



***Thank you for Participating in our SGEC webinar!***

We appreciate your participation in our SGEC webinar series.

Webinar handouts and instructions are on the following pages. Below is an important announcement and request for all participants:

***Important Request:***

When you enter the webinar meeting you will be asked to enter your name.

Please enter either:

**Your Full Name** (First and Last as it appears on the Registration)

*or if you prefer*

**First Initial and Last Name**

Adobe® Acrobat® Connect™ Pro Meeting

**SGEC Webinar**

Enter as a Guest  
Type your name:

Enter with your login and password

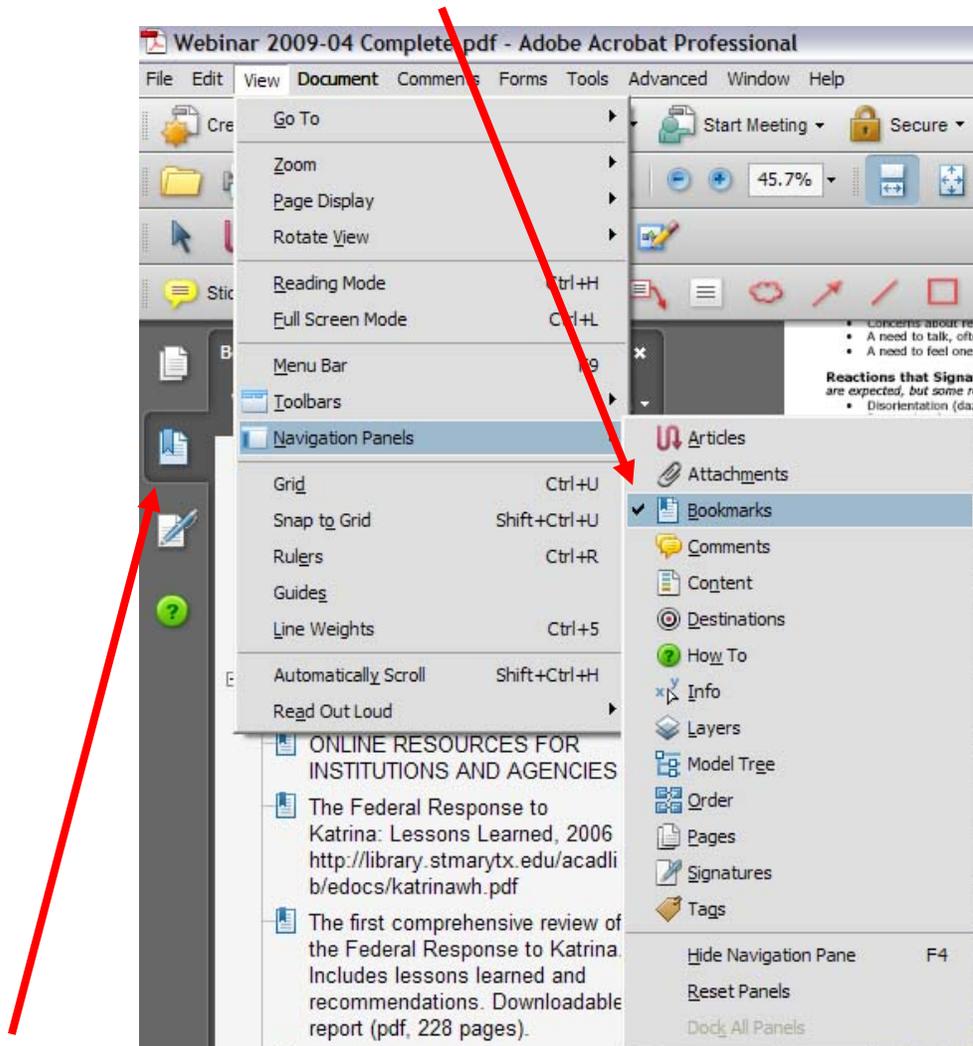
Detailed login instructions are on the following pages.

Thank you!

Christopher Motola  
Media Coordinator, Stanford Geriatric Education Center (SGEC)  
<http://sgec.stanford.edu>

Note: This PDF file contains several documents. To easily access and navigate to each document, open the BOOKMARKS feature of the Adobe Acrobat application.

View: Navigation Panels: Bookmarks



You can also click on the Bookmarks Icon

## **Webinar Technical Quick Reference Guide:**

### **Connect:**

To Connect to the Webinar:

1. Please visit our web site at:

<http://connectpro50192156.acrobat.com/sgec/>

The screenshot shows the Adobe Acrobat Connect Pro Meeting interface. At the top, it says "Adobe® Acrobat® Connect™ Pro Meeting". Below that, the title "SGEC Webinar" is displayed. There are two radio button options: "Enter as a Guest" (which is selected) and "Enter with your login and password". Under the "Enter as a Guest" option, there is a text input field labeled "Type your name:" and a button labeled "Enter Room". Below the radio buttons, there is a link for "Terms of Use and Privacy Policy" and a "Help" link. At the bottom of the interface, there is a copyright notice: "Copyright © 2001 - 2009 Adobe Systems Incorporated and its licensors. All rights reserved."

2. Select "Enter as a Guest," and type your name

<p style="text-align: center;"><b><u>IMPORTANT REQUEST:</u></b> Please enter your <b>Full Name (First and Last</b> as it appears on the Registration), <b>or if you prefer</b> <b>First Initial and Last Name.</b> Thank you!</p>
---

3. Click "Enter Room" and the webinar will start.

## TEST Your System in Advance (Before the Webinar):

We recommend that all users test the system in advance, to ensure that your computer system is compatible with the service.

1. Please visit our web site at:

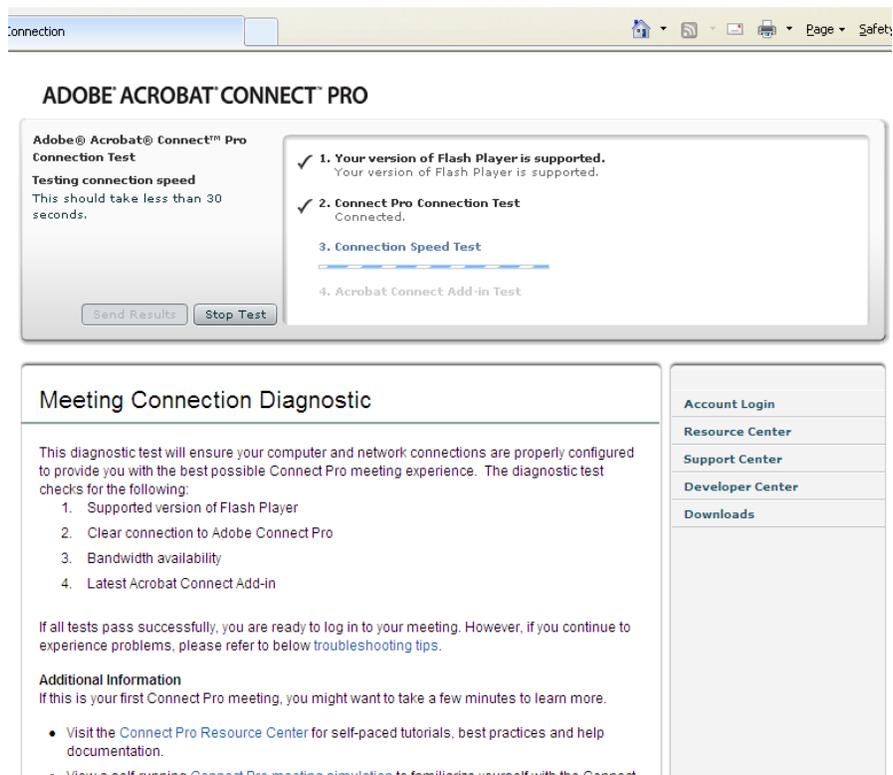
<http://connectpro50192156.acrobat.com/sgec/>

2. Click the "Help" link (small text on lower left).

3. If a pop up warning appears, you can choose either Yes or No.



On the next screen you should see whether your system is ready for the webinar ("ADOBE ACROBAT CONNECT PRO" Connection Test).

A screenshot of a web browser displaying the "ADOBE ACROBAT CONNECT PRO" Connection Test page. The browser's address bar shows "connection". The page has a light gray background with a white content area. At the top, it says "ADOBE ACROBAT CONNECT PRO". Below that, there's a section titled "Adobe® Acrobat® Connect™ Pro Connection Test" with a sub-heading "Testing connection speed" and a note "This should take less than 30 seconds." There are "Send Results" and "Stop Test" buttons. To the right, a list of test results is shown: 1. "Your version of Flash Player is supported." (checked), 2. "Connect Pro Connection Test Connected." (checked), 3. "Connection Speed Test" (with a progress bar), and 4. "Acrobat Connect Add-in Test". Below this is a "Meeting Connection Diagnostic" section with a detailed explanation of the test and a list of checks: 1. Supported version of Flash Player, 2. Clear connection to Adobe Connect Pro, 3. Bandwidth availability, and 4. Latest Acrobat Connect Add-in. It also includes "Additional Information" and a list of links: "Account Login", "Resource Center", "Support Center", "Developer Center", and "Downloads".

## Audio During the Webinar:

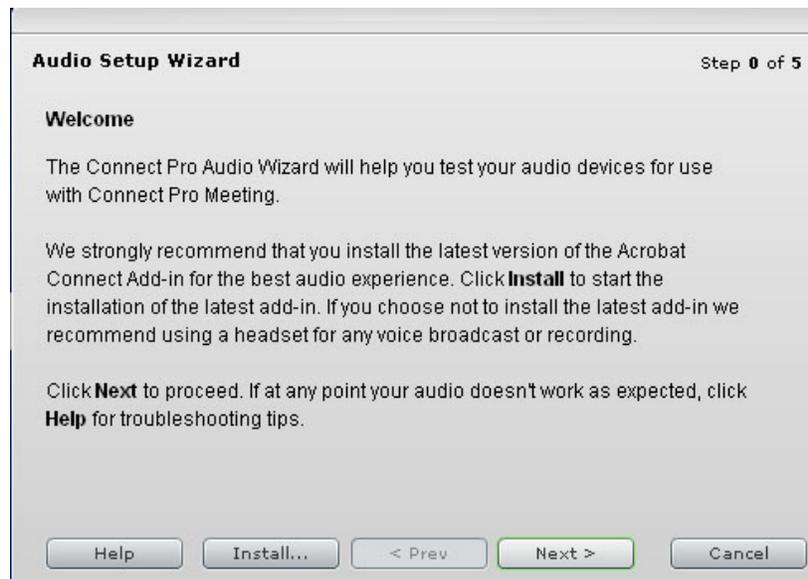
The webinar requires that you use a computer with a sound card in order to hear the participants. A microphone is optional (see below for methods of asking questions).

To test your computer sound, please use the Audio Setup Wizard.

Select: the “Meeting” menu, then “Manage My Settings” and “Audio Setup Wizard.”



Follow the instructions and guide to test your audio hardware.



If you don't have a microphone or don't want to use it you can cancel or skip the microphone tests.

## Chat Feature

During the Webinar, you can use the Chat feature to send a message to the Host, Presenter, and other participants.

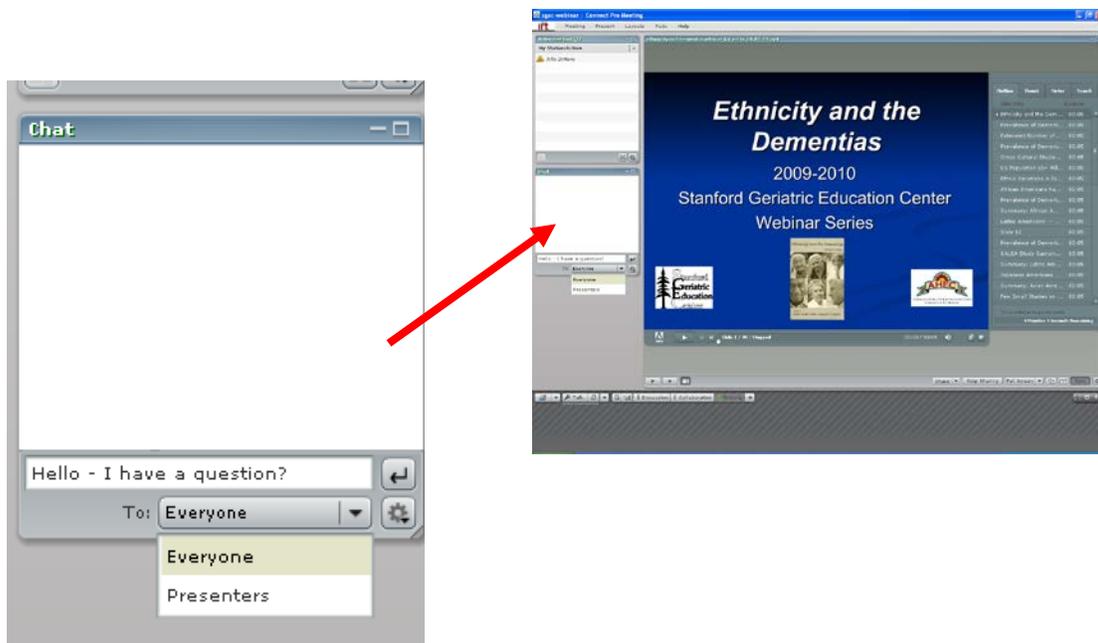
You can use the chat feature for technical and administrative questions and assistance such as:

- Video/Picture/Sound Issues
- Questions regarding CEUs, Registration

You can also ask questions to the Presenters about the topic and course material such as:

- Question about the current discussion topic or slide content
- Requesting more information or references/publications

Type your message into the text box and choose to send the message just the Presenters, or Everyone (including participants). Click ↵ or Press Enter on your keyboard to send the message.








**Stanford Geriatric Education Center**

**THE AMERICAN GERIATRICS SOCIETY**  
Dedicated to the Health of Older Americans

**Natividad MEDICAL CENTER**

**AHEC**  
CENTRAL COAST AREA HEALTH EDUCATION CENTER  
CALIFORNIA AHEC PROGRAM  
SAN DIEGO BORDER AREA HEALTH EDUCATION CENTER

*Webinar Series*

**Dementia Assessment and Family Caregiving, Part 2:  
Chinese**

**November 3, 2011**      **12:30 PM Pacific Time**

Sponsored by  
Stanford Geriatric Education Center  
in conjunction with  
American Geriatrics Society,  
California Area Health Education Centers,  
and  
Natividad Medical Center

- Steven Chao, M.D., PhD
- Dolores Gallagher-Thompson, PhD
- Benjamin Kao, MSW, LCSW
- Marian Tzuang, MSW

If you do not hear any audio, please use the audio set up wizard:  
Choose the "Meeting" menu (above, left),  
Then select "Manage my settings"  
and "Audio Setup Wizard"



This project is/was supported by funds from the Bureau of Health Professions (BHP), Health Resources and Services Administration (HRSA), Department of Health and Human Services (DHHS) under UB4HP19049, grant title: Geriatric Education Centers, total award amount: \$384,525. This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by the BHP, HRSA, DHHS or the U.S. Government.

**Care of Diverse Elders and their Families in Primary Care**  
**November 3, 2011 – WEBINAR SERIES**

**"Dementia Assessment and Family Caregiving, Part 2: Chinese and other Asian"**

**Natividad Medical Center CME Committee Planner Disclosure Statements:**

The following members of the CME Committee have indicated they have no conflicts of interest to disclose to the learners: Kathryn Rios, M.D.; Valerie Barnes, M.D.; Anthony Galicia, M.D.; Sandra G. Raff, R.N.; Sue Lindeman; Janet Bruman; Jane Finney; Tami Robertson; Judy Hyle, CCMEP; Christina Mourad and Kevin Williams.

**Stanford Geriatric Education Center Webinar Series Planner Disclosure Statements:**

The following members of the Stanford Geriatric Education Center Webinar Series Committee have indicated they have no conflicts of interest to disclose to the learners: Gwen Yeo, Ph.D. and John Beletz, MPH.

**Faculty Disclosure Statement:**

As part of our commercial guidelines, we are required to disclose if faculty have any affiliations or financial arrangements with any corporate organization relating to this presentation. Dr. Steven Chao, Dolores Gallagher-Thompson, Mr. Benjamin Kao and Ms. Marian Tzuang have indicated they have no conflicts of interest to disclose to the learners, relative to this topic.

Dr. Steven Chao, Dolores Gallagher-Thompson, Mr. Benjamin Kao and Ms. Marian Tzuang will inform you if they discuss anything off-label or currently under scientific research.

## Dolores E. Gallagher-Thompson, PhD, ABPP

**Dolores E. Gallagher-Thompson**, received her degree in clinical psychology/adult development and aging from the University of Southern California in 1979 and has worked in the field ever since as a practicing geropsychologist, conducting research, teaching, and providing clinical care to patients and families. She has been an NIH funded clinical researcher for the past 20 years and is most noted for her empirical studies on the efficacy of different types of psychosocial intervention to reduce stress and improve the psychological status of family caregivers of older adults with Alzheimer's disease or other forms of dementia. She recently completed the first efficacy trial of psychosocial interventions with Chinese American caregivers, and has pilot work in progress with Farsi-speaking Persian caregivers in the San Francisco Bay area. Her work on the development and evaluation of psychoeducational "coping classes" with caregivers has been translated into Spanish, Chinese, Japanese, and Persian. Dr. Gallagher-Thompson has authored over 150 papers in major journals in the field and has co-edited the critically well-received second edition of "Ethnicity and the Dementias" (with Gwen Yeo, senior editor) and the book "Innovative Interventions to Reduce Caregiver Distress" (David Coon, senior editor). She is currently co-editor in chief of the journal *Clinical Gerontologist*. She also serves in several volunteer positions with the Alzheimer's Association in northern California and is currently developing online intervention programs for caregivers of older persons with significant memory loss. She is a Professor of Research in the Department of Psychiatry and Behavioral Sciences at Stanford University School of Medicine, and Director of the Stanford GEC.

## Steven Chao, M.D., PhD

After finishing neurology residency from Stanford University hospital, Dr. Steven Chao has been working with Dr. Bruce Miller at UCSF Memory and Aging center evaluating variety of dementia patients, especially with Chinese speaking population in San Francisco in the last four years. His research interested is in early diagnosis of dementia and dementia in Chinese America.

Currently, Dr. Steven Chao is serving as a staff neurology at VA Palo Alto health care system. He spend two half day in clinic seeing WRIISC pt and TBI patients from the polytrauma network for second level TBI evaluations. The rest of the time, he work with the WRIISC team in conducting clinical research and seeing general neurology patients.

At the same time, he spend one day a week work at the Memory and Aging Center at UCSF seeing dementia patients in the China town outreach clinic and conducting research with the group.

## Marian Tzuang, MSW

**Marian Tzuang**, received her BSW from National Taiwan University and MSW from the University of California-Berkeley, with a concentration in gerontology. She is presently the Program Coordinator for the Stanford Geriatric Education Center (SGEC) and also the Project Coordinator for a research program to develop a fotonovela for Hispanic/Latino family caregivers (funded by the Alzheimer's Association). Further, she is the Editorial Coordinator for the journal, Clinical Gerontologist. Prior to joining SGEC, she worked as a legislative assistant in Taiwan, and has completed internships at On Lok Lifeways, Family Caregiver Alliance, and San Mateo County Adult Protective Services in the San Francisco Bay Area.

## Benjamin Kao, MSW, LCSW

**Benjamin Kao** started his career as front line social worker since 1995, received his master in social welfare degree from University of California, Berkeley in 1998 and obtained his California Licensed Clinical Social Worker license in 2004. He worked mostly with the Chinese population in San Francisco for the past 16 years in substance abuse, community mental health clinics, school based program with children, youth, adults and families. Since 2005, he has been working 4 days per week at On Lok Lifeways Senior Health as a Mental Health Clinician and 1 day private practice. He is experienced in providing psychotherapy, group therapy, mental health assessments, clinical consultation and crisis intervention with the Chinese population with mental health, substance abuse and family issues. Since working at On Lok, he had conducted numerous workshops and presentations regarding Dementia and managing Dementia related difficult behaviors to clinicians and family members.

## Q & A

- We now have some time for the presenters to answer your questions. if you have any questions, please use the “Chat” feature located on the left side of your screen.
- After the Q and A, We would like to ask each of the participants to answer the short evaluation questionnaire.

Please complete this short survey, We appreciate your feedback.

**NOTE:** Continuing Education Participants must complete a final survey in order to receive CEUs

[Link to Survey](#)



2011  
NOV

Thank You for Participating!  
We will send copies of slides by e-mail.

Please complete this short survey.  
We appreciate your feedback.

**NOTE:** Continuing Education Participants must complete a final survey in order to receive CEUs

[Link to Survey](#)

## Dementia Assessment and Family Caregiving Part 2: Chinese

**Steven Chao, MD, PhD**  
**Dolores Gallagher-Thompson, PhD, ABPP**  
**Benjamin Kao, LCSW, MSW**  
**Marian Tzuang, MSW**

*November 3, 2011*  
Stanford GEC 2011 Webinar Series

---

---

---

---

---

---

---

---

## Alzheimer Dementia in the U.S.

5.3 million people have Alzheimer's  
7th leading cause of death  
172 billion dollars in annual costs  
10.9 million unpaid caregivers

Alzheimer's Association 2010 Alzheimer's Disease Facts and Figures

---

---

---

---

---

---

---

---

## Leading Cause of Death in the U.S.

Leading Cause of Death	Percentage Change
Alzheimer's Disease	+46.1%
Stroke	-18.2%
Prostate Cancer	-8.7%
Breast Cancer	-2.6%
Heart Disease	-11.1%
HIV	-16.3%

Alzheimer's Association 2010 Alzheimer's Disease Facts and Figures

---

---

---

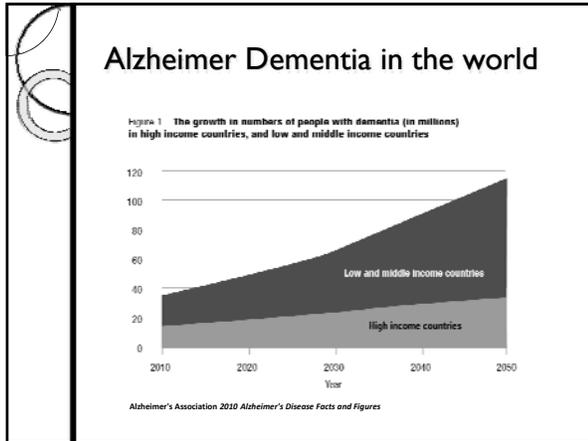
---

---

---

---

---



---

---

---

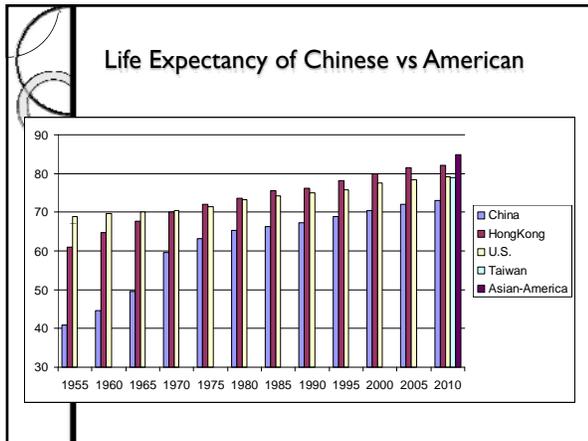
---

---

---

---

---



---

---

---

---

---

---

---

---

### Description of Neurodegenerative Diseases in Ancient China

- Yellow Emperor's Canon of Medicine (B.C. 425) described Parkinson like tremors and stiffness.
- Chinese idiom “返老还童” describes child-like behavior in elders
  - throwing a tantrum
  - saying “silly” things

黄帝内经

---

---

---

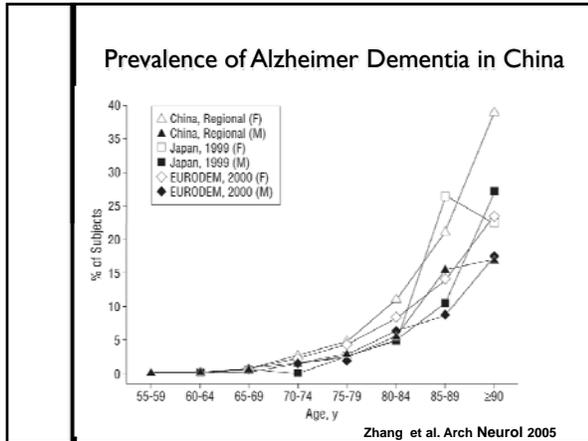
---

---

---

---

---




---

---

---

---

---

---

---

---

---

---

### Neurodegenerative Diseases in China

- Few reports on non-AD, and non-Vascular dementia
- Pathological study from China found Tauopathies (FTD, CBD, PSP) and Lewy body (DLB) in elders
- Accurate clinical diagnosis is needed for clinical trails




---

---

---

---

---

---

---

---

---

---

### Different types of Dementia

- Alzheimer's disease (AD)
- Dementia with Lewy Bodies (DLB)
  - Parkinson's disease w/ dementia
- Vascular dementia (VasD)
- Frontotemporal dementia (FTD)
- Others
  - Genetic (Fragile X, down syn...)
  - Less common dis (CBD, PSP...)
  - other non neurodegenerative illnesses (CJD, Hashimoto enceph, Vit B12, thyroid disease, syphilis...)

Type	Percentage
AD	60%
DLB	15%
Vas	15%
FTD	5%
Other	5%

---

---

---

---

---

---

---

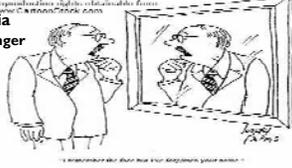
---

---

---

### Typical clinical feature of common dementia

- Alzheimer's Disease**
  - Short term memory, V-S, language
- Vascular Dementia**
  - Stroke, "stepwise changes", cardiovascular disease
- Dementia with Lewy Bodies**
  - Parkinsonism, hallucinations, fluctuations, REM behavior dis.
- Frontotemporal Dementia**
  - personality, behavior, younger



---

---

---

---

---

---

---

---

### Anatomical Atrophy Patterns of Common Dementia

**A** Syndrome-specific regional atrophy patterns: patients vs. controls  Atrophy max = seed ROI

AD +35, bvFTD +11, SD +14, PNFA +10, CBS +43

R Ang, R FI, L TPole, L IFG, R PMG

**B** Intrinsic functional connectivity networks: healthy controls

**C** Structural covariance networks: healthy controls

Seeley et. al. Neuron. 2009 16:62

---

---

---

---

---

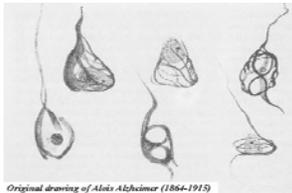
---

---

---

### How do we diagnose dementia

- Pathological diagnosis
  - Pathological diagnosis is considered as Gold Standard.



*Original drawing of Alois Alzheimer (1864-1915)*

---

---

---

---

---

---

---

---

## How do we diagnose dementia

- Pathological diagnosis.
- Clinical diagnosis is made by qualified clinician
  - Clinical interview of the patient and informants
    - Functional deficits (Executive, memory, language, V-S and motor)
    - Confounding factors
      - Depression, med, infection, tumor...
      - FH, SH, PMH...
  - Complete Physical examination
    - Motor (Parkinson, PSP, CBD, stroke)
    - Sensory (Neuropathy, B12, thyroid dys.)
  - Lab test
    - Thyroid function, Vit B12, and RPR




---

---

---

---

---

---

---

---

## How do we diagnose dementia

- Pathological diagnosis
- Clinical diagnosis is made by qualified clinician

Additional evaluations

- Neuropsychological testing
- Structure imaging study
- CSF study, PIB imaging (under investigation)




---

---

---

---

---

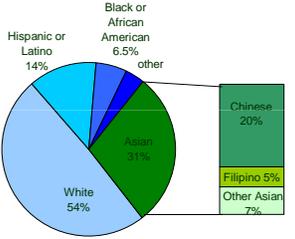
---

---

---

## Chinese American in San Francisco

- Asian in San Francisco Bay Area
  - 31.3% total population
  - 11% of CA elderly
  - 21% of CA APIs >60 yrs
- Chinese Americans :
  - 62% of APIs in SF (20% of total population) (United States Census, 2008)
- Asian elders underrepresented by 50% in California Alzheimer's Centers (Chow et al, 2000)



Group	Percentage
White	54%
Asian	11%
Hispanic or Latino	14%
Black or African American	6.5%
Other	6.5%

Group	Percentage
Chinese	20%
Filipino	5%
Other Asian	7%

---

---

---

---

---

---

---

---

### Chinese Outreach at UCSF MAC

- Alzheimer Disease Research Center (ADRC) at UCSF
  - Longitudinal study
  - Normal and cognitive impaired
  - 100 Chinese America
  - Outreach Clinic in SF China Town





---

---

---

---

---

---

---

---

### Clinical evaluations

- Before clinic
  - Clinical referral
  - Contact family
- During clinic (3Hrs)
  - History and physical exam with interpretations
  - Short NeuroPsych testing (CASI/MOCA, CVLT, Rey, Trails, GDS...)
    - Memory, executive function, language, V-S function, mood screening
- After clinic
  - Imaging and laboratory work up
  - Follow up clinic




---

---

---

---

---

---

---

---

### Demographics of Chinatown Patients

**Demographics of Chinatown Health Fair Participants and Outreach Clinic Patients (N=453)**

	Community Health Fairs (N = 222)	Outreach Clinics (N = 231)
Age (years)	63.3 (11.71)	74.02 (11.14)
Gender (% male)	26.15 %	36.36%
Education (years)	9.53 (4.25)	7.66 (5.13)
Language	92.13% Chinese Only 4.65% Bilingual 2.79% English Only	96.73% Chinese Only 7.14% Bilingual 0.45% English Only

---

---

---

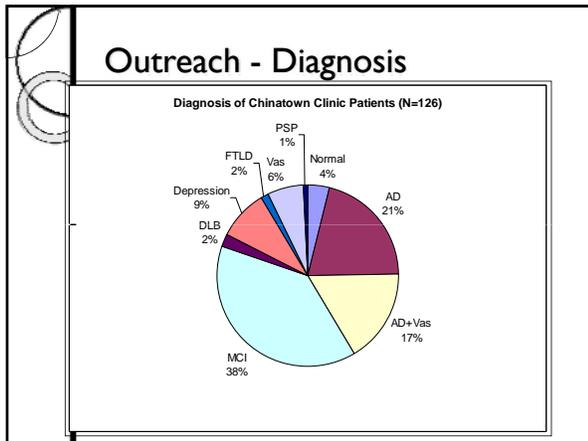
---

---

---

---

---



---

---

---

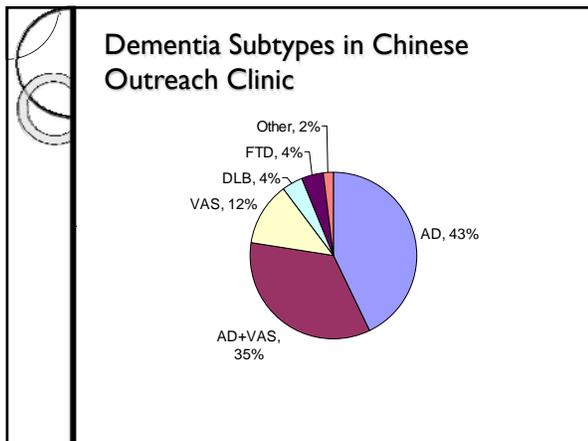
---

---

---

---

---



---

---

---

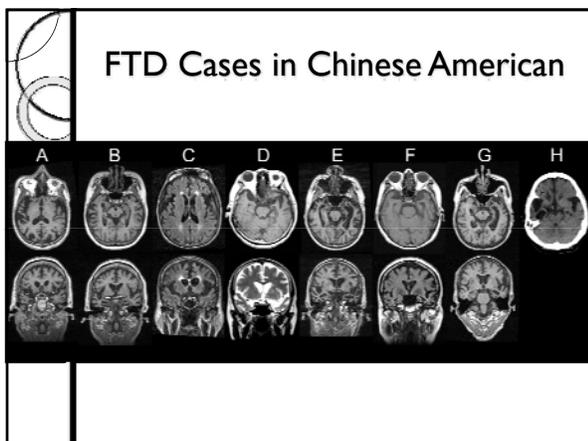
---

---

---

---

---



---

---

---

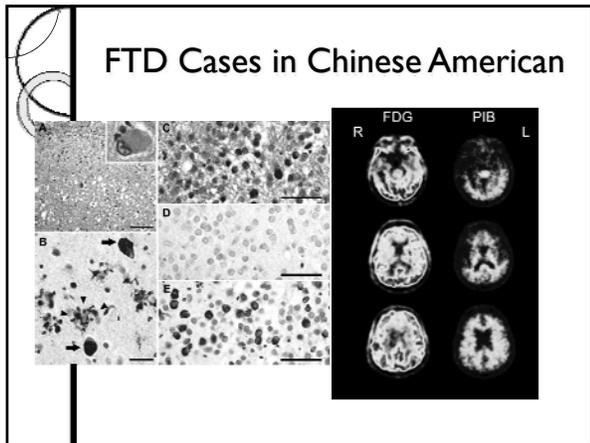
---

---

---

---

---



---

---

---

---

---

---

---

---



---

---

---

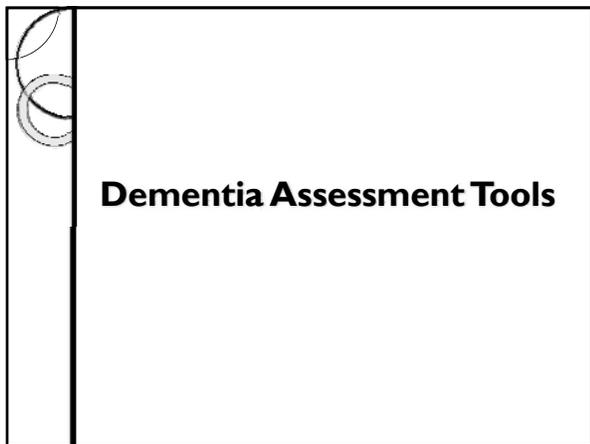
---

---

---

---

---



---

---

---

---

---

---

---

---

**Challenges to Assessing Dementia in Chinese Elders**

- On the part of the family, misconceptions about dementia are common – e.g., belief that memory problems are a normal part of aging. So diagnosis and treatment are not sought until the later stages of the disease, when behavioral problems are more apparent.
- In the Chinese language, the traditional character used to designate dementia is translated as “crazy” – it does not reflect Western understanding that dementia is a brain disease and not a mental illness.

---

---

---

---

---

---

---

---



**Challenges, continued**

- On the part of the professional community, there is significant under-recognition of cognitive impairment by health care providers.
- As well, there is a paucity of culturally and linguistically appropriate assessment tools that can be used to evaluate the elder.
- Existing neuro-cognitive measures do not have sufficient normative data based on the performance of Chinese elders, so scores can be difficult to interpret.

---

---

---

---

---

---

---

---

**Commonly Used Screening Tools for Dementia in Chinese Elders**

- Mini- Mental Status Examination (MMSE)

Alternatives to MMSE:

- Mini Cog
- Cognitive Abilities Screening Instrument (CASI) - research
- Clock Drawing Tests
- Montreal Cognitive Assessment (MoCA) – Beijing, Hong Kong, Taiwan, Cantonese, Japanese, Korean, Thai, Vietnamese

---

---

---

---

---

---

---

---

**Value Of MMSE**

- MMSE has been used for many years & studied extensively around the world.
- It has a number of strengths:
  - it is brief & needs short administration time
  - translated into multiple languages
  - useful screen for cognitive impairment when appropriate cut-off scores are used

---

---

---

---

---

---

---

---

**Weaknesses of MMSE**

- Scores are highly influenced by age and education – even in non-Hispanic Whites. Greater age and less education are associated with poorer performance on the MMSE.
- Scores are affected not only by age and education but also by cultural background: MMSE underestimates cognitive capacities of most minority elderly persons compared with Whites – so a high rate of “false positives” occurs in these groups.
- It is now copyrighted and copies in English, and authorized translations, must be purchased (no longer free)
- It is only a screen: does not give diagnosis.

---

---

---

---

---

---

---

---

**Utility of MMSE with Chinese and Chinese-American Elders**

- “No ifs, and or buts” is not easily translated into other languages and it loses its articulatory complexity
- Chinese older people who have used brushes instead of pens may have a different form of motor control
- “Close your eyes” can imply death in the Chinese culture
- Orientation to time (date/season) requires habitual use of Western calendars
- Orientation to place (addresses/nearby streets) requires familiarity with Western style addresses

*Translation does not equal validation!*

---

---

---

---

---

---

---

---

**Validated screening tools in Chinese**

---

---

---

---

---

---

---

---

**Chinese Mini Mental Status (CMMS):** in Mandarin.

- Developed by Katzman et al.
- Major adaptations:
  - 1) "Forty-four stone lions" replaced "No if's, and's, or but's."
  - 2) "Please raise your hands" instead of "Please close your eyes."
  - 3) "Say" a sentence instead of writing a sentence.
- Cut-off scores:
  - No education: <18
  - Elementary school education: <21
  - Middle school education: <24

---

---

---

---

---

---

---

---



**Chinese Mini-Mental State Exam (CMMSE):**  
in Mandarin.

Available from Alz. Assoc.:  
[http://www.alz.org/professionals\\_and\\_researchers\\_chinese\\_communities.asp#assessment](http://www.alz.org/professionals_and_researchers_chinese_communities.asp#assessment)

- Adaptations:
  - 1) The three recall items: ball, flag, tree
  - 2) "There is a moon in the sky."
- Cut-off scores:
  - General practice: <23
  - Recommended by researchers: <18

---

---

---

---

---

---

---

---

**簡易智能狀態檢查中文版**  
Chinese Mini-Mental State Exam (CMMSE)

訪員：現在我要將三樣東西的名稱，在我講完之前，请您重複說一遍，請您  
 記住這三樣東西，因為等一下還要再問您。  
 (請仔細說清楚，每一樣東西一秒鐘。)

“皮球”                      “國旗”                      “樹木”

請把這三樣東西說一遍(以第一次答案記分)。

	對	錯	拒絕回答
11 皮球	1	5	9
12 國旗	1	5	9
13 樹木	1	5	9

---

訪員：現在我要說一句話，然後請您把它倒說一遍，這句話是“天上明月正”  
 。請倒說出來。(如有必要可重念。)

18(a) 天上明月正

	錯誤數	拒絕
0 1 2 3 4 5		9

---

---

---

---

---

---

---

---

---

---

---

---

**Chinese-adapted MMSE (CAMSE): in Mandarin.**

- Developed by Xu et al.
- For use with persons of little or no formal education.
- Adaptations:
  - 1) Say the five elements in Chinese philosophy backward.
  - 2) name a button rather than a pencil
  - 3) Imitate the posture of a man as illustrated in a cartoon instead of reading and following the written command "close your eyes."
- Cut-off scores:
  - Illiterate individuals: <22
  - Literate individuals: <20

---

---

---

---

---

---

---

---

---

---

---

---

**中文簡易智能狀態檢查**  
Chinese Adapted Mini-Mental Status Examination (CAMSE)

13) 如果 12) 不能完成，可以作本題：我說五個字，請你按相反順序說出來，

金木水火土

0 1 十

0 1 火

0 1 水

0 1 木

0 1 金

---

---

---

---

---

---

---

---

---

---

---

---

**Cantonese version of MMSE**

- Developed by Chiu et al.
- Adaptations:
  - 1) 3 recall items: apple, newspaper, train.
  - 2) Cantonese phrase "Uncle buys fish intestine."
  - 3) Reverse five digits (4, 2, 7, 3, 1) instead of spelling WORLD backwards.
- Advised cut-off scores: 19 or 20

---

---

---

---

---

---

---

---

---

---

**簡短智能測驗**

3 ( ) 依家我會講三樣野既名，講完之後，請你重複一次。  
請記住佢地，因為幾分鐘後，我會叫你再講番俾我聽。  
[蘋果]、[報紙]、[火車]。依家請你講番哩三樣野俾我聽。  
(以第一次講的計分，一個一分；然後重複物件，直至全部三樣都記住。)

5 ( ) 請你用一百減七，然後再減七，一路減落去，直至我叫你停為止。  
(減五次後便停) ( )  
或：依家我講幾個數目俾你聽，請你倒轉頭講番出黎。  
[ 4 2 7 3 1 ] ( )

9 ( ) 哩樣係乜野？(鉛筆)(手錶)。(2)  
請你跟我講句說話 [姨丈買魚腸](1)  
依家檯上面有一張紙。用你既右手拿起張紙，用兩隻手一齊將紙摺成一半，然後放番張紙條檯上面。(3)  
請讀出哩張紙上面既字，然後照住去做。(1)  
請你講任何一句完整既句子俾我聽。例如：[我係一個人]、  
[今日天氣好好]。(1)  
哩處有幅圖，請你照住黎畫啲。(1)

---

---

---

---

---

---

---

---

---

---

**Mini Cog**

- Developed by Borson et al. (2000)
- Mini Cog is quick to administer & simple to score, consisting of 3 item recall plus clock drawing. Takes 5 min. to give & has been used with Chinese, Japanese, Vietnamese and Spanish speaking older adults.
- Copy in English (only) in accompanying materials; no translations available. No charge to use. A sample can be download from:  
<http://geridoc.net/MiniCogAssessmentForm.pdf>
- Under license from the University of Washington, solely for use as a clinical aid.
- To obtain information, contact Soo Borson at [soob@u.washington.edu](mailto:soob@u.washington.edu)

---

---

---

---

---

---

---

---

---

---

**Cognitive Abilities Screening Instrument (CASI)**

- Cognitive Abilities Screening Instrument was developed to be relatively culture fair. Administration takes about 20 min.; scoring takes additional time. Training is required to be able to administer the questions correctly.
- It is based on MMSE - with major modifications. CASI scores can be converted to "standard" MMSE scores using certain formulas.
- Available in English, Chinese, Japanese, Vietnamese and Spanish from developer, Professor Evelyn Lee Teng, Ph.D: [eteng@usc.edu](mailto:eteng@usc.edu)

---

---

---

---

---

---

---

---

**Clock Drawing Test**

- Can be used as a screening tool with virtually all elders whether literate or not.
- Instructions are: draw a clock, put in all the numbers; set the hands at 10 past 11.
- 5 point scoring system is used to evaluate quality of clock. No charge to use this measure & interpretation is straightforward so it's worth considering as an addition to your main cognitive screening measure.
- Please visit [http://www.neurosurgical.ca/ClinicalAssistant/scales/clock\\_drawing\\_test.htm](http://www.neurosurgical.ca/ClinicalAssistant/scales/clock_drawing_test.htm) to download example and summaries of scoring methods.

---

---

---

---

---

---

---

---

**Montreal Cognitive Assessment (MoCA)**

- Brief screening tool for MCI (10 minutes)
- Intended for first-line physicians
- Greater sensitivity to detect MCI and mild AD than the MMSE
- Clinical Implications:
  - (1) Useful screening tool for the detection of mild AD and MCI
  - (2) Useful predictive screening tool for the development of dementia in subjects with MCI
- Limitation: No advantage in detecting change in cognition over a 6-month period.
- The test itself and instructions can be downloaded at: <http://www.mocatest.org>

---

---

---

---

---

---

---

---



**WORKING WITH  
CHINESE  
CAREGIVERS**

---

---

---

---

---

---

---

---

**Commonly Held Cultural  
Values  
Clinicians May Consider  
While Serving the  
Chinese Population**

---

---

---

---

---

---

---

---

**Three Important Things  
When Working with  
Chinese Clients:  
Family, Family, Family...**

(and Education is quite important too)

---

---

---

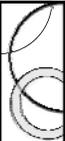
---

---

---

---

---



**Three Philosophies that Influence Chinese Culture**

儒 Confucianism  
釋 Buddhism  
道 Taoism

---

---

---

---

---

---

---

---



**Confucianism** : Social Orders, ranking, family hierarchy and filial piety

**Buddhism**: Karma, what goes around comes around either in previous life, this life or the next life...so be good

**Taoism**: Balance in life, harmony with people and nature, Tai Chi, Ying Yang, the Middle Way

---

---

---

---

---

---

---

---



Cultural Values:  
**Collectivism (not Individualism)**

- Family is the societal unit, not the individual – a person is not viewed as separate from his/her family
- Individuals must consider the interests of the community/family over his/her interests
- Autonomy is valued less
- Respect or deference to authority,
- Individual privacy is not a high value

---

---

---

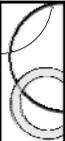
---

---

---

---

---



Cultural Values:  
**Family**

- Filial piety/ loyalty
- Family hierarchy
- Joint decision making
- “Family knows best”

---

---

---

---

---

---

---

---



各家自掃門前雪  
莫理他人瓦上霜

Every family clear their own front door's snow  
Don't bother with others' ice on their roof...

*That means each family minds its own business*

---

---

---

---

---

---

---

---



Cultural Values:  
**Harmony / Balance / Equanimity**

- Avoidance of conflict
- Avoidance of shame
- Suppression of public displays of emotion
- Emphasis on the welfare of the group/family/community

---

---

---

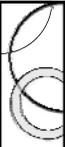
---

---

---

---

---



Cultural Values:  
**Superstition / Karma**

- Old traditions
- Belief that speaking about bad things will make them happen
- Industriousness
- Frugal behavior

---

---

---

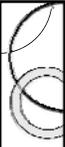
---

---

---

---

---



**Cultural Factors with Clinical Implications:**

- Language
- Suppression of emotion
- Somatization of mental health symptoms
- Unfamiliarity with mental health services
- Well-defined family roles
- Favoritism towards males
- Family members may be anxious

---

---

---

---

---

---

---

---



**Cultural Factors with Clinical Implications**  
(Continued)

- Family secrets
- Ageism
- Different immigration experiences and degree of acculturation
- Age cohort with war trauma (PTSD)
- Religious, ritual, spiritual beliefs
- Reliance on alternative medicines

---

---

---

---

---

---

---

---



---

---

---

---

---

---

---

---

**Interventions with Asian Clients:**

- Use the client's language
- Allow them to teach you about their culture
- Assessment should heavily rely on activities of daily living
- Don't forget to ask about immigration experiences, alternative medicines used and possible war trauma
- **Family! Family! Family!**

---

---

---

---

---

---

---

---

**Two ways to approach a Chinese family....**

---

---

---

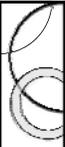
---

---

---

---

---



Become **part of the family**  
by finding common ground.  
Use self disclosure.

*“My Mom was a Seamstress, too.”*  
Dr. Davis Ja’s comment to a group of  
immigrant mothers

---

---

---

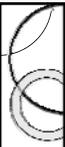
---

---

---

---

---



Disclose your  
**Education and Experience**

*Let the client/ family know where  
you went to school, your years of  
experience and areas of  
expertise.*

---

---

---

---

---

---

---

---



**How do you explain a  
Dementia diagnosis to a  
Chinese family?**

**Full Circle of Life**

---

---

---

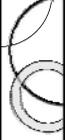
---

---

---

---

---



**Applying Buddhism beliefs**

*Dementia is like coming full circle: you go back to where you started from, slowly becoming a child again*

**返老還童**

---

---

---

---

---

---

---

---



**Case 1**

**Who is Making the Decision?**

---

---

---

---

---

---

---

---



**Case 1**

- 81 year old female, widow, 2 daughters and 3 sons, lived with the youngest son since 1997 (after husband passed away)
- Enrolled into On Lok, a comprehensive medical program for frail elderly, after a fall at home that resulted in head injury and onset of Dementia
- Cognition and physical health declined rapidly (severely impaired memory, disorientation, 1:1 feeding, incontinence)
- Youngest son maintained close contact with OL staff and agreed to end of life status with no G-tube
- Older siblings flew in from out of state, reversed decision and wanted aggressive treatment and G-tube

---

---

---

---

---

---

---

---



**一物治一物  
糯米治木虱**

**In this universe, one thing can  
counter/ defuse another**

**Sticky rice can counter wood lice**

*Old Chinese Saying*

---

---

---

---

---

---

---

---



**Eldest son** usually has the highest  
power and influence in decision  
making in a typical Chinese family...

But try to find out who he would  
listen to in the family...

Maybe a niece, an uncle, an aunt, a  
granddaughter, or a family friend

---

---

---

---

---

---

---

---



Case 2

*and again...*

**“It’s all about the family”**

---

---

---

---

---

---

---

---

**Case 2**

- 61 year old Chinese male, married, On Lok participant for 3 years
- End stage progressive supranuclear palsy, severely depressed, NF placement, unable to move, speak or close his jaw, on G-Tube, frequent aspiration, DNR
- PCP felt that patient was suffering and did not want to prolong his suffer
- Wife was ambivalent, felt that patient was "too young to die", wanted to extend his life for 2 more months for the birth of his first grandchild; hence requested aggressive treatment to keep him alive

---

---

---

---

---

---

---

---



---

---

---

---

---

---

---

---

**Impacts of Dementia Caregiving**

• ADLs/IADLs	• Family conflict
• Employment Changes	• Emotional strain
• Financial hardship	• Physical strain
• Give up leisure	• Physical health problems
• Reduced time for family	• Greater amounts of service utilization
	• <b>NOT ALL NEGATIVE!</b>

---

---

---

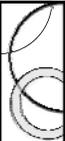
---

---

---

---

---



**Results of Two Empirical Studies with Chinese-American Caregivers**

*The only 2 studies that have used random assignments and had good results so far!*

---

---

---

---

---

---

---

---



**I. Chinese Caregiver Assistance Project (CCAP #1)**

- Overview:**
  - This randomized trial enrolled 51 Chinese or Chinese American dementia caregivers.
  - It compared the effectiveness of a home-based intervention (IHBM) vs. an education/ telephone support comparison condition (TSC).
  - The in-home program, developed by a bilingual/bicultural team, was designed to teach CGs a range of skills for managing their situation, and their feelings, with less distress.

---

---

---

---

---

---

---

---



**Linear Regression Analysis Summary of Primary Outcome Variables**

	B	SE	<u>B</u>	P-value	Effect Size
(Cohen's d)					
CES-D	-4.91	2.13	-.224	.026*	0.72
Conditional Bother	-.0532	0.228	-.294	.025*	0.71
Perceived Stress	-.010	1.035	-.001	.992	0.00

Note: B = Unstandardized Coefficient B;  
 SE = Standard Error of Measurement; B = Standardized Beta;  
 CESD = Center for Epidemiological Studies Depression Scale  
 \*p < .05.

---

---

---

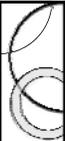
---

---

---

---

---



**Results**

- There was a significant between group difference at the post evaluation \*(with pre scores adjusted for) on 2 of the 3 outcome measures:
- Caregivers in the In-Home condition were significantly less depressed than those in TSC, as measured by the CES-D total score.
- They also reported less distress (“bother” scores from the Revised Memory & Behavior Problem Checklist), suggesting greater ability to manage everyday problems more effectively.

---

---

---

---

---

---

---

---



**II. Chinese American Caregivers DVD Project**

- A less expensive and more “portable” version of the In-Home program in CCAP
- Doubled enrollment (about 100 entered the study)
- Skill-Training Program
  - Information teaching CGs how to handle specific everyday problems, such as:
  - How to manage, modify, and/or change troublesome behaviors
  - How to challenge unhelpful negative thoughts
  - Role Plays to learn more effective methods of communicationWorkbook accompanied this DVD for reinforcement
- Educational Program
  - General information about dementia (how to recognize dementia and help the loved ones)

---

---

---

---

---

---

---

---



**Results from the DVD Project**

- Comparable to the In-Home study there was significant reduction in stress related to caregiving reported by those who were in the skill-training DVD program compared to those in the education-only control group.
- However, in this study, caregivers’ depression was not significantly reduced over time. There was a trend in that direction for those in the DVD condition.

---

---

---

---

---

---

---

---

**Results, continued**

- Caregivers were overwhelmingly positive about the DVD experience & over 80% said they would recommend the program to a friend.
- When asked if they would be likely to view the DVD again in the future when stressful situations arose, to help themselves cope better, over 75% said yes.
- Finally, virtually all of the caregivers who got the DVD said they shared it with family members.

---

---

---

---

---

---

---

---

**Conclusions regarding Interventions**

- Chinese American caregivers suffer distress similar to other CGs studied.
- They respond well to a variety of programs developed (or "tailored") specifically to meet their needs AND that overcome language and access barriers (such as the empirical programs reported here).
- A cautionary note: We need to assess the caregiver carefully at the outset, before intervention begins. Those who are significantly depressed are likely to respond better to a more intensive program; in contrast, those who are stressed but not really depressed are likely to benefit from a less intensive program, like the DVD, or an internet-based program.

---

---

---

---

---

---

---

---

**Conclusion...**

**知己知彼  
百戰百勝**

Know yourself, Know others  
(opponents)

One hundred battles, one hundred  
victories

Sun Tzu Art of War

---

---

---

---

---

---

---

---

**Conclusion...**

The same principle applies to  
**Cultural Humility...**

- Know your own cultures (personal and professional), your bias, presumptions, strength and weaknesses....
- It's an ongoing process as people, cultures and the world are changing, evolving everyday....

---

---

---

---

---

---

---

---

**Resources from the Alzheimer's Association**

- Helpline in Chinese 1.800.272.3900
- Bridge to Healthy Families
  - API Dementia Care Network in Sacramento
- Chinese Caregiver Forum
- Support groups
- Chinese portal at <http://www.alz.org/asian/chinese.asp>

---

---

---

---

---

---

---

---

**References**

- Yeo, G. & Gallagher-Thompson, D. (2006) *Ethnicity and the Dementias*, 2<sup>nd</sup> ed. NY: Routledge/ Taylor & Francis.
- Steis, M.R., & Schrauf, R.W. (2009) A review of translations and adaptations of the Mini-Mental State Examination in languages other than English and Spanish. *Research in Gerontological Nursing*, 2(3), 214-224.
- Katzman, R., et al. (1988). A Chinese version of the Mini-Mental State Examination: Impact of illiteracy in a Shanghai dementia survey. *Journal of Clinical Epidemiology*, 41(10), 971-978.
- Xu, G., et al. (2003). Adapting Mini-Mental State Examination for dementia screening among illiterate or minimally educated elderly Chinese. *International Journal of Geriatric Psychiatry*, 18, 609-616.
- Chiu, H.F.K., Lee, H.C., Chung, W.S., & Kwong, P.K. (1994). Reliability and validity of the Cantonese version of Mini-Mental State Examination---A preliminary study. *Journal of Hong Kong College Psychiatry*, 4(SF2), 25-28.
- Teng, E.L., et al. (1994). The Cognitive Abilities Screening Instrument: A practical test for cross-cultural epidemiological studies of dementia. *International Psychogeriatrics*, 6(1), 45-62.
- Nasreddine, Z. S., Phillips, N.A., Be dirian, V., Charbonneau, S., Whitehead, V., & Collin, I., et al. (2005). The Montreal Cognitive Assessment, MoCA: A Brief Screening Tool For Mild Cognitive Impairment. *Journal of the American Geriatrics Society*, 53, 695-699.
- Borson, S., Scanlan, J., Brush, M., Vitaliano, P., & Dokmak, A. (2000). The mini-cog: a cognitive 'vital signs' measure for dementia screening in multi-lingual elderly. *International Journal of Geriatric Psychiatry*, 15(11), 1021-1027.

---

---

---

---

---

---

---

---

**Drinking the Sea**



Being a caregiver  
Is like drinking the sea:  
Overwhelming magnitude  
with  
No chance of success-Alone.  
Yet, with help from others  
Even that becomes possible.

-Lani Kaaihue

---

---

---

---

---

---

---

---

# 簡易智能狀態檢查中文版

Chinese Mini-Mental State Exam (CMMSE)\*

訪問員：現在要問您一些問題，來檢查您的注意力和記憶力，大多數問題都很容易。（記錄回答并圈分數，不知者算是錯誤。）

		正確	錯誤
1. 今年的年份?	年_____	1	5
2. 現在是什麼季節?	季節_____	1	5
3. 今天是幾號?	日_____	1	5
4. 今天是星期幾?	星期_____	1	5
5. 現在是幾月份?	月_____	1	5
6. 您能告訴我現在我們在哪里嗎? 例如，現在我們在哪個省、市?	省(市)_____	1	5
7. 您現在在什麼區(縣)?	區(縣)_____	1	5
8. 您住在什麼街道?	街道(鄉)_____	1	5
9. 我們現在在第幾樓?	層樓_____	1	5
10. 這兒是什麼地方? 地址(名稱)_____		1	5

訪問員：現在我要說三樣東西的名稱，在我講完之前，請您重複說一遍，請您  
 記住這三樣東西，因為等一等還要再問您的。  
 （請仔細說清楚，每一樣東西一秒鐘。）

“皮球”

“國旗”

“樹木”

請把這三樣東西說一遍（以第一次答案記分）。

	對	錯	拒絕回答
11. 皮球 _____	1	5	9
12. 國旗 _____	1	5	9
13. 樹木 _____	1	5	9

訪問員：（繼續重複這三樣東西，直到受訪者能正確重述，可重複六次。）

13(a). 重復幾次? \_\_\_\_\_次

訪問員：現在請您從 100 減去 7，然後從所得的數目再減去 7，如此一直計算下去，把每一個答案都告訴我，直到我說“停”為止。

(若錯了，但下一個答案卻是對的，那麼只記一次錯誤。)

	對	錯	說不會做	其他原因不做
14. ( ) _____	1	5	7	9
15. ( ) _____	1	5	7	9
16. ( ) _____	1	5	7	9
17. ( ) _____	1	5	7	9
18. ( ) _____	1	5	7	9

(停止!)

訪問員：現在我要說一句話，然後請您把它倒說一遍，這句話是“天上有月亮”，請倒說出來。(如有必要可重念。)

18(a). 亮月有上天	錯誤數						拒絕
	0	1	2	3	4	5	9

訪問員：現在請您告訴我，剛才我要您記住的三樣東西是什麼？

	對	錯	說不會做	拒絕
19. 皮球 _____	1	5	7	9
20. 國旗 _____	1	5	7	9
21. 樹木 _____	1	5	7	9

訪問員：(請拿出手表)請問這是什麼？

	對	錯	拒絕
22. 手表 _____	1	5	9

訪問員：(出示鉛筆)請問這是什麼？

	對	錯	拒絕
23. 鉛筆 _____	1	5	9

訪問員：現在我要說一句話，請清楚地重復一遍，這句話是：  
 “四十四只石獅子”。（只許說一遍，只有正確、咬字清楚的才記一分。）

		正確	不清楚	拒絕
24. 四十四只石獅子	_____	1	5	9

訪問員：（把一張寫有“閉上你的眼睛”的卡片交給受訪者）請照這卡片所寫的去  
 做。

（如果受訪者閉上眼睛，記一分）

		有	沒有	說不會做	拒絕	文盲
25. 閉眼睛	_____	1	5	7	9	8

訪問員：（請念下面一段話，並給對方一張空白紙，不要重復說明，也不要作示  
 範。）請用右手拿這張紙，再用雙手把紙對摺，然後將紙放在您的大腿上。

		對	錯	說不會做	拒絕
26. 用右手拿紙	_____	1	5	7	9
27. 把紙對摺	_____	1	5	7	9
28. 放在大腿上	_____	1	5	7	9

訪問員：請您說一句完整的、有意義的句子（句子必須有主語、動詞）。

記下所敘述句子的全文 \_\_\_\_\_

		合乎標準	不合標準	不會做	拒絕
29. 句子	_____	1	5	7	9

訪問員：（把卡片交給受訪者）這是一張圖，請您在同一張卡片上照樣把它畫出  
 來。（對：兩個五邊形的圖案，交叉處形成一個小四邊形。）

		對	錯	說不會做	拒絕
30. 畫圖	_____	1	5	7	9

\*Translated and adapted from Polstein, M. E., Polstein, S. W., and Nchugh, P. R. (1975). "Mini-Mental State: A Practical Method for Grading the Cognitive State of Patients for the Clinician." Journal of Psychiatric Research 12: 189-198. The format and score used in Shanghai are patterned after the MMSE section of the Diagnostic Interview Schedule (DIS) published by the National Institute of Mental Health.

# 中文简易智能状态检查

## Chinese Adapted Mini-Mental Status Examination (CAMSE)

姓名: \_\_\_\_\_ 病案号: \_\_\_\_\_ 利手: \_\_\_\_\_  
测试日期: \_\_\_\_\_年\_\_月\_\_日 教育程度: \_\_\_\_\_

错误 正确

0 1 1) 今年是哪一年?

0 1 2) 现在是什么季节?

0 1 3) 今天是几号?

0 1 4) 今天星期几?

0 1 5) 现在是几月?

0 1 6) 我们在那一个省?

0 1 7) 我们现在是在那一个县/市?

0 1 8) 这里是什么医院?

0 1 9) 我们在几楼?

0 1 10) 这是什么科?

0 1 11) 皮球 请重复这三个名称, 按照第一次重复的结果计分, 最多重复三次.

0 1 树木 练习次数: \_\_\_\_\_

0 1 国旗

0  1 12) 请从 100 开始, 连续减去 7, 直到我说停为止。(每减对一次得一分)

0 1 93\_\_\_\_\_;

0 1 86\_\_\_\_\_;

0 1 79\_\_\_\_\_;

0 1 72\_\_\_\_\_;

0 1 65\_\_\_\_\_

13) 如果 12) 不能完成, 可以作本题: 我说五个字, 请你按相反顺序说出来,

## 金木水火土

0 1 土

0 1 火

0 1 水

0 1 木

0 1 金

0 1 14) 皮球 (约五分钟后, 请说出刚才让你记住的三个名称, 不分顺序)

0 1 15) 树木

0 1 16) 国旗

0 1 17) (拿出手表) 这是什么? \_\_\_\_\_

0 1 18) (拿出铅笔) 这是什么? \_\_\_\_\_

0 1 19) 请跟着我说 “四十四只石狮子”。

0 1 20) 跟我读并照着做: “闭上你的眼睛”

0 1 21) 请用右手拿着这张纸, 将纸对折, 然后放在你的大腿上 (三个步骤, 每一步正确得一分)

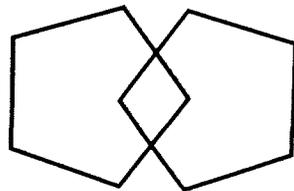
0 1 右手拿纸

0 1 把它对折

0 1 放在大腿上

0 1 22) 写一个句子 (必须要在没有提示的情况下完成, 句子应至少有主语, 谓语)

0 1 23) 这里有一幅图, 请照着画下来 (两个五边形, 相交为四边形, 有两个交点)



评分:

测试者:

注: 12 和 13 题选择分数高的一项计入总分

Appendix

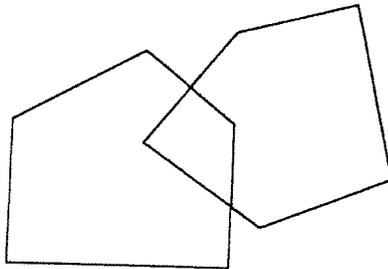
簡短智能測驗

最高  
分數 分數

- 5 ( ) 依家係乜野日子(年份)(季節)(月份)(幾號)(星期幾)?
- 5 ( ) 我地依家係邊嘅?  
(九龍/新界/香港)(九龍/新界/香港既邊度)(醫院)(邊層樓)(病房)  
或:(九龍/新界/香港)(九龍/新界/香港既邊度)(邊一科診所)(診所名字)  
(邊層樓)  
或:(九龍/新界/香港)(九龍/新界/香港既邊度)(邊條街)(邊一座)(邊層樓)  
或:(九龍/新界/香港)(九龍/新界/香港既邊度)(邊個屋村)(中心名字)  
(邊層樓)
- 3 ( ) 依家我會講三樣野既名, 講完之後, 請你重複一次。  
請記住佢地, 因為幾分鐘後, 我會叫你再講番俾我聽。  
[蘋果]、[報紙]、[火車]。依家請你講番哩三樣野俾我聽。  
(以第一次講的計分, 一個一分; 然後重複物件, 直至全部三樣  
都記住。)
- 5 ( ) 請你用一百減七, 然後再減七, 一路減落去, 直至我叫你停為止。  
(減五次後便停) ( )  
或: 依家我讀幾個數目俾你聽, 請你倒轉頭講番出黎。  
[ 4 2 7 3 1 ] ( )
- 3 ( ) 我頭先叫你記住既三樣野係乜野呀?
- 9 ( ) 哩樣係乜野? (鉛筆)(手錶)。(2)  
請你跟我講句說話 [姨丈買魚腸](1)  
依家檯上面有一張紙。用你既右手拿起張紙, 用兩隻手一齊將  
紙摺成一半, 然後放番張紙係檯上面。(3)  
請讀出哩張紙上面既字, 然後照住去做。(1)  
請你講任何一句完整既句子俾我聽。例如: [我係一個人]、  
[今日天氣好好]。(1)  
哩處有幅圖, 請你照住黎畫啦。(1)

總分: \_\_\_\_\_

拍手



**MINI-COG™**

- 1) GET THE PATIENT'S ATTENTION, THEN SAY: "I am going to say three words that I want you to remember now and later. The words are **Banana Sunrise Chair**. Please say them for me now." (Give the patient 3 tries to repeat the words. If unable after 3 tries, go to next item.) (Fold this page back at the TWO dotted lines BELOW to make a blank space and cover the memory words. Hand the patient a pencil/pen.)
- 2) SAY ALL THE FOLLOWING PHRASES IN THE ORDER INDICATED. "Please draw a clock in the space below. Start by drawing a large circle." (When this is done, say) "Put all the numbers in the circle." (When done, say) "Now set the hands to show 11:10 (10 past 11)." If subject has not finished clock drawing in 3 minutes, discontinue and ask for recall items.

3) SAY: "What were the three words I asked you to remember?"

Score the clock (see other side for instructions): \_\_\_\_\_ (Score 1 point for each) 3-Item Recall Score

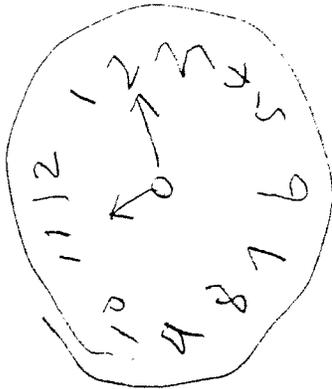
Normal clock	2 points	Clock Score
Abnormal clock	0 points	

Total Score = 3-item recall plus clock score

0, 1, or 2 possible impairment; 3, 4, or 5 suggests no impairment

# CLOCK SCORING

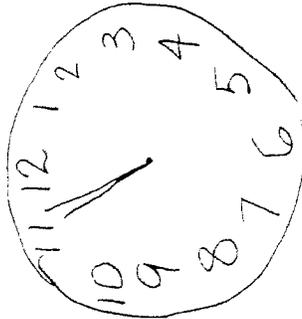
## NORMAL CLOCK



A NORMAL CLOCK HAS ALL OF THE FOLLOWING ELEMENTS:  
All numbers 1-12, each only once, are present in the correct order and direction (clockwise).  
Two hands are present, one pointing to 11 and one pointing to 2.

ANY CLOCK MISSING ANY OF THESE ELEMENTS IS SCORED ABNORMAL. REFUSAL TO DRAW A CLOCK IS SCORED ABNORMAL.

## SOME EXAMPLES OF ABNORMAL CLOCKS (THERE ARE MANY OTHER KINDS)



Abnormal Hands



Missing Number

# Montreal Cognitive Assessment (MoCA)

## Administration and Scoring Instructions

The Montreal Cognitive Assessment (MoCA) was designed as a rapid screening instrument for mild cognitive dysfunction. It assesses different cognitive domains: attention and concentration, executive functions, memory, language, visuoconstructional skills, conceptual thinking, calculations, and orientation. Time to administer the MoCA is approximately 10 minutes. The total possible score is 30 points; a score of 26 or above is considered normal.

### 1. **Alternating Trail Making:**

**Administration:** The examiner instructs the subject: "Please draw a line, going from a number to a letter in ascending order. Begin here [point to (1)] and draw a line from 1 then to A then to 2 and so on. End here [point to (E)]."

**Scoring:** Allocate one point if the subject successfully draws the following pattern: 1 -A- 2- B- 3- C- 4- D- 5- E, without drawing any lines that cross. Any error that is not immediately self-corrected earns a score of 0.

### 2. **Visuoconstructional Skills (Cube):**

**Administration:** The examiner gives the following instructions, pointing to the cube: "Copy this drawing as accurately as you can, in the space below".

**Scoring:** One point is allocated for a correctly executed drawing.

- Drawing must be three-dimensional
- All lines are drawn
- No line is added
- Lines are relatively parallel and their length is similar (rectangular prisms are accepted)

A point is not assigned if any of the above-criteria are not met.

### 3. **Visuoconstructional Skills (Clock):**

**Administration:** Indicate the right third of the space and give the following instructions: "Draw a clock. Put in all the numbers and set the time to 10 after 11".

**Scoring:** One point is allocated for each of the following three criteria:

- Contour (1 pt.): the clock face must be a circle with only minor distortion acceptable (e.g., slight imperfection on closing the circle);
- Numbers (1 pt.): all clock numbers must be present with no additional numbers; numbers must be in the correct order and placed in the approximate quadrants on the clock face; Roman numerals are acceptable; numbers can be placed outside the circle contour;
- Hands (1 pt.): there must be two hands jointly indicating the correct time; the hour hand must be clearly shorter than the minute hand; hands must be centred within the clock face with their junction close to the clock centre.

A point is not assigned for a given element if any of the above-criteria are not met.

4. **Naming:**

**Administration:** Beginning on the left, point to each figure and say: *“Tell me the name of this animal”*.

**Scoring:** One point each is given for the following responses: (1) camel or dromedary, (2) lion, (3) rhinoceros or rhino.

5. **Memory:**

**Administration:** The examiner reads a list of 5 words at a rate of one per second, giving the following instructions: *“This is a memory test. I am going to read a list of words that you will have to remember now and later on. Listen carefully. When I am through, tell me as many words as you can remember. It doesn't matter in what order you say them”*. Mark a check in the allocated space for each word the subject produces on this first trial. When the subject indicates that (s)he has finished (has recalled all words), or can recall no more words, read the list a second time with the following instructions: *“I am going to read the same list for a second time. Try to remember and tell me as many words as you can, including words you said the first time.”* Put a check in the allocated space for each word the subject recalls after the second trial.

At the end of the second trial, inform the subject that (s)he will be asked to recall these words again by saying, *“I will ask you to recall those words again at the end of the test.”*

**Scoring:** No points are given for Trials One and Two.

6. **Attention:**

**Forward Digit Span: Administration:** Give the following instruction: *“I am going to say some numbers and when I am through, repeat them to me exactly as I said them”*. Read the five number sequence at a rate of one digit per second.

**Backward Digit Span: Administration:** Give the following instruction: *“Now I am going to say some more numbers, but when I am through you must repeat them to me in the backwards order.”* Read the three number sequence at a rate of one digit per second.

**Scoring:** Allocate one point for each sequence correctly repeated, (*N.B.*: the correct response for the backwards trial is 2-4-7).

**Vigilance: Administration:** The examiner reads the list of letters at a rate of one per second, after giving the following instruction: *“I am going to read a sequence of letters. Every time I say the letter A, tap your hand once. If I say a different letter, do not tap your hand”*.

**Scoring:** Give one point if there is zero to one errors (an error is a tap on a wrong letter or a failure to tap on letter A).

**Serial 7s: Administration:** The examiner gives the following instruction: "Now, I will ask you to count by subtracting seven from 100, and then, keep subtracting seven from your answer until I tell you to stop." Give this instruction twice if necessary.

**Scoring:** This item is scored out of 3 points. Give no (0) points for no correct subtractions, 1 point for one correction subtraction, 2 points for two-to-three correct subtractions, and 3 points if the participant successfully makes four or five correct subtractions. Count each correct subtraction of 7 beginning at 100. Each subtraction is evaluated independently; that is, if the participant responds with an incorrect number but continues to correctly subtract 7 from it, give a point for each correct subtraction. For example, a participant may respond "92 - 85 - 78 - 71 - 64" where the "92" is incorrect, but all subsequent numbers are subtracted correctly. This is one error and the item would be given a score of 3.

7. **Sentence repetition:**

**Administration:** The examiner gives the following instructions: "I am going to read you a sentence. Repeat it after me, exactly as I say it [pause]: *I only know that John is the one to help today.*" Following the response, say: "Now I am going to read you another sentence. Repeat it after me, exactly as I say it [pause]: *The cat always hid under the couch when dogs were in the room.*"

**Scoring:** Allocate 1 point for each sentence correctly repeated. Repetition must be exact. Be alert for errors that are omissions (e.g., omitting "only", "always") and substitutions/additions (e.g., "John is the one who helped today;" substituting "hides" for "hid", altering plurals, etc.).

8. **Verbal fluency:**

**Administration:** The examiner gives the following instruction: "Tell me as many words as you can think of that begin with a certain letter of the alphabet that I will tell you in a moment. You can say any kind of word you want, except for proper nouns (like Bob or Boston), numbers, or words that begin with the same sound but have a different suffix, for example, love, lover, loving. I will tell you to stop after one minute. Are you ready? [Pause] Now, tell me as many words as you can think of that begin with the letter F. [time for 60 sec]. Stop."

**Scoring:** Allocate one point if the subject generates 11 words or more in 60 sec. Record the subject's response in the bottom or side margins.

9. **Abstraction:**

**Administration:** The examiner asks the subject to explain what each pair of words has in common, starting with the example: "Tell me how an orange and a banana are alike". If the subject answers in a concrete manner, then say only one additional time: "Tell me another way in which those items are alike". If the subject does not give the appropriate response (*fruit*), say, "Yes, and they are also both fruit." Do not give any additional instructions or clarification.

After the practice trial, say: "Now, tell me how a train and a bicycle are alike". Following the response, administer the second trial, saying: "Now tell me how a ruler and a watch are alike". Do not give any additional instructions or prompts.

**Scoring:** Only the last two item pairs are scored. Give 1 point to each item pair correctly answered. The following responses are acceptable:

Train-bicycle = means of transportation, means of travelling, you take trips in both;

Ruler-watch = measuring instruments, used to measure.

The following responses are **not** acceptable: Train-bicycle = they have wheels; Ruler-watch = they have numbers.

**10. Delayed recall:**

**Administration:** The examiner gives the following instruction: “*I read some words to you earlier, which I asked you to remember. Tell me as many of those words as you can remember. Make a check mark (✓) for each of the words correctly recalled spontaneously without any cues, in the allocated space.*”

**Scoring:** Allocate 1 point for each word recalled freely without any cues.

**Optional:**

Following the delayed free recall trial, prompt the subject with the semantic category cue provided below for any word not recalled. Make a check mark (✓) in the allocated space if the subject remembered the word with the help of a category or multiple-choice cue. Prompt all non-recalled words in this manner. If the subject does not recall the word after the category cue, give him/her a multiple choice trial, using the following example instruction, “*Which of the following words do you think it was, NOSE, FACE, or HAND?*”

Use the following category and/or multiple-choice cues for each word, when appropriate:

FACE: category cue: part of the body multiple choice: nose, face, hand

VELVET: category cue: type of fabric multiple choice: denim, cotton, velvet

CHURCH: category cue: type of building multiple choice: church, school, hospital

DAISY: category cue: type of flower multiple choice: rose, daisy, tulip

RED: category cue: a colour multiple choice: red, blue, green

**Scoring:** No points are allocated for words recalled with a cue. A cue is used for clinical information purposes only and can give the test interpreter additional information about the type of memory disorder. For memory deficits due to retrieval failures, performance can be improved with a cue. For memory deficits due to encoding failures, performance does not improve with a cue.

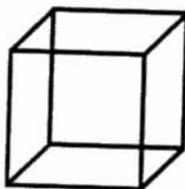
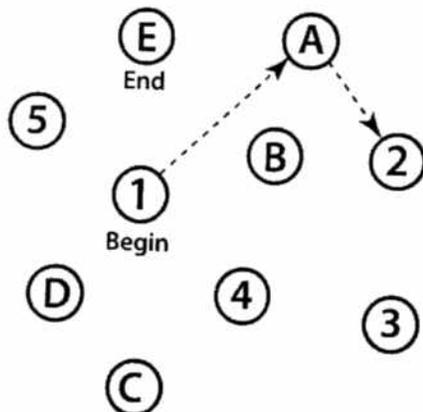
**11. Orientation:**

**Administration:** The examiner gives the following instructions: “*Tell me the date today*”. If the subject does not give a complete answer, then prompt accordingly by saying: “*Tell me the [year, month, exact date, and day of the week].*” Then say: “*Now, tell me the name of this place, and which city it is in.*”

**Scoring:** Give one point for each item correctly answered. The subject must tell the exact date and the exact place (name of hospital, clinic, office). No points are allocated if subject makes an error of one day for the day and date.

**TOTAL SCORE:** Sum all subscores listed on the right-hand side. Add one point for an individual who has 12 years or fewer of formal education, for a possible maximum of 30 points. A final total score of 26 and above is considered normal.

**VISUOSPATIAL / EXECUTIVE**



Copy cube

Draw CLOCK (Ten past eleven)  
(3 points)

POINTS

[ ]

[ ]

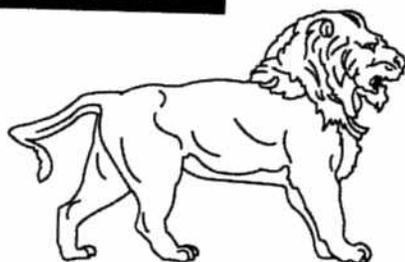
[ ]  
Contour

[ ]  
Numbers

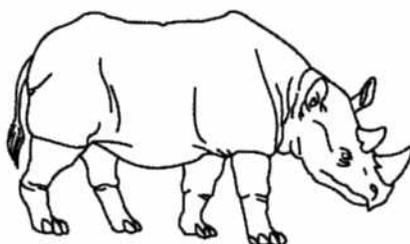
[ ]  
Hands

\_\_\_/5

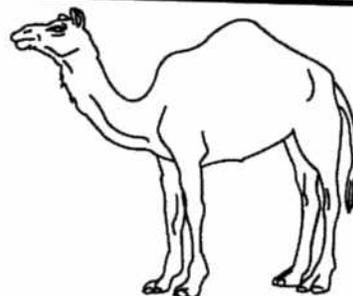
**NAMING**



[ ]



[ ]



[ ]

\_\_\_/3

**MEMORY**

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
1st trial					
2nd trial					

No points

**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 points if  $\geq 2$  errors

[ ] FBACMNAAJKLBAFAKDEAAAJAMOF AAB

\_\_\_/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  $\geq 11$  words)

\_\_\_/1

**ABSTRACTION**

Similarity between e.g. banana - orange = fruit

[ ] train - bicycle [ ] watch - ruler

\_\_\_/2

**DELAYED RECALL**

Has to recall words

WITH NO CUE

FACE

[ ]

VELVET

[ ]

CHURCH

[ ]

DAISY

[ ]

RED

[ ]

Points for UNCUED recall only

\_\_\_/5

**Optional**

Category cue

Multiple choice cue

**ORIENTATION**

[ ] Date

[ ] Month

[ ] Year

[ ] Day

[ ] Place

[ ] City

\_\_\_/6

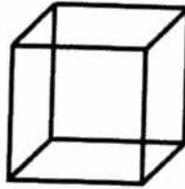
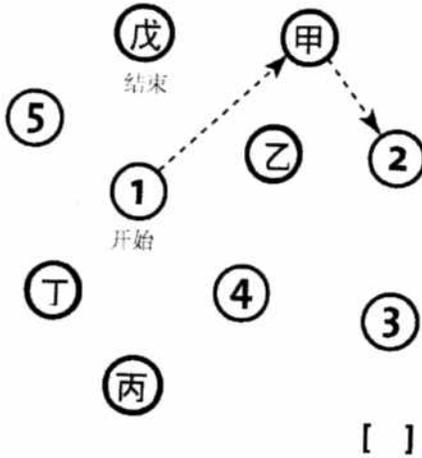
# Montreal Cognitive Assessment (MoCA) Beijing Version

## 蒙特利尔认知评估北京版

出生日期：  
教育水平：  
性 别：

姓名：  
检查日期：

### 视空间与执行功能



复制  
立方体

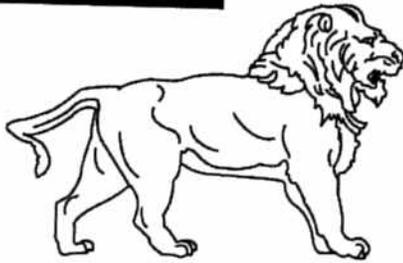
画钟表 (11点过10分) (3分)

得分

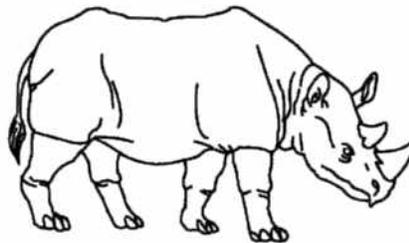
[ ] 轮廓 [ ] 数字 [ ] 指针

\_\_\_/5

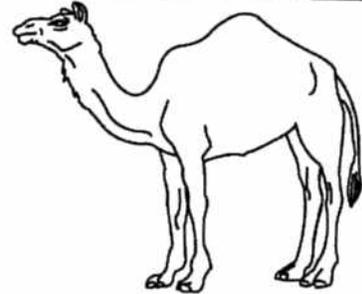
### 命名



[ ]



[ ]



[ ]

\_\_\_/3

### 记忆

读出下列词语,而后由患者重复  
上述过程重复2次  
5分钟后回忆

	面孔	天鹅绒	教堂	菊花	红色
第一次					
第二次					

不  
计  
分

### 注意

读出下列数字,请患者重复  
(每秒1个)

顺背 [ ] 2 1 8 5 4  
倒背 [ ] 7 4 2

\_\_\_/2

读出下列数字,每当数字1出现时,患者必须用手敲打一下桌面,错误数大于或等于2个不给分

[ ] 5 2 1 3 9 4 1 1 8 0 6 2 1 5 1 9 4 5 1 1 1 4 1 9 0 5 1 1 2

\_\_\_/1

100连续减7

[ ] 93 [ ] 86 [ ] 79 [ ] 72 [ ] 65  
4-5个正确给3分,2-3个正确给2分,1个正确给1分,全都错误为0分

\_\_\_/3

### 语言

重复: 我只知道今天张亮是来帮过忙的人 [ ]  
狗在房间的时候,猫总是躲在沙发下面 [ ]

\_\_\_/2

流畅性: 在1分钟内尽可能多的说出动物的名字

[ ] \_\_\_\_\_ (N ≥ 11 名称)

\_\_\_/1

### 抽象

词语相似性: 如香蕉-桔子=水果 [ ] 火车-自行车 [ ] 手表-尺子

\_\_\_/2

### 延迟回忆

回忆时不能提示

面孔 [ ] 天鹅绒 [ ] 教堂 [ ] 菊花 [ ] 红色 [ ]

仅根据非提示回忆  
计分

\_\_\_/5

选 项

分类提示  
多选提示

### 定向

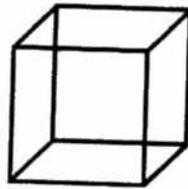
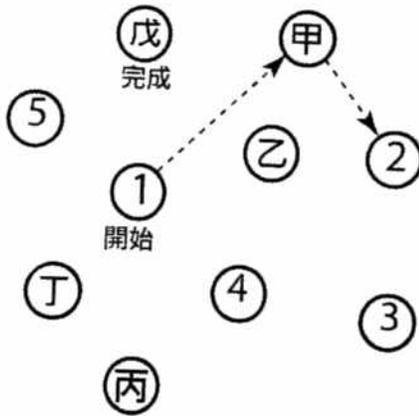
[ ] 日期 [ ] 月份 [ ] 年代 [ ] 星期几 [ ] 地点 [ ] 城市

\_\_\_/6

总分

\_\_\_/30

視覺空覺/執行



抄畫  
立方體

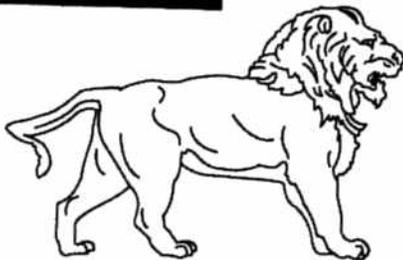
畫時鐘 (11點2)  
(3分)

分數

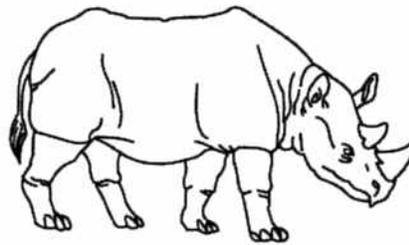
[ ] 外形 [ ] 數字 [ ] 指針

\_\_\_/5

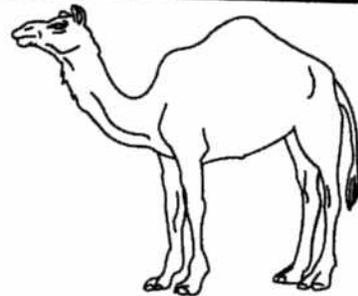
名稱



[ ]



[ ]



[ ]

\_\_\_/3

記憶

讀出一系列詞語，由測試對象複述。進行兩次嘗試。五分鐘後再憶述。

	面孔	絨布	寺廟	菊花	紅色
第一次嘗試					
第二次嘗試					

不計分

專注力

讀出一系列數字 (每秒讀一個)。

測試對象需要順序背出數字 [ ] 2 1 8 5 4

測試對象需要倒序背出數字 [ ] 7 4 2

讀出數字。當主考人讀到1時，測試對象輕輕拍一下枱面。如有兩個或以上錯誤，沒有分數。

[ ] 6 2 1 3 9 8 1 1 7 6 5 2 1 6 1 6 4 5 1 1 1 7 1 9 8 6 1 1 2

\_\_\_/1

從100開始連續減7

[ ] 93 [ ] 86 [ ] 79 [ ] 72 [ ] 65

4或5次正確減算: 3分, 2或3次正確: 2分, 1次正確: 1分, 0次正確: 0分

\_\_\_/3

語言

重複: 我只知道今日黎幫手既係大文。 [ ]  
當有狗係度時，隻貓一定走去梳化下面。 [ ]

\_\_\_/2

流暢度/一分鐘內說出最多個水果的名稱

[ ] \_\_\_\_\_ (≥ 11個詞語)

\_\_\_/1

抽象概念

共通點: 例如: 香蕉 - 橙 = 生果

[ ] 火車 - 單車 [ ] 磅 - 尺

\_\_\_/2

延遲記憶

在沒有提示下 記得的詞語	面孔	絨布	寺廟	菊花	紅色
	[ ]	[ ]	[ ]	[ ]	[ ]

只有無需提示  
而能記得的詞語  
才可得分

\_\_\_/5

選擇性使用

題目提示					
多項選擇提示					

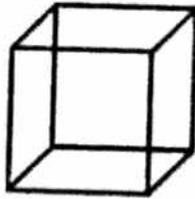
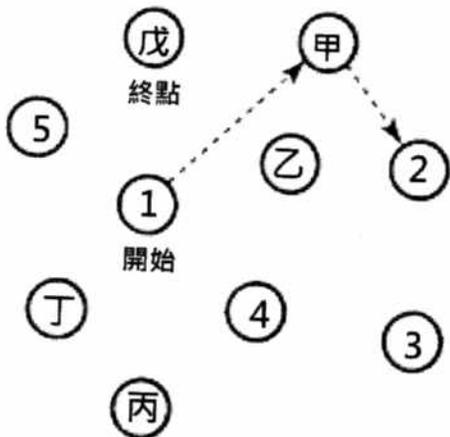
導向

[ ] 日期 [ ] 月份 [ ] 年份 [ ] 星期 [ ] 地點 [ ] 地區

\_\_\_/6



視覺空間/執行



複製立方體

畫時鐘 (11點10分)  
(3分)

分數

[ ]

[ ]

[ ]

[ ]

[ ]

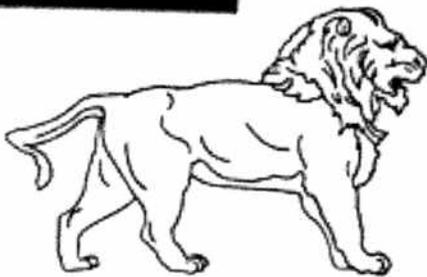
形狀

數字

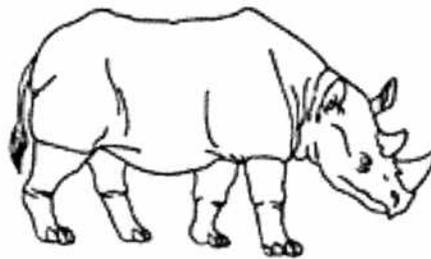
指針

\_\_\_/5

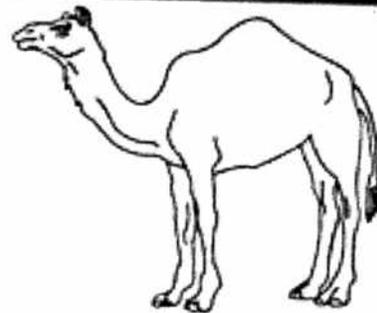
命名



[ ]



[ ]



[ ]

\_\_\_/3

記憶

讀出右方詞語，由受測對象複述。上述步驟重複兩次。五分鐘後再測能否回憶。

	臉	絨布	教堂	菊花	紅色
第一次嘗試					
第二次嘗試					

不計分

專注

施測者讀出右方數字(每秒讀一個)。

受測對象需要順序背出數字 [ ] 2 1 8 5 4

受測對象需要倒序背出數字 [ ] 7 4 2

讀出數字。當施測者讀到1時，受測者輕輕拍一下桌面。如錯誤兩個或以上，沒有得分。

[ ] 6 2 1 3 9 8 1 1 7 6 5 2 1 6 1 6 4 5 1 1 1 7 1 9 8 6 1 1 2

\_\_\_/1

從100開始連續減7

[ ] 93 [ ] 86 [ ] 79 [ ] 72 [ ] 65

4或5次正確:3分, 2或3次正確:2分, 1次正確:1分, 0次正確:0分

\_\_\_/3

語言

(國)我知道今天來幫忙的是小吳 [ ]

(國)當狗在房間時，貓總是躲在桌子下 [ ]

(台)我知影今日來幫忙的是蔡桑 [ ]

(台)狗那置咧房間內，貓總是密置ㄟ桌子腳 [ ]

流暢度/一分鐘內說出最多個水果的名字

[ ] \_\_\_\_\_ (≥ 11 個即得分)

\_\_\_/1

抽象概念

共通點：例如：香蕉-橘子 = 水果

[ ] 火車-腳踏車

[ ] 手錶-尺

\_\_\_/2

延遲記憶

在沒有提示下答出

臉孔

絨布

教堂

菊花

紅色

只有不需提示而能記得的詞語才得分

選擇性使用

類別提示

多選提示

\_\_\_/5

定向

[ ] 日期

[ ] 月份

[ ] 年份

[ ] 星期

[ ] 地點

[ ] 城市

\_\_\_/6

## Geriatric Depression Scale (Chinese Version)

以下的問題是人們對一些事物的感受。在過去一星期內，如果你曾有以下的感受，請圈「是」，如果沒有的話請圈「否」。

- |                                     |   |   |
|-------------------------------------|---|---|
| 1. 你是否對自己的人生大致感覺滿意？ .....           | 是 | 否 |
| 2. 你是否已放棄了很多以往常做的活動和有興趣的事？ .....    | 是 | 否 |
| 3. 你是否覺得你的人生是無意義、空虛的呢？ .....        | 是 | 否 |
| 4. 你是否常感到無聊？ .....                  | 是 | 否 |
| 5. 你是否覺得你的未來是有希望的？ .....            | 是 | 否 |
| 6. 你是否被自己一些揮之不去的念頭所困擾？ .....        | 是 | 否 |
| 7. 你是否大部份的時間都感到朝氣蓬勃的呢？ .....        | 是 | 否 |
| 8. 你是否害怕將會有不好的事情發生在你身上？ .....       | 是 | 否 |
| 9. 你是否大部份時間都感到快樂？ .....             | 是 | 否 |
| 10. 你是否常有無助的感覺？ .....               | 是 | 否 |
| 11. 你是否常感覺煩燥及坐立不安？ .....            | 是 | 否 |
| 12. 你是否寧願留在家裡，而不想外出並且去做些新的事呢？ ..... | 是 | 否 |
| 13. 你是否常常擔心未來的事情呢？ .....            | 是 | 否 |
| 14. 你是否覺得自己比多數人有更多記憶力的問題呢？ .....    | 是 | 否 |
| 15. 你是否覺得現在可以活著是一件好事？ .....         | 是 | 否 |
| 16. 你是否常常感到無精打采及鬱悶呢？ .....          | 是 | 否 |
| 17. 你是否覺得自己現在是很沒用的呢？ .....          | 是 | 否 |
| 18. 你是否對過去的事很憂慮？ .....              | 是 | 否 |
| 19. 你是否覺得人生很有趣呢？ .....              | 是 | 否 |
| 20. 你是否覺得要開始新計劃是一件困難的事呢？ .....      | 是 | 否 |
| 21. 你是否感到精力充沛？ .....                | 是 | 否 |
| 22. 你是否覺得自己的處境是沒有希望的呢？ .....        | 是 | 否 |
| 23. 你是否覺得大部份人的情況比你呢？ .....          | 是 | 否 |
| 24. 你是否常為小事感到不開心呢？ .....            | 是 | 否 |
| 25. 你是否時常覺得想哭？ .....                | 是 | 否 |
| 26. 你是否在困難集中精神？ .....               | 是 | 否 |
| 27. 你是否在早上樂於起床？ .....               | 是 | 否 |
| 28. 你是否寧願避免參加社交聚會呢？ .....           | 是 | 否 |
| 29. 要你做決定是一件容易的事嗎？ .....            | 是 | 否 |
| 30. 你的頭腦是否和以前一樣清晰呢？ .....           | 是 | 否 |

Sandy Chen Stokes, RN, BSN      San Jose State University 1998

## Summary of Diagnostic Tests for Dementia

Dolores Gallagher-Thompson, PhD  
Marian Tzuang, MSW

November 3, 2011

### **Mini-Mental State Examination (MMSE)**

MMSE is now published by “Psychological Assessment Resources (PAR), Inc.” Visit: <http://www.minimental.com/> , contact [custsup@parinc.com](mailto:custsup@parinc.com) or call 1.800.331.8378  
The following information is extracted from this website.

There are now 3 versions of the MMSE:

(1) MMSE-2 Standard Version: The structure and scoring of the original 30-item MMSE have been retained while some items have been replaced. The three words for the Registration/Recall tasks have been made slightly more difficult and were revised to make foreign language translations easier. The phrase for the Repetition task has been changed to facilitate its translation into foreign languages, enabling easier comparison of results across all language versions. The Comprehension task has been altered to make it easier for persons with physical limitations to perform. Scores obtained using the original MMSE and scores obtained using the MMSE-2: Standard Version are comparable.

(2) MMSE-2 Brief Version: Composed entirely of the MMSE-2: Standard Version Registration, Orientation to Time, Orientation to Place, and Recall tasks, the 16-item MMSE-2: Brief Version can be used for clinical or research situations that require a rapid cognitive screener. These tasks were chosen based on a literature review, their use in the original MMSE, and their adequate retention of sensitivity and specificity to detect dementia.

(3) MMSE-2 Expanded Version: This version improves the clinical utility of the original MMSE by extending the test's ceiling (i.e., difficulty level), increasing the range of raw scores, and increasing the screening sensitivity for individuals with less severe cognitive impairment, such as those with subcortical dementia and mild cognitive impairment. The 90-item MMSE-2: Expanded Version consists of the MMSE-2: Standard Version tasks plus two new tasks: Story Memory (immediate recall of a brief story) and Processing Speed (a symbol-digit coding task).

MMSE-2 translations are now available in German, French, Dutch, Spanish for the US, Simplified Chinese, Russian, Italian, Spanish for Latin America, European Spanish and Hindi. To use a modified version of the MMSE-2, including a modified format or translation, you will need to submit a MMSE Permission Request Form downloadable online at: <http://www4.parinc.com/Products/Product.aspx?ProductID=MMSE-2>

## **Chinese Translations of the MMSE**

### **CMMS:**

A minimally adapted Chinese version of the MMSE, the CMMS, has been used in epidemiological studies in Shanghai (Katzman et al., 1998; Zhang et al., 1990) and Beijing (Li et al., 1991).

Most of the items on the MMSE were directly translated. Items requiring major adaptations include:

- (1) "No if's, and's, or but's," was substituted by "forty-four stone lions."
- (2) "Please close your eyes" was replaced by "Please raise your hands." Because "close eyes" sometimes has a death connotation in the Chinese culture.
- (3) Instead of "Please write a sentence," the respondent was asked to "Say a sentence" to guard against failure on this item due to inability to write as a result of lack of education.

Advised cut-off scores for different levels of education:

- No education cut-off: <18
- Elementary school education cut-off: <21
- Middle school education cut-off: <24

### **CMMSE:**

CMMSE can be downloaded from the National Alzheimer's Association website at:  
[http://www.alz.org/professionals\\_and\\_researchers\\_chinese\\_communities.asp#assessment](http://www.alz.org/professionals_and_researchers_chinese_communities.asp#assessment)

### **CAMSE:**

While the CMMS proved appropriate for testing the more Westernized and educated individuals living in these metropolitan areas, the MMSE required further adaptations to effectively assess cognitive impairment in the less-educated, rural-dwelling individuals who comprise 80% of mainland China's population (Xu et al., 2003) In developing the Chinese-adapted MMSE (CAMSE) for persons with little or no formal education, Xu et al. strove to keep the contents of test items similar to those of the original MMSE while reducing language dependence and increasing sociocultural relevance. For example, in the CAMSE, the elder is asked to name a button rather than a pencil, because an illiterate individual would have little experience with a writing instrument. Similarly, as reading and following the written command "Close your eyes" would be inappropriate for an illiterate individual, the comparable item in the CAMSE involves orally directing the elder to imitate the posture of a man with his arms crossed over his chest, as illustrated in a cartoon.

Advised cut-off scores based on literacy:

- For illiterate individuals: <22
- For literate individuals: <20

### **Cantonese Version of MMSE:**

This is an adapted Cantonese version of the MMSE. Adaptations include:

- (1) “No if’s, and’s, or but’s” was changed to a Cantonese phrase of “Uncle buys fish intestine 姨丈買魚腸.”
- (2) “Please close your eyes” was replaced by “Please raise your hands” for the same reason as described in CMMS.
- (3) Instead of “Please write a sentence,” the respondent was asked to “Say a sentence.”
- (4) Instead of spelling “W-O-R-L-D” backwards, respondents were asked to reverse five digits.

Advised cut-off scores: 19/20

## **Mini-Cog**

The Mini-Cog is a very simple and quick test carried out by a doctor or clinician. It takes about 3 minutes to administer and is often used in emergency departments to identify people who require further investigation into their clinical presentation.

The test consists of a three item recall and a clock drawing test.

1)First the 'patient' is asked to repeat three unrelated words. This is the same as in the Mini Mental State Examination (MMSE).

(2)The 'patient' is then asked to draw a clock. This is the same as the Clock Drawing Test (CDT).

(3)The 'patient' is then asked to recall the three words.

### **Results of the Mini-Cog**

If the 'patient' is unable to recall any of the three words then they are categorized as 'probably demented'. If they can recall all three words then they are categorized as 'probably not demented'. People who can recall one or two words are categorized based on their clock drawing test.

### **Results of the Clock Drawing Test**

If the 'patient' draws a clock that is in any way abnormal they are considered as 'probably demented'. If the clock is normally constructed then they are considered 'probably not demented'.

The mini-Cog test results only contribute to a diagnosis of dementia. The test cannot be used in isolation in diagnostic tests for Alzheimer's.

The Mini-Cog has been used in various Chinese and Spanish languages and dialects, Italian, Japanese, and Vietnamese. The issue is one of which three unrelated words to use. In an Italy study where education levels are very low (<5 years), extremely simple words (the Italian equivalent of house-cat-green) were used; in better educated groups 'banana-sunrise-chair' was adopted.

You can pick words that you think are appropriate to the population. The key, however, is to be sure that they are truly unrelated to each other and unrelated to probable stimuli in the testing room. For example, you wouldn't want to pick 'pen' as one of the words, then hand the subject/patient a pen to draw the clock with.

## **The Cognitive Abilities Screening Instrument (CASI)**

The Cognitive Abilities Screening Instrument (CASI) has a score range of 0 to 100 and provides quantitative assessment on attention, concentration, orientation, short-term memory, long-term memory, language abilities, visual construction, list-generating fluency, abstraction, and judgment. Scores of the Mini-Mental State Examination, the Modified Mini-Mental State Test, and the Hasegawa Dementia Screening Scale can also be estimated from subsets of the CASI items.

Typical administration time is 15 to 20 minutes. Record form, manual, videotape of test administration, and quizzes to qualify potential users on the administration and scoring of the CASI are available upon request.

Chinese version: <http://content.karger.com/ProdukteDB/produkte.asp?Doi=66024>

CASI in English has two versions. CASI Version E-1.0 is for computer scoring and is meant for large studies. In this 1.0 version, each item's score is an integer in order to simplify computer input, and all domain scores are calculated automatically by computer before they are summed to the CASI Total score. In this version and for the two domains of Short-Term Memory and Language, their item scores go through some simple arithmetic manipulations before they are summed to the domain scores. In contrast, CASI Version E-1.1 is meant for clinical use where the domain and total scores usually need to be hand calculated right after CASI administration. In the 1.1 version, some of its item scores for Short-Term Memory and Language involve decimal points, but the domain scores are simply summed from its constituent item scores. (based on email communications with Professor Evelyn Teng)

Please note that the Vietnamese version of the CASI has not been validated outside of the one project.

## **Clock Drawing Test**

This is a simple test that can be used as a part of a neurological test or as a screening tool for Alzheimer's and other types of dementia.

The person undergoing testing is asked to;  
Draw a clock  
Put in all the numbers  
Set the hands at ten past eleven.

### **Scoring system for Clock Drawing test (CDT)**

There are a number of scoring systems for this test. The Alzheimer's disease cooperative scoring system is based on a score of five points.

1 point for the clock circle  
1 point for all the numbers being in the correct order  
1 point for the numbers being in the proper special order  
1 point for the two hands of the clock  
1 point for the correct time.  
A normal score is four or five points.

The test can provide huge amounts of information about general cognitive and adaptive functioning such as memory, how people are able to process information and vision. A normal clock drawing almost always predicts that a person's cognitive abilities are within normal limits. The Clock Drawing test does offer specific clues about the area of change or damage. Research varies on the ability of the Clock Drawing test to differentiate between, for example, vascular dementia and Alzheimer's disease. The CDT has been shown to lack sensitivity for mild cognitive impairment.

For more information, visit:

[http://www.neurosurgical.ca/ClinicalAssistant/scales/clock\\_drawing\\_test.htm#settingandscore](http://www.neurosurgical.ca/ClinicalAssistant/scales/clock_drawing_test.htm#settingandscore)

### **The Montreal Cognitive Assessment (MoCA)**

The MoCA is a brief cognitive screening tool with high sensitivity and specificity for detecting MCI as currently conceptualized in patients performing in the normal range on the MMSE (over 25 points). It takes about 10 minutes to complete.

It is available in the following languages: English, Arabic, Afrikaans, Chinese (Beijing), Chinese (Cantonese), Chinese (Changsha), Chinese (Hong Kong), Chinese (Taiwan), Czech, Croatian, Danish, Dutch, Estonian, Filipino, Finnish, French, German, Greek, Hebrew, Italian, Japanese, Korean, Persian, Polish, Portuguese, Portuguese (Brazil), Russian, Serbian, Sinhalese, Slovak, Spanish, Swedish, Thai, Turkish, Ukrainian, Vietnamese

The test and instructions can be downloaded at: <http://www.mocatest.org>

Please visit <http://www.mocatest.org/permission.asp> for more detail on permission to use MoCA.

For more information, contact Dr. Ziad Nasreddine MD [info@mocatest.org](mailto:info@mocatest.org)