



## **interRAI COVID-19 Vulnerability Screener (CVS)**

### **Introduction**

Physical distancing procedures aim to reduce the spread of coronavirus disease 2019 (COVID-19). As a result, access to community care providers has been limited to persons with more “urgent” problems. Additionally, some individuals are being discharged from health services to increase capacity to care for COVID-19 patients. This places vulnerable persons, often frail, older persons with comorbidities, at greater risk of physical and mental health decline because needs are not identified and responded to until there is a serious health crisis. Moreover, social isolation protocols may result in increased reliance on informal caregivers, many of whom were already experiencing high levels of distress prior to the COVID-19 pandemic. Thus, physical distancing measures may paradoxically lead to more ED and acute care visits by frail older persons resulting in increased risk of viral transmission.

To reduce the likelihood of physical and mental decline and identify those at risk for negative outcomes, on-going surveillance is required. It is important to quickly identify vulnerable persons and provide further assessment and access to care where warranted. The use of targeted geriatric screening instruments allows for systematic identification of those at risk for adverse outcomes and the prioritization of scarce resources. Screening allows organizations to differentiate those requiring further intervention without imposing a large burden on scarce frontline resources.

### **The interRAI COVID-19 Vulnerability Screener**

The interRAI COVID-19 Vulnerability Screener (CVS) is a brief, standardized screening tool for clinical use with older adults and adults with disabilities. Its purpose is to help identify persons who may be especially vulnerable during the pandemic. The CVS is a self-reported survey tool that identifies the presence of COVID-19 symptoms and major comorbidities that increase mortality risk related to COVID-19 and produces a frailty-based measure to help identify and prioritize persons in need of comprehensive assessment. The CVS could be administered by either a lay person (e.g., student, volunteer, health care aide, administrative staff) or clinical staff. This flexibility allows each organization to create care processes that align with their context and choose who is best situated to collect valuable information on their patients, clients or residents. The CVS can be administered over the phone or in-person.



## How was the CVS developed?

The CVS draws from two scientifically validated interRAI instruments: a) the interRAI Contact Assessment<sup>1</sup> and b) the interRAI Check-Up (Self-Reported version)<sup>2,3</sup>.

## How were the CVS Applications developed?

### COVID 19 Symptom Screener

The COVID-19 Symptoms Screener identifies whether individuals report symptoms linked to COVID-19. Symptoms included in the CVS are based on a review of 15 self-assessment tools for COVID-19 that have been released by organizations like the World Health Organization, US Center for Disease Control, and Health Canada. Based on this screener the following decision support tools are generated: Emergency Care Flag, COVID-19 Symptom Flag and the COVID-19 Symptom Count.

### Major Comorbidity Count Algorithm

The Major Comorbidity Count algorithm identifies the presence of medical diagnoses reported by the WHO to be associated with increased risk of death related to COVID-19. This algorithm has been validated using over 3 million interRAI assessment records from nursing homes and home care agencies in Canada and the US.

### Assessment Urgency Algorithm

Self-reported items from the interRAI Check-Up were matched to the Assessment Urgency Algorithm (AUA), an output from the interRAI Contact Assessment. The AUA algorithm is already in widespread use by primary care, home care, and emergency departments internationally as a frailty-based measure to identify persons in urgent need of comprehensive assessment.

## How should the screener results influence care?

Data collected using the CVS and its outputs have several applications for clinical practice:

- Identify persons who need urgent medical attention for emergency health concerns
- Identify persons who should contact public health authorities for COVID-19 testing (depending on country-specific procedures)
- Prioritize persons who require a more comprehensive interRAI assessment by a clinician
- Require monitoring to manage moderate risks related to underlying medical issues, functional problems, distress mood, or social isolation. These individuals could be followed with the interRAI Check-Up (self-reported version) for a more detailed view of their strengths and needs.
- Provide basic health and safety information about COVID-19 for those who are at low risk levels (e.g., information about handwashing, social distancing)

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<sup>1</sup> Sinn CJ. From less invisible to more transparent: Need for and outcomes of formal personal support services in long-stay and short-stay home and community care. Doctoral dissertation. Waterloo, ON: University of Waterloo; 2019. Available from: <https://uwspace.uwaterloo.ca/handle/10012/14978>.

<sup>2</sup> IHEME LO. The feasibility, reliability, and validity of using the self-report version of the interRAI Check-Up among community dwelling older adults. Masters thesis. Waterloo, ON: University of Waterloo; 2019. Available from: <https://uwspace.uwaterloo.ca/handle/10012/15220>.

<sup>3</sup> Geffen LN, Kelly G, Morris JN, Hogeveen S, Hirdes JP. Establishing the criterion validity of the interRAI Check-Up Self-Report instrument. Forthcoming 2020.



Each organization, jurisdiction, and country should determine the specific clinical processes to respond to the outputs produced.

### What is happening with the CVS now?

interRAI has engaged collaborators in Canada, South Africa and Europe to begin using the CVS in primary care, geriatric services, and community programs with lay health workers to reach out to vulnerable persons living in community settings. interRAI has partnered with RAIssoft Ltd. ([www.raisoft.com](http://www.raisoft.com)) as a commercial partner to provide access to high quality software for the CVS at no cost to users<sup>4</sup>. The CVS will be used as part of clinical practice in these settings and the de-identified data will be used for epidemiological monitoring of the health needs of individuals who are not already enrolled in home and community care agencies using interRAI systems.

If you would like additional information about the CVS please contact:

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<sup>4</sup> Other licensed interRAI vendors who are interested in producing interRAI CVS software should contact John Hirdes ([hirdes@uwaterloo.ca](mailto:hirdes@uwaterloo.ca)).