late 19th century 'Russian' influenza outbreak in the UK, and fear/worry of contracting the virus, pessimism, helplessness, isolation, loneliness and disconnectedness linked to the SARS outbreak.

What are the implications of this synthesis?

The potential suicidogenic impact of public health emergencies may be greater in certain populations or professional groups, in particular older adults, people who are or become unemployed or under-employed, people with pre-existing mental health and/or substance misuse problems, and frontline health and social care staff. The articles identified by this review did not examine the effectiveness of interventions in mitigating the impact of pandemics on the incidence of suicide. This highlights the urgent need for primary studies of such interventions in the context of the COVID-19 pandemic which would inform suicide prevention policies and clinical practice. This review constitutes the most comprehensive current knowledge that can inform suicide prevention initiatives during the COVID-19 pandemic, as well as future infectious disease-related public health emergencies. This work also identifies gaps in the existing literature which can guide the planning and prioritization of future research and interventions regarding suicide prevention.

Keywords: suicide, attempted suicide, self-harm, epidemic, pandemic, public health emergency, systematic review

Other Populations: None

Harnessing digital mental health to improve equity in mental health care in the context of COVID-19: Needs, best-practices and opportunities in the Asia Pacific region: One-Month Knowledge Synthesis, June 22, 2020

Nominated Principal Investigator: Dr. Raymond Lam, Professor and BC Leadership Chair in Depression Research; Associate Head for Graduate and Undergraduate Education, Department of Psychiatry, University of British Columbia; Director, Mood Disorders Centre, Djavad Mowafaghian Centre for Brain Health; Executive Director, APEC Digital Hub for Mental Health.

Authors: Dr. Jill Murphy, University of British Columbia, Dr. Raymond Lam, University of British Columbia, Dr. Erin Michalak, University of British Columbia, Amna Khan, University of British Columbia

For more information, please contact: Dr. Jill Murphy, jill.murphy@ubc.ca

Target/priority population(s) in synthesis:

- At-risk groups across the Asia Pacific region

What is the issue?

The COVID-19 pandemic and the related social and economic effects are having profound mental health impacts that are expected to be long lasting. Some groups are at higher risk of the negative mental health impacts of the pandemic, and may experience challenges to accessing care. Because of physical distancing requirements, the pandemic has led to an accelerated shift to the use of digital and virtual care for mental health. Although digital and virtual care options can be convenient and acceptable for many, at-risk groups may experience barriers to accessing these types of services. Through this knowledge synthesis, we identify priority at-risk groups across the Asia Pacific region, the mental health risk factors they experience, and challenges in access to care, including digital mental health care. We also identify recommendations to help policy makers, health care providers and other stakeholders to address these challenges to improve mental health and psychosocial support for at-risk groups across the Asia Pacific region.

Key messages:

- Several groups across the Asia Pacific region are at higher risk of the negative mental health effects of the COVID-19 pandemic, and may experience more barriers to accessing digital and virtual care

- Challenges include interruptions in standard mental health care, lack of access to culturally or linguistically appropriate care, barriers to accessing digital technology or the Internet, and persistent health and socioeconomic inequalities.

- Recommendations include involving at-risk groups in consultations about planning for mental health care, improving accessible options (e.g. multiple languages, format and platforms) for digital and virtual care, investing in research on the effectiveness of digital and virtual care for at-risk groups, and addressing the underlying socioeconomic contributors to poor mental health

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How was the synthesis conducted?

We conducted a rapid review using two databases (PubMed and Google Scholar) to identify priority at-risk groups in the Asia Pacific region, mental health risk factors, barriers to care access and recommendations. Papers that related to mental health or psychosocial risk factors and COVID-19 among at-risk groups; that referred to one or more Asia-Pacific Economic Cooperation (APEC) countries or had a global scope; English language papers, and papers with full text available were included. Snowballing was used to identify sources from the reference lists of included studies. A total of 36 papers were reviewed.

What did the synthesis find?

The knowledge synthesis identified several groups that are at higher risk of the negative mental health effects of the COVID-19 pandemic from across the Asia Pacific region. These include: people with existing mental illness, healthcare workers, Black, Indigenous and People of Colour (BIPOC), older adults, migrants (including refugees, asylum seekers, migrant workers and international students), victims of domestic violence, people experiencing homelessness and people with disabilities. Research into the effects on other groups, including people living with HIV, women and girls, LGBTQIA+ people and incarcerated people is warranted.

Challenges facing at-risk groups in terms of mental health and access to mental health care include the interruption in standard mental health and support services as a result of the COVID-19 pandemic. The mental health impact of physical distancing and self-isolation may be profound for at-risk groups. Many at-risk groups may also lack access to care in their own language or that is appropriate for their culture. Though care has largely shifted towards digital (e.g. apps or Internet-based care) or other types of virtual care (e.g. via telephone), many at-risk groups may lack access to digital technologies or Internet access. Finally, many groups are at-risk due to persistent socioeconomic inequalities, including poverty, stigma and discrimination.

To address these challenges, it is recommended that representatives of at-risk groups be included in consultations to plan for mental health care. Ensuring that care, including digital and virtual care, is accessible is also essential. This includes ensuring that care is delivered in multiple languages, through various platforms (e.g. Smartphones and landlines), and in various formats (e.g. not just written text, large font, etc.). Research is needed to test the effectiveness of digital mental health interventions among at-risk groups. Finally, in the long term, research and policy must address the underlying socioeconomic inequalities that contribute to poor mental health among at-risk groups.

What are the implications of this synthesis?

This knowledge synthesis helps to call attention to the mental health needs and challenges facing the most vulnerable populations in the context of the COVID-19 pandemic. It provides knowledge users with evidence regarding key challenges and gaps facing these groups and advances recommendations to address these challenges. In doing so, it provides knowledge users with information to inform the development of policy and delivery of interventions that help to address the mental health needs of at-risk groups and the specific gaps that may impede their access to care.

Keywords: mental health, digital health, virtual mental health care, at-risk groups, vulnerable populations, Asia-Pacific, equity, psychosocial risk factors, COVID-19, rapid review

Other Populations: None

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A systematic review on the effectiveness of virtual sleep intervention delivery to improve sleep and mental health outcomes in the post-secondary student population: Preliminary findings

Nominated Principal Investigator: Efrosini Papaconstantinou, RN, PhD, Assistant Professor, Faculty of Health Sciences, Ontario Tech University Research Scientist, Centre for Disability Prevention and Rehabilitation (CDPR) at Ontario Tech University and the Canadian Memorial Chiropractic College (CMCC)

Authors: Carol Cancelliere[1,2,3], Pierre Côté[1,2,4], Krystle Martin[2,5], Ginny Brunton[1], Karima Velji[5], Danielle Annamalai[1,2], Leslie Verville[1,2], Anne Taylor-Vaisey[1,2]

[1]Ontario Tech University
[2]Centre for Disability Prevention and Rehabilitation (CDPR) at Ontario Tech University and the Canadian Memorial Chiropractic College (CMCC)
[3]Canadian Chiropractic Research Foundation (CCRF) Research Chair in Knowledge Translation
[4]Canada Research Chair in Disability Prevention and Rehabilitation
[5]Ontario Shores Centre for Mental Health Sciences

For more information, please contact: Efrosini Papaconstantinou, RN, PhD: efrosini.papaconstantinou@ontariotechu.ca

Target/priority population(s) in synthesis:

- Post-secondary students

What is the issue?

Sleep problems, including disrupted sleep, are increasingly recognized as a risk factor for poor health outcomes including mental health problems. Students pursuing post-secondary education are a population group at risk for both significant sleep problems and poor mental health outcomes such as depression and anxiety.

Interventions such as sleep hygiene education and cognitive behavioural therapy (CBT) are common treatment options for sleep problems and have been effective in improving sleep and mental health in post-secondary students. Given the global COVID-19 pandemic, students may face additional challenges with their sleep and mental health. As a result of the public health measures put in place, in-person mental health services that have been provided by post-secondary institutions to students have closed. In an effort to address this gap, some institutions have moved to providing care through a virtual platform, or tele-health services. However, the effectiveness of delivering sleep interventions virtually to the post-secondary population is unknown. Also, we lack knowledge about the students' experience, perspectives, attitudes and beliefs of sleep interventions being delivered virtually or digitally.

Key messages:

- Post-secondary students are a vulnerable population at risk for both significant sleep problems and mental health conditions.

- The COVID-19 pandemic poses additional challenges to sleep and mental health for post-secondary students. Symptoms of anxiety, depression and stress have increased during this pandemic and are associated with sleep problems.
- Addressing student sleep problems may also protect students from developing other mental health challenges or improve psychological symptoms.
- Preliminary findings from our knowledge synthesis suggest that online sleep education and digital cognitive behavioural therapy for insomnia (CBT-I) are effective in improving sleep and mental health outcomes in the post-secondary student population.
- We will continue to update our findings as we search for more evidence.

How was the synthesis conducted?

We developed the search strategy in consultation with a health sciences librarian. We searched the following databases from 2000 to July 3, 2020 for peer-reviewed studies published in any language: MEDLINE, CINAHL, Embase, and APA PsycInfo. Pairs of trained, independent reviewers screened articles in two phases to determine eligibility. In phase I screening, paired reviewers screened titles and abstracts to determine possible relevant and irrelevant citations based on specific inclusion and exclusion criteria. In phase II screening, paired reviewers independently reviewed possibly relevant citations from Phase I using the full-text article to determine eligibility. Pairs of trained, independent reviewers then critically appraised all relevant studies using specific criteria for randomized controlled trials (RCTs) and cohort studies (Scottish Intercollegiate Guidelines Network [SIGN]). Disagreements in ratings between reviewers were resolved by a third reviewer where necessary. The SIGN criteria were used to determine the internal validity of the studies. To date, we have completed screening in one database (MEDLINE). Screening is currently underway for the remaining databases. Our preliminary synthesis focuses only studies with adequate internal validity (i.e., low risk of bias) that have been identified thus far. Our final synthesis will include evidence tables for all relevant studies.

What did the synthesis find?

This is the first systematic review to evaluate the effectiveness of digitally delivered sleep interventions to improve sleep in post-secondary students. Only three high-quality randomized controlled studies (RCT) were included in this preliminary knowledge synthesis. In one RCT, a sleep education website improved sleep knowledge, behaviours, sleep quality, and decreased depression scores. These changes were noted 8 weeks after the intervention ended, suggesting that these improvements may persist. The second study evaluated the effectiveness of digital cognitive behavioral therapy for insomnia (CBT-I). CBT-I reduced insomnia and improved depression and anxiety. These effects were maintained over time (22 weeks post-intervention). In the third study, online delivery of a single component of CBT (implementation intentions) was no more effective than a daily online sleep diary with respect to adoption of healthy sleep behaviours and improvement in sleep quality and symptoms of insomnia. Preliminary findings suggest that both online sleep education and digital CBT-I are effective in improving sleep and mental health outcomes in the post-secondary student population. We will continue to update our findings as we identify more studies.

What are the implications of this synthesis?

- Preliminary findings suggest that online sleep education and digital CBT-I may be effective in improving sleep and mental health outcomes in the post-secondary student population.

- Digital sleep intervention delivery, such as those delivered via mobile- and web-based platforms, may be an attractive feature and a good fit with the culture of the postsecondary student population.
- Digital sleep intervention may improve the accessibility to sleep and other mental health resources and circumvent barriers to receiving traditional services.
- Our knowledge synthesis will provide knowledge users (post-secondary students, healthcare providers and managers, administrators, mental health advocacy groups, researchers) with the best available evidence regarding effective sleep interventions delivered through virtual platforms.
- As the COVID-19 pandemic evolves, this synthesis allows us to be proactive in adapting methods to deliver sleep-related mental health services.

Keywords: sleep, post-secondary students, mental health, depression, anxiety, stress, cognitive behavioral therapy (CBT), digital interventions, virtual care, tele-care, effectiveness, systematic review

Other Populations: None

Knowledge synthesis to support and promote mental wellness and resiliency during the COVID-19 pandemic

Nominated Principal Investigator: Joseph H. Puyat (School of Population and Public Health)

Authors: Joseph Puyat (SPPH, FoM, UBC), Haroon Ahmad (Psychiatry, FoM, UBC), Arminee Kazanjian (SPPH, FoM, UBC)

For more information, please contact: Joseph Puyat

Target/priority population(s) in synthesis:

- General population

- Persons at risk of developing mental illness

- Persons with pre-existing mental illness

What is the issue?

Without a vaccine, effective treatment and herd immunity, public health approaches to controlling the COVID-19 pandemic will continue to depend on measures such as isolation, quarantine, physical distancing, and frequent hand washing. Some of these measures when prolonged and implemented at the same time can have severe unintended consequences on mental health. At the same time, access to in-person health care services, including those for mental health, may be limited during the COVID-19 public health emergency. It is important, therefore, to identify and explore alternative, home-based activities and resources that have potential therapeutic and protective value against symptoms of mental disorders. These will complement initiatives that aim to provide internet-based therapies and tele-mental health. To date, the knowledge base regarding home-based activities and resources that promote mental wellness and resilience is limited. Filling this gap will help inform the creation of a more comprehensive response to the mental health challenges that arise during periods of extended mass quarantine and isolation.

Key messages:

There is limited evidence on home-based activities that can promote mental wellness during the COVID-19 pandemic. The limited evidence points to the value of exercise, meditation, relaxation and a wide range of activities in alleviating symptoms of depression and anxiety. The effects on mental health vary from small to large depending on type of activity, symptoms and severity of mental disorders. The promotion of these activities should complement the provision of mental health services that leverage modern information and communication technology.

How was the synthesis conducted?

We conducted a rapid review of studies that examined home-based activities and their effect on mental health. We searched various databases and sources for studies published in the last twenty years that investigated participants who are healthy or experiencing mental health challenges.

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To produce the synthesis in a timely manner, we took steps to expedite the regular process of conducting full systematic reviews. During the first stage of the process, two review authors screened titles and abstracts found during the search. During the second stage, 25% of the potentially eligible studies were reviewed in full by two review authors while the remaining 75% were reviewed by one review author. Data extraction and risk of bias assessment were performed by one review author and checked for completeness and accuracy by a second review author.

Collaborators consisting of mental health professionals, content experts, and persons with lived experience were consulted in the planning and execution of the synthesis.

What did the synthesis find?

The synthesis found 1,236 unique records, 160 of which were reviewed in full and resulted in 16 studies included in this synthesis. Eight of the studies were randomized clinical trials while the remaining eight were non-randomized studies of intervention. The most frequently investigated activity was exercise and the mental health outcomes that were examined include reductions in symptoms of anxiety, depression, psychological distress, feelings of hopelessness, and overall symptom severity. Other studies have examined yoga's potential in reducing anxiety and depressive symptoms and solitary religious activities' (e.g. reading religious literature or viewing/listening to religious programs on TV/radio) link with increased risk of symptoms of post-traumatic stress disorder. Another study specifically investigated the role of progressive muscle relaxation in reducing anxiety symptoms among patients with COVID-19. Lastly, one study reported the beneficial effects of listening to relaxing music on reducing anxiety symptoms.

Our team has also identified and examined 30 reviews that investigated the effectiveness of a wide range of activities in improving mental health outcomes in general settings, not just during pandemics and similar settings. These activities include exercise for anxiety and depression (9 reviews); yoga for schizophrenia (4); meditation for anxiety, depression, and stress (2); music for depression and schizophrenia (2); dance for anxiety, depression, and schizophrenia (2); light therapy for seasonal and non-seasonal depression (2); distraction technique for schizophrenia (1); art therapy for schizophrenia (1); drama for schizophrenia (1); exergames for anxiety (1); horticulture for anxiety, depression, and stress (1); exposure to natural environments for anxiety (1); relaxation for depression (1); using self-help resources for eating disorders and depression (1); and using video calls for depression and loneliness (1). Effects of these activities on mental health range from negligible to large depending on the activity and mental health outcome studied.

What are the implications of this synthesis?

- There is good evidence that home-based activities can help promote mental wellness and resilience. Exercise and other forms of physical activities are particularly helpful across a broad range of symptoms of mental illness. Because of limitations in the study designs that form the evidence-base for these activities, we recommend that these activities are promoted or offered in conjunction with conventional mental health services. Combining the activities identified in this review with standard therapies delivered online may produce the best results, especially for people experiencing moderate to severe symptoms.

- Guidelines on home-based activities that have the potential to promote mental wellness are needed. This will help minimize potential adverse effects that may happen when certain activities are done in excess or incorrectly (e.g. excessive or incorrect exercise routines). Guidelines would also help increase the likelihood that the activities will optimize their intended benefits.
- This synthesis needs to be updated on a regular basis as published studies on activities that promote mental wellness during the current COVID-19 pandemic and in settings that increase social isolation become available in the next few months.

Keywords: home-based activities, depression, anxiety, music, arts, exercise, mindfulness, nature, social isolation, information and communications technology, mental health, quarantine, pandemic

Other Populations: None

Digital interventions to support population mental health during COVID-19: A knowledge synthesis

Nominated Principal Investigator: Gillian Strudwick, Centre for Addiction and Mental Health

Authors: Sanjeev Sockalingam, Centre for Addiction and Mental Health, Allison Crawford, Centre for Addiction and Mental Health, Sophie Soklaridis, Centre for Addiction and Mental Health, Branka Agic, Centre for Addiction and Mental Health, Rohan Mehta, Centre for Addiction and Mental Health, Lydia Sequeira, University of Toronto, Iman Kassam, Centre for Addiction and Mental Health, Sarah Bonato, Centre for Addiction and Mental Health, David Wiljer, University Health Network, Nadia Green, University of Toronto, Danielle Impey, Mental Health Commission of Canada, Alaa Youssef, University of Toronto

For more information, please contact: Gillian Strudwick: Gillian.strudwick@camh.ca

Target/priority population(s) in synthesis:

- General population in Canada

What is the issue?

- Population-based interventions are increasingly needed as a way of reducing the potential mental health impacts experienced by Canadians as a result of job loss, social isolation, changes to everyday life, both now and into the foreseeable future.

- There is a need to support the adaptation and augmentation of our current infrastructure to increase capacity, and ideally support mental health and wellness at a population health level.

Key messages:

- Digital interventions are potential solutions to support population mental health during and after the pandemic.

- By digital interventions, we refer to those described by the Mental Health Commission of Canada, and in the World Health Organization's Classification of Digital Health Technologies, like websites, web-based programs, electronic knowledge platforms, mobile health apps (inclusive of texting), telemedicine and social media

- Digital interventions that have been created for non-COVID-19 related purposes (e.g. for natural and human-made disasters) may be relevant to support population mental health

How was the synthesis conducted?

- We conducted a rapid review of the academic and grey literature using the interim guidance from the Cochrane Rapid Reviews Methods Group in June 2020

- Our librarian team member created detailed search strategies, and executed searches for:
  - Academic databases: Embase, Psycinfo, Medline and Web of Science (total of 2907 citations found)

- o Grey literature: Google and Million Short
- We also searched for relevant apps through the App Store (Apple) and Google Play store by brainstorming search terms with a person with lived experience of mental illness, and searching eight curated app libraries
- Two members of the investigator team applied the inclusion and exclusion criteria independently to 30 randomly selected articles identified from the academic review ensuring an appropriate level of agreement in the application of this criteria before further screening was conducted
- Additional screening of citations identified during the academic searches was done using Covidence in two stages:
    - o Abstract and title (all 2907 citations screened that were identified from the searches)
    - o Full text (243 screened that met inclusion/exclusion criteria from the abstract and title stage)
- Data was extracted from the articles that were included after the full text screening was completed
- Plans to engage experts in the field to share the findings of this work and identify other digital interventions not uncovered during the search detailed above will be conducted in July/August of 2020
- Further analysis will be completed on equity related topics such as: relevance of the findings to Indigenous communities in Canada; intervention appropriately addresses or acknowledges ethnicity/race, sex/gender and socioeconomic status considerations

What did the synthesis find?

- The majority of digital interventions identified in the academic literature to support population mental health were related to providing mental health clinical care through a virtual method instead of face-to-face care, and came from the COVID-19, other pandemics and/or natural or human-made disaster (e.g. forest fires, hurricanes, earthquakes, conflict) literature.
- The primary means of replacing face-to-face care included the use of video and/or telephone calls, but also included online or smartphone application based Cognitive Behavioural Therapy (CBT) assisted by a provider.
- Other relevant digital interventions identified in the academic literature included, but were not limited to:
    - o Digital learning packages/educational resources
    - o Web-based self-help and parent assisted-help intervention
    - o Peer-to-peer support
- Specific websites, electronic resources and mobile applications for smartphones have been developed for COVID-19 within a Canadian context such as:
    - o A smartphone application used to support stress and anxiety during COVID-19

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- A website with numerous methods for supporting wellness, mental health and substance use support
- COVID-19 Youth Mental Health Resource Hub
- An inventory of these resources is currently being developed

- Of the >150 smartphone applications identified that may support population mental health, only 9 of were identified as either: 1) developed for COVID-19; 2) having COVID-19 specific updates; or, 3) were identified as relevant to COVID-19. Only 5 of these mobile applications were available in Canada.

- Further analyses and synthesis of the identified academic and grey literature will be conducted and this section will be updated accordingly on a monthly basis

What are the implications of this synthesis?

- The body of literature related to the use of digital interventions that could support population mental health specific to COVID-19 is limited in quantity. Thus, drawing on the digital interventions used during other pandemics and disasters (e.g. hurricanes) may provide initial insights into appropriate solutions to support population mental health during COVID-19.

- Canadian researchers, providers and other stakeholders who have developed and/or are utilizing digital interventions to support population mental health should share their interventions, evaluations and lessons learned with the broader community to expand this body of available knowledge in Canada.

- Further analysis will be conducted on relevance of the identified digital mental health interventions for equity related purposes such as: relevance of the findings to Indigenous communities in Canada; intervention appropriately addresses or acknowledges ethnicity/race, sex/gender and socioeconomic status considerations

Keywords: population mental health, digital interventions, pandemic, digital mental health, e-mental health, virtual mental health, digital psychiatry, tele-psychiatry, disaster mental health, telemental health

Other Populations: Vulnerable or At-Risk Populations

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Mental health during the COVID-19 pandemic: A living systematic review of mental health burden, factors associated with mental health outcomes, and intervention effectiveness in the general population and vulnerable populations

Nominated Principal Investigator: Brett D. Thombs[1-7]

Authors: Olivia Bonardi,[1] Danielle B. Rice,[1,5] Jill T. Boruff,[8] Marleine Azar,[1] Chen He,[1] Sarah Markham,[9] Ying Sun,[1] Yin Wu,[1,2] Ankur Krishnan,[1] Andrea Benedetti,[3,4,11] Ian Thombs-Vite,[1] Kevin Jutras[1], Yutong Wang[10]

[1]Lady Davis Institute for Medical Research, Jewish General Hospital, Montreal, Quebec, Canada; [2]Department of Psychiatry, McGill University, Montreal, Quebec, Canada; [3]Department of Epidemiology, Biostatistics, and Occupational Health, McGill University, Montreal, Quebec, Canada; [4]Department of Medicine, McGill University, Montreal, Quebec, Canada; [5]Department of Psychology, McGill University, Montreal, Quebec, Canada; [6]Department of Educational and Counselling Psychology, McGill University, Montreal, Quebec, Canada; [7]Biomedical Ethics Unit, McGill University, Montreal, Quebec, Canada [8]Schulich Library of Physical Sciences, Life Sciences, and Engineering, McGill University, Montreal, Quebec, Canada; [9]King's College, London, United Kingdom; [10]Southeast University, China; [11]Respiratory Epidemiology and Clinical Research Unit, McGill University Health Centre, Montreal, Quebec, Canada

For more information, please contact: Dr. Brett D. Thombs: Brett.thombs@mail.mcgill.ca

Target/priority population(s) in synthesis:

The target populations include both the general population and vulnerable sub-populations. Initial sub-populations of interest include (1) medical staff involved in caring for patients infected with COVID-19; (2) people infected with COVID-19 (as determined in primary studies), including those hospitalized and not hospitalized; (3) people vulnerable to poor mental health outcomes because of pre-existing mental health conditions, including those receiving treatment and those not receiving treatment at the time of the outbreak; (4) people at risk of complications if infected with COVID-19 due to pre-existing medical conditions; (5) People in correctional settings; and (6) Low income populations.

What is the issue?

Serious mental health implications from COVID-19 will disproportionately affect vulnerable groups and extend beyond the acute outbreak period for many people. A major barrier, however, to effectively using mental health evidence from COVID-19 is the rapid speed at which studies are being published and the poor quality and sub-standard reporting in many studies. Effective uptake for rapid response will require that informative evidence be separated rigorously and rapidly from less useful or misleading evidence. A quick perusal of early journal and pre-print publications, trial registries, discussions with journal editors, and our own experience with peer review requests suggests that it will be crucial to be able to curate evidence rapidly, clearly delineate the kind of evidence that will answer pressing questions, and identify well-conducted and reported studies that can help us answer those questions.

Key messages:

We have reviewed over 4,200 citations and begun to post results and narrative synthesis for our 3 living systematic reviews on the project website (https://www.depressd.ca/covid-19-mental-health). Our first review estimates the impact of COVID-19 on mental health by comparing changes in symptom levels or proportions of people with diagnoses or above symptom thresholds at different times across the pandemic. The second review is synthesizing evidence to identify sociodemographic, medical, and pandemic-related factors associated with poor mental health outcomes. The third review evaluates evidence on effectiveness of interventions designed to prevent the onset of mental health problems or improve mental health outcomes.

How was the synthesis conducted?

The objectives of our living systematic review are to evaluate (1) changes in mental health symptoms across events during COVID-19 (e.g., pre- COVID-19 to COVID-19; pre-isolation to isolation); (2) factors associated with mental health during COVID-19, and (3) the effectiveness of different types of interventions on mental health during COVID-19. The MEDLINE (Ovid), PsycINFO (Ovid), CINAHL, EMBASE (Ovid), Web of Science, China National Knowledge Infrastructure, Wanfang, MedRxiv, and Open Science Framework databases are searched, as well as trial registries, with daily updating, using a search strategy designed by a health sciences librarian. In addition, we supplement these searches by manual review of references of included trials and by searching trial registries, including ClinicalTrials.gov, the World Health Organization International Clinical Trials Registry Platform (https://apps.who.int/trialsearch), the Chinese Clinical Trial Registry (http://www.chictr.org.cn/searchprojen.aspx), and the European Union Clinical Trials Register (https://www.clinicaltrialsregister.eu/ctr-search/search?query=covid-19). Studies and registrations in any language are included in our review. We upload daily results, including risk of bias analyses, to our project website (https://www.depressd.ca/covid-19-mental-health). For reviews of mental health changes and of factors associated with symptom levels or changes, eligible studies must use a validated scale or set of items to assess symptom levels or as an outcome measure for evaluating associated factors. Studies on factors associated with mental health outcomes must include multivariable adjustment for potential confounders. For the review of intervention effects, randomized and non-randomized controlled trials of interventions that target mental health outcomes (e.g., depression, anxiety, trauma) are eligible. All evidence is reviewed for inclusion at title /abstract and full-text levels and all data are extracted by two reviewers independently. Data are initially synthesized narratively then pooled quantitatively, once there is sufficient evidence. Outputs include daily evidence updates on the project website (https://www.depressd.ca/covid-19-mental-health), and will include specific briefs on vulnerable populations, dissemination of briefs to stakeholders, dissemination of findings on social media to reach the public, periodic stakeholder webinars, and open access publication in peer-reviewed journals. We also publish expert comments on the available evidence.

More information is available in the systematic review protocol: https://osf.io/96csg/

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What did the synthesis find?

Fourteen eligible studies for the symptom changes research question indicate that among university students for whom social relationships are likely highly valued and for whom risk of complications from COVID-19 is generally lower than among other adults, symptoms of depression increased more than anxiety in three studies where that was reported; in one study, anxiety symptoms actually decreased among university students. A large population study reported general mental health symptoms and a small increase, but this did not allow interpretation of the types of symptoms experiences. The additional population studies show either small increases or negligible changes in anxiety, depression, and other mental health functions. Emerging evidence on vulnerable populations suggests anxiety may be more important. It will be important to understand to what degree these finding are replicated in other populations.

Eligible studies overwhelmingly report on factors associated with mental health symptoms. We have identified 42 studies, mostly from China and Europe, which predominantly analyze demographic risk factors. Comments are forthcoming.

We have identified and extracted data from two trials. In the first trial, the effect of progressive muscle relaxation (20-30 minutes for 5 consecutive days) on state anxiety was tested among patients in China hospitalized with COVID-19 compared to routine hospital care. The second trial compared a very brief exercise in which paid online volunteers were asked to write psychologically affirming text, and their stress and well-being were compared immediately after to participants who wrote text about a colour. Large trials with relevance to the general population and vulnerable groups are pending.

Most of the registered trials plan to recruit a small sample of participants and use standard interventions not adapted for COVID-19 (e.g., yoga, exercise). There are several feasibly implemented COVID-19 tailored interventions being tested that may be useful for rapid uptake, pending results.

What are the implications of this synthesis?

Our mental health research community has the important responsibility and the opportunity to dramatically expand our understanding of how large-scale health and other crises may influence mental health. The degree to which we are able to do this and our ability to effectively apply what we learn to preventive activities and to mental health intervention depends on the quality of the evidence we generate, our ability to identify the most informative studies, and how capably we use evidence from those studies to draw conclusions. We are hoping that our living systematic review will help towards that end. Important evidence, particularly for trials of interventions is still pending.

Keywords: coronavirus; COVID-19; mental health; psychological outcomes; living systematic review; Vulnerable population, Trials

Other Populations: Vulnerable or At-Risk Populations

Additional Syntheses Relevant to This Population

Title: Approaches to support mental health of diverse patients on wait lists for procedures delayed by COVID-19

NPI: Anna R Gagliardi, University Health Network

Primary Population: Chronic Disease and/or Mental Illness

Lay Summary on Page: 48

Healthcare, Front-line Workers and Public Safety Personnel

COVID-19 physical distancing and post-traumatic stress injury: Utilization of digital health and remote mental health services for military, veterans, and public safety personnel

Nominated Principal Investigator: Suzette Brémault-Phillips, PhD, OT, University of Alberta

Authors: Chelsea Jones, MScOT, PhD (cand.),[1,2,8] Antonio Miguel Cruz, PhD, Eng.,[1,3,8] Lorraine Smith-MacDonald, PhD,[1,8] Emily Cruikshank, MEd, PhD (cand.)[4,8] Delaram Baghooi, MSc (cand.),[5,8] Avneet Kaur Chohan, BSc, MScOT (cand.),[1,8] Alexa Laidlaw, BSc, MScOT (cand.),[1,8] Allison White, BSW, MScOT (cand.),[1,8] Olga Winkler, MD,[6,8] Lisa Burback, MD,[6,8] Phillip R. Sevigny, PhD,[4,8] Liz Dennett, MLIS,[7,8] Martin Ferguson-Pell, PhD,[5,8] Andrew Greenshaw, PhD,[6,8] Suzette Brémault-Phillips, PhD, OT.[1,8]

[1]Department of Occupational Therapy, Faculty of Rehabilitation Medicine, University of Alberta;
[2]Department of National Defense;
[3]Research and Innovation Glenrose Rehabilitation Hospital (GRIT);
[4]Department of Educational Psychology, Faculty of Education, University of Alberta;
[5]Rehabilitation Science, Faculty of Rehabilitation Medicine, University of Alberta;
[6]Department of Psychiatry, Faculty of Medicine and Dentistry, University of Alberta;
[7]Scott Health Sciences Library, University of Alberta;
[8]Heroes in Mind Advocacy and Research Consortium (HiMARC)

For more information, please contact: Suzette Brémault-Phillips, 587-985-4161; suzette2@ualberta.ca

Target/priority population(s) in synthesis:

- Trauma Affected Populations (TAPs) including military members, veterans and public safety personnel (e.g., border services, communications officials, correctional workers, firefighters, paramedics, police, etc.).

What is the issue?

Physical distancing arising from COVID-19 has rapidly forced a paradigm shift toward remote mental health (MH) service delivery and a surge in the use of digital health (DH) (e.g., teletherapy/medicine, eHealth, mHealth). Though limited in use mere months ago, DH has become essential for system access, assessment, and treatment. Legal, clinical, cultural, practical, and security considerations, however, remain unaddressed for delivering MH services to trauma-affected populations (TAPs). TAPs include public safety personnel, military members, and Veterans struggling with Post-Traumatic Stress Injuries (PTSIs) and other MH concerns that can be associated with or exacerbated by the pandemic. As TAPs may be particularly affected by changes from in-person to digital delivery of MH services, an understanding is needed of the following associated with DH use: (1) clinical effectiveness with PTSIs; (2) perspectives of TAPs, MH clinicians, senior leaders and policymakers; (3) the current context, needs, and considerations; and (4) realistic solutions for effectively delivering DH to TAPs.

Key messages:

- **Preliminary evidence for DH and TAPs:** encouraging but limited[1]

- **Advantages:** convenience, accessibility, cost effectiveness, stigma reduction, and similar efficacy and drop-out rate to in-person delivery.

- **Barriers:** technology, privacy, the therapeutic relationship, ease of client disengagement, incompatibility of elements of therapy with technology, clinician perspectives, safety.

- **Recommendations:** ensure technology quality and security, intentional rapport, progress and commitment to therapy, revised therapy standards and practices, and risk and safety protocol.

- **Use of DH during pandemic response:** While DH solutions are necessary, a cautious approach is warranted before widespread adoption of DH for TAPs, until more evidence-based literature is available.

How was the synthesis conducted?

This scoping review employed the following steps: 1) formulation of research questions based on PICOS guidelines (Population, Intervention, Comparison, Outcome, Study type); 2) identification of relevant studies; 3) selection of studies; 4) charting of data; and 5) collation, analysis, summarization, and reporting of results. The search strategy yielded 629 articles, 286 of which remained after deduplication and were screened at the title/abstract level. The full text of 131 manuscripts were reviewed, 93 of which were excluded. The remaining 38 studies were included in the review and subjected to data extract and analysis.

What did the synthesis find?

Advantages, barriers and recommendations were identified from 38 articles subjected to full text review, highlights of which follow.

Advantages included the 1) convenience and cost-effectiveness of remotely accessing teletherapy (especially for clients in rural areas), 2) comfort for clients of engaging from their home, 3) stigma reduction as a result of not having to physically go to a MH facility, 4) unchanged treatment efficacy or dropout rates when DH was used. Based on review findings, DH has several potential benefits over in-person therapy. For clients open to using DH, clinical outcomes may not differ.

Barriers included 1) technological issues and disruptions, 2) inconsistent access to secure high quality internet connections, 3) lack of openness to using DH by some clients, 4) privacy concerns associated with the home environment, 5) ease of client disengagement from a session and enablement of avoidant behaviours, 6) challenges associated with establishing a therapeutic alliance and managing intervention activities (i.e., homework), and 7) challenges managing safety and risk remotely, particularly regarding suicide risk.

Recommendations related to DH use for delivering evidence-based psychotherapy to TAPs include: 1) address technological issues, 2) supplement interventions to increase patient comfort, 3) consider ways for MH practitioners to establish and maintain rapport and trust, 4) provide additional supports and flexibility to clients as required to support progress and commitment to therapy, 5) review previously established standards and practices of delivering certain psychotherapeutic interventions to improve suitability for DH, and 6) consider issues related to risk and safety due to the remote and independent nature of telehealth.

What are the implications of this synthesis?

- **Contribution of study findings**: will inform the extent to which use of digital MH service delivery will be appropriate for those suffering from PTSIs and other MH challenges.

- **A clear advantage of DH use** over in-person trauma-focused therapy for TAPs is accessibility in the absence of other MH services.

- **Quality of evidence supporting the use of DH** is limited, and only specific evidence-based trauma-focused modalities have been tested (i.e., CPT, CBT, PE). We cannot presume equally effective remote delivery of all trauma modalities. More research will determine modalities best suited to DH.

- **Types of trauma-focused therapies appropriate for DH use**. We do not yet understand what therapeutic modalities work for whom in relation to in-person vs. DH service delivery. Nor do we understand the role of context(s), patient factors, therapist skill set, or phase of the therapeutic process in determining the impact of DH service delivery.

- **Considerations for implementation of DH:** technological issues (e.g., internet bandwidth, device access), organizational/legal concerns (i.e., access to health compliant secure platforms), therapist competencies (training and adaptation of DH trauma-focused modalities), and safety planning.

- **Future use of DH:** Due to the limited literature available, a cautious approach is warranted before more widespread adoption of DH for TAPs, until more is known about the potential risks and barriers.

Keywords: mental health, trauma, posttraumatic stress injuries, PTSD, military, veteran, public safety personnel, first responders, digital health, psychotherapy

Other Populations: None

A COVID-19 patient oriented response and recovery effort: Working across sectors to aid healthcare providers suffering from burnout, PTSD, or treatment resistant depression (TRD)

Nominated Principal Investigator: Shannon Dames, Vancouver Island University

Authors: Shannon Dames, Vancouver Island University

For more information, please contact: Shannon Dames

Target/priority population(s) in synthesis:

- Healthcare providers

What is the issue?

Chronic Mental Health distress, leading to a variety of individual and systemic consequences.

Key messages:

- Workplace stress can lead to burnout, PTSD, and treatment resistant depression (TRD), affecting morale, absenteeism, retention, and patient care.

- The mental health of caregivers is understudied and inadequately supported, especially given the current pandemic.

- We will address PTSD and TRD with a combination therapy involving communities of practice (CoP) and Ketamine-assisted Psychotherapy.

- The CoP's have undergone two successful pilots, demonstrating a significant impact on wellness traits and cognitive control in participants.

- Ketamine is described as the most important advancement in the treatment of depression in over fifty years.

- We will capitalize on the potential synergy of these two interventions to provide an evidence-based intervention for PTSD and/or TRD.

How was the synthesis conducted?

Dr. Dames worked with her team to develop a strategic planning document. This document outlines all of the core knowledge synthesis tasks, which will lay the foundation for the larger program of research.

In terms of task details, our team is synthesizing knowledge in two core ways: literature review/scoping review, and provincial practice reviews. We have multiple work teams meeting to gather research and practice advice, and two students that are engaging in ongoing literature reviews. Our guideline development team is now are well into the process of completing the first draft of the research-based therapy guidelines.

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What did the synthesis find?

With the current state of mental health in the general population and particularly among healthcare providers, we are motivated to implement and study this evidence-informed and highly promising treatment strategy within a community-based mental health treatment model. In this project, we are synthesizing and applying knowledge concurrently. We are both studying and developing a novel, evidence-based mental health treatment strategy. While we are still onboarding members, our team is projected to complete the knowledge synthesis process by this fall 2020 and we are mobilizing knowledge as we go (co-creating guidelines, numerous stakeholder meetings, internal newsletters, media releases, etc.). Once the treatment protocol is complete, we will run the program within a quality improvement project, further enabling us to synthesis knowledge as we transition from research to practice.

What are the implications of this synthesis?

Our team now has a detailed workplan that will direct the rest of our knowledge synthesis effort.

Keywords: ketamine-assisted therapy, resilience, PTSD, depression, mental health, healthcare providers, stress

Other Populations: None

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Supporting firefighter mental health during COVID-19: A scoping review (draft)

Nominated Principal Investigator: Dr. Kathryn Sinden, School of Kinesiology, Lakehead University, Thunder Bay, Ontario, Canada

Authors: Sara Sayed, School of Kinesiology, Lakehead University, Thunder Bay, Ontario, Canada, Dr. Joy MacDermid, School of Physical Therapy, Western University, London, Ontario, Canada, Regan Bolduc, Thunder Bay Fire Rescue, Thunder Bay, Ontario, Canada, Emily Tella, School of Kinesiology, Lakehead University, Thunder Bay, Ontario, Canada

For more information, please contact: Kathryn E. Sinden - School of Kinesiology, 955 Oliver Road, Thunder Bay, Ontario, Canada, P7B 5E1; kathryn.sinden@lakeheadu.ca. 807-343-8654

Target/priority population(s) in synthesis:

- Firefighters

- Other first responder groups (i.e., paramedics)

What is the issue?

Firefighting is a high-risk occupation that increases firefighters' chances of exposure to transferable diseases as well as witnessing traumatic events. Witnessing traumatic events can increase firefighters' chances of experiencing issues with their mental health such as post-traumatic stress injuries. As well, during times of heightened risk like the COVID-19 pandemic, there is even more risk to their mental health. There have been various ways that firefighters have attempted to manage their mental health, but it's not clear whether they are effective. The purpose of this synthesis is to review different sources of knowledge, bring them together and to determine whether those methods are effective and if they are, which has the best supporting scientific evidence.

Key messages:

- Firefighters experience increased risk of mental health disorders which is heightened during COVID-19.

- Weak to moderate evidence suggests that strategies typically adopted by fire services to manage firefighter mental health have little to no effect on mental health outcomes.

- Very weak evidence suggests that informal strategies such as mindfulness can have a positive effect on managing firefighter post-traumatic stress injury symptoms, depression and alcohol use.

- A critical gap in managing mental health during COVID-19 for all first responders was identified.

- There is an urgent need for high-quality studies to identify strategies that firefighters can use to effectively manage their mental health.

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How was the synthesis conducted?

A scoping review of the literature was conducted focused on studies that investigated the effectiveness of strategies to manage firefighter mental health and studies that discussed management of firefighter mental health during COVID-19.

Due to the limited number of studies that were specific to firefighting, the search strategy was expanded to include other first responders (i.e., paramedics, police) and front-line health care workers (i.e., nurses, physicians).

Five bibliographic databases were searched using standard medical subject headings (MeSH) and text words.

Studies were included that met the following criteria: i.) participant sample was firefighters or other first responders (i.e., paramedics), ii.) the intervention studied was related to management of mental health among firefighters and / or first responders, iii.) mental health included various disorders but focused towards post-traumatic stress injury, anxiety and substance abuse, iv.) studies were written in English.

The same criteria were applied to studies related to mental health during COVID-19.

A structured form was applied to identify key concepts that helped to identify and characterize the studies.

An evaluation tool that determined the quality of the methods used in the study were applied to all articles related to strategies developed to manage firefighter mental health; the articles related to COVID-19 and mental health were anecdotal so the tool wasn't applicable.

The study findings were then brought together and common ideas about firefighter mental health and COVID-19 were identified.

Firefighters were included in this project including development of the search strategy as well as review and interpretation of study findings.

What did the synthesis find?

There are very few high-quality studies that have been conducted with firefighters that indicate the best approach for managing their unique mental health trauma exposures. Most studies were conducted at one point in time or didn't include a "control" group to which results could be compared. However, there is indication that mindfulness might be an effective strategy that could be incorporated into a mental health management program for firefighters. Approaches commonly used by fire services such as Road to Mental Readiness (R2MR) and Critical Incident Stress Debriefing (CISD) in their mental health management programs demonstrated little effect on mental health outcomes. Furthermore, R2MR has not been empirically tested with firefighters therefore, uptake should be cautioned. Our synthesis identified a critical need for high quality studies to identify effective mental health management strategies for firefighters. No studies specifically related to managing firefighter mental health during COVID-19 were identified. However, anecdotal and opinion papers identify COVID-19 as a "trauma event". Consequently, there is a critical need for including mental health management programs during and following COVID-19 for first responders and front-line health care workers. These occupational groups are at heightened risk of experiencing increased exposure to both COVID-19 and already

experience high levels of mental health disorders therefore COVID-19 is putting them at heightened risk. Our synthesis reflects the same urgent call reflected in the studies, for current and future emergency response plans to include specific guidelines for managing mental health of first responders and front-line health care workers. Developing effective, feasible evidence-based mental health management strategies for firefighters and other first responders, will ensure that that they too can return to their families at the end of the day and the end of their careers which is something that their service to our communities allows us to do everyday.

What are the implications of this synthesis?

- Firefighters are in urgent need of evidence-based solutions to manage their mental health burden.

- First responders and front-line health care workers who are working during COVID-19 require formal mental health management programming both during and following the pandemic.

- There is an urgent need to develop policy to include mental health management during emergency preparedness planning.

Keywords: firefighters, mental health disorders, post-traumatic stress injury, intervention, COVID-19

Other Populations: None

Stress, burnout and depression in women in health care during COVID-19 pandemic: A rapid evidence synthesis

Nominated Principal Investigator: Abi Sriharan, Institute of Health Policy, Management and Evaluation, Dalla Lana School of Public Health, University of Toronto

Authors: Principal Investigator: Savithiri Ratnapalan, Department of Pediatrics and Dalla Lana School of Public Health, University of Toronto. Hospital for Sick Children, Toronto; Co-Investigator: Andrea Tricco, Li Ka Shing Knowledge Institute, St. Michael's Hospital, Unity Health Toronto; Epidemiology Division and Institute of Health Policy, Management and Evaluation, Dalla Lana School of Public Health, University of Toronto, Queen's Collaboration for Health Care Quality Joanna Briggs Institute Centre of Excellence, Queen's University; Principal Knowledge-user: Doina Lupea, Physician Health Program, Ontario Medical Association

For more information, please contact: Abi Sriharan: abi.sriharan@utoronto.ca

Target/priority population(s) in synthesis:

- Women in health care

What is the issue?

When a pandemic such as COVID-19 spreads, it subjects the health care system and health workers to increased stress (Mock, J, 2020.,). Stress, burnout, and depression can lead to substance abuse and suicidal ideations (Oreskaovich, MR et al., 2012., West, CP et al, 2018). The recent reports of suicides among health care workers (HCWs) managing the COVID-19 pandemic have prompted concern about the mental health of HCWs (Orr, C, 2020). Further, reports show COVID-19 has socially, psychologically, and economically affected women because of their primary caregiving roles as parents and family caregivers (UN). In Canada, 80% of our health workforce is made up of women (Porter, A et al., 2017).

Key messages:

Our preliminary findings show that women HCWs are at increased risk for stress, burnout, and depression during the COVID-19 pandemic. More specifically, younger women and mid-career women are more vulnerable to anxiety, stress, depression and burnout. These negative outcomes are triggered by individual-, organizational-, and systems-level factors. There is a limited amount of evidence on effective interventions that prevents anxiety, stress, burnout and depression during a pandemic.

How was the synthesis conducted?

We conducted a rapid review of literature to synthesize the evidence to identify stress, burnout, and depression among women in health care during coronavirus pandemics. The rapid review was conducted in accordance with the WHO Rapid Review Guide (Tricco, A et al 2017). The review protocol is registered in PROSPERO (CRD42020189750) and OSF (https://osf.io/y8fdh/?view_only=1d943ec3ddbd4f5c8f6a9290eca2ece7).

What did the synthesis find?

In this preliminary rapid review, we synthesized evidence from 32 studies examining stress, burnout, and depression triggers in women in health care and the interventions that can prevent them. There were a significant variability in the tools used to measure mental health. This limits the generalizability of our findings. The current literature showed that women HCWs present high levels of anxiety, depression, and burnout. We identified a broad number of common triggers, including individual-level factors, such as age, family status, factors relating to work conditions such as access to PPE, training and preparedness to care for COVID-19 patients, and systems-level factors such as clear guidelines, recognition for the work. The current literature lacks data on women's socioeconomic, cultural and ethno-racial differences in mental health outcomes.

Mental health services such as online resources, psychological assistance hotlines, and group activities for stress reduction are poorly utilized whereas online-push messages of mental health self-help and self-help books are mostly preferred by women HCWs. Measures to support HCWs financially, provision of rest areas for sleep and recovery, care for basic physical needs such as food, training programs to improve resiliency, information on protective measures , access to leisure activities and counsellors if needed were considered useful in supporting HCWs during the pandemic.

What are the implications of this synthesis?

- Institutions should pay attention to work environment for healthcare workers and provide them with the tools and ongoing training to care for COVID-19 patients.

- Ensure adequate PPE and clear infection prevention guidelines are available to support HCWs.

- Work hours, workload and the number of COVID 19 positive patients a health care worker can safely care for should be reassessed and carefully monitored.

- Consider online-push messages of mental health self-help and self-help books and access to counselors

Keywords: coronavirus, COVID-19, women in health care, stress, burnout, depression

Other Populations: Vulnerable or At-Risk Populations

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Indigenous Peoples and Communities

Pandemic experiences and impacts of COVID-19 on the mental health of Indigenous communities

Nominated Principal Investigator: Alanaise Goodwill, Simon Fraser University

Authors: Jeannie Morgan, Simon Fraser University; Alanaise Goodwill, Simon Fraser University

For more information, please contact: agoodwil@sfu.ca or jeannie_morgan@sfu.ca

Target/priority population(s) in synthesis:

- Indigenous peoples living in BC in the COVID-19 context more generally, and more specifically, Indigenous peoples living in more remote regions of the Pacific Northwest Coast.

What is the issue?

Our objective to contextualize the current evidence base on MHSU service needs, delivery, and related guidelines, practices and issues within the COVID-19 pandemic so as to provide decision makers with high quality, timely, accessible, and relevant evidence in a short period of time.

Key messages:

- Indigenous health research worldwide documents common vectors of illness transmission: underfunded and understaffed health services; lack of core funding for mental health; overcrowded and inadequate housing; boil water advisories; the disproportionate rates of suicides; as well as the stressful experience of living with food, housing, and income insecurities. These social conditions existed pre-COVID-19 and shape the context of Indigenous pandemic experiences.

- Hinderances to Indigenous MHSU service access include cultural and communication barriers, perceptions of discrimination, mental illness stigma and the use of unprofessional sources of care, transport/distance, long waiting times, cost and dislike of services, and lack of Indigenous staff.

How was the synthesis conducted?

We conducted a scoping review of databases including: Academic Search Premier Bibliography of Native North America; CINAHL; Criminal Justice Abstracts; ERIC; Global Health; Medline via EBSCO; APA Psycharticles; PschINFO; Women's Studies International; Academic Search Premier Ultimate; Native Health Database; and Medline Complete using several Boolean operator configurations of the following keywords: Aboriginal, First Nations Indigenous, Indians of North America, mental health, counselling, harm reduction, Post-traumatic stress disorder, substance use, misuse, drug or alcohol, suicide, culturally responsive service, culturally safe, First Nations Health Authority, Canadian Mental Health Association over the time period June 7 to June 19, 2020. The number of results exceeded our ability to systematically track the inclusion and exclusion criterion, and this aspect of our method remains in progress.

What did the synthesis find?

Distrust of healthcare systems stems from colonialism and historic mistreatment of Indigenous peoples (IP). Lack of early detection and intervention are consistent drivers of health disparities in (IP). Informal family and friendship networks absorb the lack of cultural safety in present day health care systems. Prevalence rates of MHSU illness in IP are very similar to the general population, and the lack of appropriate mental health care and low cultural responsivity to IP MHSU issues are responsible for MHSU system overburdens. Poor living conditions are the primary culprit for most health issues (physical and mental) in Indigenous communities. Studies examining the unmet mental health needs of IP are not carried out to the same extent that they have been in the general population. Obstacles to service utilization were identified to be cultural and communication barriers, perceptions of discrimination, stigma of mental illness, the use of unprofessional sources of care, transport/distance, long waiting times, cost and dislike of services, and lack of Indigenous staff. More information about treatment drop out is needed to assess barriers to MHSU health services for IP, as well as information about IP use of health services within specific service preferences and service contexts. A common thread throughout this synthesis are the diverse ways racism has a presence in the MHSU knowledge base. The etiology of mental health disorders, research ethics and research equity, and the interventions themselves are infused with racism due to the neglect of Indigenous cultural ways of knowing and healing. Gendered pandemic experiences are poorly represented in the professional and academic literature, but social media and front line workers are sounding the alarm on increased service uses of shelters and kids helplines. Methodological issues and time constraints limited the power and effectiveness of our scoping methodology, representing the growth edge of this project.

What are the implications of this synthesis?

- IP MHSU issues contexts are the same during the pandemic as they were before, built upon lower social determinants of health and disparities in health research and service

- The pandemic context has created a rapid shift to telehealth MHSU services that there is a very small evidence base to guide this transition

- Greater attention to scoping methodology needs to be paid to gendered MHSU pandemic experiences

- There are lessons to shape our present-day healthcare responses to the pandemic in previous literatures on SARS, H1N1, and TB

- Remote communities have diverse challenges around service and access that are poorly served by the research base and Indigenous MHSU health responses are best informed by local knowledge.

Keywords: social determinants of health, Indigenous mental health and substance misuse, telehealth, pandemic experiences, cultural safety

Other Populations: None

Niikaniganaw (all my relations) II – the COVID-19 rapid response: Indigenous approaches to synthesizing knowledge for culturally-safe and stigma free mental health care for under-served Indigenous communities in Ottawa-Gatineau

Nominated Principal Investigator: Laperrière, Hélène (School of Nursing, University of Ottawa)

Authors: Our team is formally led by Dr. Hélène Laperrière (PA, UOttawa), a bilingual scholar who brings an expertise in HIV/AIDS community-based research, with a specific interest in the role of civil society and participatory evaluation. Traditional Knowledge Carrier Christina Bendevis (PKU), excels at creating a safe, non-judgemental and welcoming space for all who wish to participate in ceremony. She also brings her vision of stigma-free mental health services for Indigenous people. This leadership team is supported by, five Indigenous Knowledge Carriers and Traditional Helpers (Sharp Dopler, Ross Saunders, Francine Desjardins, Neal Shannacappo, Michele Penney), who share a commitment to harm reduction, to gender inclusivity, and to providing ceremony for those who need it most, i.e., those with the least access to ceremony such as 2SLGBTQ, those who use substances, and those who have been disconnected from their culture for a variety of reasons. Mike Laframboise brings his Indigenous living experience of HIV and intersecting stigmas including culturally unsafe health and social services. Seven community partners (AIDS Committee of Ottawa, Drug Users Action League, Ottawa Inner City Health, Le Bras, ADOO, and Public Health Agency of Canada COVID-19 Quarantine Department) Ottawa Public Health representing frontline service organizations who serve the Indigenous community, will ensure that we are grounded in local community concern and are well-positioned to 'take up' the knowledge we share with each other to create immediate and lasting social change. Researchers (Dr. Leah Layman-Pleet, Dre. Marie-Hélène Chomienne) from two academic departments (Psychiatry, Medicine), nursing professionals (Karina Pelletier) and trainees (Rana Annous, Ines Zombre) ensure that our research can continue to build capacity for culturally-safe care in Ottawa-Gatineau.

For more information, please contact: Laperrière, H. School of Nursing, University of Ottawa: Helene.laperriere@uottawa.ca

Target/priority population(s) in synthesis:

- Indigenous community members in Ottawa-Gatineau, who are living with or affected by HIV or related issues, such as substance use, mental illness, poverty or homelessness

- Health and Social services providers as well as graduate and post-graduates' educators in the discipline of nursing, medicine, psychiatry

What is the issue?

With *Niikaniganaw II-the COVID-19 rapid response*, we face the unanticipated situation of COVID-19 pandemic. Our team inevitably confronts new preoccupations: How is COVID-19 affecting the mental health of Indigenous community members in Ottawa-Gatineau who are living with or affected by HIV or related issues, such as substance use, mental illness, poverty, or homelessness? How are they receiving / adapting to the standard public health messaging? What is the effect of COVID-19 on the mental health of health and social service providers who serve these communities? What does culturally-safe and stigma free care in health and social services look like in the age of COVID-19, and by extension, future pandemics or remote / isolated environments? How can we develop capacity for culturally-safe and

stigma free mental health care for under-served Indigenous communities in Ottawa-Gatineau in the context of COVID-19?

Key messages:

- We are pursuing integrated indigenous knowledge translation (iKT).

- Participants 'learn by doing'.

- Participants learn by observing and watching the way that the Niikaniganaw team creates and emulates a stigma free and culturally safe environment for Indigenous people facing challenges on their mental health, substance uses, harm reduction practices, homelessness, life with HIV/AIDS or other situations exacerbated by COVID-19.

- Indigenous people with lived experience are integral to this process in all team activities. This provides an unparalleled opportunity to break down barriers and misconceptions between service providers, knowledge carriers, researchers, and students.

How was the synthesis conducted?

Based on Niikaniganaw I and II, activities for this 6-months project fall into three inter-related categories: **(1)** We create meetings/ceremonies (2 for the first month, once a month/5 months) in virtual Indigenous spaces, co-facilitated by researchers and Knowledge Carriers. Each of these meetings integrate ceremony and culture with qualitative and quantitative data collection, as well as opportunities to reflect on the living experience with COVID-19 pandemic situation. **(2)** We document and implement the innovative ways of providing ceremonies at-distance and online for Indigenous people and stakeholders, using qualitative research approach including a series of Indigenous graphic novel-style images. **(3)** Simultaneously, we do a literature review on cultural-safety, indigenous health and COVID-19 and **(4)** We activate new social media tools with our Niikaniganaw website platforms to outreach and interconnect the Indigenous communities as well as social and health care providers, academics, students, partners as a kind of "virtual culturally-safe care" community.

What did the synthesis find?

Building on our strong network and the experience from Niikaniganaw I and II, we adapt the Niikaniganaw model to the COVID-19 context, and offer 'virtual' sharing circles and ceremonies to answer these questions (one question per sharing circle virtual ceremony/from June to October 2020). To this end, we have six Indigenous Knowledge Carriers and Traditional Helpers on our team who share their knowledge and ensure that we are grounded in culture, ceremony, and Indigenous ways of knowing. We also have seven Indigenous team members with lived or living experience of HIV, substance use, mental health concerns, street involvement, incarceration, or who are 2SLGBTQ, who share their experiences of accessing health and social services, identifying mental health and substance use issues that might be exacerbated by COVID-19 (e.g. prolonged periods of social isolation, decreased access to critical services such as counselling, chronic health conditions, anxiety and uncertainty about the future, and also stigmatization and culturally unsafe experiences with public health surveillance activities). Specifically, we offer virtual sharing circles / ceremonies for Indigenous community members and Niikaniganaw partners. These sharing circles are co-facilitated by researchers and Indigenous Knowledge Carriers. Consistent with the Niikaniganaw approach, we also evaluate the challenges and opportunities of providing virtual sharing circles and ceremonies as a way to address the needs of

underserved Indigenous people in Ottawa-Gatineau, including IPHAs, people who use substances or who struggle with mental health. Those Indigenous approaches of knowledge synthesis encompasses a variety of sources, a timely mobilization of knowledge and an exchange of practical information within a number of multisectoral stakeholders in real-life during the pandemic.

What are the implications of this synthesis?

Consistent with the Indigenous Peoples' Health Research Centre's (IPHRC) approach to knowledge translation (Kaplan-Myrth & Smylie, 2006), our plan integrates a multifaceted and interactive strategy to link our findings to action (Masching, Allard & Prentice, 2006). The anticipated outcomes are: (1) increased awareness and understanding of Indigenous worldviews *and* issues related to mental health concerns associated to COVID-19 for IPHAs among team members and our expanded networks; (2) increased capacity to provide culturally-safe and stigma free mental health care for under-served Indigenous communities in Ottawa-Gatineau; (3) a stronger, larger, more educated community of stakeholders who are engaged in delivering culturally-safe and stigma free services to Indigenous people living with or affected by HIV and intersecting issues (such as substance use, mental health, and gender) in Ottawa-Gatineau; (4) an innovative 'virtual' cultural-safety intervention model that has been collaboratively developed and assessed with a variety of groups and is ready for scale-up across Canada to a rapid response to COVID-19 issues in Indigenous communities; (5) a visual and written document, including a series of graphic novel-style images. (see Neal Shannacappo); and (6) an up-to-date academic literature review on the issues of culturally-safe and stigma free mental health for Indigenous communities faced by COVID-19.

Keywords: Indigenous health, mental health, homelessness, virtual culturally-safe care, cultural-safe and stigma-free mental health, HIV/AIDS, Indigenous research methodologies

Other Populations: None

Valuing Indigenous emotional wellness — reviewing programs to enhance support for children in rural and remote communities

Nominated Principal Investigator: Dr. Nancy L. Young, Laurentian University

Authors: Mrs. Mary Jo Wabano, Naandwechige-Gamig Wikwemkong Health Centre, Dr. S. Barbic, University of British Columbia, Dr. M. Greenwood, University of Northern British Columbia, Ms. D. Jacko, Nadmadwin Mental Health Clinic, Wiikwemkoong, Dr. M. Latimer, Dalhousie University, Dr. R. Linklater, CAMH, Dr. J. Mcgavock, University of Manitoba, Dr. C. Mushquash, Lakehead University, Dr. L. Puchalski-Ritchie, University of Toronto, Dr. B. Restoule, Nipissing First Nation, Dr. S. Ritchie, Laurentian University, Dr. A. Roy-Charland, University of Moncton, Dr. P. Szatmari, University of Toronto, Dr. D. Urajnik, Northern Ontario School of Medicine

For more information, please contact: Dr. Nancy L. Young, Laurentian University: nyoung@laurentian.ca

Target/priority population(s) in synthesis:

- Health leaders in rural and remote Indigenous communities
- Indigenous children and youth living in rural and remote communities

What is the issue?

Indigenous children are at much higher risk of emotional and mental health issues than their non-Indigenous peers. This population is uniquely vulnerable, will be heavily impacted by COVID-19 restrictions, and lacks access to health supports that most Canadians take for granted. One of the worst consequences of the COVID-19 pandemic will be its impact on the mental wellness of this population of young people. In this context, health leaders must prepare to manage a rising emotional health pandemic.

Key messages:

- We are reviewing programs that support mental wellness for Indigenous children and youth. We will provide communities with a compendium strategies to support their children and youth. We will evaluate the relevance and feasibility of each program to rural and remote communities and document the level of evidence supporting its effectiveness.
- There is significant stigma around mental health among Indigenous children that poses a barrier to accepting support. We are developing a positive messaging initiative that prioritizes mentall health among children and youth. These education resources will be culturally safe, strength-based, bound in traditional knowledge, community-oriented, realistic and accessible.

How was the synthesis conducted?

We are currently reviewing the available academic and grey literature to explore programs and strategies that have been developed, adopted, or implemented by Indigenous communities in Canada. Academic literature includes books, academic journal articles, and published expert reports, and it is usually peer-reviewed. Grey literature includes reports, policy literature, working papers, newsletters, and it is usually produced by organizations and published outside the traditional commercial or academic channels. To be included in this review, a program has to fit three inclusion criteria. First, the program has to be for Indigenous youth. Second, at least one of its goals is to promote mental health or prevent suicide (for example: we excluded programs that focus only on healthy eating, substance abuse, or violence prevention). Third, it was developed in or implemented by communities in Canada. Each program is being evaluated according to how relevant it is to the population, how realistic or feasible it would be to implement it in the context of a rural and remote community, and what kind of evidence supports that it is effective.

At the same time, we are working on a positive messaging strategy that normalizes and prioritizes emotional health. We are aware that improving the range of services available will be pointless if children don't access support or ask for help. This will provide information for leaders that is grounded in evidence and culture, tailored for their use, and easy to access.

What did the synthesis find?

From the initial review, we found fifty-two (52) programs that fit the inclusion criteria. Several programs are geared towards Indigenous youth (First Nations, Inuit and Métis) and some that are specifically tailored to First Nations or Inuit communities, but we have yet to identify programs that focus on Metis youth. We are gathering and summarizing information on each program, to give communities insights on effective strategies and approaches other organizations and communities have implemented.

We are working in collaboration with our community partners to understand the critical elements related to stigma in this context and we are reviewing the literature to identify the factors that contribute to stigma. There are two factors that stand out from our initial research. First, Indigenous youth sometimes lack the skills and resources to understand and make effective use of mental health information ("mental health literacy"). Second, the tools available to improve mental health literacy are often not culturally appropriate, do not consider the historical context, lack connections to traditional knowledge, and the coping mechanisms usually recommended are not feasible or not applicable in rural and remote Indigenous communities.

We understand that tools and programs should be culturally safe, strength-based, bound in traditional knowledge, community-oriented, realistic and accessible. We are working on a positive messaging initiative that normalizes and prioritizes emotional health. This will encourage self-care, self-identification of needs, and reduce barriers to accessing supports for Indigenous children. We will draw on the expertise of our team, search the academic, grey literature and social media, and enlist local experts.

What are the implications of this synthesis?

- It is difficult and time consuming to find programs that address Indigenous youth's mental health that are culturally relevant and effective. This synthesis will enable community health leaders to access information that is tailored for their use and easy to access.
- There is significant stigma around mental health among Indigenous children and that poses a barrier to talking about their emotional health and accepting support. Improving the spectrum of services and resources available in rural and remote communities will be ineffective unless there is significant attention paid to reducing stigma.
- This knowledge synthesis will allow us to create materials that can be used by Indigenous communities to encourage children to focus on wellness, work on self-care, self-identification of needs, and reduce barriers to accessing supports for Indigenous children.

Keywords: Indigenous, culturally relevant, culturally grounded, children and youth, mental health programs, suicide prevention, rural and remote communities, evidence-based, traditional knowledge

Other Populations: Children, Youth and Families

People Who Use Drugs (PWUD) and Substance Use

A scoping review of ethical considerations when responding to the needs of people who use drugs during public health emergencies: Working paper (search inclusive of June 19th, 2020)

Nominated Principal Investigator: Adrian Guta, School of Social Work, University of Windsor

Authors: Carol Strike (Dalla Lana School of Public Health, University of Toronto), Marilou Gagnon (School of Nursing, University of Victoria), Katherine Rudzinski (Dalla Lana School of Public Health, University of Toronto), Melissa Perri (Dalla Lana School of Public Health, University of Toronto)

For more information, please contact: Adrian Guta, aguta@uwindsor.ca

Target/priority population(s) in synthesis:

- People who use drugs (PWUD)

What is the issue?

People who use drugs have been disproportionately impacted by the COVID-19 pandemic because of public health mandated restrictions (e.g., physical distancing) and resulting emergency changes to health and human services (e.g., treatment disruptions, rationing, and reduced hours). These changes have complex ethical dimensions which need to be considered as the COVID-19 pandemic unfolds and in future public health emergencies.

Key messages:

There is little published guidance (normative or descriptive) in the academic and grey literature to support ethical analysis and decision-making about the needs of people who use drugs in the context of the COVID-19 pandemic or similar previous pandemic public health emergencies. Future research needs to be conducted which centre the experiences of diverse communities of people who use drugs.

How was the synthesis conducted?

We conducted a two-pronged scoping review following PRISMA scoping review guidelines and our own experience (combined in a single review for rapid dissemination). We were interested in the intersection of ethics, PWUD, and COVID-19 and other related past public health emergencies (e.g., Severe Acute Respiratory Syndrome (SARS), Middle East Respiratory Syndrome (MERS), and Influenza A virus subtype H1N1). Our search was 'horizontal' and retrospective in that we asked two research questions:

1. What ethical issues have been identified in the emerging COVID-19 related academic and grey literature pertaining to people who use drugs? and

2. What ethical issues have been identified in the established academic and grey literature about similar past outbreaks (e.g., SARS, H1N1) pertaining to people who use drugs?

What did the synthesis find?

Overall, few academic and grey resources explicitly discussed ethical issues related to the needs of people who use drugs during the COVID-19 pandemic and the other similar public health emergencies (zero resources met our inclusion criteria). Some emerging guidance (three resources met out inclusions

criteria) points to stigma and access as key ethical issues and considerations related to professional ethics.

What are the implications of this synthesis?

Decisions that impact people who use drugs in research, health and human services, and public health responses during pandemic emergencies should be based on an analysis of the ethical principles and implications. Future research is needed to develop ethical guidance and decision-making resources. This research should centre the experiences of diverse communities of people who use drugs.

Keywords: ethics, research ethics, clinical ethics, public health ethics, people who use drugs, scoping review

Other Populations: None

Securing safe supply during COVID-19 and beyond: Scoping review and knowledge mobilization

Nominated Principal Investigator: Matthew Herder, Director, Health Law Institute, Schulich School of Law, Dalhousie University; Associate Professor, Department of Pharmacology, Faculty of Medicine, Dalhousie University

Authors: Matthew Alexander Bonn, Program Coordinator, Canadian Association of People Who Use Drugs, Natasha Touesnard, Executive Director, Canadian Association of People Who Use Drugs, Michael Pugliese - Research Assistant, Dalhousie University, Faculty of Medicine, Halifax, Nova Scotia, Brianna Cheng - Research Assistant, MSc, McGill University, Department of Epidemiology, Biostatistics and Occupational Health, Montréal, Canada, Emilie Comeau - Research Assistant, Dalhousie University, Faculty of Medicine, Halifax, Nova Scotia, Dr. Claire Bodkin - McMaster University, Family Medicine, Hamilton, Canada, Dr. Tommy Brothers - Dalhousie University, Faculty of Medicine, Halifax, Nova Scotia, Dr. Leah Meghan Genge – Dalhousie University, Dept of Family Medicine; Mobile Outreach Street Health - North End Community Health Centre, Candis Lepage - Research Analyst, Pier Labs, Halifax, Nova Scotia, Dr. Ayden Scheim - Assistant Professor, Epidemiology and Biostatistics, Dornsife School of Public Health, Drexel University, Dr. Daniel Werb –Assistant Professor, Division of Infectious Diseases & Global Public Health, University of California San Diego; Institute for Health Policy, Management & Evaluation, University of Toronto; Director, Centre on Drug Policy Evaluation, St. Michael's Hospital, Toronto, Sheila Wildeman - Associate Professor, Schulich School of Law, Dalhousie University

For more information, please contact: Matthew Herder: Matthew.Herder@Dal.Ca; (902)-494-2567

Target/priority population(s) in synthesis:

- Our scoping review targets several audiences: healthcare providers; federal and provincial health policy-makers; regulatory colleges of physicians and pharmacists; and, people who use(d) drugs (PWUD). Our aim is to synthesize knowledge from existing literature (both published and grey literature) and enhance that knowledge base with the expertise and insights of PWUD who are directly engaged in the project.

What is the issue?

Prior to the COVID-19 pandemic, PWUD, allied healthcare providers, engaged community-based organizations, and others have advocated for the implementation of a safe supply of drugs (i.e., drugs from regulated sources) in an effort to reduce a variety of harms, including death, suffered by PWUD from illicit sources of drugs. Due to social distancing measures put into place to curb the pandemic's spread, preliminary steps (e.g., take-home dosing of controlled substances) have been taken during the pandemic to improve PWUDs access to drugs. However, whether those steps have meaningfully helped and/or what the other barriers and facilitators to securing safe supply actually are—both in the context of an emergency such as the pandemic or natural disaster as well as outside of those circumstances—has not been previously synthesized. The aim of the scoping review is therefore to map existing knowledge about barriers and facilitators of safe supply while prioritizing and giving voice to the insights and expertise of PWUD.

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Key messages:

- Restrictive laws and fear of discipline by professional bodies appear to limit access to safe supply.

- Facilitators such as regulatory exemptions are insufficient by themselves, to improve access to safe supply.

- In some respects, there is broad agreement between the literature reviewed and PWUD expertise whereas, in other cases, there is a disconnect between the bodies of knowledge about the barriers to implementing safe supply. To ensure this disconnect does not misdirect resources toward initiatives that do not respond to the barriers that are encountered, PWUD should be represented and integrated directly into efforts to improve access to safe supply.

How was the synthesis conducted?

The scoping review proceeded in an iterative fashion, comprising multiple systematic searches of published academic literature and grey literature. We also iteratively incorporated the insights of PWUDs and clinical prescribers on our research team, as well as consultations with an expert advisory committee constituted by a diverse group of PWUDs, to initially inform the review protocol and to subsequently aid in interpretation. Literature was scanned for inclusion/exclusion based upon *a priori* defined criteria, and themes were abstracted from relevant studies by several team members in collaboration with our expert advisory committee.

Throughout, we sought to ensure authentic and meaningful engagement of PWUDs during the project, which is a collaboration across several academic researchers and centres (e.g., Dalhousie University's Health Law Institute, the Centre for Drug Policy Evaluation at St. Michael's Hospital), a number of clinical prescribers and researchers active in the field of practice, and PWUD, including Matthew Bonn and Natasha Touesnard as Principal Investigator and Knowledge User, on behalf of the Canadian Association of People who Use Drugs (CAPUD), respectively.

What did the synthesis find?

Literature searches yielded 39 studies that meet our inclusion criteria. Thirty-three (33; 85%) were identified through our searches of published literature and 6 (15%) through a grey literature scan. Of these, the highest proportion were commentaries (18; 46%), qualitative studies (12; 31%), or reports (4; 10%). The remainder were mixed methods studies (3; 8%), guidelines (1; 3%), quantitative studies (1; 3%) and peer reviewed reports (4; 10%).

A series of preliminary themes related to barriers and facilitators of safe supply were identified in the reviewed studies and assessed in collaboration with PWUD involved in the project. The main preliminary barriers to safe supply identified were: restrictive laws or policies, manufacturing policies or practices, limited prescribing power or prescribers, distrust towards institutions, concerns about drug harms, concerns about evidence, and a variety of practical barriers. PWUD significantly enlarged our understanding of the barriers to safe supply, emphasizing the intersection of racism with stigma/discrimination connected to drug use while also pointing to over-medicalization of safe supply

related programs and other factors such as child apprehension by social works and a lack of cultural competency as important additional barriers.

While not a primary focus of the synthesis, the literature used various alternative terms to refer to safe supply. Discussions among PWUD involved in this project further highlighted the inconsistent use of the term.

What are the implications of this synthesis?

While a more thorough discussion of implications will follow once the review is fully analyzed, we have identified two major initial implications. The first is that there is a low level of peer-reviewed evidence on safe supply models and on ensuring that they are resilient to interruptions caused by mass events such as pandemics. The second is that the existing scientific evidence explores themes that are largely distinct from the priorities of PWUD who would benefit from scale-up of safe supply. Given that the safety profile of standard pharmaceutical grade opioids is, by its nature, higher than unknown substances from the unregulated ("street") drug supply, the generation of scientific evidence on safe supply should shift focus towards a retrospective examination of the most effective delivery model after scale-up is achieved. In short, the emerging syndemic of the North American opioid overdose epidemic and the COVID-19 pandemic requires public health responses that prioritize limiting the exposure of PWUD to these twin risks. As such, the focus of public health systems should be on urgently scaling up safe supply programs for opioids, stimulants and benzodiazepines while retrospectively assessing the best model for delivery and considering temporary or complementary approaches to reduce barriers to OAT (e.g., low-barrier maintenance programs, take home doses, no urine drug screen analysis).

Keywords: heroin, hydromorphone, oxycodone, morphine, pandemic, influenza, diacetylmorphine, COVID-19, SARS, safe supply

Other Populations: None

Rapid review of the impacts of "Big Events" on people who use drugs and delivery of harm reduction and drug treatment services: Implications for strengthening systems in response to COVID-19

Nominated Principal Investigator: Dr Sarah Larney, Université de Montréal

Authors: Dr Sarah Larney, Université de Montréal and Centre de Recherch du CHUM, Professor Julie Bruneau, Université de Montréal and Centre de Recherche du CHUM, Professor Marie-France Raynault, Université de Montréal and Centre de Recherche du CHUM, Ms Julie-Soleil Meeson, Association des intervenants en dépendance du Québec, Dr Stine Høj, Centre de Recherche du CHUM, Ms Nanor Minoyan, Centre de Recherche du CHUM, Ms Camille Zolopa, Centre de Recherche du CHUM, Ms Iuliia Marakenko, Centre de Recherche du CHUM

For more information, please contact: Dr Sarah Larney, sarah.larney@umontreal.ca

Target/priority population(s) in synthesis:

- People who use drugs

What is the issue?

The global pandemic of COVID-19 disproportionately affects marginalized people. People who use drugs are often socially and economically marginalized due to substance use disorders, comorbid mental disorders, low incomes, and social stigma. Many people rely on low-threshold services to meet their essential needs (shelter, food, medicine) and to minimize the risk of drug-related harms such as overdose and infection.

Major social disruptions ("Big Events") such as pandemics, natural disasters, and economic crises simultaneously impact the lives of people who use drugs and the services they may require. This synthesis aims to better understand the varied effects of previous Big Events on risk behaviors and drug-related harms among people who use drugs, and delivery of harm reduction and drug treatment services. Equipped with this knowledge, public health officials and service providers will be better prepared to design and implement appropriate responses to the COVID-19 pandemic.

Key messages:

- Several key indicators were identified for monitoring as the pandemic progresses and evolves, including drug overdose mortality, hepatitis C notifications, and fentanyl availability

- Flexibility in service provision is critical during and after Big Events. For treatment services, maintaining communication is also important

- Service providers should be aware of potential trauma as a result of Big Events; in the COVID-19 context, this may include mental health problems and grief

- Several key indicators were identified for monitoring as the pandemic progresses and evolves, including drug overdose mortality, hepatitis C notifications, and fentanyl availability

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- Flexibility in service provision is critical during and after Big Events. For treatment services, maintaining communication is also important
- Service providers should be aware of potential trauma as a result of Big Events; in the COVID-19 context, this may include mental health problems and grief

How was the synthesis conducted?

We searched the PubMed database for publications that focused on drug-related risks and harms, and/or service provision for people who use drugs in the context of Big Events. Big Events of interest included previous respiratory infection pandemics, natural disasters, economic recessions, and heroin shortages. Outcomes of interest were changes in drug-related risks and harms following Big Events, and challenges and responses in harm reduction and drug treatment service delivery following Big Events.

Of 115 articles identified by the literature search, 33 were included in the review. There were no studies reporting on previous pandemics and people who use drugs. There were 12 studies of natural disasters, 17 heroin shortage studies, and 5 economic recession studies (one study was included in both the heroin shortage and economic recession categories).

We recorded information about the design of each selected study, details of the Big Event in question, and the findings related to our outcomes of interest. Data were combined using a narrative synthesis approach. Findings were visualized using "risk pathway maps" that highlighted key outcomes and indicators.

What did the synthesis find?

Big Events generally lead to riskier drug use environments by disrupting drug markets, which in turn affects drug price, purity and availability. As people who use drugs respond and adapt to these changes, risk of harm may increase. For example, changes in suppliers and drugs used may increase overdose risk given that the purity and effects of new drugs may be unknown or unexpected. Drug scarcity may increase violence within the social milieu. If a given Big Event causes harm reduction services to close, people may be more likely re-use and share needles and syringes, increasing their risk of blood borne viral infection. Several studies noted that increased risk behavior sometimes continued after a Big Event had resolved. Critically, these effects are not consistent across Big Events, but vary due to unknown factors.

Publications that provided information on the delivery of harm reduction and drug treatment services discussed responses to the challenges posed by Big Events, and the resources required for services to respond adequately. The impacts of Big Events on service delivery were different between those events that cause widespread disruptions, and those the represent a shock only to the illicit drug market. Big Events can cause changes in treatment demand and retention, although there were mixed findings on the direction of these effects. Service providers may need to be prepared to provide harm reduction and treatment services for drugs that have not previously been widely used in their local area, and for different populations of people who use drugs. Treatment outcomes were better for clients of services that were able to respond flexibly within their clinical guidelines and maintained lines of communication with clients during the crisis. Adequate funding, space, staffing, transportation, training, and preparedness all play a role in maintaining service delivery during and after a Big Event.

What are the implications of this synthesis?

- Big Events often potentiate risk for a range of harmful outcomes for people who use drugs. Recent overdose mortality statistics bear out the supposition that people who use drugs are at increased risk at this time.

- Flexibility is key in service provision. This may mean developing or expanding mobile or outreach models of harm reduction service provision to increase client access. Clinical guidance has been issued to support opioid agonist treatment via telemedicine. In BC, guidance has been issued on pandemic prescribing for risk mitigation. Continued innovation in these areas, and evaluation of outcomes, is critical.

- Several studies identified a need for trauma-informed care following a Big Event. In the COVID-19 context, this translates to being responsive to mental health problems, and potentially, grief and loss. Impacts on homelessness and violence are as yet unclear, but these may also be issues for service providers to be aware of and responsive to.

- Preparedness planning was critical to achieving good outcomes following a Big Event. Critically, we note that despite several previous respiratory infection pandemics in recent years (albeit with more limited geographic spread), we were unable to identify any publications reporting on how service providers should prepare for such an event. There is a clear need for services to consider and plan for the range of emergencies that may occur and to which they must be ready to flexibly and rapidly respond.

- There was limited information on the impacts of Big Events on particular populations of people who use drugs, such as women, Indigenous peoples, and visible minorities. From the findings of one study, women appear to be at particular risk of harm if drug market disruptions create scarcity. Another study noted that displacement and service disruptions can change the demographic make-up of people accessing a given service; this may require adjustments to ensure culturally and linguistically appropriate service provision. There remains a large gap in knowledge on how services can best respond to these populations during and after a Big Event.

Keywords: people who use drugs, people who inject drugs, harm reduction, opioid agonist treatment, COVID-19, Big Events

Other Populations: None

An evidence synthesis service to support Ontario's Mental Health and Addictions Centre of Excellence: First product (topics will vary) Rapid Evidence Profile: What pandemic-related mental health and addictions issues have emerged and what indicators and strategies can be used to monitor and address them, respectively?

Nominated Principal Investigator: Dr John N Lavis, PhD, Director, McMaster Health Forum, McMaster University

Authors: Heather L Bullock, PhD, Executive Lead, RISE, McMaster University; Michael G Wilson, PhD, Assistant Director, McMaster Health Forum, McMaster University; Cara Evans, PhD student, Health Policy PhD program, McMaster University

For more information, please contact: Heather Bullock, bullochl@mcmaster.ca

Target/priority population(s) in synthesis:

- People experiencing a mental health and/or substance use concern during the COVID-19 pandemic

What is the issue?

The Ontario Mental Health and Addictions Centre of Excellence wanted to understand what mental health and addictions issues have emerged during the pandemic, what indicators could be used to monitor emergent issues and what interventions are effective at addressing those issues. This rapid evidence profile was prepared in three business days to inform next steps in evidence synthesis, guideline development and/or decision-making related to the question that was posed.

Key messages:

- This rapid REP identifies relevant evidence about the types of mental health and addiction issues arising, indicators that can be used to monitor changes in population mental health, and strategies to respond to emergent needs

- It also surfaces the international experiences of Australia, Finland, Germany, New Zealand, Norway, Sweden, and the U.K. as well as the experiences of Canadian provinces and territories

- It is clear that the health, economic, and social system responses to the pandemic have affected the mental health of citizens

- Less evidence is available on the indicators that can be used and strategies to respond to emergent needs

How was the synthesis conducted?

We identified documents addressing the three questions by searching the guide to key COVID-19 evidence sources between 8 and 10 June 2020.

We searched for guidelines that were developed using a robust process (e.g., GRADE), full systematic reviews (or review-derived products such as overviews of systematic reviews), rapid reviews, protocols

for systematic reviews, and titles/questions for systematic reviews or rapid reviews. Single studies were only included if no relevant systematic reviews were identified.

We searched for guidelines that were developed using a robust process (e.g., GRADE), full systematic reviews (or review-derived products such as overviews of systematic reviews), rapid reviews, protocols for systematic reviews, and titles/questions for systematic reviews or rapid reviews. Single studies were only included if no relevant systematic reviews were identified.

We appraised the methodological quality of full systematic reviews and rapid reviews using AMSTAR. AMSTAR rates overall quality on a scale of 0 to 11, where 11/11 represents a review of the highest quality. It is important to note that: 1) the AMSTAR tool was developed to assess reviews focused on clinical interventions, so not all criteria apply to systematic reviews pertaining to delivery, financial, or governance arrangements within health systems; and 2) quality-appraisal scores for rapid reviews are often lower because of the methodological shortcuts that need to be taken to accommodate compressed timeframes.

We identified experiences from select other countries and from Canadian provinces and territories by searching jurisdiction-specific websites (e.g., government ministries and webpages dedicated to COVID-19). Our scan of experiences from other countries focused on those that we identified as being further ahead in their response to COVID-19.

What did the synthesis find?

We identified 22 evidence documents (guidelines, systematic reviews, rapid reviews, and primary studies) that provide highly relevant evidence in relation to one or more of the questions and some complementary findings from a jurisdictional scan. The majority of the evidence found was in relation to the type and prevalence of those mental health and addictions issues that are likely to require a response from mental health and addictions services, with little evidence about indicators or strategies used in response. Another CIHR-funded living synthesis (www.depressd.ca/covid-19-mental-health) was identified as a key resource in answer to at least two of these questions moving forward (changes in mental-health symptoms from pre-COVID-19 to during COVID-19), and factors associated with levels or changes in symptoms during COVID-19). The third area of focus in the living systematic review (effects of interventions on mental-health symptoms during COVID-19) relates to the third question addressed in this rapid evidence profile. We suggest that decision makers continue to monitor this living synthesis as an ongoing source of information in answer to these questions.

What are the implications of this synthesis?

- This rapid evidence profile surfaces all of the relevant, synthesized evidence pertaining to this question at this particular time (June 8-10th)

- All identified documents are time-stamped to assist decision-makers in understanding recency and relevance (given how quickly the pandemic is evolving) and syntheses are quality rated to help decision-makers understand how much confidence they can place in the findings

- At the time this REP was conducted, much of the existing evidence focussed only on the prevalence of mental health and/or substance use concerns; we expect more evidence will become available in the coming months related to indicators and responses and it may be worth revisiting these questions at a future date

Keywords: mental health, addictions, indicators, response strategies

Other Populations: None

Palliative care for people who use substances during communicable disease epidemics and pandemics: A scoping review

Nominated Principal Investigators: Jenny Lau, Princess Margaret Cancer Centre, University Health Network; Daniel Buchman, Krembil Research Institute, University Health Network

Authors: Rouhi Fazelzad, University Health Network, Andrea Furlan, Toronto Rehabilitation Institute, University Health Network, Sarina Isenberg, Temmy Latner Centre for Palliative Care, Sinai Health System, Sheryl Spithoff, Women's College Hospital, Camilla Zimmermann, Princess Margaret Cancer Centre, University Health Network, Shelly Cory, Canadian Virtual Hospice, Naheed Dosani, Palliative Education and Care for the Homeless, Inner City Health Associates, Alissa Tedesco, Palliative Education and Care for the Homeless, Inner City Health Associates, Samantha Lo, Princess Margaret Cancer Centre, University Health Network, Philip Ding, Princess Margaret Cancer Centre, University Health Network

For more information, please contact: Jenny Lau, 416-946-4501 x5093, Jenny.Lau@uhn.ca

Target/priority population(s) in synthesis:

- People who use substances and have life-limiting illnesses

What is the issue?

While palliative care addresses the suffering experienced by people with life-limiting illnesses, people who use substances face challenges to receiving such care. These individuals often have few social supports and lack financial resources. Moreover, delivery of community-based health services may be restricted due to institution and provider concerns that the settings are risky or unsafe. Zero-tolerance policies toward non-medical use of substances and stigma towards people who use substances also restrict access to palliative care units and hospices. Unfortunately, the COVID-19 pandemic and its response efforts magnify the barriers to palliative care access encountered by people with life-limiting illnesses who use substances.

In response to COVID-19's high transmissibility and mortality, health care is currently limited to a list of essential services and physical distancing has become the main public health measure to mitigate the spread of the virus. Many programs, such as supervised consumption sites, are closed or have reduced hours of operation. Similarly, palliative care providers have transitioned to primarily virtual care for clinically stable patients to reduce physical meetings. However, people who are socioeconomically disadvantaged may not have access to the necessary technologies to receive virtual care (e.g. smartphones, Internet). These changes are necessary to combat COVID-19 but have unintended consequences for people with life-limiting illnesses who use substances. Restricted access to mental health and substance use services and potential for reduced support systems due to physical distancing likely increases risk of relapse and overdoses. Given the pre-existing inequities to palliative care access and increased demand for palliative care during the COVID-19 pandemic, it is important to understand the impact of communicable disease epidemics and pandemics on people with life-limiting illnesses who use substances.

Key messages:

In progress

How was the synthesis conducted?

Based on discussions with our Knowledge Users, we chose to address the question, "what is known about communicable disease epidemics and pandemics, palliative care, and people who use substances?"

Using the PECOS framework, a comprehensive search strategy was developed in collaboration with our information specialist and technical experts. Our **P**opulation focuses on people who use substances and have life-limiting illnesses with **E**xposure to communicable disease epidemics and pandemics. We are including literature with and without **C**omparison and **C**ontrol groups. Quantitative **O**utcomes and qualitative themes related to palliative care interventions, programs, policies, and service accessibility were included. Regarding **S**tudy characteristics, we are including peer or non-peer reviewed literature published from any country and published in English or French.

After the initial search in select databases from inception to present, the core research team used Covidence to screen the studies by applying the PECOS framework to all titles and abstracts. The same process was applied to the full text articles. A third investigator was consulted as a tie-breaker to resolve conflicts in screening.

The Core research team developed a standardized data charting form and we extracted key findings from the identified articles. The data was charted in an iterative process to ensure that the articles aligned with our research question and purpose. A preliminary PRISMA-ScR flow diagram was created to map out the review process to date. We are currently in the process of retrieving outstanding full text articles to evaluate their eligibility and conducting our grey literature search. When these steps are completed, we will provide a narrative description of the search decision process. Additionally, we will conduct and report on a descriptive quantitative and qualitative thematic analysis of the included studies.

Our integrated knowledge mobilization strategy has allowed for continuous refinement of our research question and interpretation of our results through consultation with our knowledge users. With our Knowledge Users, Canadian Virtual Hospice and Palliative Education and Care for the Homeless, we have developed a comprehensive knowledge mobilization plan and timeline.

What did the synthesis find?

In progress

What are the implications of this synthesis?

In progress

Keywords: palliative care, substance use, communicable diseases, COVID-19, pandemics, epidemics, scoping review, knowledge dissemination, mental health, health equity

Other Populations: None

Digital health solutions to support women with addiction during COVID-19: Applying a gender- and trauma-informed lens

Nominated Principal Investigator: Lena C. Quilty, PhD, CPsych; Centre for Addiction and Mental Health (CAMH)

Authors: Branka Agic, PhD, Centre for Addiction and Mental Health, Leslie Buckley, MD, FRCPC, Centre for Addiction and Mental Health, Michelle Coombs, PhD, Jean Tweed Centre, Betty-Lou Kristy, Centre for Innovation in Peer Support, Jill Shakespeare, Centre for Addiction and Mental Health, Adrienne Spafford, Addictions Mental Health Ontario

For more information, please contact: Lena C. Quilty, lena.quilty@camh.ca or 416-535-8501, x34313

Target/priority population(s) in synthesis:

- Adults (18 years and above)

- Report risky or harmful substance use (except for nicotine or caffeine)

- Identify as a female/woman OR report history of trauma

What is the issue?

- We need to know more about middle-aged (45 to 65 years of age) caregivers, men as caregivers, and visible minority and migrant caregivers in Canada
- We need to understand how family caregivers assess and make decisions about their mental health, and how they choose and access mental health resources, supports and services
- We also need to determine if the mental health services available during COVID-19 were effective in improving the mental health and wellbeing of both women and men who provided essential unpaid care to children, spouses, friends, and elders/parents in Canada.

Key messages:

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- We need to understand how family caregivers assess and make decisions about their mental health, and how they choose and access mental health resources, supports and services
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How was the synthesis conducted?

This synthesis consisted of two components:

1. **Rapid Review:**

- A Rapid Review was conducted, informed by the recommendations of the Cochrane Rapid Reviews Methods Group as well as Arksey & O'Malley (2005), with modifications informed by the review of Tricco and colleagues (2015).

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- Research team members collaboratively developed the following:
  o Specific research questions
  o Eligibility criteria
  o Search strategy
- Research team members then identified records from PsycInfo and Grey Matters (1895 records)
  o Three team members completed title and abstract screening independently on 50 articles to ensure agreement in application of eligibility criteria
  o Three team members then completed identification of studies in two stages:
  o (1) Title and abstract (all 1895 records screened; 1663 excluded)
  o (2) Full text (232 screened; 140 excluded)
- Data was extracted from the 91 articles that were included after the full text screening was complete
- Future Directions: To increase the comprehensiveness and rigor of this review, this initial Rapid Review will be expanded to a Scoping Review, including further databases and additional grey literature; two independent team members selecting records and extracting data; and rating of study risk of bias. Resources identified during the resource rating and by knowledge users will also be added to our search.

2. Resource Rating: The rating of digital health resources was conducted following a series of steps.

- *Resource Identification:* Research team members identified digital health resources from the following resources: rapid review; hospital websites (e.g., www.camh.ca); professional, not-for-profit, and other websites (e.g., www.cmha.ca, www.otn.ca, www.amho.ca); government websites; curated app libraries.
- *Rating Scale Development:* Research team members identified 36 rating questions to assess whether digital health resources were characterized by the principles of gender- and trauma-informed care.
- *Rating Scale Implementation:* Research team members applied rating questions to the 12 most widely used resources. All resources were provided overall ratings for the presence of both evidence of effectiveness or efficacy in adults who identify as female or woman, or who endorse a history of trauma, and consistency with principles of gender- and trauma-informed care.

Future Directions: Additional resources will be identified during our expanded scoping review as well as our Knowledge User Needs Assessment. To increase the comprehensiveness and rigor of this rating, this rating scheme will be independently reviewed, and all resources will be rated independently by two members. Question responses and ratings will be reviewed by the investigator team; discrepancies will be resolved by consensus. Knowledge User Needs Assessment feedback will inform the optimal presentation and communication of qualitative and quantitative components of this review.

What did the synthesis find?

- The majority of digital health resources for addiction identified in the academic literature were in one of three formats: mobile education and monitoring applications, web-based screening and brief interventions, and web-based multimedia and multi-module intervention platforms.
- Studies included a range of sample types and a range of substance use targets. Clinical, community, and university/college student samples were the most common samples (21-34%), and alcohol use (64%) the most frequent target substance.
- Empirical investigations including adults who identified as female or women generally revealed positive effects. Notably, evidence was more mixed/modest for those interventions that are more restricted in scope (e.g., brief interventions). A substantial proportion of investigations did not assess gender identity or conduct sex- or gender-based analyses, precluding strong inferences about the evidence for the efficacy or effectiveness of these interventions in females or women specifically.
- Empirical investigations demonstrated clear gaps. Investigations rarely reported gender or trauma history, for example, and follow-up periods were frequently limited. Few empirical investigations (4) were conducted in Canada.
- Interim ratings of digital health resources for addiction available in Canada suggested that these resources provide sex or gender specific information, and support empowerment at least to some degree; however, the majority of the principles of gender-informed care are not evident in these resources. Interim ratings also suggested that resources uphold several principles of trauma informed care (e.g., safety and trustworthiness, choice, control, and collaboration, and strength-based and skills-building care and empowerment). However, other principles of trauma-informed care were less robustly represented, if at all.

What are the implications of this synthesis?

- The evidence to support the efficacy and effectiveness of digital health resources for addiction in females or women has limitations, particularly in the application of analytic approaches permitting clear conclusions regarding their benefit for women. The evidence for these interventions in those who report trauma is limited in quantity, and frequently specific to special populations.
- There is a need to develop innovative digital health resources to support the provision of remote gender- and trauma-informed care. Currently available resources do not uphold all features of these best practice guidelines.
- Further refinement of this synthesis will be conducted over the next three months to ensure comprehensiveness, rigour, and applied significance.

Keywords: addiction, substance misuse, substance use disorder, women, female, trauma, abuse, digital health, web-based treatment, eHealth

Other Populations: Vulnerable or At-Risk Populations

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Alcohol consumption and the COVID-19 pandemic: synthesizing knowledge for policy action

Nominated Principal Investigator: Dr. Kevin D Shield, Centre for Addiction and Mental Health

Authors: Dr. Matthew Young, Canadian Centre on Substance Use and Addiction, Dr. Branka Agic, Centre for Addiction and Mental Health, Dr. Samantha Wells, Centre for Addiction and Mental Health, Dr. Jürgen Rehm, Centre for Addiction and Mental Health, Dr. Shehzad Ali, Western University, Dr. Adam Sherk, Canadian Institute for Substance Use Research, Dr. Tim Stockwell, Canadian Institute for Substance Use Research

For more information, please contact: Kevin Shield: Kevin.Shield@CAMH.ca

Target/priority population(s) in synthesis:

- General population of Canada

What is the issue?

- Health researchers are warning that alcohol use may be increasing due to the COVID-19 pandemic; however, while a few ad-hoc reports from North America show there may be increases in alcohol sales, scientific evidence on this topic is sparse.
- Alcohol policy, especially restrictions on sales during the current pandemic, has become a topic of public debate.
- A comprehensive understanding of the impact of COVID-19 on short-term and long-term alcohol use and related health harms is urgently needed to inform policy and practice.

Key messages:

- As compared to before the COVID-19 pandemic, 23.3% of respondents reported drinking more alcohol compared to before the pandemic (4.8% drank much more and 18.5% drank slightly more), 11.8% reported drinking less alcohol (6.1% drank much less and 5.7% drank slightly less), and 65% reported no change in alcohol use.
- Analyses indicated that changes in alcohol use were associated with age, household income, a person's living situation, anxiety, and feeling lonely or depressed.
- The observed shifting of alcohol consumption may have impacts on health which could be offset by implementing alcohol policies.

How was the synthesis conducted?

Guidelines for alcohol control policy recommendations are being constructed based on a) analyses of pre-existing data sources, b) a systematic scoping review of the literature, and c) systematically conducted expert interviews.

Analysis of pre-existing data sources

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- An analysis using data collected between May 29 and June 23, 2020 via a web panel, AskingCanadians, which sampled adults (≥18 years of age) (N=1,969). The surveys collected data on changes in alcohol consumption, gender, age, household income, changes in employment status, whether the respondent was living alone or with others, location of residence, anxiety (General Anxiety Disorder-7), and depression (Center for Epidemiologic Studies Depression Scale.
- The analyses of these data assessed whether changes in alcohol consumption since the start of the COVID-19 pandemic are related to sex, gender, household composition, changes in circumstances due to COVID-19, and/or feelings of anxiety and depression.
- Data have been requested regarding per capita consumption of alcohol in Ontario and British Columbia based on weekly sales data from the LCBO SOD and the British Columbia direct sales database, respectively. These data will be used to validate the findings of the survey analysis.
  - Expected Completion date: August 2020
- The project team now has access to data from a European study being conducted in over 20 countries which focusses on the effects of changes in distress and in the availability of alcohol on alcohol use during the COVID-19 pandemic. These data will be used as the basis for a comparative analysis with Canadian data.
  - Expected Completion date: August 2020

Systematic Scoping Review

- A systematic scoping review is being performed to assess how similar crises (economic crises and natural disasters) have affected both average volume of alcohol consumed and patterns of consumption, the prevalence of alcohol use disorders, and alcohol-related harms in high-income countries, with a focus on differences by gender and the effects of these crises on alcohol-related domestic violence.
- The methodology will be based on the Project on a Framework for Rating Evidence in Public Health (PRECEPT) and has been registered with PROSPERO.
  - Expected Completion date: August 2020

Expert interviews

- Nominal group interviews will be used to triangulate knowledge from multiple disciplines and reach a consensus among diverse experts on a) the impact of the COVID-19 pandemic and associated mass physical distancing on alcohol consumption and its resulting harms, b) the impacts of alcohol availability policies implemented around the world during the COVID-19 pandemic on alcohol consumption and its resulting harms, with a focus on domestic violence, and c) recommendations for effective alcohol policies.
- Individuals with relevant expertise are being identified using MEDLINE, EMBASE, Web of Science, and the "expertscape" database.
  - Expected Completion date: October 2020

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What did the synthesis find?

- During the COVID-19 pandemic, more people have increased their alcohol consumption in Canada than have decreased their alcohol consumption.
- As identified in previous systematic reviews, those cost-effective interventions which are aimed at reducing alcohol-related harms include increases in price or taxation, decreases in availability, and restrictions on marketing. Additional interventions include brief interventions for people with alcohol use disorders.
- The effects of the current pandemic and associated social distancing policies on unrecorded alcohol consumption (i.e., alcohol which is not tracked by any level of government) are unknown; however, where increases in methanol poisonings have been observed, managed alcohol programs at homeless shelters may be an effective method of harms reduction.
- Further analyses and syntheses of the identified academic and grey literature will be conducted, and this lay summary section will be updated accordingly on a monthly basis.

What are the implications of this synthesis?

- More people in Canada have increased their alcohol consumption during the COVID-19 pandemic than have reduced their alcohol consumption.

  - Increases in alcohol consumption have been particularly high among people 40 to 49 years of age, those who reported having an increased level of anxiety, and those who reported feeling lonely.

  - Increases in alcohol consumption are expected to result in an increase in short-term and long-term harms from communicable diseases, non-communicable diseases, and injuries.

  - Further analyses will be conducted to assess the validity of the survey findings that alcohol consumption has increased during the pandemic period.

  - It is currently not known if relaxation of social distancing policies in Canada will lead to increases or decreases in alcohol consumption. Analyses in months 2 to 6 will address this knowledge gap.

  - If alcohol consumption remains elevated, alcohol policies may be needed to offset any potential increases in alcohol-related harms.

Keywords: alcohol, heavy episodic drinking, policy, COVID-19, financial crisis, anxiety, depression, social isolation, systematic review, survey

Other Populations: None

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A rapid review of opioid substitution therapy during major disruptions to medical care

Nominated Principal Investigator: Dr. Ross Upshur, Lunenfeld-Tanenbaum Research Institute (Toronto), Dr. Abhimanyu Sud, Family & Community Medicine, University of Toronto (co-PI)

Authors: Fabio Salamanca-Buentello, Lunenfeld-Tanenbaum Research Institute (Toronto); Darren K. Cheng, Lunenfeld-Tanenbaum Research Institute – Bridgepoint (Toronto); Ross Upshur, Lunenfeld-Tanenbaum Research Institute (Toronto); Abhimanyu Sud, Family & Community Medicine, University of Toronto

For more information, please contact: Abhimanyu Sud: abhimanyu.sud@utoronto.ca

Target/priority population(s) in synthesis:

- Healthcare providers (e.g. physicians, pharmacists, nurses, nurse practitioners, social workers, addiction and chronic pain specialists)

- Health system administrators

- Health leaders and policy-makers

- General public

What is the issue?

The recent months have seen a collision of two complex health crises: the novel coronavirus pandemic and the persistent epidemic of opioid-related harms. Individuals with opioid use disorder (OUD) are especially vulnerable to the pandemic and the changes it has caused. Opioid substitution therapy (OST) is first-line therapy for OUD and can be life-saving. It requires regular and frequent visits with health care providers, and thus has been affected by responses to the pandemic such as physical distancing measures and disruption of transport systems. Medication and drug supplies have also been disrupted during this pandemic. The risks of withdrawal, overdose and diversion of opioids have increased so there is an urgent need to adapt existing methods of providing OST and support people with OUD.

The purpose of this project is to identify the views, perspectives, and experiences of people who use opioids, health care providers and system administrators on opioid substitution therapy (OST) in the context of major and sustained disruptions to medical care as we have seen during the current pandemic.

Key messages:

- Disaster planning must take into account the health care of people who use drugs (PWUDs) and, specifically, individuals suffering from opioid use disorder

- There is an identified need for:

  o centralized databases with essential information regarding PWUDs, their medical records, and their medications and dosages

  o standardized but flexible guidelines for OST clinic operation during a disaster

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- communication strategies that connect PWUDs with OST clinic staff and with alternative sources of treatment

- networks of OST clinics that support each other during an emergency

- transportation strategies based upon links with public and private transport companies

How was the synthesis conducted?

Records were retrieved from an ongoing qualitative evidence synthesis of OST. Keywords and eligibility criteria were developed in collaboration with knowledge users. Records were keyword searched, title and abstract screened and full-text screened independently and in duplicate. Studies were included if they investigated OST in the context of a major disruption to medical care. Included studies were read and key themes were identified and summarized for this initial synthesis.

To complete Stage 1 of this knowledge synthesis, coding and thematic analysis will be carried out for the initial set of studies identified. Following this, two additional databases from collaborators' ongoing research will be organized, searched, screened and analyzed similarly to Stage 1.

What did the synthesis find?

Disaster planning seldom takes into account the health care of people who use drugs (PWUDs) and, specifically, individuals suffering from opioid use disorder. Disruption of opioid substitution therapy (OST) dispensing and counselling services can have severe consequences for PWUDs such as relapse, withdrawal, and resumption or increase of high-risk injection behaviours. OST programs have to anticipate a wide range of emergency situations and plan accordingly to address them.

Service continuity is essential for reducing physical and psychological distress for OST PWUDs, their families, and their communities. Our findings show that PWUDs are very concerned by the lack of service continuity during a disaster and by the absence of rigorous and systematic OST preparedness planning.

PWUDs and providers worry about communication and transportation issues; lack of standardized manuals, guidelines, and plans to prepare for emergencies; conflicts among laws and regulations governing the operation of OST clinics during a disaster; many regulatory and financial hurdles impeding the daily functioning of OST clinics and the acquisition of opioid medication by PWUDs; and social and cultural conflicts resulting from the relocation of PWUDs and providers to alternative institutions.

Our analysis also identified several potential solutions to many of these challenges, such as: centralized databases with essential information regarding PWUDs, their medical records, and their medications and dosages; standardized but flexible guidelines for OST clinic operation during a disaster; communication strategies that connect PWUDs with OST clinic staff and with alternative sources of treatment; networks of OST clinics that support each other during an emergency; transportation strategies based upon links with public and private transport companies; mental health care for both PWUDs and providers; and the designation of an OST clinic staff member as a Disaster Preparedness Deputy.

What are the implications of this synthesis?

- Several barriers and obstacles are identified in the context of disruptions to medical care

- Many pre-existing issues are exacerbated by disruptions but also present possible opportunities for change

- Standardized but flexible disaster preparedness guidelines are needed to allow adequate and efficient health system response to disruptions

Keywords: opioid, opioid use disorder, methadone, buprenorphine, opioid substitution therapy, disruptions to medical care, COVID-19, pandemic, disaster preparedness

Other Populations: None

Additional Syntheses Relevant to This Population

Title: Mental health and substance use among children and adolescents amidst COVID-19 – A systematic review

NPI: Dr. Salima Meherali, University of Alberta, Faculty of Nursing

Primary Population: Children, Youth and Families

Lay Summary on Page: 24

Title: Le projet GID-COVID : Genre et intervention en dépendance en contexte de pandémie auprès de personnes en situation de précarité sociale

NPI: Karine Bertrand, Université de Sherbrooke; Chaire de recherche du Canada en genre et intervention en dépendance (CRC-GID); directrice scientifique, Institut universitaire sur les dépendances (IUD).

Primary Population: Vulnerable or At-Risk Populations

Lay Summary on Page: 123

Title: Substance use among women in the context of the corollary pandemics of COVID-19 and Intimate Partner Violence (IPV)

NPI: Lorraine Greaves PhD, Senior Investigator, Centre of Excellence for Women's Health

Primary Population: Vulnerable or At-Risk Populations

Lay Summary on Page: 126

Vulnerable or At-Risk Populations

The GID-COVID Project: Gender and Intervention in Addiction with Individuals in Situations of Social Precarity in the Context of a Pandemic

Nominated Principal Applicant: Karine Bertrand, Université de Sherbrooke; Canada Research Chair on Gender and Intervention in Addiction; Scientific Director, Institut universitaire sur les dépendances (IUD)

Authors (names and affiliations): Martin Camiré (CSSMTL-IUD), Jorge Flores Aranda (UQAM), Dr. Mare-Ève Goyer (Université de Montréal, CSSMTL-IUD), Mathieu Goyette (UQAM), Marie Jauffret Roustide (INSERM, Paris, France), Dr. Julie Loslier (DSP–Montérégie, UdeS), David-Martin Milot (UdeS, DSP–Montérégie), Vincent Wagner (IUD), Laura Désilets (UdeS), Thomas Haig (UdeS), Débora Merveille Ngo Ngué (UdeS), Axelle Moreau (IUD) et Jean-Philippe Galipeau (IUD), Caroline Leblanc (UdeS), Chelsea Grothe (CACTUS) et Carl Tardif (UdeS).

For more information, please contact: Karine Bertrand, karine.bertand@usherbrooke.ca

Target/priority population(s) in synthesis:

- Individuals experiencing problematic psychoactive substance (PAS) use in a context of social precarity

What is the issue?

- How does COVID-19 affect individuals in situations of social precarity who are dealing with problematic PAS use, specifically in terms of their overall health, their service needs and the provision of addiction-related services?
- In the context of a pandemic, what interventions are recommended to better meet the health and social needs of individuals in situations of social precarity? How should addiction-related services be adapted?

Key messages:

- Individuals in situations of social precarity who are dealing with problematic substance use run a higher risk of contracting COVID-19. Priority must therefore go toward making them aware of health measures that take into account substance use and the living conditions of marginalized populations.
- During the pandemic, a range of measures must be developed to ensure access to a continuum of harm reduction and treatment services. Certain essential activities, particularly outreach work, must likewise be maintained.
- Sexual and gender diversity must factor into the adaptation of services during the pandemic to prevent further health inequities, especially for women and members of sexual and gender minorities who are dealing with substance use.

How was the synthesis conducted?

The research, which is participatory, is based on a scoping review consisting of two components: 1) a narrative synthesis of the literature; and 2) expert consultations. For the synthesis, a rapid-assessment methodology (INESSS, 2020) was used to develop the search strategy. Data from the literature consulted to date were collated in an information retrieval grid and the preliminary findings identified. Expert consultations will begin once ethics approval has been obtained (assessment in progress). For now, the entire team (researchers, knowledge users, peer researchers) has been asked to provide preliminary input on the research questions in two ways: at a meeting and by completing a form to list what they felt were the key points. These initial stages have allowed us to draw our first conclusions.**Quelles ont**

What did the synthesis find?

Individuals in situations of social precarity who are dealing with problematic substance use run a higher risk both of contracting COVID-19 and of suffering serious adverse health effects. This reality points to the urgent need to provide them with clear, ongoing information about various available public health measures as these are implemented. Such measures must address issues specifically related to psychoactive substance use while also taking into account other factors, including the housing and living situations of homeless populations, issues related to financial security, sexuality, and the living conditions of specific marginalized populations such as sex workers.

When planning services for the most vulnerable populations, priority must be given to measures that promote access to a continuum of harm reduction and treatment services. These include online interventions; maintaining the capacity to receive new requests for assistance; maintaining outreach work as an essential activity; and establishing or developing collaborative agreements between harm reduction and treatment services in the health and community sectors. Harm reduction activities that are vital to maintain during the COVID-19 pandemic include overdose monitoring and prevention, safe supply initiatives, and HIV/STI prevention. Supporting — and, if possible, improving — cooperation between addiction services and those that address living conditions and basic needs (food, housing, income) is equally critical.

Investment is needed to support harm reduction and treatment practitioners by making the appropriate technology, training and supervision available. Such resources will enable the development of clinical practices adapted to the challenges of substance use in a context of social precarity, including online intervention work. In addition, sexual and gender diversity must be considered when adapting services in the context of the pandemic to prevent further health inequities, especially for women and members of sexual and gender minorities who are dealing with substance use.

Quelles sont les implications de cette synthèse?

- Produced in the first month of the GID-COVID project, this rapid response will make it possible to provide practice settings with prompt support in the midst of a health crisis.
- The project's focus on knowledge exchange will serve as a basis for recommendations that meet the needs of both service users and practitioners in Quebec.

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Keywords: Dependency, psychoactive substances, social precarity, homelessness, mental health, gender, sexual orientation, harm reduction, treatment, services.

Other Populations: People Who Use Drugs (PWUD) and Substance Use

Substance use among women in the context of the corollary pandemics of COVID-19 and Intimate Partner Violence (IPV)

Nominated Principal Investigator: Lorraine Greaves PhD, Senior Investigator, Centre of Excellence for Women's Health

Authors: Andreea Catalina Brabete, Lorraine Greaves, Lindsay Wolfson, Julie Stinson, Sarah Allen, Nancy Poole. Centre of Excellence for Women's Health, Vancouver BC. www.bccewh.bc.ca

For more information, please contact: Lorraine Greaves PhD lgreaves@cw.bc.ca & Nancy Poole PhD npoole@cw.bc.ca

Target/priority population(s) in synthesis:

- First responders, and providers of substance use and violence against women services

What is the issue?

The links between, and occurrence of both IPV and SU are complex and both appear to have risen during the COVID-19 pandemic, with potentially enduring effects on women's health. Providing current advice to health providers and first responders on how to prepare and respond to these issues is critically important.

Key messages:

Consequent to COVID response measures has been increased help-seeking for intimate partner violence (IPV) and indications of increased substance use (SU). Pandemic responses affect IPV and SU due to social isolation, 'stay-at-home' orders, distancing, limited service provision, unemployment, financial stress, loss of routine, additional caregiving & lack of outdoor access. Disasters are associated with IPV increases and disaster planning should include responses to IPV, trauma and mental health issues. IPV and SU are bidirectionally related but IPV impacts long term impacts on mental health, SU and trauma in women. Improved responses and interventions that address IPV and SU in the context of disasters must be developed.

How was the synthesis conducted?

We undertook a rapid review approach to address two research questions:

RQ1. What evidence on the role of natural disasters and pandemics in intimate partner violence among women has been published in the academic and grey literature?

RQ2. What evidence on the role of substance use in intimate partner violence among women has been published in the academic and grey literature?

Academic literature was identified through Medline, CINAHL, PsycInfo, Cochrane, and Web of Science using the following keywords: 1) pandemics (e.g. "social isolation", "quarantine", COVID-19, etc.) and IPV (e.g. "domestic violence", "spousal abuse", etc.); and 2) substance use (e.g. "alcohol", "tobacco", "drugs", etc.) and IPV (e.g. "physical abuse", "battered women", etc.). The academic search for RQ1 yielded 2,356 unique returns and RQ2 yielded 3,641 unique returns (the search for RQ2 was limited to

articles published between 2015-2020). The records were title and abstract screened separately by two independent reviewers. Abstract screening reduced the number of included papers to n = 79 (for RQ1) and n = 332 (for RQ2). Full text articles were screened by five reviewers independently and relevant data was charted in Excel. The findings from the academic literature were summarized by two reviewers with the input from all the authors and one reviewer interpreted the results for the summaries and introduction.

Two supplemental grey literature searches were conducted to answer the two research questions using the same keywords as the academic search. For Q1, literature was identified on Data2X and the first 75 returns were considered for exclusion. For Q2, literature was identified from through a targeted search of national and international (USA, Australian, and UK-based) anti-violence and substance use organizations including CCSA, CAMH, Canadian Women's Foundation, SAMHSA, VAWnet and AVA. Full text articles were screened by two reviewers independently and relevant data was charted in Excel before being summarized.

What did the synthesis find?

The links between pandemic, IPV and SU are complex. Disasters are associated with a rise in IPV, along with lasting parallel issues such as PTSD, trauma, and mental health issues. Policy responses to pandemics, such as isolation and lockdowns, exacerbate the conditions for both, as perpetrators adopt new measures to carry out IPV. SU and IPV are bidirectionally related, in that: SU among perpetrators and/or victims can accompany violence; and SU can be a lasting adaptive coping mechanism for survivors after IPV. Best practices and interventions in response to these issues in the context of pandemics and disasters are underdeveloped. The few interventions and tools in the academic and grey literatures indicate that intensive interventions reduce IPV or SU, but rarely both, and that related mental health issues such as depression and trauma require ongoing service support. Even so, the element of coercion can apply to women experiencing IPV, SU and post disaster mental health issues, and could be a promising linking concept on which to develop better training and responses for brief interventions in disasters and pandemics. Disaster related interventions and planning must incorporate effective, timely responses to IPV; first responders must be sensitive and timely in responding to IPV during disasters; health care providers must investigate presentations of either SU or IPV for both issues; and substance use responders need training in understanding and responding concurrently to SU and IPV. Ongoing mental health issues result from both SU and IPV post disaster and need to be monitored. This area requires tailored awareness raising, first responder training, and development of brief interventions, referral tools and ongoing SU and IPV training for service providers. In short, disasters often highlight a rise in IPV and/or SU and require sharpened responses from HCP, SU workers and first responders.

What are the implications of this synthesis?

This synthesis alerts and assists first responders, substance use and violence against women service providers in understanding and better responding to both intimate partner violence and substance use in the context of disasters, pandemics, isolation, and COVID-19.

Keywords: intimate partner violence; substance use; pandemic; disaster; isolation; health care providers; first responders; trauma

Other Populations: People Who Use Drugs (PWUD) and Substance Use

COVID-19 pandemic guidelines for mental health support of racialized women at risk of gender-based violence

Nominated Principal Investigator: Nazilla Khanlou, York University

Authors: NPA Nazilla Khanlou (York University), Principal Knowledge User: Andrew Ssawe (South Riverdale Community Health Centre) with Co-Investigators: Yvonne Bohr (York University), Jennifer Connolly (York University), Iris Epstein (York University), Thumeka Mgwigwi (York University), Soheila Pashang (Humber College), and Collaborators: Farah Ahmad (York University), Negar Alamdar (York University) and Sajedeh Zahraei (Ontario Council of Agencies Serving Immigrants).

For more information, please contact: Nazilla Khanlou, RN, PhD, Faculty of Health, York University: nkhanlou@yorku.ca

Target/priority population(s) in synthesis:

- Women at risk of domestic or intimate partner violence, and

- Racialized individuals who have less social support structures and lower economic stability

What is the issue?

Gender-based violence (GBV) affects 30–60% of women, impacting their mental, physical, and sexual health. Violence against women contributes to high levels of morbidity and mortality. It is associated with life-long mental health impacts including anxiety disorders, depression, and substance use disorders. Global statistics reveal a dramatic rise in violence against women during the COVID-19 pandemic. Fear, uncertainties and stressors among the population during the pandemic contribute to anger and aggression against spouses and partners. Worldwide warnings (including Canada) are raised on the increasing domestic violence during the crisis. Growing evidence shows that racialized groups are especially at higher risk of COVID-19 related morbidity and mortality. Taken together, racialized women at risk of GBV are a priority group to focus on for immediate mental health support and care during the pandemic. Our project's overall goal is to advance trauma-informed mental health care for racialized women at risk of GBV during the COVID-19 pandemic's response and recovery phases.

Key messages:

- Pandemic responses must consider gendered roles and dynamics, and adopt gender-sensitive programming

- Safety principles to guide responses – data collection, service provision

- Need to gather disaggregated data - sex, race, age. GBV data collection to ensure women and girls' safety

- Increase dedicated funding for specialized services

- Ensure that services remain open, accessible, and inclusive

- Expand access points to mental health supports

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- Apply survivor-centred principles and trauma-centred supports

- Prevent racism and discriminatory practices in service provision

- Build capacity, increase awareness and training for frontline workers

- Expand shelter capacity. Strengthen helplines, online counselling and technology-based solutions. Ensure online supports 24/7. Update referral pathways

How was the synthesis conducted?

We applied the Cochrane Rapid Reviews method and were guided by an equity lens in conducting rapid reviews on public health issues, following the below 6 steps:

Step 1. Setting the Research Question. We identified the research questions as follow: "What are the racialized and gendered social determinants of health among women with experiences of GBV?"; and "What are the emerging best practice/evidence of effectiveness of services or implementation for equity-informed mental health promotion and health care provision for this population during the current COVID-19 pandemic*?".*

Step 2. Identifying Criteria for considering studies. We included studies on a) women and/ or girls at risk of violence, and b) who were 15 years and older. We also included studies assessing violence against women and girls, and mental health outcomes, interventions, initiatives, during the COVID-19 pandemic.

Step 3. Search methods for identification of studies. Searches were conducted across 4 electronic databases (Cochrane CENTRAL, Medline, ProQuest, and EBSCO). We examined ongoing/unpublished studies through grey literature searching of websites, including electronic news media, Google Scholar, and policy documents. Search and keyword strategy were developed by research team members and approved by the study Principal Investigator and the health sciences librarian and team member.

Step 4. Data collection. We used Excel to record key characteristics of selected studies/articles (e.g. date, study design, participant characteristics).

Step 5. Analysis and Synthesis. Emerging review findings were organized applying a systems approach (including micro, meso, and macro interrelated dimensions. We interpreted the emerging findings applying an intersectionality-informed lens.

Step 6. Applicability and Transferability of Findings. We adapted international guidelines such as the pyramid of interventions approach, identifying multilevel interventions from the macro (social considerations in basic services and security), meso (strengthening community and family supports and person-to-person non-specialized supports) and the micro level (specialized services).

For this Initial Knowledge Synthesis Report, we are reporting on **28 selected sources from a total of 221** search results. In the following 5 months before the completion of this project, we will expand our review. The 28 sources consist of **7 peer-reviewed articles and 21 grey literature sources**. To this date we have collected a total of 18 peer-reviewed journal articles, and 120 grey literature materials, which will be reviewed during the next weeks.

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What did the synthesis find?

1. The racialized and gendered social determinants of mental health among women exposed to GBV during the COVID-19 pandemic. Women are experiencing the COVID-19 pandemic very differently from men. Women are more likely to work in informal and precarious jobs, and they carry most of the unpaid caregiving work at home. Associated risk factors that increase the vulnerability of women and girls to violence during the pandemic include economic distress (e.g. unemployment), household stress, social isolation, shelter-in-place, parental stress, substance misuse, psychological distress. Racialized populations are the hardest hit in the COVID-19 pandemic due to such social determinants as poverty, inequitable access to medical care or health advice, inadequate housing, precarious employment, and structural racism.

2. Emerging recommendations and best practices for detection, referral, and service provision for equity informed mental health promotion and care.

What are the implications of this synthesis?

Practice and policy must address the structural determinants of the mental health of racialized women at risk of gender-based violence during COVID-19 pandemic's response and recovery phases. The experiences of racialized communities highlight the differentiated risks and marginalization they face, which have been always present, but have become further amplified in the context of the ongoing COVID-19 pandemic.

We present the emerging recommendations and best practices for detection, referral, and service provision for equity informed mental health promotion and care through three levels. These are include individual, psychological and situational (micro); institutional, organizational and agency-based (meso); and structural, systemic (macro) levels. In line with an upstream approach to public mental health support, we present the recommendations from macro to meso to micro levels. We also recognize the contextual fluidity of the levels and apply an intersectionality informed perspective. **Keywords:** COVID-19, mental health, women, girls, racialized, gender, gender-based violence, domestic violence, intimate partner violence, pandemic

Keywords: COVID-19, mental health, women, girls, racialized, gender, gender-based violence, domestic violence, intimate partner violence, pandemic

Other Populations: None

Examining the use of virtual care interventions to provide trauma-focused treatment to domestic violence and sexual assault populations

Nominated Principal Investigator: Dr. Stephanie Montesanti, University of Alberta

Authors: Dr. Peter Silverstone, MD, Professor, Department of Psychiatry, University of Alberta, Dr. Lana Wells, PhD, Brenda Stafford Chair, Prevention of Domestic Violence, Associate Professor, Faculty of Social Work, University of Calgary, Ms. Winta Ghidei, MPH, PhD Student, Project Manager, School of Public Health, University of Alberta

For more information, please contact: Dr. Stephanie Montesanti: montesan@ualberta.ca, Phone: 587-968-1316

Target/priority population(s) in synthesis:

- Domestic violence and sexual assault population

What is the issue?

The COVID-19 pandemic has had a profound impact on the psychological and mental well-being of individuals and families, and the incidence of domestic and intimate partner violence (IPV) has increased since the start of the pandemic. In Alberta alone calls to domestic and family violence hotlines during the COVID-19 pandemic have increased by more than 50%. With the rapid shift to virtual care during the pandemic there is a need to examine the effectiveness, feasibility and acceptability of virtual care interventions across a range of diverse domestic violence and sexual assault populations, including interventions that incorporate gender-responsive approaches to trauma (e.g., cultural, historical, and immigration-related trauma).

Key messages:

- Information is key; children and adolescents need to be educated and informed about the pandemic situations.

- Effective and rapid communication is essential.

- Most of the adverse effects come from the school closure, isolation, limited physical activities, social distancing, and imposition of a restriction of liberty.

- Parents, teachers, health care providers, and public health officials can play an important role in minimizing the impact of pandemic on mental and psychological health.

- Children and adolescents' access to mental health services should be improved and should be social-distancing and lockdown friendly.

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- Mental health professionals should use existing evidence-based guidelines and also establish easy operational strategies such as mobile based applications to cope with COVID-19 pandemic-related mental health problems in children and adolescents

How was the synthesis conducted?

A rapid review of the literature following the principles of rapid evidence assessment (REA) was undertaken from May–June 2020. REA provides a timely, valid and balanced assessment of available empirical evidence related to a particular policy or practice issue. REA is a rigorous and explicit method that avails evidence required for policy recommendations in a short timeframe. The process is characterised by developing a focused research question, a less developed search strategy, literature searching, a simpler data extraction and quality appraisal of the identified literature. To contextualize the findings of our rapid review we conducted stakeholder interviews with clinical and non-clinical providers that serve the domestic violence and sexual assault population in the province of Alberta.

What did the synthesis find?

The findings from the rapid review demonstrate that despite the broad range of negative effects associated with domestic and intimate partner violence, virtual care interventions that incorporate trauma-focused treatment are scarce and largely limited to online support tools that facilitate empowerment and self-efficacy of individuals who are currently in a violent or abusive relationship. Available online interventions that incorporate trauma-focused treatment for this at-risk group are limited in scope, and effectiveness data are preliminary in nature. Research evidence supports the provision of online psychological therapies for reducing psychological symptoms such as depression, anxiety and post-traumatic stress disorder (PTSD) resulting from domestic violence or sexual assault. Findings from the rapid evidence review also indicate that treatment provided via videoconferencing is capable of achieving comparable gains that accrue during traditional in-person services. The provision of virtual care delivery (e.g., videoconferencing) is associated with a number of perceived challenges regarding the impact of distal services on the relationship between providers and clients, confidentiality, patient safety and technological difficulties. Stakeholder interviews conducted in Alberta helped to contextualize knowledge from the rapid evidence review support understanding of the experiences of providers and patients in using virtual care to treat trauma-related symptoms resulting from domestic violence and sexual assault. Providers shared both positive aspects of virtual care, such as the accessibility of virtual care sessions or appointments, and barriers to delivering virtual care which included concerns about privacy and safety of their clients and organizational changes that were required to delivery services and treatment virtually.

What are the implications of this synthesis?

- Virtual care interventions for this population should not be used to completely replace in-person professional care for trauma and is most effective when used to supplement or facilitate care or supports.

- Most of the research evidence on effective implementation of trauma-focused virtual care has been examined in rural and remote communities. Therefore, guidance from available evidence for how to deliver virtual care interventions across a range of diverse domestic violence and sexual assault populations, including interventions that incorporate gender-responsive approaches to trauma (e.g., cultural, historical, and immigration-related trauma) is not provided.
- The findings of our rapid evidence review and stakeholder interviews demonstrated positive aspects from delivering care virtually to this population. This warrants future research to evaluate a range of virtual care interventions (including e-mental health) across diverse population groups to improve our understanding of their effectiveness and acceptability. This will also strengthen the evidence-base for virtual care solutions that benefit this at-risk population.
- There is strong evidence from RCT trials to support the provision of online psychological therapies for reducing psychological symptoms such as depression, anxiety and post-traumatic stress disorder (PTSD) among individuals exposed to domestic violence or sexual assault. These online therapies can be safely used to support individuals and families in violent or abusive situations.
- There is an urgent need to tackle inequities in digital access to care and treatment. Some policy measures to narrow the digital divide including funding broadband infrastructure and increasing digital health literacy for the most vulnerable clients.

Keywords: domestic violence, sexual assault, virtual care, e-mental health, trauma-focused treatment, mental health

Other Populations: Children, Youth and Families

Pandemic-proof: Synthesizing real-world knowledge of promising mental health and substance use practices for young people who are experiencing or have experienced homelessness

Nominated Principal Investigator: Naomi Thulien, NP-PHC, PhD, McMaster University School of Nursing

Authors: Thulien, N.S.,[1,2] Noble, A.,[3,4] Daley, M.,[5] French, D.,[6] Hwang, S.W.,2,7,8 & Kidd, S.9,10

[1]School of Nursing, McMaster University, Hamilton, ON; [2]MAP Centre for Urban Health Solutions, Li Ka Shing Knowledge Institute of St Michael's Hospital, Toronto, ON; [3]Factor-Inwentash Faculty of Social Work, University of Toronto, Toronto, ON; [4]Covenant House Toronto, Toronto, ON; [5]The Lived Experience Lab, Toronto, ON; [6]A Way Home Canada, Toronto, ON; [7]Division of General Internal Medicine, Department of Medicine, University of Toronto, Toronto, ON; [8]Dalla Lana School of Public Health, University of Toronto, Toronto, ON; [9]Department of Psychiatry, University of Toronto, Toronto, ON; [10]Psychology Division, Centre for Addiction and Mental Health, 1001 Queen St. W., Unit 2-1, #161, Toronto, ON

For more information, please contact: Dr. Naomi Thulien: thulienn@mcmaster.ca

Target/priority population(s) in synthesis:

- Young people (16 – 24 years of age) who are experiencing or have experienced homelessness

What is the issue?

Young people who are experiencing or have experienced homelessness are disproportionately impacted by the negative socioeconomic effects of the COVID-19 pandemic. This pandemic has made visible the precarious existence in which these young people live. In our respective professions dedicated to working with these young people, we are witnessing the fallout of pandemic-related repercussions such as job losses, impending evictions, outreach services operating at zero or reduced capacity, social isolation, and loneliness. The impetus for this project came from our desire to understand the rapidly changing landscape of youth homelessness in Canada and to support our colleagues on the front lines seeking evidence-informed decisions to guide practice adaptations.

Key messages:

- The majority of providers are reporting concerning increases in mental health challenges and substance use among the youth they serve. Approximately 1/3 are reporting increases in suicidal ideation and drug overdoses.

- The majority of providers have adapted their practices by connecting virtually or over the phone; however, this can be problematic for young people with no internet or phone access and for those living in unsafe situations.

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- Promising practice adaptations include: holistic mobile outreach (e.g., mental health and substance use supports combined with meals and art supplies), "live" virtual drop-in sessions on social media platforms, and "self-serve" virtual applications.

How was the synthesis conducted?

This initial synthesis represents data collected from a 26-item survey of 188 providers across Canada who serve young people who are experiencing or have experienced homelessness. Our next step is to conduct follow-up focus groups with providers who identified particularly innovative practice adaptations. In addition, we plan to conduct at least one other focus group with young people who are experiencing or have experienced homelessness so they can "speak back" to this initial synthesis.

What did the synthesis find?

Pandemic Impacts on Mental Health and Substance Use Patterns

Provider perspectives regarding pandemic impacts on mental health and substance use patterns are insightful and alarming. Overall, these insights paint a picture of young people and providers struggling to adapt to pandemic-related closures. Moreover, current public health restrictions and ensuing service limitations operate on the premise that young people: have a place to isolate; can isolate safely and with others; can afford phones/computers; and have access to the internet.

Practice Adaptations

Despite the need for enhanced mental health and substance use supports, most agencies/organizations have either shut down their services entirely or (more commonly) moved them all off-site. This is understandable given the requirement to align with pandemic-related public health measures; however, the implications for young people who depend on these services – especially the most marginalized (e.g., transgender, refugee, and street-entrenched young people) – are worrisome. Additionally, as we head toward the winter season and the weather becomes colder, the demand for on-site services will likely rise.

Promising and Transformative Approaches

Despite the unprecedented challenges brought about by the COVID-19 pandemic, front-line providers have adapted remarkably. While there is still a great deal to learn about the effectiveness and sustainability of these adaptations, we believe some may hold promise as a better way of addressing the mental health and substance use needs of young people who are experiencing or have experienced homelessness. Notably, almost three quarters of providers believe their mental health adaptations hold post-pandemic promise. However, when asked about adaptations related to substance use, only about half of providers believe their adaptations hold post-pandemic promise and 40% are unsure – the latter notion of uncertainty a narrative that kept emerging during our data analysis specific to substance use.

What are the implications of this synthesis?

Practice

- Increase (not decrease) outreach and do so in a proactive way; enhance staffing levels to facilitate enhanced engagement.

- Consider a blended model of virtual support (ensure adequate staff training), in-person visits, and holistic outreach.

- Be intentional about connecting with other services (e.g., healthcare) that touch the homelessness sector; be clear about/advertise what services your agency/organization offers and meet regularly to facilitate ongoing collaboration (see paper on rethinking service design in Hamilton, ON – Wang et al., 2020)

Research

- Pilot promising phone/virtual supports that have been tested in young people who have not experienced homelessness (e.g., Woebot; Fitzpatrick et al., 2017); incorporate perspectives of young people who have experienced homelessness into all phases of the research process (crucial for any research involving young people who are experiencing or have experience homelessness).

- Incorporate the integration of virtual supports into promising wraparound supports for youth exiting homelessness (e.g., Kidd et al., 2019.

- Adapt promising in-person interventions for young people who are experiencing or have experienced homelessness (e.g., McCay et al., 2015; Thulien & Wang, 2019) to incorporate a live virtual and/or asynchronous learning component.

Policy

- Immediately prioritize investments in agencies/organizations serving young people experiencing homelessness so they can: a) continue adapting their services using an equity-informed approach (e.g., in-person outreach to the most marginalized and free/affordable devices to access virtual/phone supports) and b) enhance staffing levels to avoid burnout.

- (Re)consider a guaranteed basic income and/or portable rent subsidies (see Aubry et al., 2020; Pankratz et al., 2017). Social rationale aside, from a return-on-investment perspective, this may prove more cost effective (and possibly safer/enhance well-being) than the current practice of moving young people experiencing homelessness into hotels (and paying for the rooms, meals, staff, etc.) to avoid overcrowded shelters. Moreover, as the economic impacts of the pandemic begin to be fully realized, we may see a surge of young people experiencing homelessness (either for the first time or returning to this state) and will need to adopt a rapid, proactive approach to ensure they do not end up trapped in a cycle of chronic homelessness/poverty.

Keywords: youth, homelessness, substance use, mental health, interventions, health equity, 2slgbtq (two-spirit, lesbian, gay, bisexual, queer), socioeconomic inclusion, COVID-19, pandemic

Other Populations: None

Additional Syntheses Relevant to This Population

Title: Quelles sont les répercussions de la pandémie du COVID-19 sur la santé mentale des enfants de 5-12 ans, et quels sont les enjeux particuliers pour les enfants handicapés ou ayant une maladie chronique ? Une scoping review des problématiques vécues et des pistes d'intervention prometteuse.

NPI: Chantal Camden, professeure à l'université de Sherbrooke, chercheure au CRCHUS et à l'IUPLSSS, Catherine Malboeuf-Hurtubise, Faculté de Psychologie, Département de Psychologie, Université Bishop's

Primary Population: Children, Youth and Families

Lay Summary on Page: 16

Title: Digital interventions to support population mental health during COVID-19: A knowledge synthesis

NPI: Gillian Strudwick, Centre for Addiction and Mental Health

Primary Population: General Population

Lay Summary on Page: 70

Title: Mental health during the COVID-19 pandemic: A living systematic review of mental health burden, factors associated with mental health outcomes, and intervention effectiveness in the general population and vulnerable populations

NPI: Brett D. Thombs

Primary Population: General Population

Lay Summary on Page: 73

Title: Stress, burnout and depression in women in health care during COVID-19 pandemic: A rapid evidence synthesis

NPI: Abi Sriharan, Institute of Health Policy, Management and Evaluation, Dalla Lana School of Public Health, University of Toronto

Primary Population: Healthcare, Front-line Workers and Public Safety Personnel

Lay Summary on Page: 86

Title: Digital health solutions to support women with addiction during COVID-19: Applying a gender- and trauma-informed lens

NPI: Lena C. Quilty, PhD, CPsych; Centre for Addiction and Mental Health (CAMH)

Primary Population: People Who Use Drugs (PWUD) and Substance Use

Lay Summary on Page: 111