

How to Navigate the Virtual Care Assessment

Part 1: Triage & Challenges in the Frail Elderly

Dr. Elizabeth Niedra

Dr. Christa Sinclair Mills

Objectives

- Understand the unique challenges of virtual care for the frail elderly
- Learn to triage virtual versus in-person support in pandemic circumstances
- Explore strategies for enhancing the safety of virtual care
- Tips & tricks for the essential in-person home visit

Conflicts of Interest

Elizabeth Niedra - None to declare.

Christa Sinclair Mills - None to declare.

Who We Are - A Caveat



Interdisciplinary healthcare for homebound seniors

- Home-based primary care for frail adults in downtown Toronto
- Average caseload 400-500 patients (600-800 annualized)
- Interprofessional longitudinal care:
 - 2 administrators
 - 7 physicians
 - 2 nurse practitioners
 - 2 social workers
 - 3 occupational therapists
 - 1 physiotherapist

Our Population: The Frail, Very Elderly and Homebound

Compared to the overall elderly population, homebound patients have:



Higher rates of cardiovascular, metabolic, cerebrovascular and musculoskeletal diseases



Higher chronic medication use



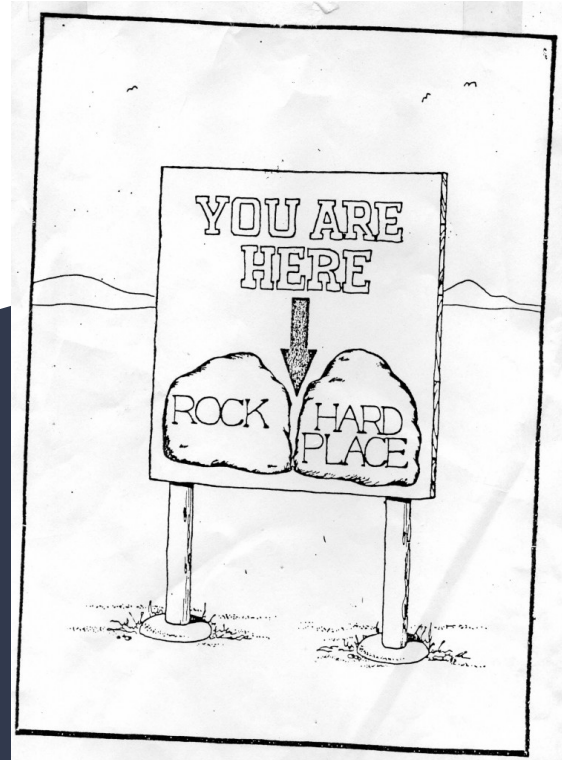
Higher ED use, and twice the rate of annual hospitalizations



Higher incidence of cognitive impairment, depression and dementia

Our Pandemic Challenge

- Prevent the spread of COVID19 among our high-risk patients and staff
- Maintain safe and patient-centred care for this uniquely vulnerable and isolated population



The Ideal Virtual Care Encounter

Provider

Adequate technological resources and literacy

Logistical flexibility

Comfort providing virtual advice

Patient

Known to provider, and/or reliable historian

Technological resources
eg. access to internet/telephone, smart device

Intact sensorium and motor abilities

Problem

Not physical exam-dependent

Well-defined symptoms

Absence of confounders and yellow flags

The Patient in Your Appointment Book

An 86 year old male patient in your practice requires follow-up after discharge from hospital for a COPD exacerbation.

The Patient in his Home



The Patient in his Home



Challenges to the Virtual Care of the Elderly

HELLOOOO



CAN YOU HEAR ME?

www.generabot.net

Sensory deficits: Limited hearing, vision, proprioception

Cognitive limitations: MCI/Dementia, Aphasia

Functional motor deficits: Gait issues limiting ability to reach telephone, praxis, fine motor coordination

Social frailty: Limited access to internet or smart devices, limited social supports to assist with virtual care, low education and/or technical literacy

Challenges to the Virtual Care of the Elderly

For the most frail patient, virtual care may not overcome vulnerabilities as one would hope, but in fact serve to accentuate them.

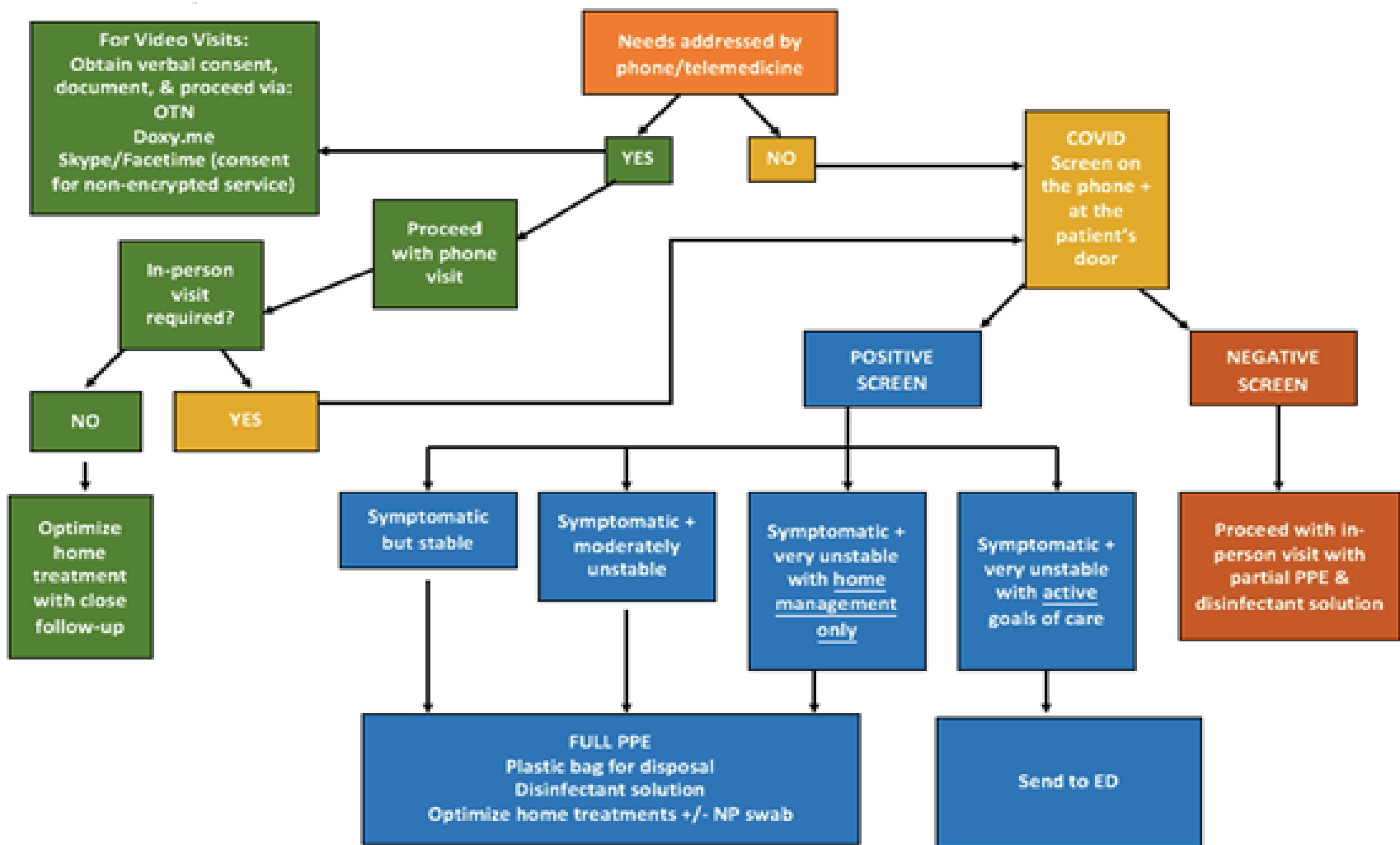


Our Approach

Virtual care where *possible*

In-person care when *essential*

Creative adaptations to keep our patients & staff safe



The Ideal Virtual Care Encounter

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Patient

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eg. access to internet/telephone, smart device

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The “Enhanced” Virtual Visit:

- Telephone or more rarely, video interview
- Enlist a support person or collateral historian where possible
 - This may involve separate calls to multiple reporters
 - Capitalize on coordinated encounters; ie. the virtual family meeting
- Make use of home care!
 - LHIN nursing for examination procedures and a clinical eye, if already visiting the home
 - At-home lab, XR, US, PT/OT, SLP and more



The “Enhanced” Virtual Visit



- Increased frequency of follow-up phone contact
- Identify patients made more vulnerable by pandemic circumstances
 - Consider the *preventative* in-person encounter
- “Friendly visitor” phone check-ins

Briefly...

- Virtual care *can* be an appropriate bridge for frail, homebound seniors, but: **virtual care where *possible*, still in-person care where *essential***
- Know when to manage by phone, and when an in-person assessment is needed
- Use simple strategies to mitigate the risks of telemedicine care
- Keep yourself and patients safe, for home-based pandemic care

Questions? Email us!

eniedra@vha.ca

csinclairmills@vha.ca

Thank you!



From the Couch to the Screen: Telepsychiatry for Frail, Homebound Older Adults

Sarah Colman MD, FRCPC

Geriatric Psychiatrist, Centre for Addiction and
Mental Health

Assistant Professor, Department of Psychiatry,
University of Toronto

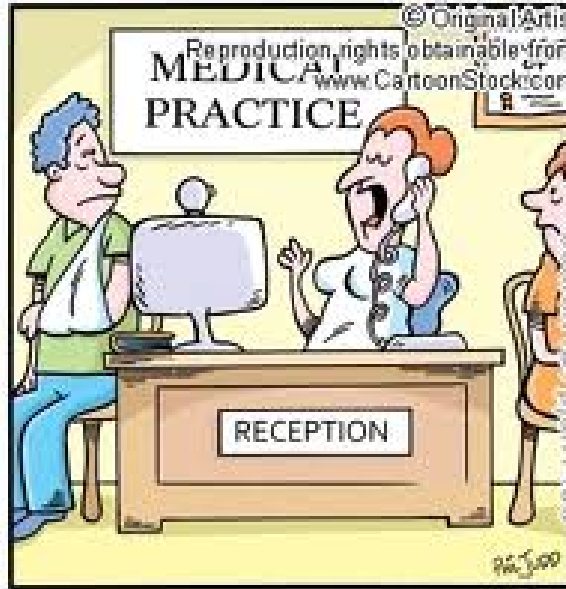


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Telepsychiatry



"No, the doctor doesn't do house calls. But he does do skype calls! "

Provision of psychiatric treatment via live, interactive videoconferencing

Shore 2013



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“Closed-circuit television has been introduced into the field of mental hygiene as a medium for the administration of therapy to a mass audience. The present evidence indicates that that the use of this type of television may promote the development of new and more effective methods for the treatment of the mentally ill.”

Tucker, H, Lewis, RB, Martin, GL. Television therapy: effectiveness of closed-circuit television as a medium for therapy in the mentally ill. *AMA Arch Neurol Psychiatry*. **1957**;77(1):57–69.



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Telepsychiatry / Telemental Health

- Employed since the 1950s
- Past decade
 - Extension of telepsychiatry services from institutional settings to private offices and homes
- Initial scientific literature
 - Feasible? Yes
 - Cost saving? Yes
- Now, exploration of strengths and weaknesses

Shore 2013



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CAT

Off the couch, onto the screen: Is the shift to virtual mental health care here to stay?



By **Nadine Yousif** Local Journalism Initiative Reporter
Sun., Oct. 4, 2020 | 7 min. read



Goldbloom, D, Grazer D. Telepsychiatry 2.0. CJP Volume: 62 issue: 10, page(s): 688-689 October 2017



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Homebound Seniors

“If leaving the home requires substantial effort or assistance and if this limitation is due to an illness or injury. The individuals who meet this definition leave home briefly and infrequently or leave only when in need of medical care.”

~ Medicare Definition

Qiu et al 2010



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Homebound Seniors

Unable to attend office visits

Increased utilization of ED

Increased hospitalization



Zimmer et al 1985, Wajnberg et al 2010



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1948 W. Eugene Smith
From Dr. Nowaczyński's May 2012 Lecture



Ontario Telemedicine Network

- One of the largest telemedicine networks in the world
- Two-way videoconferencing
- Secure
- Telehealth nurse goes to the patient's homes, physician calls in from office
- Patients can also link directly with physician, with no intermediary*

OTNresults.ca



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Practical Recommendations

- Back up number in case of technological failure
- Know your patients address and key contact person prior to proceeding
- Have a plan for managing safety issues
 - SI
 - HI
- Safety concerns secondary to cognitive impairment

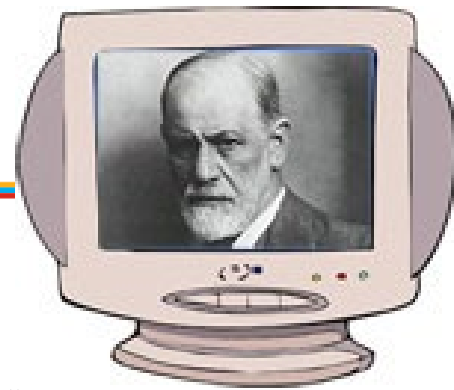


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Resources



- Telemental Health Guide
 - www.tmhguide.org
- American Telemedicine Association’s “Practice Guidelines for Videoconferencing-Based Telemental Health”
 - www.americantelemed.org
- <https://www.cpso.on.ca/Physicians/Policies-Guidance/Policies/Telemedicine/Advice-to-the-Profession-Telemedicine>
- <https://www.cmpa-acpm.ca/en/covid19#section-virtual-care>

Roadtojustice.org



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The Virtual Geriatric Cognitive Assessment: Tools & Strategies

Angela Golas MD, FRCPC

Geriatric Psychiatrist, Centre for Addiction and
Mental Health

Assistant Professor, Department of Psychiatry,
University of Toronto



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Immediate Imperative: Risks of Age & Diagnosis

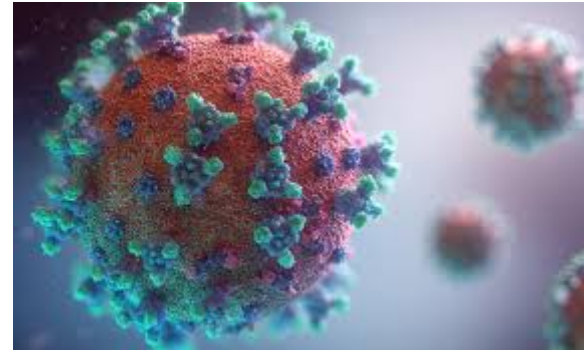
[Comments \(1\)](#)

PREEXISTING COMORBIDITIES PREDICTING SEVERE COVID-19 IN OLDERADULTS IN THE UK BIOBANK COMMUNITY COHORT

Janice L Atkins, Jane AH Masoli, Joao Delgado,  Luke C Pilling, Chia-Ling C Kuo, George Kuchel, David Melzer

doi: <https://doi.org/10.1101/2020.05.06.20092700>

“...in adjusted models, COVID-19 patients were more likely than other participants to have **pre-existing dementia (OR=3.07 95% CI 1.71 to 5.50)**, COPD (OR= 1.82 CI 1.33 to 2.49), depression (OR=1.81 CI 1.36 to 2.40), type 2 diabetes (OR=1.70 CI 1.30 to 2.21), chronic kidney disease and atrial fibrillation.”



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Cognitive Assessment

Received: 12 February 2020 | Revised: 3 March 2020 | Accepted: 9 April 2020
DOI: 10.1002/alz.12105

Alzheimer's & Dementia
THE JOURNAL OF THE ALZHEIMER'S ASSOCIATION

PERSPECTIVE

Recommendations of the 5th Canadian Consensus Conference on the diagnosis and treatment of dementia

Zahinoor Ismail¹ | Sandra E. Black² | Richard Camicioli³ | Howard Chertkow⁴ | Nathan Herrmann⁵ | Robert Laforce Jr.⁶ | Manuel Montero-Odasso^{7,8} | Kenneth Rockwood⁹ | Pedro Rosa-Neto¹⁰ | Dallas Seitz¹¹ | Saskia Sivananthan¹² | Eric E. Smith¹¹ | Jean-Paul Soucy¹³ | Isabelle Vedel¹⁴ | Serge Gauthier¹⁵ | the CCCDT5 participants

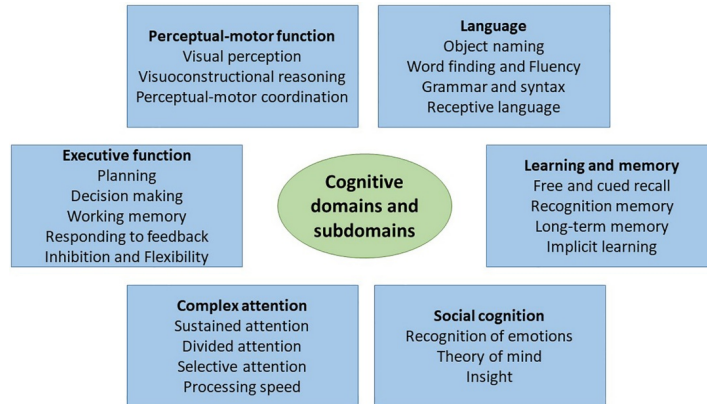
September 08, 2015; 85 (10) CONTEMPORARY ISSUES

Improving clinical cognitive testing

Report of the AAN Behavioral Neurology Section Workgroup

Kirk R. Daffner, Seth A. Gale, A.M. Barrett, Bradley F. Boeve, Anjan Chatterjee, H. Branch Coslett, Mark D'Esposito, Glen R. Finney, Darren R. Gitelman, John J. Hart, Alan J. Lerner, Kimford J. Meador, Alison C. Pietras, Kytja S. Voeller, Daniel I. Kaufer

First published July 10, 2015, DOI: <https://doi.org/10.1212/WNL.0000000000001763>



- Detailed clinical history – pt & informant
- Cognitive testing
- Affective history
- Functional status
- Behavioural history
- Medical history
- General neurological exam
- Investigations



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Logistics

Reduce frustration from connectivity issues & optimize exam findings



Internet speed test
(384 Kbps down/uplink)



Screen size 100%

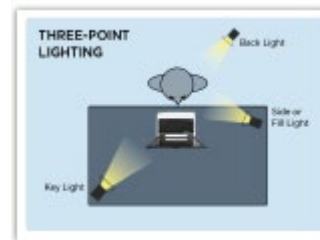
Lighting, colours, muting
- HIPPA-compliance

Clinician preparedness:

- Lighting, colours
- Time lags
- back-up tel #'s (pt, collateral, translator)
- Avoiding echo/feedback

Pt preparedness:

- reminder calls, “dry-run” of video platform prior to appointment



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Environmental Considerations



- ✓ Quiet, private testing environment
- ✓ Silence other devices
- ✓ No orientation prompts
- ✓ Minimize assistance from family members
- ✓ Screenshare copies of testing materials

Perceptual difficulties and slower internet speeds are correlated to lower test scores in videoconferenced environments

(Gentry, Lapid & Rummans *et al.* 2019;27(2):109-127)



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Patient Considerations

Ethical adoption of technology

- Limits of confidentiality
- Two-factor verification
- Safety concerns (“DISH”, elder abuse)
- Alternate modes of contact
- Ensure patient autonomy
- Assessment structure, number



Robillard JM *et al.* *Alzheimers Dement.* 2018;14(9):1104-1113.



- ✓ Age
- ✓ Education
- ✓ Visual acuity
- ✓ Hearing acuity
- ✓ Motor function
- ✓ Linguistic and cultural factors
- ✓ Strategies to foster alliance



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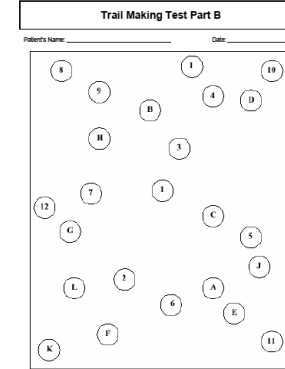
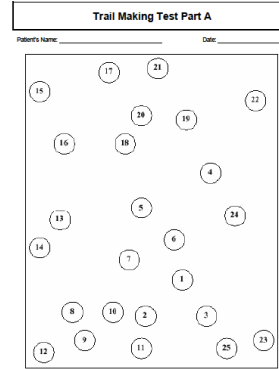
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Telephone-based Cognitive Assessment

MONTREAL COGNITIVE ASSESSMENT / MoCA-BLIND
Version 7.1 Original Version

Name: _____
Education: _____
Sex: _____
Date of birth: _____
Date: _____

MEMORY	FACE	VELVET	CHURCH	DAISY	RED	POINTS	
Read list of words, subject must repeat them. Do 2 trials even if 1st trial is successful. Do a recall after 5 minutes.	1st trial					No points	
	2nd trial						
ATTENTION							
Read list of digits (1 digit/sec) Subject has to repeat them in the forward order [] 2 1 8 5 4 Subject has to repeat them in the backward order [] 7 4 2						_/ 2	
Read list of letters. The subject must tap with his hand at each letter A. No point if ≥ 2 errors [] F B A C M N A A J K L B A F A K D E A A A J A M O F A A B						_/ 1	
Serial 7 subtraction starting at 100 [] 93 [] 86 [] 79 [] 72 [] 65 4 or 5 correct subtractions: 3 pts, 2 or 3 correct: 2 pts, 1 correct: 1 pt, 0 correct: 0 pt						_/ 3	
LANGUAGE							
Repeat: I only know that John is the one to help today. [] The cat always hid under the couch when dogs were in the room. []						_/ 2	
Fluency / Name maximum number of words in one minute that begin with the letter F [] _____ (N ≥ 11 words)						_/ 1	
ABSTRACTION							
Similarity between e.g. banana - orange = fruit [] train - bicycle [] watch - ruler						_/ 2	
DELAYED RECALL	Has to recall words	FACE	VELVET	CHURCH	DAISY	RED	Points for UNCLE recall only
Optional	With no cue	[]	[]	[]	[]	[]	_/ 5
	Category cue						
	Multiple choice cue						
ORIENTATION	[] Date	[] Month	[] Year	[] Day	[] Place	[] City	_/ 6
© Z. Nasreddine MD www.mocatest.org Normal $\geq 18 / 22$						TOTAL	_/ 22
Administered by: _____						Add 1 point if ≤ 12 yr edu	



Salib E, McCarthy J. *Int J Geriatr Psych* 2002;17(12):1157-1161.

Animal names (semantic fluency, executive function, processing speed

- Adv: Minimal language, culture, education bias

Cutoff <19, for MCI sensitivity = 63%, specificity

98%



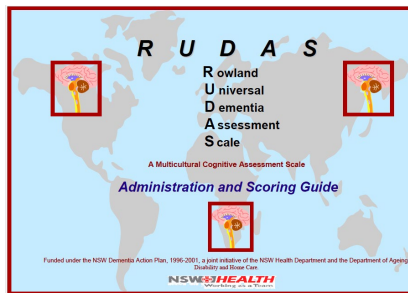
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Video-based Cognitive Assessment

R U D A S	
<small>The Rowland Universal Dementia Assessment Scale: A Multicultural Cognitive Assessment Scale (Storer, Rowland, Clark, Crawford & Dickson, 2004). International Psychogeriatrics, 16 (1), 15-31</small>	
Date: ___/___/___ Patient Name: _____	
Item	Max Score
Memory	
1. (Instructions) I want you to imagine that we are going shopping. Here is a list of grocery items. I would like you to remember the following items which we need to get from the shop. When we get to the shop in about 5 mins. time I will ask you what it is that we have to buy. You must remember the list for me Tea, Cooking Oil, Eggs, Soap Please repeat this list for me (ask person to repeat the list 3 times). (If person did not repeat all four words, repeat the list until the person has learned them and can repeat them, or, up to a maximum of five times)	
Visuospatial Orientation	
2. I am going to ask you to identify/show me different parts of the body. (Correct = 1). Once the person correctly answers 5 parts of this question, do not continue as the maximum score is 5.	
(1) show me your right foot	.....1
(2) show me your left hand	.....1
(3) with your right hand touch your left shoulder	.....1
(4) with your left hand touch your right ear	.....1
(5) which is (indicate/point to) my left knee	.....1
(6) which is (indicate/point to) my right elbow	.....1
(7) with your right hand indicate/point to my left eye	.....1
(8) with your left hand indicate/point to my left foot	.....1
	...5
Praxis	
3. I am going to show you an action/exercise with my hands. I want you to watch me and copy what I do. Copy me when I do this ... (One hand in fist, the other palm down on table - alternate simultaneously.) Now do it with me. Now I would like you to keep doing this action at this pace until I tell you to stop - approximately 10 seconds. (Demonstrate at moderate walking pace).	
Score as:	
Normal = 2 (very few if any errors; self-corrected, progressively better; good maintenance; only very slight lack of synchrony between hands)	
Partially Adequate = 1 (noticeable errors with some attempt to self-correct; some attempt at maintenance; poor synchrony)	
Failed = 0 (cannot do the task; no maintenance; no attempt whatsoever)	
	...2
Visuoconstructional Drawing	
4. Please draw this picture exactly as it looks to you (Show cube on back of page). (Tes = 1)	
Score as:	
(1) Has person drawn a picture based on a square?	.....1
(2) Do all internal lines appear in person's drawing?	.....1
(3) Do all external lines appear in person's drawing?	.....1
	...3
Judgment	
5. You are standing on the side of a busy street. There is no pedestrian crossing and no traffic lights. Tell me what you would do to get across to the other side of the road safely. (If person gives incomplete response that does not address both parts of answer, use prompt: "Is there anything else you would do?") Record exactly what patient says and circle all parts of response which were prompted.	
Score as:	
Did person indicate that they would look for traffic? (YES = 2; YES PROMPTED = 1; NO = 0)	.....2
Did person make any additional safety proposals? (YES = 2; YES PROMPTED = 1; NO = 0)	.....2
	...4



Cut-off: 23/30

Interpret scores
<22 with caution in
test takers with a
physical disability

- Memory
- Visuospatial orientation
- Praxis
- Visuoconstructional drawing (cube copy)
- Judgment
- Language (animal fluency)



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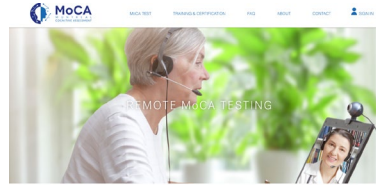
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Video-based Cognitive Assessment

MONTREAL COGNITIVE ASSESSMENT (MOCA)
Version 7.3 Original Version

NAME: _____ Date of birth: _____
Education: _____ Sex: _____ DATE: _____

VISUOSPATIAL / EXECUTIVE		Copy cube (3 points)	POINTS
		Draw CLOCK (Ten past eleven) (3 points)	
NAMING		Contour	POINTS
		Numbers	POINTS
MEMORY		Hands	POINTS
Read list of words, subject must repeat them. Do 2 trials, even if 1st trial is successful. Do a recall after 5 minutes.		FACE VELVET CHURCH DAISY RED	No points
ATTENTION			POINTS
Read list of digits (1 digit) sec. Subject has to repeat them in the forward order [] 2] 8 5 4 Subject has to repeat them in the backward order [] 7 4 2			
Read list of letters. The subject must tap with his hand at each letter A. No points if ≥ 3 errors [] F B A C M N A A J K L B A F A K D E A A A J A M O F A A B			
Serial 7 subtraction starting at 100 [] 93 [] 86 [] 79 [] 72 [] 65			
4 or 5 correct subtractions: 3 pts , 2 or 3 correct: 2 pts , 1 correct: 1 pt , 0 correct: 0 pt			
LANGUAGE			POINTS
Repeat: I only know that John is the one to help today. [] The cat always hid under the couch when dogs were in the room. []			
Fluency / Name maximum number of words in one minute that begin with the letter F [] _____ (N ≥ 11 words)			
ABSTRACTION			POINTS
Similarity between e.g. banana - orange = fruit [] train - bicycle [] watch - ruler			
DELAYED RECALL			POINTS
Has to recall words WITH NO CUE [] [] [] [] [] [] Points for UNCLUED recall only			
Optional Category cue Multiple choice cue			
ORIENTATION			POINTS
[] Date [] Month [] Year [] Day [] Place [] City			
© Z. Nasreddine MD www.mocatet.org Normal ≥ 26 / 30 TOTAL Add 1 point if ≤ 12 yr edu			



Remote MoCa Testing

WHAT is the BNA-SF...

The Behavioural Neurology Assessment – Short Form (BNA-SF) is a shorter form of the TorCA and is a 20-30 minute cognitive assessment tool. It is typically used in patients with mild to moderate stage dementia, and is also collected as a part of the Dementia Clinical Research Database when the TorCA is not appropriate. This BNA-SF examines the domains depicted below.

[Register here to download the BNA-SF.](#)



Attention



Memory



Language



Visuospatial Function



Executive Function



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Use of Interpreters

- Professional interpreters
- Explain facilitator role to test taker
- Ensure correct dialect
- Familiarize interpreter with assessment
- Importance of concurrent and precise interpreting

- Debrief: clarify potential areas of cultural bias



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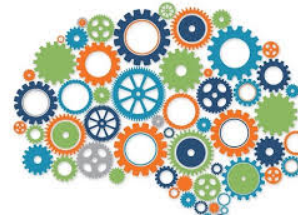
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Take-home Messages

Prioritize **clinical interview data** over videoconferenced assessment data

Research: Need more evidence-based guidance on utility, validity, efficacy, tolerability, safety of virtual cognitive assessments

Ethics: potential harm to patient in interpreting results from remote assessments



Geddes et al. <https://alz-journals.onlinelibrary.wiley.com/doi/epdf/10.1002/dad2.12111>



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Resources

American Psychological Association. Office and technology checklist for telepsychological services. <https://www.apa.org/practice/programs/dmhi/research-information/telepsychological-services-checklist>.

Daffner, *et al.* Improving clinical cognitive testing: Report of the AAN Behavioral Neurology Section Workgroup *Neurology*: 2015; 85(10) DOI: <https://doi.org/10.1212/WNL.0000000000001763>

Clark, St. John. Virtual approaches to cognitive screening during pandemics. *CGS Journal of CME* 2020:10(1). www.geriatricsjournal.ca

Geddes *et al.* Remote cognitive and behavioral assessment: report of the Alzheimer Society of Canada Task Force on dementia care best practices for COVID-19. (<https://alz-journals.onlinelibrary.wiley.com/doi/epdf/10.1002/dad2.12111>)



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Tips and Tricks for Essential Home Visits



Tips and Tricks for Essential Home Visits



House Calls PPE Kit: Stored in trunk of car or bike basket

1. “Clean” bin: Holds all appropriate PPE in “clean” environment

- Paper towel with disinfectant spray or Cavi wipes if available
- Face shield (cleaned)
- Supply of masks, gloves, gowns, hair covers, swabs Disposal/garbage bags
- Hand sanitizer
- Ziploc bags for smartphone (if may be used during visit)

2. “Dirty” bin: For doffing used/uncleaned PPE

Tips and Tricks for Essential Home Visits



Tips and Tricks for Essential Home Visits

Pearls for PPE in the Home Setting:

- If possible, use one mask per series of visits
- Always change masks after a patient who is a person under investigation (PUI) or confirmed COVID19+
- Do not touch or remove face shield for duration of visits, unless a patient is a PUI or COVID+. In this case, clean/change face shields before and after assessing the PUI/COVID+ patient.
- Remember to disinfect any surface contact (including car/steering wheel, trunk or bike handles) when returning from a visit
- Consider wearing scrubs or designated HV clothes to visits, doff and wash immediately after use and avoid tracking through home.
- Consider showering immediately after returning from any in-person visit.

Tips and Tricks for Essential Home Visits

What not to bring to a home visit, during COVID19:

- Laptops/backpack
- Non-essential medical equipment, adjusted to anticipated visit needs
- Non-essential coats/scarves/outerwear
- Avoid sitting or removing/storing items from your person while in the home

Charting during home visits:

- Do all hands-off interviewing by phone prior to or after the visit, if possible
- Take mental notes and chart electronically after the visit in a “clean” environment
- Use your smartphone through a Ziploc bag if in-home note-taking is required; chart into a secure email or directly into the EMR

Briefly...

- Virtual care *can* be an appropriate bridge for frail, homebound seniors, but: **virtual care where *possible*, still in-person care where *essential***
- Know when to manage by phone, and when an in-person assessment is needed
- Use creative strategies to mitigate the risks of telemedicine care
- Keep yourself and patients safe, for home-based pandemic care

Questions? Email us!

eniedra@vha.ca

csinclairmills@vha.ca