How to Navigate a Virtual Cognitive Assessment

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Disclosures/CoI

- Research and Development Board of Cogniciti
- A developer of Toronto Cognitive Assessment (TorCA)
- Research grants from:
  a) Baycrest Foundation (from donors)
  b) Alzheimer Society of Canada
  c) CIHR
  d) Bial Foundation
  e) Ontario Brain Institute
  f) Westin Brain Institute
- Patent related to methods and kits for diagnosis of Alzheimer's disease vs frontotemporal dementia using blood biomarkers

Objectives

At the end of the session, participants will be able to do the following using OTN and Zoom:

- Perform a cognitive assessment virtually

- Administer cognitive tests virtually that require visual presentation of test stimuli and screen capture of drawings

Outline

- Demonstrate a virtual MMSE
- Review general principles that will enable healthcare professionals to administer any cognitive test virtually – as long as this is doable

Preparation for Virtual Cognitive Assessment

Patients require:

- 6-7 sheets of blank paper

- Pencil or pen

- Surface to write on

- Glasses (if needed)

- Hearing aids (if needed)

MMSE

Folstein MF, Folstein SE, McHugh PR: J Psychiatr Res 1975

Maximum Score	Score	
		MMSE

==Address== ==Floor of house or apartment==

ORIENTATION

| 5 | ____ | What is the (year) (season) (month) (date) (day) |
| 5 | ____ | Where are we: (country) (province) (city) (hospital) (floor) |

REGISTRATION

| 3 | ____ | Name 3 common objects ("Cat", "Apple", "Table")
Take 1 second to say each. Then ask the patient to repeat all 3 after you have said them.
Give 1 point for each correct answer. Then repeat them until he/she learns all 3.
Count trials and record. Trials: ____ |

ATTENTION AND CALCULATION

| 5 | ____ | Spell "world" backwards. The score is the number of letters in correct order (D__L__R__O__W__)
[Note: Instead of "world", the following may be used – subtract 7 from 100 and keep subtracting 7 from the result until you tell him/her to stop.] 1 point for each correct.
Stop at 5 answers. |

RECALL

| 3 | ____ | Ask for the 3 objects repeated above. Give 1 point for each answer. |

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LANGUAGE

2	____	Name a "pencil", and a "watch".	(2 points)
1	____	Repeat the following: "No ifs, ands, or buts."	(1 point)
3	____	Follow a 3-stage command: "Take the paper in your right hand, fold it in half, and put in on the floor".	(3 points)

READ AND OBEY THE FOLLOWING:

1	____	Close your eyes.	(1 point)
1	____	Write a sentence.	(1 point)
1	____	Copy the following design.	(1 point)

Total Score **/30**

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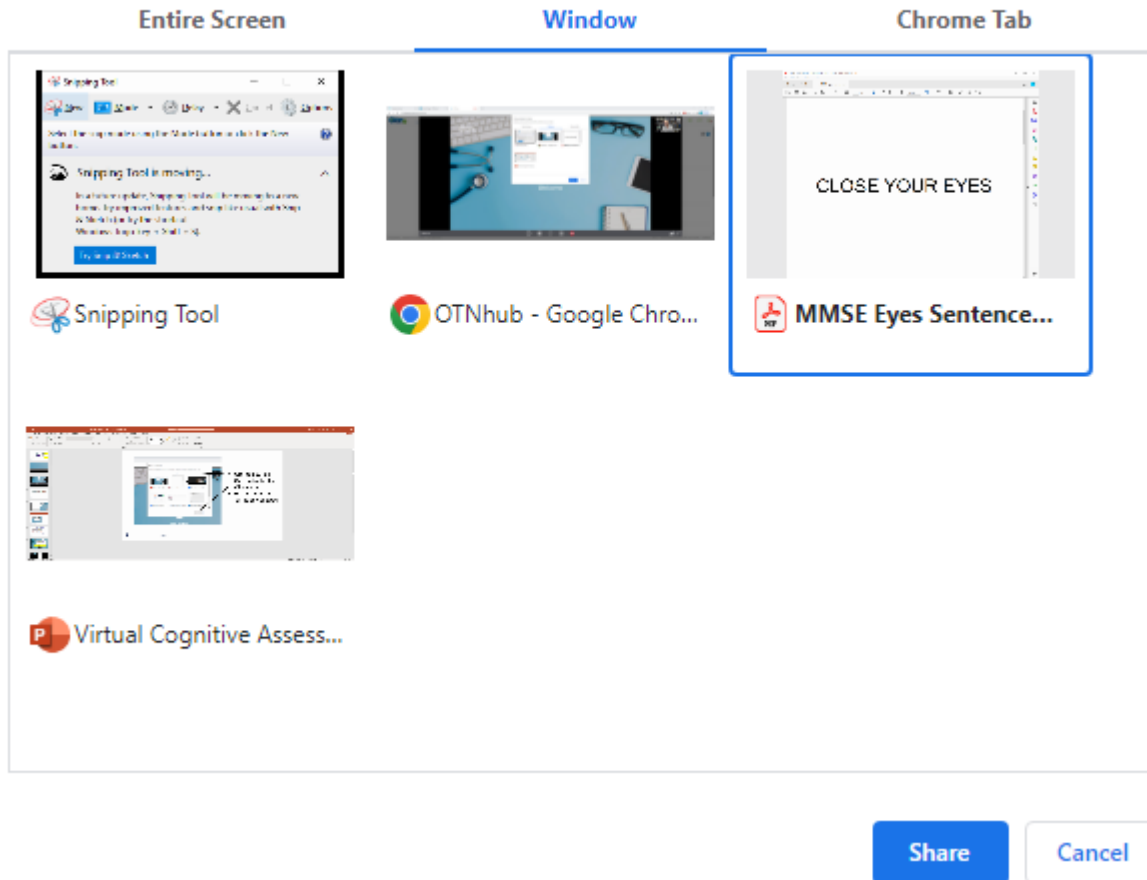Content Sharing Icon at Bottom of Screen

More Icon

Sharing Test Stimuli on OTN

- Open stimulus on screen and move to one side of screen so that OTN share button is visible
- Click on screen share icon
- Next slide shows what you see

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- Click Window
- Click on file to share
- Click share

Click on Share Icon
Click on Add File
Click on the file you want to share
Click Start Presenting
Click on the small figure to make it large
Scroll by clicking on arrow at top
When finished click on Stop Share

Different Content Sharing Icon at Bottom of Screen

LANGUAGE

2	____	Name a "pencil", and a "watch".	(2 points)
1	____	Repeat the following: "No ifs, ands, or buts."	(1 point)
3	____	Follow a 3-stage command: "Take the paper in your right hand, fold it in half, and put in on the floor".	(3 points)

READ AND OBEY THE FOLLOWING:

1	____	Close your eyes.	(1 point)
1	____	Write a sentence.	(1 point)
1	____	Copy the following design.	(1 point)

Total Score   **/30**

Show items using screen share

Accompanying person needs to hold out paper in front of patient

3

LANGUAGE

2   ____   Name a "pencil", and a "watch".   (2 points)
1   ____   Repeat the following: "No ifs, ands, or buts."   (1 point)
3   ____   Follow a 3-stage command: "Take the paper in your
    right hand, fold it in half, and put in on the floor".   (3 points)

READ AND OBEY THE FOLLOWING:

1   ____   Close your eyes.   (1 point)
1   ____   Write a sentence.   (1 point)
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Show items using screen share

Accompanying person needs to hold out paper in front of patient

Show items using screen share

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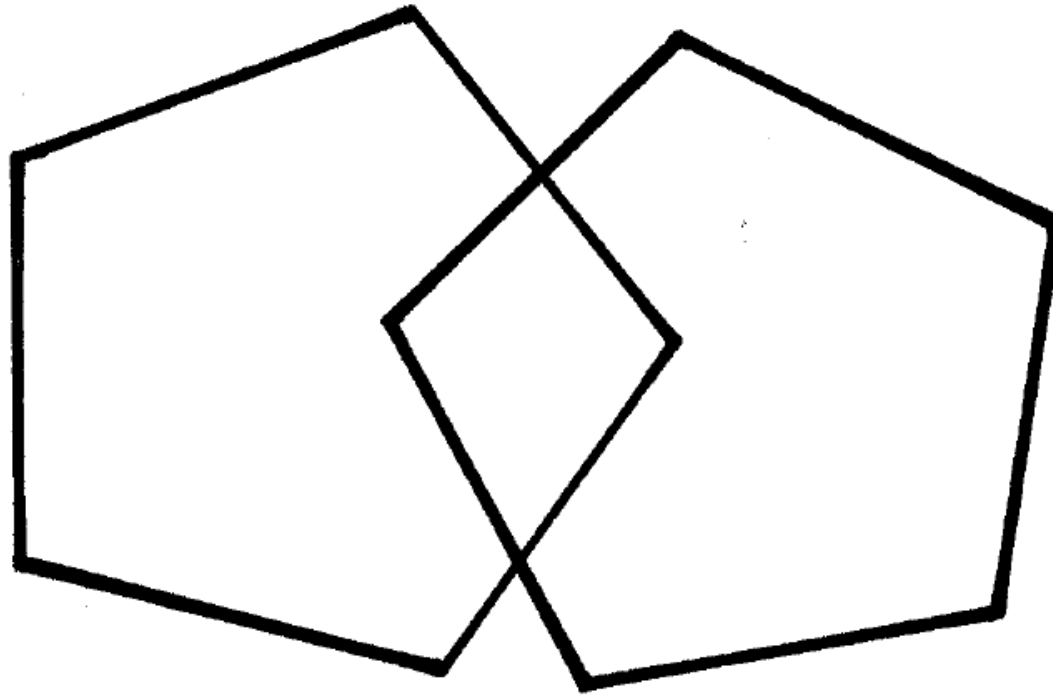
CLOSE YOUR EYES

CLOSE YOUR EYES

- When screen sharing this item do not go full screen. Only fill part of your screen so that you can see the patient's eyes

- Patient will see the command to close eyes in the middle of their screen

- For other shared items, use full screen for ease of advancing to the next screen

Write a sentence

Do a print screen and paste into WORD and print
(Same for drawings)

Copy the following design

General Principles that Apply to All Cognitive Tests

Items that require:
- Answering questions
- Following verbal instructions
- Drawing to command
- Drawing to copy
- Naming
- Drawing and receiving feedback when incorrect
- Pointing to correct item

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General Principles For Test Items That Require Answering Questions

- Simply ask the question

Example

- Testing auditory comprehension: "Is a hammer good for cutting wood?"

General Principles for test Items that Require Following Verbal Instructions

- Use same instructions as for in-person testing

Example

- Testing attention: Serial subtractions – "Begin at 100 and subtract 7 and keep taking away 7 from the next number until I say stop"

General Principles that Require Drawing to Command

Items that require drawing to command (eg clock drawing)

- Give instructions for drawing the item
- Ask patient to hold drawing up to screen and
  a) Do "Print Screen"
  b) Paste into WORD document
  c) Print and put in patient chart
.
Example

- Clock Drawing: "Draw a face of a clock, put in the numbers, and set the hands at 10 after 11"

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General Principles that Require Drawing to Copy

Items that require drawing to copy (eg cube)

- Share screen to show patient pdf of item to be copied
- Give instructions to copy the item
- Ask patient to hold drawing up to screen and
  a) Do "Print Screen"
  b) Paste into WORD document
  c) Print and put in patient chart

Example
- "Copy this item as best as you can"

General Principles that Require Naming Objects

Share screen to show patient pdf of item to be named
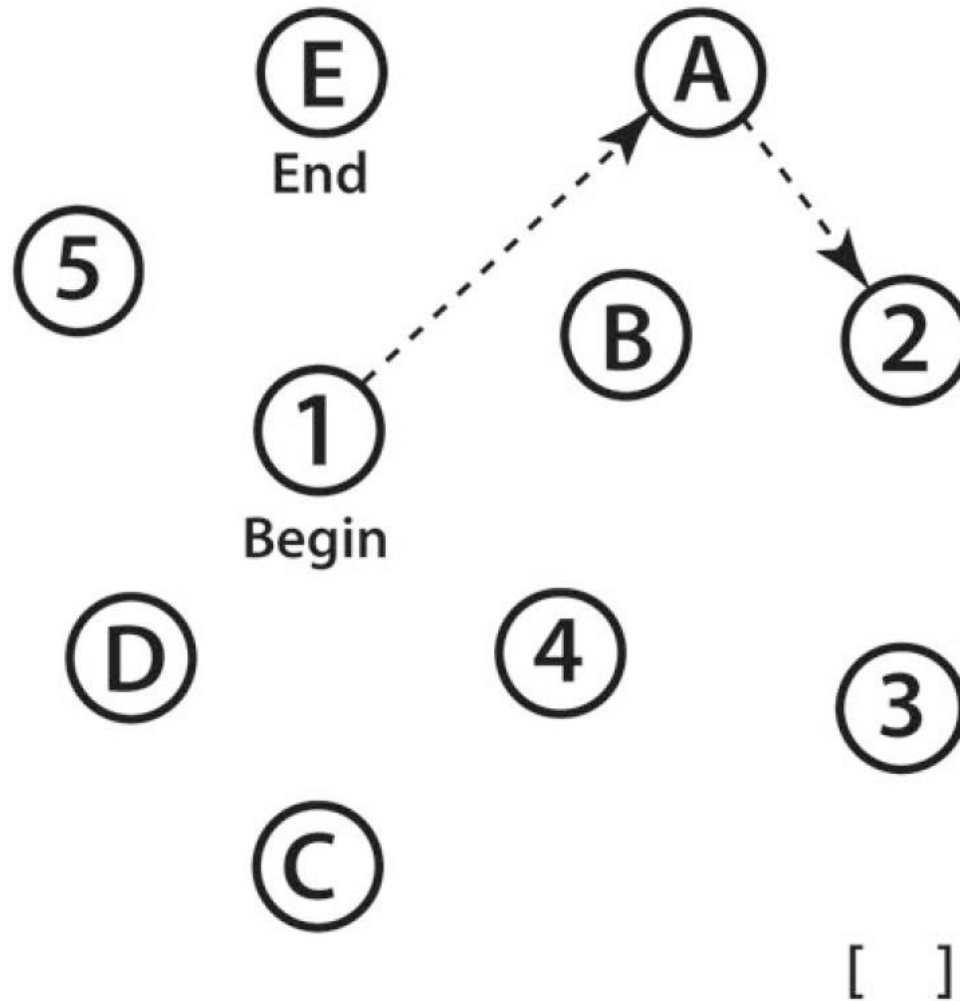
Examples in next slides

Other General Principles

Items that require:

• Drawing and receiving feedback while drawing (eg Trails A and B)

• Pointing to objects

NB: Can only administer with special software

From MoCA:
Need special software to administer virtually

Summary

Discussed the following:

- How to perform cognitive assessments virtually – using MMSE as an example

- General principles that will enable healthcare professionals to administer any cognitive test virtually – as long as this is doable

Thank you

Contact information for questions

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