7-Minute Medi-Cog

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Learning Objectives

- Articulate the value of a brief cognitive/pillbox skills screen to identify patients at risk for medication misadventures.
- Administer and score a brief cognitive screen that identifies clinically significant cognitive impairment.
- Administer a pillbox skills screen designed to identify patients who would benefit from pillbox education.
- Apply clinical judgment to the interpretation of a patient's performance on the Medi-Cog.
- Evaluate the Medi-Cog for applicability in various practice settings.

Self-Assessment Questions

1. How many points are awarded to a Clock Draw Test (CDT) in the Mini-Cog© scoring rubric?

   A. 0 point

   B. 1 point

   C. 2 points

   D. Either A or C

Self-Assessment Questions

2. In the Mini-Cog© scoring rubric, how many points are awarded for the correct recall of three words in the Three Item Recall (TIR)?

A. 1 point

B. 2 points

C. 3 points

Self-Assessment Questions

3. The Medi-Cog is comprised of which of the following screens?

A. Clock Draw Test (CDT)

B. Three Item Recall (TIR)

C. Medication Transfer Screen (MTS)

D. All of the above

Self-Assessment Questions

4. Which of the following screens have been validated? Which screen is a part of the public domain?

A. Medi-Cog/Mini-Cog

B. Mini-Cog/Medication Transfer Screen

C. Mini-Cog/Medi-Cog

D. Medication Transfer Screen/Medi-Cog

Self-Assessment Questions

5. A patient scores 1 of 5 points on the Medication Transfer Screen (MTS). Other than cognitive impairment, select a reason why the patient may have failed the screen.

A. The patient was tired when he was screened.

B. The patient is unable to read.

C. The patient had never done a task like this before and didn't understand the instructions.

D. The patient was not wearing his glasses.

E. All of the above

Med Safety Screening Strategy Needed for 77 Boomers +

- Medication errors injure over 1.5 million people a year.[1]

- Regimen non-adherence is associated with injury, higher healthcare expenditures, loss of quality of life.

- Health outcomes have been shown to improve for many patients who utilize a pillbox.[2]

- Our goal: use proactive *prevention* strategies.

- Implement swift and accurate ways to identify patients at risk for medication mismanagement.

1. http//www8nationalacademies.org/onpinews/newsitem.aspx?RecordID+11623. Accessed 3/1/2010
2. Zelikovsky N, et al. Perceived barriers to adherence among adolescent renal transplant candidates. Pediatr Transplant. 2008 May;12(3):300-8.

Safe Medication Management

- Limited validated screens to predict med adherence.
- Mini-Cog© is validated as a cognitive screen.
- Medi-Cog has not yet been validated. (Mini-Cog©+MTS)
- Medication Transfer Screen (MTS) was developed in the VA and is public domain. It has not been validated.
- Medi-Cog developed as a brief assessment of cognition, literacy, pillbox skills to:
  - Identify patients who have cognitive deficit
  - Alert for literacy deficits
  - Flag patients who would benefit from pillbox education

Mini-Cog© Method

- Three item recall (TIR) - screener names 3 unrelated objects (banana/sunrise/chair); patient repeats them back. Patient is told they will be asked to recall the words in two minutes.

- Clock drawing test (CDT) - subject is asked to draw the face of a clock, then to draw the hands of the clock depicting 11:10. "Ten minutes after eleven."

- After performing the CDT, the subject is asked to recall the 3 words.

Borson et al. J Am Geriatr Soc 2005;53:871-4.

Mini-Cog$^{©}$ Scoring

- ## Mini-Cog$^{©}$ – 5 points
  - Three Item Recall (TIR) - 1 point for each item recalled (0-3 possible)

  - Clock Draw Task - 2 points for a correct clock; if all numbers are not present, or not in correct sequence or position, the score is zero

- ## Passing score: $\geq$3
  - All 3 words of TIR   OR

  - Correct clock and recall of at least one word

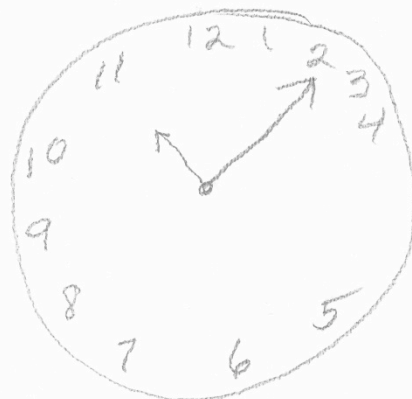# Mini-Cog© Administration & Scoring

Audience Participation

Medication Transfer Screen

- On the table write the number of pills as instructed into the correct compartments:

- **Example: TAKE ONE TABLET EVERY DAY AT BEDTIME** (Patient fills in remaining slots).

- **1. TAKE ONE TABLET EVERY DAY IN THE MORNING**

- **2. TAKE ONE TABLET 3 TIMES DAILY WITH MEALS**

- **3. TAKE TWO TABLETS M-W-F IN THE EVENING**

- **4. TAKE ONE-HALF TABLET ON SATURDAY AT BEDTIME**

- **5. How many pills total are in the pill box for the entire day of Saturday? __**

	S	M	T	W	Th	F	S
Morn							
Noon							
Eve							
Bed	1	1	1	1	1*	1*	1*

Score: 1 point for each MTS question (0 to 5 points)

3/3 TIR

2/2 CDT

MiniCog
score 5/5

TRANSFERING MEDICATION TO A PILL BOX

On the table below write the number of pills as instructed into the correct compartments:

Example: TAKE ONE TABLET EVERY DAY AT BEDTIME

1. TAKE ONE TABLET EVERY DAY IN THE MORNING   /

2. TAKE ONE TABLET 3 TIMES DAILY WITH MEALS   O

3. TAKE TWO TABLETS M-W-F IN THE EVENING   O

4. TAKE ONE-HALF TABLET ON SATURDAY AT BEDTIME   /

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Morn	3 /	3 /	3 /	3 /	3 /	3 /	3 /
Noon	/			/			
Eve	2			2		2	
Bed	1	1	1	1	1	1	1 ½

5. How many pills total are in the pill box for the entire day of Saturday? __5½__ /

MTS = 3/5
Minicog = 5/5
Medi-cog = 8/10

TIR 3/3

CDT 0/2

Mini-Cog 3/5
Score

TRANSFERING MEDICATION TO A PILL BOX

On the table below write the number of pills as instructed into the correct compartments:

Example: TAKE ONE TABLET EVERY DAY AT BEDTIME

1. TAKE ONE TABLET EVERY DAY IN THE MORNING   1

2. TAKE ONE TABLET 3 TIMES DAILY WITH MEALS   1

3. TAKE TWO TABLETS M-W-F IN THE EVENING   0

4. TAKE ONE-HALF TABLET ON SATURDAY AT BEDTIME   0

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Morn	1 1	1 1	(1	(1	1 1	(1	(1
Noon	1	1	1	1	1		1
Eve	1	1 1	1	1 1	1	1 1	½
Bed	1	1	1	1	1	1	1

5. How many pills total are in the pill box for the entire day of Saturday? 5½   1

MTS 3/5
score
Mini Cog 3/5
Medi-Cog Score 6/10

Medication Transfer (MTS) Administration & Scoring

Audience Participation

Medi-Cog

- Study results demonstrated that Medi-Cog screen scores correlated 0.72 with patient accuracy in loading medications in a pillbox.
- Screen utilized in various practice settings
  - At time of discharge from hospitals, LTC, SNF.
  - ALF admit and routine screen for self administered meds.
  - Community pharmacy
  - Senior centers screenings

- Anderson K, Jue SG, Madaras-Kelly KJ. Identifying Patients at Risk for Medication Mismanagement: Using Cognitive Screens to Predict a Patient's Accuracy in Filling a Pillbox. Consult Pharm 2008;June;23(6):259-72.

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