



Clinical judgement is paramount when performing cognitive screening during COVID-19

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*To the Editor:* Rudi Coetzer<sup>1</sup> has provided thoughtful first impressions on the non-standardized use of the Montreal Cognitive Assessment (MoCA<sup>2</sup>) with in-patients during the COVID-19 pandemic. Our goal is to continue a dialogue on how to engage in best practices for bedside and/or emergency room cognitive screening under these challenging conditions. Our take-home message is that cognitive assessment is as much a process as an outcome.

Both Dr. Coetzer's and our experience shows that current hospital environments are often noisy, with space and time pressures. The use of personal protective equipment (PPE) may degrade sensory cues to communication.. COVID-19 disproportionately affects frail and vulnerable people and may exacerbate sleep deprivation and increase delirium. These factors can compound and likely affect cognitive performance itself and cognitive testing procedures and interpretation.

1. *Wearing PPE while performing bedside cognitive assessment poses several logistical challenges for the assessor in terms of materials and time.* Coetzer's letter illustrates that it is presently not "business as usual" and some clinical environments are more restrictive than others. Our own strategies have included using a smart-phone or tablet inside a transparent bag to administer clock drawing tests (through a whiteboard app), photograph results, and dictate clinical notes. Timing MoCA subtests may be approximated through silent counting. The methods will differ and will need to be carefully considered. In any non-standard situation, it will be the clinician's observations of the patient's performance rather than the score per se that will inform the clinical picture.
2. *Perceptual problems are accentuated by wearing PPE.* Opaque masks may reduce speech intelligibility<sup>3</sup>, both by making speech less audible and by eliminating visual speech cues that facilitate speech perception<sup>4, 5, 6</sup>. Communication may be facilitated by using face shields or masks with clear panels in front of the mouth that preserve important visual cues during communication. Speech-Language & Audiology Canada and the Canadian Coalition for Adult

Hearing Health have resources to improve communication with the large number of older adults with hearing loss (<https://www.sac-oac.ca/update-members-and-associates-covid-19>) and there are apps for accurate speech-to-text conversion. The patient's visual abilities must be also considered.

3. *Factors related to COVID-19 itself can influence the findings of bedside cognitive assessment, including "debilitating fatigue" and psychological factors.*
  - a. It is important to distinguish between patients who cannot stay awake versus those who are fatigued. The former is a sign of disordered arousal which requires a differential diagnosis and clinical testing to evaluate arousal, not psychometric testing with a tool like the MoCA. Arousal can be evaluated using methods well-known to medical practitioners, including the assessment of gaze holding and spatial and temporal orientation<sup>7</sup>. In contrast, tests like the MoCA can be administered if patients have adequate arousal even if they are fatigued either due to the infection itself or the circumstances.
  - b. Psychological factors can affect the bedside cognitive assessment, including anxiety around COVID-19 and the unsettling experience of being hospitalized, isolated from family, and treated by health care staff who are gowned and masked. No cognitive screening test will be unaffected by such experiences. It may help to mitigate these factors by explaining why testing is taking place and establishing rapport at the beginning of a clinical interaction before performing cognitive screening.

Coetzer rightly notes that it is difficult to disentangle the potential factors that contribute to under-performance on a cognitive screening test, including fatigue, psychological factors, perceptual issues, or metabolic or neurological compromise (and the synergistic combination and interaction thereof). None of these factors can be quantified with precision and, more than ever, weighing their potential importance will depend on clinical acumen and judgement. We believe that cognitive screening tools

(including the MoCA) can provide a semblance of structure to assess cognition even in these challenging conditions, assuming more significant issues are ruled out (e.g., disordered arousal) or accounted for (e.g., sensory difficulties). If such tools are used, the goal is to generate hypotheses about the cognitive status of the patient, and the interpretation of the findings will depend on the clinician's observations of the patient (alertness, orientation, confusion, anxiety, sensory issues, etc.). Clearly, interpretation of a patient's clinical status should not be based on the number written at the bottom of the page in such adverse testing conditions. Instead, the MoCA (or other screening tests) can be used as a familiar vehicle to elicit behaviours to be observed and interpreted, to generate hypotheses, and to plan immediate next steps in care delivery until a more comprehensive follow-up cognitive assessment can be conducted in more ideal testing conditions.

## ACKNOWLEDGMENTS

### Conflicts of Interest

The authors report no conflicts of interest.

### Author Contributions

All authors contributed to the concept and preparation of the manuscript.

### Sponsor's Role

None.

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