Fall Prevention Community of Practice
ADULT+JUNIOR

Evidence Summary: Fall Prevention and COVID-19

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PURPOSE

In March 2020, coronavirus disease 2019 (COVID-19) was declared a pandemic by the World Health Organization. During this global public health crisis, health professionals are being challenged to maintain fall-related risk screening, assessment, rehabilitation and prevention activities in a safe manner that follows the directives imposed to stop the spread of COVID-19. This challenge has been compounded by these public health directives, such as mandatory masking, social distancing, restrictions on movement, and limits on social contact, which have exacerbated known risk factors (e.g., social isolation) or introduced novel risk factors (e.g., masking) for fall-related injuries.

The following evidence summary reviews the impact of COVID-19 on risk factors contributing to fall-related injuries. It also summarizes current and emerging evidence on the effective planning and implementation of fall risk screening and assessment, fall care, fall rehabilitation and fall prevention initiatives, all of which have become largely reliant on virtual modalities of delivery in order to comply with COVID-19 countermeasures. The summary concludes with key implications for fall prevention policy and practice over the course of the COVID-19 pandemic.

COVID-19 RELATED FACTORS AFFECTING FALL RISK AND FALL PREVENTION

Deconditioning

Deconditioning refers to a complex process of physiological change following a period of inactivity, bedrest or sedentary lifestyle [1]. For older adults, deconditioning can induce functional losses in mental status and the ability to carry out activities of daily living. Deconditioning is also frequently associated with hospitalization in the elderly [1, 2].

In many jurisdictions, mandated 'lockdowns', which entail closures of non-essential businesses, restrictions on movement and limits on social contact, have been implemented as a key strategy to contain the spread of COVID-19. Older adults, especially those living with comorbidities and frailty, have often been subject to more stringent limitations on movement and social contact than the general population. These constraints place them at increased risk of sedentary behaviour and the attendant outcomes of deconditioning, including balance deficits, worsening (or new) mental health issues, and increased fall risk [3, 4].

Deconditioning can also arise from the suspension of preventive and tertiary health interventions in order to divert resources to the treatment of acute COVID-19 infections. As a result, the curtailment of measures that improve or maintain the mobility of older adults (e.g., hip replacement or fall prevention or physical activity programs) contributes to deconditioning and its negative health impacts [3].

The impact of COVID-19 on deconditioning was observed in a longitudinal, phenomenological study of 24 patients living with dementia in the United Kingdom. The study revealed a self-reinforcing pattern whereby lockdown measures increased levels of apathy, frailty, demotivation and social disengagement among patients. This resulted in decreased levels of physical activity, which, in turn, heightened the impacts of deconditioning over time [5].

Concerns about the impact of COVID-19 mitigation measures on the physical activity levels of older adults has led some authors to sound the alarm about a looming 'deconditioning pandemic' [6,7]. To avert this scenario, Gray and Bird call for the implementation of an emergency reconditioning programme to foster a significant increase in physical, cognitive, and emotional activity, especially among people living alone [7].

It is important to note that the association between COVID-19 and increased levels of deconditioning is by no means limited to older adults. A longitudinal study of 70 young (aged 18-35) adult males in Hong Kong found a significant decline in physical activity levels and corresponding increases in sedentary behaviour and long sleep duration after the onset of the COVID-19 pandemic [8]. These findings are consistent with recent Canadian [9] and US [10] surveys reporting significant declines in physical activity among children and youth during the COVID-19 pandemic. The authors of the US study express concern that the potential entrenchment of short-term changes in physical activity and sedentary behaviour resulting from COVID-19 may lead to increased risk of obesity, diabetes, and cardiovascular disease among young people over time [10].

Social Isolation and Social Distancing

Social isolation can be defined as *"the absence of social interactions, contacts, and relationships with family and friends, with neighbors on an individual level, and with "society at large" on a broader level"* [11]. The negative health impacts of social isolation are substantial and have been equated to the health risks posed by high blood pressure, physical inactivity, obesity and smoking 15 cigarettes a day [12, 13].

Older adults are especially vulnerable to social isolation due to age related transitions, including retirement, caregiving, loss of family and friends, changes in health status and negative societal perceptions (i.e., ageism) [14]. High levels of social isolation among older adults, which was gaining recognition as a public health concern prior to the onset of the COVID-19 pandemic [14, 15], have been exacerbated by a range of pandemic mitigation measures, including physical and

social distancing requirements, shelter in place and stay at home orders, and restrictions on interactions between older adults and family members, friends, caregivers and organizations [14, 16].

Heightened levels of social isolation among older adults due to COVID-19 control measures pose a concern to fall prevention practitioners, as an emergent body of evidence points to a consistent link between social isolation and fall risk among older adults. For example, an analysis of longitudinal data from the Health and Retirement study of 8,464 community dwelling older adults focused on number of falls self-reported over the observation period as the key outcome variable. Independent variables included perceived isolation (feeling lonely, perceptions of social support), social disconnectedness (e.g., having no friends or relatives living nearby, living alone), and number of depressive symptoms [17]. Results from regression models indicated that social disconnectedness was associated with a 5% increase in the risk of falls. Perceived lack of social support was associated with a 21% increase in the risk of falls; when examined in tandem, perceived lack of social support and loneliness were associated with a combined 37% increase in falls risk. Depression, a key consequence of prolonged social isolation, was associated with a 47% increase in falls [17].

Similar associations between levels of social isolation and fall risk were found in analyses of a population based sample of community dwelling individuals in Germany [18] and two years of data from the National Health and Aging Trends Study, a nationally representative sample of US Medicare recipients aged 65 plus [19]. The latter study found that the relationship between social isolation and fall risk remained significant after adjusting for age, gender, and education, but weakened after adjusting for self-reported general health, depression risk, and fear of falling [19]. A recent systematic review of 17 studies found that falls among adults aged 60 and over were consistently associated with higher levels of social isolation, loneliness and living alone. However the authors noted that the body of evidence focused specifically on social isolation and falls is relatively small, and further longitudinal studies using standardized measures were needed to better understand the association [20].

Somewhat paradoxically, given the relationship between social isolation and fall risk, there is limited evidence that COVID-19 control measures may be reducing the incidence of fall-related injuries. An analysis of cases admitted to a level 1 trauma centre in Louisville, Kentucky from January to April 2019 and 2020 found a significant decrease in fall-related admissions in March-April 2020 (a time when COVID-19 control measures were in place) compared to the prior year. The authors attributed this result to older adults spending less time outdoors due to social distancing recommendations [21]. Social distancing measures were also cited as a potential contributing factor for a significant reduction in patients admitting to a Louisiana hospital with blunt trauma injuries, although the study did not provide data on falls as a specific causal factor [22].

However, these results should be interpreted with caution due to the cross sectional nature of this data, the limited timeframes under study and the rapidly evolving evidence base on the health impacts of COVID-19.

Fear of Falling

Fear of falling (FOF) refers to ongoing concern about sustaining a fall that, in turn, causes an individual to avoid daily activities [23]. Over time, FOF can become a barrier to walking and participation in physical activities, leading to an abnormal gait and a loss of confidence in walking ability [24, 25]. Persistent FOF has been linked to deconditioning, social isolation, depression, more frequent falls, greater frailty, decline in mobility and, ultimately, increased mortality [26-29]. Although many of the health and social impacts of COVID-19 have yet to be determined conclusively, there is some speculation that the current pandemic may serve to increase FOF among older adults given the known relationships between FOF and two antecedent risk factors that have been exacerbated by mitigation measures put in place to control the spread of the virus: deconditioning and social isolation [30, 31].

Masking

Public health authorities have recommended, and, in many cases, mandated, wearing face masks to limit the spread of COVID-19 [32]. While mask wearing is essential to prevent the spread of COVID-19, especially for high risk groups such as older adults, there is growing concern that mask wearing has the potential to contribute to fall-related injuries.

An editorial by Kal, Young and Ellmers, summarizes the means by which face masks can contribute to fall risk [32]. In addition to obstructing the visual acuity of glasses wearers (by causing lenses to fog up), face masks block parts of the lower peripheral visual field, which is important for detecting nearby hazards and safe step placement [33]. Wearing a face mask decreases an individual's opportunity to utilize this sensory information during walking, thereby increasing the risk of trips and falls [34, 35].

While the fall risks associated with face mask wearing are recognized, there is some divergence of opinion about the recommended practices for safe walking while wearing a face covering. Kal, Young and Ellmers emphasize the importance of wearing a tightly fitting mask and walking more slowly as key preventive strategies. Slower walking is proposed as a safer alternative to looking down while walking, which the authors feel deprives walkers of vital visual information from the periphery which is needed to spot and avoid fall risks.

In a published response to these recommendations, Callisaya et al. argue that a more tailored set of guidelines for walking while masked is needed for a heterogeneous population of older adults [36]. For example, they note that some older adults with underlying conditions (e.g., Parkinson's disease or peripheral neuropathy) will have to look down while walking because they do not have the ability to vary their strategy to compensate for loss of vision. In addition, they note that slowing down while walking may increase the risk of a fall given the evidence that a person's usual speed helps to optimize stability [37]. Last, the authors call for messaging emphasizing a range of strategies to reduce fall risk, such as railing use when navigating stairs wearing a mask.

Both the Kal, Young and Ellmers article and the rebuttal by Callisaya et al. agreed that further research is required to assess strategies aimed at reducing the fall risks of walking while masked in order to generate evidence-based practice. This research is warranted given that mask wearing is likely to be a lasting (and necessary) counter measure against COVID 19 [36].

FALL RISK ASSESSMENT AND CARE DURING COVID-19

During the COVID-19 pandemic, social distancing requirements and the suspension of many in-person health care activities has necessitated an increased utilization of virtual modalities for diagnostic and therapeutic services [38, 39]. The following section reviews the evidence supporting virtual options for the assessment of fall risk and the provision of therapy, rehabilitative and care services for individuals who have sustained a fall-related injury.

Virtual Fall Risk Screening and Assessment

Mobile technologies, such as smart phones and tablets, enable the objective assessment of fall risk among older adults with minimal cost and training requirements [40]. The utilization of these technologies to access health apps is growing among older adults [41], thereby enabling them to monitor and improve key aspects of their health status, including fall risk.

There is growing evidence supporting the efficacy of apps for fall risk screening. A standardized review conducted by Ryes, Qin and Brown assessed five balance apps for the general public offered through the iPhone Operating System [42]. The Mobile Application Rating Scale (MARS), an instrument for measuring the quality of mobile health apps [43] was used to conduct the assessment. Mean scores for each of the MARS domains were: Engagement (3.32), Information (3.7), Functionality (3.8) and Esthetics (3.8). One app, UStablize, received a MARS rating of 4.43/5, which was considered "good", while the other apps demonstrated acceptable quality.

A systematic review of balance and fall risk assessments using mobile phone technology conducted by Roeing, Hsieh and Sosnoff included studies that measured static balance or a clinical measure of balance with a mobile device [44]. Although all of the thirteen studies included in the review successfully tested their application, only 38% (5/13) evaluated the validity of their apps against 'gold standard' technologies for fall risk assessment such as standalone accelerometry, 3D motion capture and force plate measurements. These yielded promising results, demonstrating strong concurrent validity. Only 23% (3/13) evaluated the reliability of their applications. Twelve of the thirteen studies identified clinicians as intended users, and seven studies identified seniors as intended users [44].

The use of mobile apps for fall risk screening and assessment is a rapidly evolving field, with pilot studies of new apps showing promising initial results [40, 45]. For example, a recent usability study of a mobile application for the screening and management of fall risks based on the CDC's STEADI toolkit with 30 older adults generated a mean satisfaction rating of 8.83 out of 10 [45]. However, further research is needed to assess the efficacy of these apps on larger samples of populations at risk of fall-related injuries.

Roeing, Hsieh and Sosnoff note additional aspects of mobile fall risk assessment apps warranting further study. First, additional research is needed to examine the ability of apps to predict falls in order to increase their utility. Second, the greater inclusion of older adults and clinical populations with elevated fall risk is needed to ascertain the scope of these apps. Third, usability testing of the apps needs to be conducted with older adults with cognitive deficits that may impair their ability to comprehend and remember instructions: none of the studies in the aforementioned systematic review conducted by the authors reported on usability. Last, further research is needed to compare the validity and efficacy of these apps with 'gold standard' methods for assessing fall risks (e.g., standalone accelerometry) and assess the reliability of the apps over time [44].

Virtual Care

COVID-19 has been identified as an opportunity to advance the use of virtual care through telehealth, also known as telemedicine, with associations in several countries, including Australia, the United Kingdom and the United States, developing guidelines to assist health professionals with telehealth care provision during the pandemic [46]. A rapid review of virtual geriatric clinics, which was conducted to provide insights to health professionals during the COVID-19 pandemic, assessed nine studies, all of which were observational in nature, with 975 patients. Seven studies reported patient satisfaction with virtual care. Relevant productivity outcomes included cost effectiveness, savings on transportation and improved waiting list metrics, while clinical benefits included successful polypharmacy reviews (a key consideration for

effective fall-related care) and reductions in acute hospitalization rates. Eight of the nine studies reported various challenges, such as hearing-impaired patients and difficulty with technology [47].

There is limited evidence on the efficacy of telehealth programs for older adults at high risk of fall-related injuries. A study conducted by Bernocchi et al. randomly assigned 283 patients discharged home after in-hospital rehabilitation to a home-based program combined with telehealth surveillance or conventional care [48]. Patients were eligible for selection if they had experienced a fall during the previous year or were at high risk of falling. During the six month period, the risk of falls in the group receiving home-based care and telehealth was significantly reduced. The average time to experience a first fall was significantly longer in the intervention group, and significantly fewer patients in the intervention group experienced two or more falls [38].

It remains to be seen if current utilization rates of virtual care persist after the COVID-19 pandemic has abated. The authors of the aforementioned rapid review of virtual geriatric clinics note that in spite of the identified productivity and clinical benefits, there is not sufficient evidence to support the adoption of telehealth in lieu of standard in-person consultations [39]. With respect to the secondary prevention of fall-related injuries, Bernocchi et al. recommend the use of multidisciplinary approaches, including telehealth monitoring, as a means of sustaining the positive changes (e.g., increased physical activity) that many adults invariably abandon after leaving hospital-based rehabilitation [46]. Over time, the successful maintenance of telehealth as a viable care option will require system-level changes, such as greater data integration in jurisdictions (including Canada) where hospitals and clinics have divergent electronic health records database or no electronic record databases at all [38].

Virtual Rehabilitation

Physical distancing requirements to control the spread of COVID-19 have necessitated the increased use of virtual modalities that provide rehabilitative exercise and gait training for individuals with balance deficits. Virtual reality therapy (VRT), which utilizes interactive balance games through the use of interactive devices [47], had been receiving increased attention from researchers and clinicians prior to the pandemic due to its restorative potential regarding fall prevention/balance rehabilitation, easy applicability, real time feedback, and engaging features that increase user motivation and compliance [48].

The benefits of VRT were validated in a systematic review and meta-analysis of ten studies conducted by de Amorim et al. [48]. A random effects meta-analysis of studies assessing balance using the Berg Balance Scale (N=6) and the Timed up and Go (TUG) test (N=6) was performed. Positive results were observed in relation to improvement in both dynamic and static balance (70% of studies), mobility (60%), flexibility (30%), gait (20%) and fall prevention (20%). However, the authors advise caution in the interpretation of these results for clinical practice due to the low number of intervention studies and the large variance in the study methodologies, interventions and outcomes [48].

Support for the efficacy of VRT was also found in a systematic review of mobile health applications in rehabilitation conducted by Nussbaum et al., which found positive benefits of some apps for the promotion of exercise or gait training [49]. As was the case with the meta-analysis conducted by de Amorim et al. [48], the authors noted the relatively low number of studies focused on user outcomes: approximately one third of the 102 studies included in the review evaluated VRT apps as interventions, while the remainder focused on app functioning or participant interaction with the app [49].

Another promising strategy for virtual rehabilitation involves the use of wearable sensors (WS), which can be attached to various body parts (e.g., waist, wrist or ankle) or worn as a pendant [50]. WS have been identified as a helpful resource for balance and gait training rehabilitation, as they enable the efficient monitoring of key activities, including mobility patterns, stair climbing and stand to sit transfers [51, 52].

A systematic review of eight randomized control trials found evidence for the effectiveness of WS training in improving static, steady-state balance parameters, and more limited evidence for the improvement of specific gait parameters and proactive balance measures. However, the authors caution that the validity of their findings are limited by heterogeneous WS training regimens, small sample sizes and short duration interventions, and recommend larger prospective studies for assessing the full rehabilitative potential of WS technology [53].

FALL PREVENTION DURING COVID-19

As was noted previously, there is growing concern that mandated restrictions on movement to contain the spread of COVID-19 places older adults at increased risk of sedentary behaviour, which, in turn, increases their susceptibility to balance deficits, mental health issues, and fall-related injuries [3, 4]. But pandemic-related public health safety measures do not mean that the physical activity of older adults must be limited or curtailed entirely. The dissemination of easily understandable information about safe physical activity options is critical for ensuring that older adults have access to

clear messages and resources on how to maintain both their physical and mental health and prevent fall-related injuries during the pandemic [54].

Virtual Engagement of Older Adults in Strength and Balance Exercises

Multiple systematic reviews have found that exercise programs, whether delivered as a stand-alone intervention or in combination with other interventions, are associated with lower rates of fall-related injuries [55-58]. But the sustainability of exercise regimens among older adults is a key challenge: long-term adherence rates are low, and many exercise programs are viewed as dull and repetitive [52].

Over the past decade, the emergence of smart phone and tablet technologies have enabled a wide range of digital exercise resources, such as mobile applications, apps and websites, for older adults and a potentially effective solution to the perennial issue of long-term exercise sustainability [59]. A systematic review of 37 trials found that exergames (interactive, exercise-based videogames) improved both physical (e.g., balance and strength) and cognitive (e.g., attention) measures and were equally effective as traditional exercise programs in reducing fall risk [60].

The suspension of in-person exercise classes has heightened interest in the utility of digital approaches to support optimal levels of physical activity among older adults during the COVID-19 pandemic. A rapid review of strength and balance exercise apps and websites for older adults conducted by McGarrigle, Boulton and Todd evaluated 13 apps and 124 websites that met their selection criteria [61]. Each of the selected apps and websites were assessed according to the quality of their evidence base, including behaviour change technique (BCT) score ratings, and usability via the Mobile Application Ratings Scale (MARS). Four apps, Standing Tall, Otago Exercise Program, Nymbi Balance and Keep on Keep Up, received both a good MARS rating and BCT scores in the top 50 percent. Three websites received both an excellent quality rating and BCT scores in the top 50 percent: csp.org.uk, fallsassistant.org.uk, and nhs.uk/live-well. Three additional websites were recommended for their video demonstrations of the Otago exercise program, which is supported by a strong evidence base. It is, however, important to note that none of the selected apps or websites had been subject to a randomized control trial evaluation at time of review [61].

An editorial on virtual reality exercise as health promoting strategy for older adults during the COVID-19 pandemic described two main types of VR-based exercise significantly associated with reduced fall rates among older adults: VR-based treadmill exercises and Wii Fit exercises [62]. At least two studies have found significant decreases in the incidence of falls among VR treadmill users compared with traditional treadmill exercise groups [63, 64]. Research on the impact of Wii Fit exercise indicates that both immersive and non-immersive Wii Fit exercises can decrease the risk of falls

among older adults through improving their motor functioning and centre of balance [65, 66].

There is also some evidence that VR exercises can improve a risk factor that may be exacerbated by the COVID-19 pandemic, fear of falling among older adults [30, 31]. For example, Levy et al. evaluated the impact of immersive VR games (e.g., fighting off imaginary enemies through hand movements) among participants reporting a fear of falling. A questionnaire focused on daily living activities, such as getting out of bed and putting on clothing, revealed significant improvements in older adults' fear of falling after the VR exercise intervention compared to a control group [67].

While there is a growing body of evidence attesting to the efficacy of digital approaches in maintaining optimal levels of physical activity and preventing fall risk among older adults, they should not be regarded as a panacea. In the summation of their review of strength and balance apps and websites, Marrigle, Boulton and Todd note that digital exercise programs may only be a suitable option for generally healthy older adults with experience using e-technology [61]. Digital exercise resources may not be geared to the needs of older adults with no or limited internet access or internet-enabled mobile devices, older adults from lower socio-economic groups, or older adults with declining visual acuity, cognitive functioning, poor general health, frailty or fear of falling [68, 69]. There are also concerns arising from the limited ability to monitor older adults participating in virtual interventions in order to ensure that the exercises are being performed correctly and safety [70]. But despite these limitations, digital apps and websites offer a convenient, cost effective and accessible way for older adults to reduce fall risk through strength and balance training during a pandemic where opportunities for outdoor or in-person indoor exercise are significantly curtailed.

Virtual Multi-Component Fall Prevention Interventions

Systematic reviews of the literature have found varying levels of support for the efficacy of multi-component or multi-factorial interventions for the prevention of fall-related injuries [55, 57]. A unique feature of a recent systematic review and meta-analysis by Chan et al. was its exclusive focus on multicomponent virtual or e-interventions – all of which can be maintained over the course of the COVID-19 pandemic – to prevent falls among community dwelling older adults. An analysis of 31 studies with 4,877 older adults found that telehealth combined with exercise and smart home systems demonstrated the best evidence of effectiveness for the reduction of falls [71].

Virtual Interventions to Reduce Social Isolation

Given the known associations between social isolation and increased fall risk among older adults [17-20], there is a need to consider the effectiveness of virtual options for reducing isolation during a time when in-person contact is severely constrained. To date, evidence for the efficacy of e-interventions, such as video calls, in reducing social isolation and loneliness among older adults is limited, with systematic reviews revealing inconsistent and/or weak outcomes [72, 73].

In a narrative review of remotely delivered interventions to reduce social isolation among older adults during the COVID-19 pandemic, Gorenko et al. note that effective implementation of e-interventions may be hindered by several barriers. These include older adults' attitudes towards required technologies (e.g., Zoom), their ability to access the required technologies, limited experience and skills with e-technologies, and the requirement for the involvement of others [15]. To rectify these barriers, the authors call for greater assessment of older adults' technological literacy and preferred delivery methods as well as greater knowledge translation to the community and long-term care settings where e-interventions will be delivered.

SUMMARY AND IMPLICATIONS FOR POLICY AND PRACTICE

Public health measures enacted to prevent the spread of COVID-19 have increased two of the key risk factors contributing to fall-related injuries: deconditioning and social isolation. There is also speculation that COVID-19 may be contributing to increased fear of falling (FOF) among older adults, given the known associations between FOF, deconditioning and social isolation. Mask wearing, a key mitigation strategy to reduce the spread of COVID-19 has been linked to visual and perception deficits that increase the risk of falls, but more research is needed on recommended practices to minimize the risk of falling while masked.

Fall risk screening and assessment during COVID-19 can be carried out through the use of virtual apps, although further research is required to assess the efficacy of these devices with larger populations of older adults, and to compare their efficacy against conventional methods for assessing fall risk. Studies assessing the use of virtual care options, such as telehealth, for patients who have sustained fall-related injuries have identified a range of potential benefits. However, there is insufficient evidence for the adoption of virtual care as a 'stand-alone' in lieu of in person consultations. Greater support was found for the use of virtual reality therapy (VRT) and wearable sensors (WS) to expedite the rehabilitation of patients recovering from a

fall-related injury. There is also strong evidence for the virtual engagement of older adults in strength and balance exercises to prevent falls, although virtual exercise apps may not be suitable for certain subgroups, such as individuals with limited or no internet connectivity or visual impairment. There is less evidence for the efficacy of virtual interventions (e.g., video calling platforms) to reduce social isolation, a significant risk condition for fall related injuries, with research showing weak or inconsistent outcomes.

The results presented in this evidence summary should be viewed with the caveat that research on the health-related impacts of COVID-19, including fall-related injuries, is rapidly evolving. Forthcoming studies may challenge conventional assumptions about the strategies that have been employed to maintain fall risk screening, assessment, rehabilitation and prevention programs during the pandemic. It is hoped that future research will also clarify key areas of uncertainty, such as recommended practices for reducing the fall risks associated with masking.

The impact of COVID-19 on fall-related injuries may persist long after the pandemic subsides. An article by Nestola and colleagues predicts that the impacts of COVID-19 on physical mobility, cognition and mental health and well-being will result in an observable acceleration of the aging process that will be most notable in older people at greater risk of falls [73]. It is also possible that the persistence of the COVID-19 virus, and its emerging variants, may result in a 'new normal' whereby modifications put in place to enable fall prevention and screening work to continue during the pandemic become standard practice. Accordingly, COVID-19 may result in an increased demand for the provision of evidence-based fall risk assessment, rehabilitation and prevention strategies, many of which may have to be tailored in ways that meet the dual needs of communicable disease control and injury reduction.

KEY LOOP RESOURCES ON FALL PREVENTION AND COVID-19

Webinars

Fall Prevention and Vision Aids. This webinar was delivered to the Loop Fall Prevention Community of Practice by Dr. Ana Juricic, a low vision optometrist practising in Toronto, Ontario, on January 15, 2020. The webinar includes information on navigation apps and other environmental supports and resources to support the mobility of low vision individuals.

Understanding the Relationship Between Fear of Falling and Mobility in Older Adults. This webinar was delivered to the Loop Fall Prevention Community of Practice by Dr. Mohammed Auais, Assistant Professor in the School of Rehabilitation Therapy, Queen's University, on April 3, 2019. The webinar provides an overview of FOF, including relevant terminology, adverse outcomes associated with FOF, FOF assessment tools and evidence-based interventions to reduce FOF. Dr. Auais also provides an overview of his FOF-related research, which focuses on FOF and mobility disability, FOF and life space mobility and FOF and the incidence of functional disability.

Advancing Best Practice in Balance and Mobility Testing for Fall Risk Assessment in Older Canadians. This webinar was delivered to the Loop Fall Prevention Community of Practice by Dr. Marla Beauchamp and Dr. Ayse Kuspinar from the School of Rehabilitation Science at McMaster University and Dr. Lauren Griffith, Associate Scientific Director of the Canadian Longitudinal Study on Aging (CSLA) at McMaster University. The webinar includes an overview of balance assessment tools and evidence on their efficacy for predicting falls.

Evidence Summaries

Loop Evidence Summary: Fear of Falling. This Loop Evidence Summary focuses on fear of falling among adults. It defines fear of falling, the populations at greatest risk of fear of falling and associated risk factors. In addition, it provides an overview of screening tools utilized to identify and assess fear of falling and describes program and policy interventions that practitioners and clinicians can take to reduce fear of falling.

Best Practice Exercise Guidelines for Fall Prevention, Strength, Balance and Coordination. This Loop Evidence Summary reports on available best practice guidelines, with standardized exercises, that have proven positive outcomes or effectiveness in improving strength, gait, balance for the population, who are frail older adults over age 55 years. Additional information is provided on research and practice guidelines related to eccentric vs concentric vs isometric exercises and which benefits strength gains, particularly in people with knee osteoarthritis.

Loop Discussion Threads

Any revision to your fall prevention strategic plan due to COVID? (December 17, 2020) This discussion thread raised the issue of whether the COVID-19 pandemic had led to a review of strategic plans by organizations with a mandate to plan and implement fall prevention interventions. One respondent from an Ontario Local Health Integration Network (LHIN) noted that her organization has adopted a short-term focus on preventing acute care capacity through the development of robust fall prevention

information and resources for patients being discharged home from acute care. Her LHIN is also working on a one stop resource for providers around exercise class delivery during COVID-19, and promoting screening with the Staying Independent Checklist in the community.

Falls Prevention App (November 3, 2016. Last post September 30, 2020). This discussion thread identifies digital fall prevention apps and offers comments on their availability and usefulness. The most recent post (September 30, 2020) describes the Map the Apps study cited in this document as well as a recent usability study on the development of a smart phone app to support fall rehabilitation exercise.

Thoughts on going virtual for assessment and intervention? (April 12, 2020). This discussion thread began with a request for advice on addressing fall prevention during COVID-19 when in-person assessments are not possible. A response referred to a series of October 2020 webinars on Senior Friendly Virtual Care provided by the Regional Geriatric Program of Toronto. The RGP also compiled an inventory of tools and tips for senior-friendly virtual care.

Stretch. Lift. Tap - How Older Adults with Frailty Can Stay Active During the COVID-19 Pandemic (July 20, 2020). This discussion thread introduces Stretch, Lift, or Tap (SLoT), a free and accessible indoor physical activity initiative for older adults. The first SLoT resource is available for download.

Caring for A Frail Senior During COVID-19: Exploring Frailty, Fall Prevention and Nutrition (June 11, 2020). In collaboration with Regional Geriatric Program of Toronto (RGP-T), the Ontario Caregiver Organization presented a free webinar designed for family caregivers to learn about frailty along with challenges and lessons learned caring for frail adults during the COVID-19 pandemic. The webinar explores the following in more detail: frailty and ways of identifying frailty in an older adult; fall prevention; and nutrition management strategies. The webinar slides are available for download.

Online Caregiver Support Resource during COVID-19 for Southwestern Ontario (May 22, 2020). The COVID-19 Community South West Region Pandemic Planning Table developed an online one-stop resource with printable tip sheets to support caregivers in Grey Bruce, Huron Perth, London Middlesex, Oxford and Elgin during the pandemic.

Resources from Regional Geriatric Program of Toronto for COVID-19 (May 13, 2020). The Regional Geriatric Program of Toronto has compiled an on-line inventory of clinical guidance tools and links for health providers caring for older adults during the COVID-19 pandemic. The inventory includes tools and resources addressing mobility.

Home exercises for homebound older adults, especially in this era of COVID 19 (April 8, 2020). This post describes Make Movement Your Mission, a program encouraging people to be active on a regular basis and to develop new habits. The Make Movement Your Mission exercises are designed for adults who sit for long periods of time; people who want to move more, and maintain ability, strength, and balance. A video overview of the Make Movement Your Mission program is available on YouTube.

COVID-19 and Injury: Staying physically active (May 4, 2020). The BC Injury Research and Prevention Unit (BCIRPU) has written an article on safety tips for engaging in physical activity during the COVID-19 pandemic.

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