

# Evidence-Based Practices in Adult Protective Services: Survey Results

Completed by the National Council on Crime and Delinquency in conjunction with the National Adult Protective Services Resource Center

The National Adult Protective Services Resource Center (NAPSRC) partnered with the National Council on Crime and Delinquency to learn about evidence-based practices in adult protection services (APS). This effort included two surveys. The first was sent to adult protection services workers, supervisors, managers, and administrators on the NAPSRC distribution list and was available online between May 3 and June 4, 2012. This survey targeted individuals working in APS and asked them to identify evidence-based practices used by their agencies. Respondents were also asked to identify individuals who could be contacted for additional information on evidence-based practices. The second survey targeted only those individuals identified as information sources on evidence-based practices and was available online between June 20 and July 12, 2012. In this subsequent survey, the respondents were asked about the types of research that had been conducted on the assessments and programs identified as evidence based and for access to published and unpublished research.

## Survey 1

# **Identifying Practices**

The first survey was sent via email to individuals known to NAPSRC as APS administrators, managers, supervisors, or workers. Forty-six responses were received from 22 states. Table 1 shows the jurisdictions that had responses and the number of respondents from each jurisdiction.

Table 1			
Responding Jurisdictions			
Jurisdiction Responses			
Alabama	1		
California	6		
Colorado	3		
Florida	1		
Hawaii	2		
Idaho	1		
Illinois	2		
Iowa	1		
Maine	1		
Maryland	1		
Michigan	2		
Minnesota	8		
Montana	1		
Nebraska	2		
North Carolina	4		
Ohio	1		
Oklahoma	2		
Pennsylvania	1		

Table 1			
Responding Jurisdictions			
Jurisdiction Responses			
Rhode Island	1		
Virginia	3		
Wisconsin	1		
Wyoming	1		

Respondents were asked several introductory questions regarding the type of services provided by their agency. Nearly half the respondents (21, or 45.6%) reported that their jurisdiction provided only short-term services to clients. (Short-term was defined as services lasting less than 90 days or the duration of an investigation.) Six respondents (13.0%) indicated that their jurisdiction provided only long-term services. (Long-term was defined as services lasting 90 days or more.) Another 19 respondents (41.3%) indicated that their jurisdiction provided both short- and long-term services.

#### **Assessment Use**

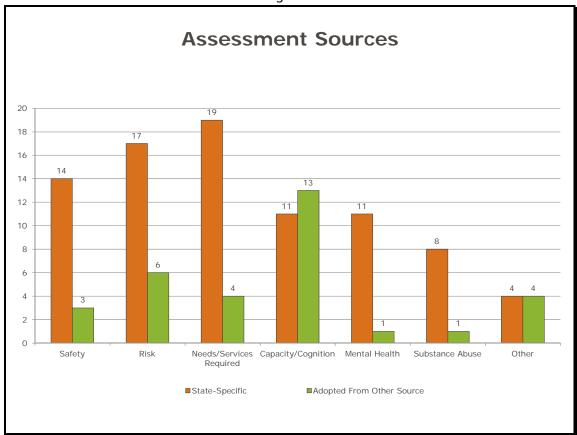
Next, survey respondents were asked about any assessments routinely used by APS workers in their agencies. More than half (26, or 56.5%) indicated that standard assessments were used statewide. Respondents were then asked to identify the purpose of each statement assessment. Table 2 shows the number of respondents who reported using each type of assessment statewide.

Table 2			
Statewide Assessment Usage			
Assessment Purpose Number of Respondents Reporting Use			
Capacity/cognition	24		
Risk	23		
Needs/services required	23		
Safety	17		
Mental health	12		
Substance abuse	9		
Other	8		

Risk, needs/services required, and capacity/cognition assessments were most commonly identified by respondents as being used statewide. Safety and mental health assessments were used by about half of respondents, with the use of substance abuse assessments being less common. "Other" reported assessments included "various," Companion Services Assessment, ASAPS investigation criteria, risk assessment, Katz ADL and Layton IADLs Intake assessment, APS community evaluation, and APS facility evaluation.

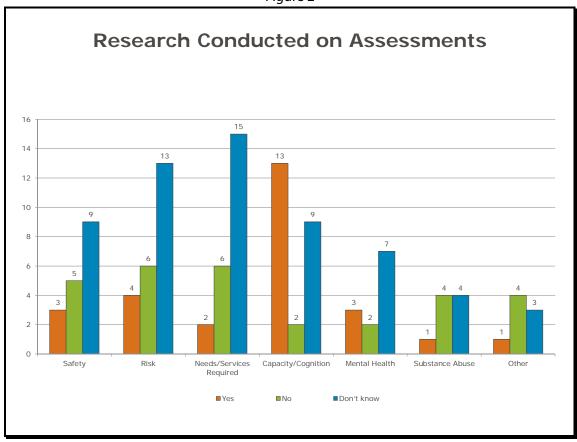
When asked how these assessments had been developed, most respondents indicated that the assessments were state-specific, while a small number were adopted from other sources (e.g., another state, or an assessment developed by a researcher independently of the jurisdiction), as shown in Figure 1. The only exception was the capacity/cognition assessment, which was almost as likely to be state developed or adopted from another source.





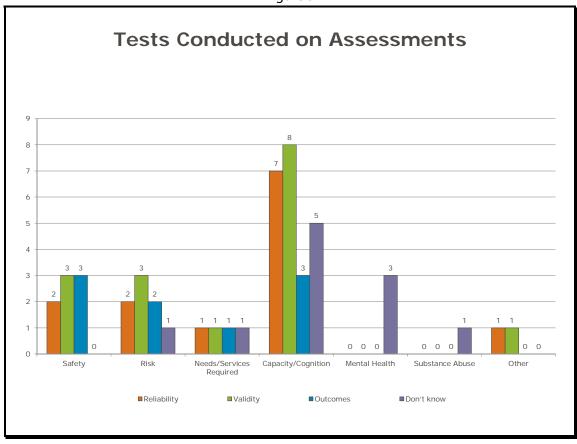
After these foundational questions about the purpose and origin of the assessments used in APS agencies were answered, respondents were asked if research had been conducted regarding each assessment used by their agency. Responses are shown in Figure 2. In most cases, respondents either believed that the assessments used had not been researched, or did not know if research had been conducted. One notable exception was assessments of capacity/cognition, which respondents most often identified as being research based.

Figure 2



The next set of questions was asked only of respondents who indicated that their assessments were evidence based. Many respondents indicated that the assessments had been tested for reliability, validity, and their ability to support positive outcomes for clients. A smaller number of respondents indicated that while they believed an assessment was evidence based, they did not know what type of research had been conducted. (Full data are shown in Figure 3.)

Figure 3



# **Programs**

Next, survey respondents were asked to identify evidence-based programs or services that their agency provided to clients. Ten respondents indicated their agencies had participated in research studies to create an evidence base for practice, and 11 indicated that their agency currently makes evidence-based programming available to clients. (For purposes of this survey, "evidence-based programs" were defined as those that "used the scientific method to evaluate outcomes and are based on observable and measurable data.") The reported purposes of these programs identified as evidence based are show in Table 3. The most common purpose of evidence-based programs was to address emotional/coping concerns, with addressing cognitive, dementia concerns the second most commonly identified purpose.

Table 3			
Purposes of Evidence-Based Programs			
Purpose Number of Programs Identifie			
Address emotional/coping concerns	4		
Address cognitive/dementia concerns	2		
Address financial concerns	1		
Address mobility concerns	1		
Caregiver assistance/support program	1		
Other	4		

Respondents were asked to indicate if any programs were intended to address developmental disability concerns. This category was not selected by any respondents.

#### **Directions for Future Research**

At the end of the first survey, respondents were asked about promising practices offered in their agencies—services not yet evaluated, but that they believe to be helpful. In the first question regarding promising practices, respondents were asked to identify promising practices from a list of common practices. Services identified as promising practices are shown in Table 4.

Table 4			
Promising Practices			
Promising Practice	Number of Respondents Identifying		
Multi-disciplinary teams – case review teams	27		
Multi-disciplinary teams – elder abuse coalition	17		
Multi-disciplinary teams – other	13		
Family group or case conferences	13		
Multi-disciplinary teams – financial abuse specialist teams	11		
Co-located services (e.g., law enforcement in Aging and Disability Resource Centers)	9		
Multi-disciplinary teams – elder death review teams	8		
DA/AG crime prevention unit	8		
Volunteer home visitors	7		
Forensic center	3		

Most respondents identified multi-disciplinary teams (MDT) as a promising practice. The top three most common responses fell into this category—MDT: case review teams (27 respondents); MDT: elder abuse coalition (17 respondents); and MDT: other (13 respondents). Family group or case conferences (13 respondents) and MDT: financial abuse specialist teams (11 respondents) were also identified as promising.

The survey then allowed respondents to write in additional practices regarded as promising. A full listing of responses may be found in Appendix A. Some themes that emerged from responses to this item include:

- Collaboration with law enforcement (e.g., training for officers, victim of crime programs);
- In-home support programs (e.g., caregiver grants, in-home referrals, visiting physicians);
- Alzheimer's services;
- Domestic violence services;
- Emergency support programs (e.g., to address homelessness or the effects of poverty);
- System supports (e.g., reporter training, referral programs to share information with system partners, fatality review boards, regional meetings);
- Prevention services (e.g., community teams);
- Technology programs (e.g., e-consults); and
- Guardianship and conservator programs.

Finally, respondents were asked what research agenda they would sent for the APS field. Respondents were asked to identify three priorities from a list. Their responses are shown in Table 5. Most identified immediate risk assessment and capacity/cognition assessment as priorities. Future/predictive risk assessment, needs/services required assessments, services to address cognitive/dementia concerns, and services to address financial concerns were also frequently selected.

Table 5				
Research Priorities				
Priority Number of Respondents Selecting				
Immediate risk assessment	31			
Capacity/cognition assessment	28			
Services to address financial concerns	18			
Services to address cognitive/dementia concerns	15			
Future/predictive risk assessment	10			
Needs/services required assessment	10			
Safety assessment	9			
Services for caregiver assistance/support program	9			
Services to address mobility concerns	2			

Table 5		
Research Priorities		
Priority	Number of Respondents Selecting	
Services to address developmental disability concerns	1	
Services to address emotional/coping concerns	1	

When asked to define a "successful outcome" for APS, the definitions shown in Table 6 were given.

Table 6				
Successful Outcomes				
Outcome Number of Respondents Ident				
Client's safety is improved	44			
Protection of the client's financial assets	41			
Risk reduced	40			
Prevention/mitigation of future abuse, neglect, or exploitation	39			
Improvement in the client's quality of life	38			
Supportive and other services provided to the client	35			
Arrest and prosecution of abusers	27			
Client accepted services	23			
Legal interventions sought	20			
All required case activities and documentation completed on time	19			
Reporter, family members, and/or community of client are satisfied	11			

Most respondents identified improved safety, reduced risk, and protection of financial assets as successful outcomes. Other frequent outcomes included the prevention/mitigation of future abuse, neglect, or exploitation; improvement in the client's quality of life; and supportive services provided to the client. It is interesting to note that "reporter, family members, and/or community of client are satisfied" was the least-frequently selected successful outcome.

When allowed a free response to this question, answers fell among the following themes. (A full list of responses is given in Appendix A.)

- Client/family satisfaction;
- Client self-determination (e.g., client remains in home, least restrictive interventions are used, client's opinions are respected);
- Reduced recurrence/recidivism;

- Mitigation of risk (e.g., client and family are educated about APS issues, client is aware of community resources);
- Legal outcomes (e.g., prosecution, recovery of assets); and
- Improved client physical/mental health.

Some respondents noted that successful outcomes in adult protection are difficult to assess because clients retain the right to refuse services (therefore, subsequent events may reflect client choice more than worker recommendations or efforts), and because some clients have conditions that naturally worsen over time and no intervention by APS could prevent subsequent negative outcomes.

After the initial survey findings were compiled, two follow-up surveys were launched. One survey was sent to all persons or institutions identified in the first survey as sources of additional information on evidence-based assessments. A different survey was sent to sources identified as having more information on evidence-based programs. These online surveys were available from June 30 to July 12, 2012.

#### Survey 2

#### **Assessments**

Respondents to the first survey identified and provided contact information for 11 unique assessments or assessment systems that they believed to be evidence based. To learn more about these assessments, a secondary survey was sent to the experts identified for each assessment. These experts were informed of the first survey and given the option to forward the secondary survey to another person whom they believed to be more "expert." The assessments identified for the secondary survey are shown in the list below; those for which respondents completed the secondary survey are shown in bold. This secondary survey had a 55.5% response rate.

Assessments included in follow-up survey:

- ASCAP: Adult Services Comprehensive Assessment Program
- Clox
- Domestic Violence Safety Plan
- FASE
- The Mini Mental Status Exam
- IADL
- The Montreal Cognitive Assessment
- NC APS Facility Evaluation
- Saint Louis University Mental Status Examination
- Six Pillars
- The Virginia UAI (Uniform Assessment Instrument)

Information for the six responding assessments is summarized in Table 7. When interpreting these results, it is important to remember that the findings reflect only the information provided by the survey respondents, whose information may have been incomplete.

Table 7			
Research on Assessments Identified as Evidence Based			
Assessment	Tested for Reliability	Tested for Validity	Evaluated Under Field Conditions
ASCAP	No	No	No
Clox	Yes	Yes	Unknown
IADL	Yes	No	Unknown
Montreal Cognitive Assessment	Yes	Yes	Yes
NC APS Facility Evaluation	No	No	Unknown
Virginia UAI	Yes	Yes	Yes

Respondents were also asked to identify if any research (in addition to reliability or validity testing or an evaluation) had been conducted. No respondents identified additional research on any of the assessments. Because the secondary survey respondents were unable to describe the research basis for the ASCAP or the NC APS Facility Evaluation, these assessments have been dropped from the current report. The survey respondent with information regarding the ASCAP noted "Rather than an assessment tool, it is more a way for adult services staff (this includes 3 separate adult programs) to document contacts, data regarding the client, investigations, etc. We utilize the program to extract data but it is used more as a tool than an evidence- or outcomes-based program at this time."

The **Clox** assessment was tested for reliability using correlational coefficients, alpha coefficients, and Rasch modeling; and for validity, using face validity, predictive validity, construct validity, and concurrent validity tests. The respondent was able to identify many published studies that documented the reliability and validity of the Clox assessment. Citations for this research were provided by the respondent, and may be found in Appendix B.

The **IADL** was piloted by Ventura County and tested for reliability and validity; however, the survey respondent was not familiar with the specific tests used and was unable to provide citations for these studies.

The **Montreal Cognitive Assessment** was tested for reliability and validity; however, the survey respondent was unable to identify the specific tests used and was unable to provide citations for these studies. In addition to these tests, a process evaluation had been conducted. Citations for the process evaluation are included in Appendix B.

The **Virginia UAI** has been tested for reliability using percentage agreement and percentage agreement with an expert score. The validity of this assessment was tested using face validity and predictive validity tests. A process evaluation was conducted by the Virginia Commonwealth University, which found that the assessment helped workers identify service needs for APS clients that were similar (to a statistically significant degree) to those of an experienced group of professionals. In addition, trained assessors with different backgrounds arrived at similar recommendations for clients. Citations for this work were provided and are included in Appendix B.

#### **Programs**

Respondents to the first survey identified and provided contact information for 12 unique programs for APS clients that they believed to be evidence based. To learn more about these programs, a secondary survey was sent to the experts identified for each program. These experts were informed of the first survey and given the option to forward the secondary survey to another person whom they believed to be more "expert." The programs identified for the secondary survey are shown in the list below; those for which respondents completed the secondary survey are shown in bold. This secondary survey had a 41.7% response rate.

Programs included in the follow-up survey:

- California APS Standards for Consistency in Determining Findings
- Center for Excellence in Aging and Geriatric Health
- Depression Screening and Falls Prevention Program
- Elder Abuse Decision Support System
- Estate Management
- Oklahoma Risk Assessment
- Preventative In-Home Partnership
- Range Women's Advocates
- Rapid Response Expert Team
- Stepping On
- Structured Decision Making®
- TRIO-UC San Diego

Information for the five responding programs is summarized below. When interpreting these results, it is important to remember that the findings reflect only the information provided by the survey respondents, whose information may have been incomplete.

Table 8  Program Information			
California APS Standards for Consistency in Determining Findings	No	No	No
Depression Screening and Falls Prevention Program	Yes	Yes	Unknown
Elder Abuse Decision Support System	Yes	No	No
Stepping On	No	Yes	Unknown
Structured Decision Making	Yes	No	Yes

Because the survey respondent for the California APS Standards for Consistency in Determining Findings program was unable to describe the research conducted on the service, this program has been dropped from this study.

The **Depression Screening and Falls Prevention Program** was subject to both a process and an outcomes evaluation. The study found that older adults participating in the program had fewer symptoms of depression, decreased physical pain, better ability to recognize and self-treat symptoms, and improved well-being. Additional benefits were identified for service providers, including expanded capacity to address depression, better communication and stronger partnerships with mental health providers, and improved staff knowledge and confidence in helping clients. The respondent was able to provide citations for this research, which are collected in Appendix B.

The **Elder Abuse Decision Support System** was subject to a process evaluation at seven provider sites in Illinois. The program is a web-based screening that considers suspected abuse and incorporates interviews with alleged victims, collaterals, and alleged abusers. This research is summarized in a study provided by the respondent. The citation for this study is listed in Appendix B.

**Stepping On** was evaluated for outcomes. This fall-prevention program demonstrated a 31% reduction in falls among program participants. Further information on the program is available through the sources listed in Appendix B.

The **Structured Decision Making** system for APS was subject to a process evaluation in New Hampshire, where the state APS agency is implementing four assessments to inform social worker decision making in APS cases. The evaluation found that early practice was promising, but varied by office. Additional research on this model included reliability testing of the four assessments (intake, safety, risk, and strengths and needs) as well as a validation study to determine the predictive validity of the risk assessment. The available research on this system is collected in Appendix B.

#### **Discussion**

The survey findings described in this report begin to scratch the surface of evidence-based practice in APS in the United States. Respondents to the initial survey represented 22 states, and the findings of these surveys should be regarded as suggested directions for future exploration, rather than as a definitive description of current practice. Findings of interest include:

- Many respondents indicated that their agencies do use standardized assessments that are implemented statewide. This may indicate an interest in supporting the consistency of decision making within jurisdictions.
- Most of the assessments used by APS agencies are specific to the individual state and were not adapted from another source. The exception is assessments of capacity/cognition, which were almost as likely to have been internally or externally developed.
- For most assessments (excluding capacity/cognition assessments), respondents either
  did not know if the assessments were evidence based or believed that they were not
  evidence based. This finding may reflect many causes: a lack of evidence-based
  assessments for use in APS, a lack of information about/dissemination of evidencebased assessments in APS, or a lack of funding to evaluate state-developed systems.

- Most respondents did not identify that their agency made evidence-based programming available to clients. Again, this may be due to a lack of research, lack of communication, or a lack of funding to test local programming.
- When asked to identify promising practices and successful outcomes, respondents
  had many suggestions for future research efforts. This may indicate that a lack of
  knowledge regarding evidence-based practice is due to a lack of research and
  research funding, rather than any lack of seeking such research by the field.
- The follow-up surveys identified a handful of evidence-based practices and assessments that other jurisdictions may choose to explore further when making their own programming choices.

# Appendix A

**Responses to Open-Response Questions** 

# **Responses to Open-Response Questions**

(Responses are presented below exactly as they were typed into the online survey.)

If your APS community has other "promising practices" in addition to those mentioned above, please list them below. (By promising practices, we mean programs, services, or other approaches that have not been evaluated or researched, but seem to produce good results for your clients.)

- Law enforcement training on elder issues for both new officers and current officers.
- caregiver grant, referrals for in home assistance, visiting physicians.
   Outreach/education to professionals who report a/n/e
- Referral process in place to share APS information with Attorney General's Office,
   Medicaid Fraud Control Unit; with county police departments; with licensing authority for residential care settings (care homes; foster homes; nursing homes).
- Emergency resources services for emergency APS cases that involve homelessness, poverty or poor nutrition due to lack of food
- Community Teams focused on prevention Will be implementing FAST and Adult Fatality Review Team
- e-consult
- Victim of Crime Program Volunteer Guardianship Program
- I selected one above we do not do any of the above.
- Contracted Guardianship & Conservatorship Meetings Regional AP Meetings every other month
- We don't have the above, but, the system required one be checked
- Developed framework for determining dependent adult status and turning the materials into an eLearning to be delivered statewide in Fall 2012.
- Coordination with the Alzheimer's Community Care Association for in-home and placement services to dementia clients. This group is unique to Palm Beach County, Florida and receives national support.
- Domestic Violence Prevention, Range Intervention Program, Children's Services
- At the state level we've partnered with the Conference of DAs to improve access to the justice system for victims of abuse, neglect and exploitation in NC.

- services to dementia clients. This group is unique to Palm Beach County, Florida and receives national support.
- Domestic Violence Prevention, Range Intervention Program, Children's Services
- The 100 local DSS agencies that provide APS may have practices we're not aware of. At the state level we've partnered with the Conference of DAs to improve access to the justice system for victims of abuse, neglect and exploitation in NC.

What other indicators would tell you that a service or practice has resulted in a successful outcome?

- Expressed appreciation by the client and family
- Client's self-determination is honored.
- We measure the goal of elimination or reduction of the protective issue. We measure progress toward goal in 4 areas. We measure prognosis of recurrence
- Improved physical and or mental health of Client
- client is able to remain in his or her home.
- Increase in prosecution of perpetrators
- Reduced recidivism rates.
- least restrictive interventions attempted before more restrictive interventions
- The reduction in re-opened cases.
- education of family members, etc. re: APS, community resources, available services
- This is a hard area to manage as adults have the right to refuse so there may not be a lot of "success" and that does not measure the volume of work that workers handle
- client's rights and opinions have been respected whether agreed upon or "professionals" feel it is best for the client.
- client is aware of available community resources client is aware of how to improve safety
- Client/Customer satisfaction
- Client's feels that satisfied and sees the improvement. There are less re-offenses
- Recovery of assets

• maltreatment is stopped or plan in place to keep client safe if remaining in same environment, plan is in place to prevent future maltreatment. The question which is subjective in nature would be Is the client better off as a result of insertion of APS into their lives? Objective outcome measures could be developed to establish 'better off'. Such as assists protected, surrogate decision maker in place. client self-reports (with capacity). markers for stability or maintenance, recognizing that many APS client will deteriorate due to health and that sustaining a person is a safe environment while they are in the dying process is as good as it gets with some clients.

# **Appendix B**

**Citations for Research Identified by Survey Respondents** 

#### **Citations for Research Identified by Survey Respondents**

#### **Clox Assessment**

- Allen, S. C., & Baxter, M. (2009). A comparison of four tests of cognition as predictors of inability to perform spirometry in old age. *Age Ageing*, *38*(5):537–541.
- Allen, S. C., Warwick-Sanders, M., & Baxter, M. A. (2009). Comparison of four tests of cognition as predictors of inability to learn to use a metered dose inhaler in old age. *International Journal of Clinical Practice*, 63(8), 1150–1153.
- Arismendi-Morillo, G., & Fernández-Abreu, M. (2010). Ultrastructural cutaneous microvascular pathology of young adults aged up to 50 years with chronic kidney disease and vascular cognitive impairment. *Ultrastructural Pathology*, *34*(4), 214–218.
- Atkinson, H. H., Rosano, C., Simonsick, E. M., Williamson, J. D., Davis, C., Ambrosius, W. T., ...

  Kritchevsky, S. B. (2007). Cognitive function, gait speed decline, and comorbidities: The health, aging and body composition study, Health ABC study. *The Journals of Gerontology Series A: Biological Sciences and Medical Sciences*, 62(8), 844–850.
- Burnett, J., Dyer, C. B., & Naik, A. D. (2009). Convergent validation of the Kohlman Evaluation of Living Skills as a screening tool of older adults' ability to live safely and independently in the community. *Archives of Physical Medicine and Rehabilitation*, *90*(11), 1948–1952.
- Chan, A., Paskavitz, J., Remington, R., Rasmussen, S., & Shea, T. B. (2008). Efficacy of a vitamin/nutriceutical formulation for early-stage Alzheimer's disease: A 1-year, open-label pilot study with a 16-month caregiver extension. *American Journal of Alzheimer's Disease & Other Dementias*, 23(6), 571–585.
- Chohan, Z. H., & Supuran, C. T. (2006). Metalloantibiotics: Synthesis, characterization and in-vitro antibacterial studies on cobalt (II), copper (II), nickel (II) and zinc (II) complexes with Cloxacillin. Journal of Enzyme Inhibition and Medicinal Chemistry, 21(4), 441–448.
- Crowe, M., Allman, R. M., Triebel, K., Sawyer, P., & Martin, R. C. (2010). Normative performance on an executive clock drawing task (CLOX) in a community-dwelling sample of older adults. *Archives of Clinical Neuropsychology*, 25(7), 610–617.
- de Jager, C. A. (2004). Changes over time in memory, processing speed and clock drawing tests help to discriminate between vascular cognitive impairment, mild cognitive impairment and Alzheimer's disease. *Journal of Neurology Research*, 26(5), 481–487.
- de Jager, C. A., Hogervorst, E., Combrinck, M., & Budge, M. M. (2003). Sensitivity and specificity of neuropsychological tests for mild cognitive impairment, vascular cognitive impairment and Alzheimer's disease. *Psychological Medicine*, *33*(6), 1039–1050.
- de Jager, C. A., Milwain, E., & Budge, M. M. (2002). Early detection of isolated memory deficits in the elderly: The need for more sensitive neuropsychological tests. *Psychological Medicine*, *32*(3), 483–491.

- de Jager, C. A., Oulhaj, A., Jacoby, R., Refsum, H., & Smith, A. D. (2012). Cognitive and clinical outcomes of homocysteine-lowering B-vitamin treatment in mild cognitive impairment: A randomized controlled trial. *International Journal of Geriatric Psychiatry*, *27*(6):592–600. doi: 10.1002/gps.2758
- Dichgans, M., Markus, H. S., Salloway, S., Verkkoniemi, A., Moline, M., Wang, Q., Posner, H., & Chabriat, H. S. (2008). Donepezil in patients with subcortical vascular cognitive impairment: A randomised double-blind trial in CADASIL. *The Lancet Neurology*, *7*(4), 310–318.
- Forti, P., Olivelli, V., Rietti, E., Maltoni, B., & Ravaglia, G. (2010). Diagnostic performance of an Executive Clock Drawing Task (CLOX) as a screening test for mild cognitive impairment in elderly persons with cognitive complaints. *Dementia and Geriatric Cognitive Disorders*, 30(1), 20–27.
- Frey, K. L., & Arciniegas, D. B. (2011). Revisiting the neuroanatomical correlates of the clock drawing test among persons with traumatic brain injury. *Brain Injury, 25*, 539–542. doi: 10.3109/02699052.2011.559612
- Giordano, N., Tikhonoff, V., Palatini, P., Bascelli, A., Boschetti, G., De Lazzari, F., ... Casiglia, E. (2012). Cognitive functions and cognitive reserve in relation to blood pressure components in a population-based cohort aged 53 to 94 years. *International Journal of Hypertension, 2012*.
- Juby, A. (1999). Correlation between the Folstein mini-mental state examination and three methods of clock drawing scoring. *Journal of Geriatric Psychiatry and Neurology, 12*, 87–91. doi: 10.1177/089198879901200209
- Kagan, V. E., Tyurina, Y. Y., Bayir, H., Chu, C. T., Kapralov, A. A., Vlasova, I. I., ... Jiang, J. (2006). The proapoptotic genies get out of mitochondria: Oxidative lipidomics and redox activity of cytochrome c/cardiolipin complexes. *Chemico-Biological Interactions*, 163(1-2), 15–28.
- Lortie, J. J., Remington, R., Hoffmann, H., & Shea, T. B. (2012). Lack of correlation of WAIS Digit Span with Clox 1 and the Dementia Rating Scale in MCI. *International Journal of Alzheimer's Disease*. doi: 10.1155/2012/829743
- McGuinness, B., Barrett, S. L., Craig, D., Lawson, J., & Passmore, A. P. (2010). Executive functioning in Alzheimer's disease and vascular dementia. *International Journal of Geriatric Psychiatry*, 25(6), 562–568.
- Margraf, N., Bachmann, T., Schwandner, W., Gottschalk, S., & Seidel, G. (2009). Bedside screening for executive dysfunction in patients with subcortical ischemic vascular disease. *International Journal of Geriatric Psychiatry*, 24(9),1002–1009.
- Matioli, M. N., & Caramelli, P. (2010). Limitations in differentiating vascular dementia from Alzheimer's disease with brief cognitive tests. *Arquivos de Neuro-Psiquiatria*, 68(2), 185–88.
- Menon, C., Hall, J., Hobson, V., Johnson, L., & O'Bryant, S. E. (2011). Normative performance on the executive clock drawing task in a multi-ethnic bilingual cohort: A Project FRONTIER study. *International Journal of Geriatric Psychiatry*. doi: 10.1002/gps.2810. [

- O'Brien, T. J., Wadley, V., Nicholas, A. P., Stover, N. P., Watts, R., & Griffith, H. R. (2009). The contribution of executive control on verbal-learning impairment in patients with Parkinson's disease with dementia and Alzheimer's disease. *Archives of Clinical Neuropsychology*, 24(3), 237–244.
- Quinn, S. C., Henshaw, H., Clark, D., Falck, C., & Smith, S. (2010). Using the CLOX drawing task to educate the public of the effects of hearing loss. *Perception*, *39*(10), 1420–1423.
- Rao, B., Anderson, T. A., Redder, A., & Jackson, W. A. (2010). Perchlorate formation by ozone oxidation of aqueous chlorine/oxy-chlorine species: Role of ClxOy radicals. *Environmental Science and Technology*, 44(8), 2961–2967.
- Román, G. C., & Royall, D. R. (1999). Executive control function: A rational basis for the diagnosis of vascular dementia. *Alzheimer Disease and Associated Disorders*, *13*(Supp. 3), S69–80.
- Royall, D. R., Chiodo, L. K., & Polk, M. J. (2000). Correlates of disability among elderly retirees with subclinical cognitive impairment. *Journals of Gerontology Series A: Biological Sciences and Medical Sciences*, 55(9), M541–46.
- Royall, D. R., Chiodo, L. K., & Polk, M. J. (2005). An empiric approach to level of care determinations: The importance of executive measures. *Journals of Gerontology Series A: Biological Sciences and Medical Sciences*, 60(8), 1059–1064.
- Royall, D. R., Cordes, J. A.; & Polk, M. J. (1998). CLOX: An executive clock drawing task. *Journal of Neurology Neurosurgery and Psychiatry*, *64*, 588–594. doi: 10.1136/jnnp.64.5.588
- Royall, D. R., Espino, D. V., Polk, M. J., Palmer, R. F., & Markides, K. S. (2004). Prevalence and patterns of executive impairment in community dwelling Mexican Americans: Results from the Hispanic EPESE Study. *International Journal of Geriatric Psychiatry*, 19(10), 926–934.
- Royall, D. R., Espino, D. V., Polk, M. J., Verdeja, R., Vale, S., Gonzales, H., ... Markides, K. P. (2003). Validation of a Spanish translation of the CLOX for use in Hispanic samples: the Hispanic EPESE study. *International Journal of Geriatric Psychiatry*, 18, 135–141. doi: 10.1002/gps.804
- Royall, D. R., Mulroy, A. R., Chiodo, L. K., & Polk, M. J. (1999). Clock drawing is sensitive to executive control: A comparison of six methods. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *54*(5), 328–333.
- Royall, D. R., Palmer, R. F., Chiodo, L. K., Polk, M. J., Markides, K. S., & Hazuda, H. (2008). Clock-drawing potentially mediates the effect of depression on mortality: Replication in three cohorts. *International Journal of Geriatric Psychiatry*, 23(8), 821–829.
- Schillerstrom, J. E., Deuter, M. S., Wyatt, R., Stern, S. L., & Royall, D. R. (2003). Prevalence of executive impairment in patients seen by a psychiatry consultation service. *Psychosomatics*, *44*(4), 290–297.

- Schillerstrom, J. E., Rickenbacker, D., Joshi, K. G., & Royall, D. R. (2007). Executive function and capacity to consent to a noninvasive research protocol. *American Journal of Geriatric Psychiatry*, 15(2), 159–162.
- Schillerstrom, J. E., Sawyer Baker, P., Allman, R. M., Rungruang, B., Zamrini, E., & Royall D. R. (2007). Clock drawing phenotypes in community-dwelling African Americans and Caucasians: Results from the University of Alabama at Birmingham study of aging. *Neuroepidemiology*, 28(3), 175–180.
- Schmelzer, C., Lindner, I., Vock, C., Fujii, K., & Döring, F. (2007). Functional connections and pathways of coenzyme Q10-inducible genes: An in-silico study. *IUBMB Life*, *59*(10), 628–633.
- Wong, A., Mok, V. C., Yim, P., Fu, M., Lam, W. W., Yau, C., ... Wong, K. S. (2004). The executive clock drawing task (CLOX) is a poor screening test for executive dysfunction in Chinese elderly patients with subcortical ischemic vascular disease. *Journal of Clinical Neuroscience*, 11(5), 493–497.
- Xu, Z. F., & Lin, M. C. (2007). Computational studies on the kinetics and mechanisms for NH3 reactions with ClOx (x = 0-4) radicals. *The Journal of Physical Chemistry A, 111*(4), 584–590.
- Writer, B. W., Schillerstrom, J. E., Regwan, H. K., & Harlan, B. S. (2010). Executive clock drawing correlates with performance-based functional status in people with combat-related mild traumatic brain injury and comorbid posttraumatic stress disorder. *Journal of Rehabilitation Research and Development*, 47(9), 841–850.
- Yaffe, K., Barnes, D., Lindquist, K., Cauley, J., Simonsick, E. M., Penninx, B., ... Cummings, S. R. (2007). Endogenous sex hormone levels and risk of cognitive decline in an older biracial cohort. *Neurobiology of Aging*, 28(2), 171–178.
- Yap, P. L., Ng, T. P., Niti, M., Yeo, D., & Henderson, L. (2007). Diagnostic performance of clock drawing test by CLOX in an Asian Chinese population. <u>Dementia and Geriatric Cognitive Disorders</u>. 24(3),193–200.
- Zuverza-Chavarria, V., & Tsanadis, J. (2011). Measurement properties of the CLOX Executive Clock Drawing Task in an inpatient stroke rehabilitation setting. *Rehabilitative Psychology*, *56*(2), 138–144.

# **Montreal Cognitive Assessment**

#### Alzheimer's/MCI

- Chertkow, H., Phillips, N., Nasreddine, Z., & Whitehead, V. (2011, March 29) Severity of mild cognitive impairment does not predict progression. Presented at the ADI Toronto.
- Cuttini, C., et al. (2010, October). Initiation in dementia: Are we detecting it? Department of Medicine, Division of Geriatrics, Queen's University, Kingston, Ontario, Canada. Abstract presented at the Canadian Conference on Dementia, Toronto.

- Damian, A. M., Jacobson, S. A., Hentz, J. G., Belden, C. M., Shill, H. A., Sabbagh, M. N., ... Adler, C. H. (2011). The Montreal Cognitive Assessment and the mini-mental state examination as screening instruments for cognitive impairment: Item analyses and threshold scores. *Dementia and Geriatric Cognitive Disorders*, 31, 126–131.
- Fujiwara, Y., Suzuki, H., Yasunaga, M., Sugiyama, M., Ijuin, M., Sakuma, N. ... Shinkai, S. (2010). Brief screening tool for mild cognitive impairment in older Japanese: Validation of the Japanese version of the Montreal Cognitive Assessment. *Geriatrics & Gerontology International, 10*, 225–232.
- Garcia, A., et al. (2009, October). Apathy in dementia: Are we detecting it? 5th Canadian Conference on Dementia, Toronto. *The Canadian Journal of Geriatrics*, 12(3), 121.
- Hemrungrojn, S., et al. (2009, September). The cognitive domains from Thai-Montreal cognitive assessment test to discriminate between amnestic MCI and mild AD from normal aging. Presented at the International Psychogeriatric Association Conference, Montreal, Quebec, Canada.
- Hsiung, G. R., et al. (2009, October). A pilot study on computerized cognitive training in mild cognitive impairment. 5th Canadian Conference on Dementia, Toronto. *The Canadian Journal of Geriatrics*, 12(3), 124.
- Koski, L., Xie, H., & Finch, L. (2009). Measuring cognition in a geriatric outpatient clinic: Rasch analysis of the Montreal Cognitive Assessment. *Journal of Geriatric Psychiatry and Neurology*, 22(3), 151–160.
- Lam, B., et al. (2009, October). Validation of the Montreal Cognitive Assessment against detailed neuropsychological measures. 5th Canadian Conference on Dementia, Toronto. *The Canadian Journal of Geriatrics*, 12(3), 138.
- Lee, J.-Y., Dong, W. L., Cho, S.-J., Na, D., Hong, J. J., Kim, S.-K., You, R. L., ... Maeng, J. C. (2008). Brief screening for mild cognitive impairment in elderly outpatient clinic: Validation of the Korean version of the Montreal Cognitive Assessment. *Journal of Geriatric Psychiatry and Neurology*, 21(2), 104–110.
- Lerch, M., et al. (2010). Could the Montreal Cognitive Assessment (MoCA) be the new "gold standard" in cognitive evaluation in geriatric patients? A clinical comparison. *The Journal of the Alzheimer's Association*, 6(4), S494.
- Luis, C. A., Keegan, A. P., & Mullan, M. (2008). Cross validation of the Montreal Cognitive Assessment in community dwelling older adults residing in the Southeastern US. *International Journal of Geriatric Psychiatry*, 24, 197–201.
- Nasreddine, Z. S., et al. (2004). The Montreal Cognitive Assessment (MoCA): A brief cognitive screening tool for detection of mild cognitive impairment. *Neurology*, 62(7), A132. Presented at the American Academy of Neurology Meeting, San Francisco, CA; and The 8th International Montreal/Springfield Symposium on Advances in Alzheimer Therapy.

- Nasreddine Z.S., et al. (2003). Sensitivity and specificity of The Montreal Cognitive Assessment (MoCA) for detection of mild cognitive deficits. *Canadian Journal of Neurological Science, 30*(2). Presented at Canadian Congress of Neurological Sciences Meeting, Quebec City, Quebec.
- Nasreddine, Z. S., Phillips, N. A., Bédirian, V., Charbonneau, S., Whitehead, V., Collin, I., ... Chertkow, H. (2005, March 30). The Montreal Cognitive Assessment (MoCA): A brief screening tool for mild cognitive impairment. *Journal of the American Geriatrics Society*, 53, 695–699.
- Nestor, S. M., et al. (2008, March) The Montreal Cognitive Assessment: a retrospective pilot study measuring longitudinal cognitive change in people with mild cognitive impairment. Presented at the Annual Meeting of the Canadian Geriatrics Society, Montreal, Canada. *Canadian Journal of Geriatrics, (11)*1, p63.
- Price, C. C., Cunningham. H., Coronado, N., Freedland, A., Cosentino, S., Penney, D. L., ... Libon, D. J. (2011). Clock drawing in the Montreal Cognitive Assessment: Recommendations for dementia assessment. *Dementia and Geriatric Cognitive Disorders*, 31,179–187.
- Qi-Hao, G., Xin-Yi, C., Yan, Z., Qian-Hua, Z., Ding, D., & Zhen, H. (2010). Application study of quick cognitive screening test in identifying mild cognitive impairment. Neuroscience Bulletin, 26(1), 47–54.
- Rahman, T. T., & El Gaafary, M. M. (2009). Montreal Cognitive Assessment Arabic version: Reliability and validity prevalence of mild cognitive impairment among elderly attending geriatric clubs in Cairo. *Geriatrics and Gerontology International*, *9*(1), 54–61.
- Reban, J. (2006). Montrealsky kognitivni test/MoCA/: prinos k diagnostice predemenci, Ceska Geriatricka, Revue, 4, 224–229.
- Richard, J. L., et al. (2009). Use of the MoCA in patients presenting to a memory disorders clinic. American Journal of Geriatric Psychiatry, 17, A112.
- Sebaldt, R., Dalziel, W., Massoud, F., Tanguay, A., Ward, R., Thabane, L., ... Lescrauwaet, B. (2009, September). Detection of cognitive impairment and dementia using the animal fluency test: The decide study. The Canadian Journal of Neurological Sciences, 36(5), p599.
- Selekler, K., et al. (2010). Power of discrimination of Montreal Cognitive Assessment (MoCA) Scale in Turkish patients with mild cognitive impairment and Alzheimer's Disease. *Turkish Journal of Geriatrics*, 13(3), 166–171.
- Shiroky, J. S., Schipper, H. M., Bergman, H., & Chertow, H. (2007) Can you have dementia with an MMSE score of 30? *American Journal of Alzheimer's Disease and Other Dementia*, 22(5), 406–415.
- Smith, M., et al. (2008, March) Case finding of people with cognitive impairment using screening clinics during Alzheimer awareness month. Presented at the Annual Meeting of the Canadian Geriatrics Society, Montreal, Canada. *Canadian Journal of Geriatrics*, (11)1, p37.
- Smith, T., Gildeh, N., & Holmes, C. (2007, May). The Montreal Cognitive Assessment: Validity and utility in a memory clinic setting. *Canadian Journal of Psychiatry*, 52(5), 329–32.

- Song, S., Correia, S., Schlicting, E., Malloy, P., & Salloway, S. (2008), July 2–5). *Executive impairment and MoCA performance in mild cognitive impairment and Alzheimer's disease*. Presented at the International Neuropsychological Society Annual Meeting, Buenos Aires, Argentina.
- Sweet, L., et al. (2009, October). The Montreal Cognitive Assessment (MoCA) in Geriatric Rehabilitation: Psychometric properties and association with rehabilitation outcomes. 5th Canadian Conference on Dementia, Toronto. *The Canadian Journal of Geriatrics*, 12(3), p113.
- Thissen, A. J., Van Bergen, F., De Jonghe, J. F. M., Kessels, R. P. C., & Dautzenberg, P. L. J. (2010).

  Applicability and validity of the Dutch version of the Montreal Cognitive Assessment (MoCA-d) in diagnosing MCI. *Archives of Gerontology and Geriatrics*, 41(6), 231–240.
- Tobinick, E. L., & Gross, H. (2008, January). Rapid cognitive improvement in Alzheimer's disease following perispinal etanercept administration. *Journal of Neuroinflammation*, *5*,2 Retrieved from http://www.jneuroinflammation.com/content/5/January/2008
- Wen, H. B., et al. (2008, January). The application of Montreal cognitive assessment in urban Chinese residents of Beijing. *Zhonghua Nei Ke Za Zhi, 47*(1), 36–39. Chinese.
- Wittich, W., Phillips, N., Nasreddine, Z., & Chertkow, H. (2010). Sensitivity and specificity of the Montreal Cognitive Assessment modified for individuals who are visually impaired. *Journal of Visual Impairment & Blindness*, 104(6), 360–368.

#### HIV

- Chartier, M. et al. (2011, April). The Montreal Cognitive Assessment (MoCA): A pilot study of a brief screening tool for mild and moderate cognitive impairment in HIV-positive veterans. Poster presentation at the American Conference for the Treatment of HIV.
- Koski, L., Brouillette, M. J., Lalonde, R., Hello, B., Wong, E., Tsuchida, A., & Fellows, L. (2011, March). Computerized testing augments pencil-and-paper tasks in measuring HIV-associated mild cognitive impairment. *HIV Med.* Advance online publication. doi: 10.1111/j.1468-1293.2010.00910.x
- Oza, M. (2011). Brain injury and lower cognitive function are common in people with HIV. *The AIDS Beacon*.

# Huntington

- Lessig, S., et al. (2010). Usefulness of two brief cognitive screening measures in Huntington's disease. *Neurotherapeutics*, *7*(1), p139.
- Mickes, L., et al. (2010, October). A comparison of two brief screening measures of cognitive impairment in Huntington's disease. *Movement Disorders*, 25(13), 2229–2233.

Videnovic, A., et al. (2010). The Montreal Cognitive Assessment as a screening tool for cognitive dysfunction in Huntington's disease. *Movement Disorders*, 25(3), 401–404.

# **Multiple Sclerosis**

- Krupp, L., et al. (2011). The Montreal Cognitive Assessment (MoCA) as a screening tool for cognitive functioning in multiple sclérosis (MS). *Neurology*, 76(9).
- Waspe, K., et al. (2008). Evaluation of modified Montreal Cognitive assessment in multiple sclerosis: A pilot study. *Multiple Sclerosis*, 14(1), p. S29. Presented at ECTRIMS Meeting, Montreal.

#### **Parkinson**

- Dalrymple-Alford, J. C., et al. (2010). The MoCA: Well-suited screen for cognitive impairment in Parkinson's disease. *Neurology*, 75.
- Gill, D. J., et al. (2008). The Montreal Cognitive Assessment as a screening tool for cognitive impairment in Parkinson's disease. *Movement Disorders*, 23(7), 1043–1046.
- Hanna-Pladdy, B., et al. (2010). Utility of the NeuroTrax computerized battery for cognitive screening in Parkinson's disease: Comparison with the MMSE and the MoCA. *International Journal of Neuroscience*, 120(8), 538–543.
- Hoops, S., et al. (2009). Validity of the MoCA and MMSE in the detection of MCI and dementia in Parkinson's disease. *Neurology*, 73(21), 1738–1745.
- Kasten, M., et al. (2010). Validity of the MoCA and MMSE in the detection of MCI and dementia in Parkinson's disease. *Neurology 75*, 479–479.
- Lessig, S., et al. (2008, September 24). Examination of the Montreal Cognitive Assessment (MoCA) and MMSE in Parkinson's disease. Presented at American Neurological Association Meeting, Salt Lake City, Utah.
- Luo Xia-Guang, et al. (2010). Cognitive deterioration rates in patients with Parkinson's disease from Northeastern China. *Dementia and Geriatric Cognitive Disorders*, 30, 64–70.
- Melissa, J., et al. (2011). Validating the Montreal cognitive assessment for the diagnosis of mild cognitive impairment in Parkinson's disease. *Neurology*, *76*(9).
- Melzer, T. R., et al. (2009). Cognition and the limbic system in early Parkinson's disease: A DTI investigation. *NeuroImage*, 47(1), S115.
- Ribosa, R., et al. (2011). Comparative accuracy of the PD-CRS, Mattis DRS, MoCA and SCOPA-COG for screening mild cognitive impairment in Parkinson's disease. *Neurology*, *76*(9).

- Sarah, H., et al. (2010). Pilot study of a three-step diagnostic pathway for young and old patients with Parkinson's disease dementia: Screen, test and then diagnose. *International Journal of Geriatric Psychiatry*, 25, 258–265.
- Sarra, et al. (2009). Montreal cognitive assessment performance in patients with Parkinson's disease with "normal" global cognition according to mini-mental state examination score. *Journal of American Geriatric Society, 57*(2), 304–308(5).
- Zadikoff, C., et al. (2008, January 30). A comparison of the mini-mental state exam to the Montreal Cognitive Assessment in identifying cognitive deficits in Parkinson's disease. *Movement Disorders*, 23(2), 297–299.

#### REM

Gagnon, J. F., et al. (2010, May 15). The Montreal Cognitive Assessment: A screening tool for mild cognitive impairment in REM sleep behavior disorder. *Movement Disorders*, 25(7), 936–940.

#### Stroke rehabilitation

Aggarwal, A., & Kean, E. (2010). Comparison of the Folstein Mini Mental State Examination (MMSE) to the Montreal Cognitive Assessment (MoCA) as a cognitive screening tool in an inpatient rehabilitation setting. *Neuroscience & Medicine*, 1, 39–42.

#### **Substance disorders**

Copersino, M. L., et al. (2009). Rapid cognitive screening of patients with substance abuse disorders. Experimental and Clinical Psychopharmacology 17(5), 337–344.

#### **Tumors**

- Olson, R., et al. (2008, March 12). Feasibility study of the Montreal Cognitive Assessment (MoCA) in patients with brain metastases. *Supportive Care in Cancer, 16,* 1273–1278.
- Olson, R., et al. (2009). *Investigation of cognitive screening measures in patients with brain tumors:* diagnostic accuracy & correlation with quality of life. Abstract presented at 2001 American Society of Clinical Oncology Annual Meeting, Orlando, FL.
- Olson, R., et al. (2009). Comparison of the Mini-Mental State Examination (MMSE) and the Montreal Cognitive Assessment (M0CA) to a comprehensive neuropsychological assessment in patients with brain tumors. Abstract presented at 11th World Congress of Psycho-Oncology, Vienna, Austria.
- Olson, R., et al. (2009). Comparison of two cognitive screening measures, the Mini-Mental State Examination (MMSE) and the Montreal Cognitive Assessment (MoCA), in patients with brain

- tumors. Canadian Association of Psychosocial Oncology, 2009 Conference, Vancouver, British Columbia.
- Olson, R., et al. (2010, October 19). Prospective comparison of the prognostic utility of the Mini Mental State Examination and the Montreal Cognitive Assessment in patients with brain metastases. Support Care Cancer.

#### Vascular

- Athilingam, P. (2008, March 27). The Montreal Cognitive Assessment (MoCA): An appropriate tool to assess subtle cognitive changes in people with heart failure? Section: "Innovations in Nursing Practice with Older Adults." Presented at the ENRS 20th Scientific Conference, Philadelphia, PA.
- Bernstein, I. H., et al. (2010). Psychometric evaluation of the Montreal Cognitive Assessment (MoCA) in three diverse samples. *The Clinical Neuropsychologist*.
- Boulanger, J. M., et al. (2008, May). A prospective cognitive evaluation in post stroke/TIA patients using the Montreal Cognitive Assessment test (MoCA). Presented at European Stroke Conference, Nice, France.
- Cameron, J., et al. (2012). Does cognitive impairment predict poor self-care in patients with heart failure? *European Journal of Health Failure 12*, 508–515.
- Dong, Y., et al. (2010). The Montreal Cognitive Assessment (MoCA) is superior to the Mini-Mental State Examination (MMSE) for the detection of vascular cognitive impairment after acute stroke. *Journal of Neurological Science*. doi:10.1016/j.jns.2010.08.051
- Godefroy, O., et al. (2011, April 7). Is the Montreal Cognitive Assessment Superior to the Mini-Mental State Examination to detect Poststroke Cognitive Impairment? A study with neuropsychological evaluation. *Stroke*, *42*.
- Hachinski, V., et al. (2006, September). National Institute of Neurological Disorders and Stroke-Canadian Stroke Network vascular cognitive impairment harmonization standards. *Stroke*, 37(9), 2220–2241.
- Harkness, K., et al. (2011, February 9). Screening for cognitive deficits using the Montreal Cognitive Assessment Tool in outpatients ≥65 years of age with heart failure. *American Journal of Cardiology*.
- Malcolm, J., & Arnold, O., et al. (2007, January). Canadian Cardiovascular Society Consensus Conference recommendations on heart failure update 2007: Prevention, management during intercurrent illness or actue decompensation, and use of biomarkers. *Canadian Journal of Cardiology*, 23(1).
- Martinic-Popovic, I., et al. (2006). Early detection of mild cognitive impairment in patients with cerebrovascular disease. *Acta Clin Croat, 45*, 77–85.

- Martinic-Popovic, I., et al. (2007, June 15). Mild cognitive impairment in symptomatic and asymptomatic cerebrovascular disease. *Journal of the Neurological Sciences*, 257(1–2), 185–193.
- Martinic-Popovic, I., Lovrencic-Huzjan, A., Simundic, A. M., & Demarin, V. (2011, March 29). Mild cognitive impairment in patients with carotid disease. Presented at the ADI Toronto.
- McLennan, S. N., et al. (2010 September/October). Cognitive impairment predicts functional capacity in dementia-free patients with cardiovascular disease. *Journal of Cardiovascular Nursing*, 25(5), 390–397.
- McLennan, S. N., et al. (2010, December 14). Validity of the Montreal Cognitive Assessment (MoCA) as a screening test for mild cognitive impairment (MCI) in a cardiovascular population. *Journal of Geriatric Psychiatry and Neurology*.
- Pendlebury, S. T., et al. (2010, June). Underestimation of cognitive impairment by Mini-Mental State Examination versus the Montreal Cognitive Assessment in patients with transient ischemic attack and stroke: A population-based study. *Stroke*, *41*(6), 1290–1293.
- Pendlebury, S., et al. (2010). Impairment on Montreal Cognitive Assessment in transient ischaemic attack and stroke patients with normal Mini-Mental State Examination score is clinically relevant. *Journal of Neurology, Neurosurgery & Psychiatry, 81*, e68.
- Sebaldt, R., et al. (2009, September). Detection of cognitive impairment and dementia using the Animal Fluency Test: The decide study. *The Canadian Journal of Neurological Sciences*, *36*(5), p599.
- Wong, A., et al. (2009, August). The validity, reliability and clinical utility of the Hong Kong Montreal Cognitive Assessment (HK-MoCA) in patients with cerebral small vessel disease. *Dementia and Geriatric Cognitive Disorders*, 28, 81–87.
- Wong, A., et al. (2008, December). The validity, reliability and utility of the Cantonese Montreal Cognitive Assessment (MoCA) in Chinese patients with confluent white matter lesions. *Hong Kong Medical Journal*, 14(6), Supplement 6.

# **Visual Impairment**

Wittich, W., Phillips, N., Nasreddine, Z., & Chertkow, H. (2010, June). Sensitivity and specificity of the Montreal Cognitive Assessment modified for individuals who are visually impaired. *Journal of Visual Impairment & Blindness*, 104(6), 360–368.

## Other

- Irak-Dersu, I., et al. (2009, February 24). *Effect of dilating drops on cognitive function*. Presented at 35th annual North American Neuro-Ophthalmology Meeting, Lake Tahoe, NE.
- Irak-Dersu, I., et al. (2009, March 6). *The effect of mydriatic eye drops on cognitive function in glaucoma patients*. Presented at 19th annual American Glaucoma Society meeting, San Diego, CA.

#### **NORMATIVE DATA**

#### Low education:

- Johns, E. K., et al. (2008, February). The Montreal Cognitive Assessment: Normative data in the community. *Journal of the International Neuropsychological Society, 14,* (Supplement 1), i-292. Poster presented at the 36th annual meeting of the International Neuropsychological Society, Waikoloa, Hawaii.
- Johns, E. K., et al. (2008, April). The effect of education on performance on the Montreal Cognitive Assessment (MoCA): Normative data from the community. *The Canadian Journal of Geriatrics*, 11, 32–73. Poster presented at the 28th annual meeting of the Canadian Geriatrics Society, Montreal, Quebec.

# Young adults:

Ratchford, T. L., et al. (2008, March 11). Normative data for the Montreal Cognitive Assessment (MoCA) in young adults. Presented at the American Academy of Neurology Meeting, Chicago, IL. *Neurology 70*, (Supplement 1) A283.

#### **REVIEWS**

- Allan, L., et al. (2006). Mild cognitive impairment: An opportunity to identify patients at high risk for progression to Alzheimer's disease. *Clinical Therapy*, 28, 991–1001.
- Appels, B. A., & Scherder, E. (2010). The diagnostic accuracy of dementia-screening instruments with an administration time of 10 to 45 minutes for use in secondary care: A systematic review. American Journal of Alzheimer's Disease & Other Dementias, 25(4), 301–316.
- Chertkow, H., & Nasreddine, Z., et al. (2007, October). Mild cognitive impairment and cognitive impairment, no dementia: Part A, concept and diagnosis. *Alzheimer's & Dementia: The Journal of the Alzheimer's Association*, 3(4), 266–282.
- Gauthier, et al. (2006, April 15). Mild cognitive impairment. Lancet, 367 (9518), 1262–1270.
- Guo Qi-Hao, et al. (2010, February). Application study of quick cognitive screening test in identifying mild cognitive impairment. *Neuroscience Bulletin*, 26(1), 47–54.
- Hachinski, et al. (2006, September). National Institute of Neurological Disorders and Stroke-Canadian Stroke Network vascular cognitive impairment harmonization standards. *Stroke*, *37*(9), 2220–2241.
- Howe, E. (2007, July). Initial screening of patients for Alzheimer's disease and minimal cognitive impairment. *Psychiatry*, 4(7), 24–27.

- Lonie, J. A., et al. (2009). Screening for mild cognitive impairment: A systematic review. *International Journal of Geriatric Psychiatry*, 24, 902–915.
- Montero-Odasso, M., & Muir, S. W. (2010, May). Simplifying detection of mild cognitive impairment subtypes. *Journal of the American Geriatrics Society*, *58*(5).
- Olson, R., Parkinson, M., & McKenzie, M. (2010). Selection bias introduced by neuropsychological assessments. *Canadian Journal of Neurological Sciences*, *37*, 264–268.
- Shiroky, J. S., Schipper, H. M., Bergman, H., & Chertow, H. (2007, October/November). Can you have dementia with an MMSE score of 30? *American Journal of Alzheimer's Disease and Other Dementia*, 22(5), 406–415.
- Zahinoor, I., et al. (2010). Brief cognitive screening instruments: an update. *International Journal of Geriatric Psychiatry*, 25, 111–120.

#### The Virginia UAI

Long-Term Care Information System Assessment Process by Angela Falcone, BSN, MPH, of Patient Care Management Systems, Inc., PO Box 393, Lenox Hill Station, New York, NW 10021 (formerly LTC Assessment Training Center at Cornell University Medical College). The original report date is 1982.

# **Additional Resources – Programs**

# The Depression Screening and Falls Prevention Program

http://careforelders.org/default.aspx?menugroup=healthyideas

Quijano, L. M., Stanley, M. A., Petersen, N. J., Casado, B. L., Steinberg, E. H., Cully, J. A., & Wilson, N.L. (2007). Healthy IDEAS: A depression intervention delivered by community based case managers serving older adults. *Journal of Applied Gerontology, 26,* 139–156.

#### **Elder Abuse Decision-Support System**

- Conrad, K. J., Iris, M., & Ridings, J. W. (2008). *Conceptualizing and measuring financial exploitation and psychological abuse of elderly individuals*. Report to the National Institute of Justice. Project #2006-MU-MU-0004. Chicago, IL: Author.
- Conrad, K. J., Iris, M., Ridings, J. W., Rosen, A., Fairman, K., & Anetzberger, G. (2011). Conceptual model and map of psychological abuse of older adults. *Journal of Elder Abuse & Neglect*, 23(02), 147–168. doi: 10.1080/08946566.2011.558784
- Conrad, K. J., Iris, M., Ridings, J. W., Langley, K., & Anetzberger, G. J. (2010). Self-report measure of psychological abuse of older adults. *The Gerontologist*. doi:10.1093/geront/gnq103

- Conrad, K. J., Iris, M., Ridings, J. W., Langley, K., & Wilber, K. H. (2010). Self-report measure of financial exploitation of older adults. *The Gerontologist*, *50*(6), 758–773.
- Conrad, K. J., Ridings, J. W., Iris, M., Fairman, K. P., Rosen, A., & Wilber, K.H. (2011). conceptual model and map of financial exploitation of older adults. *Journal of Elder Abuse & Neglect*, 23(4):304–325. doi: 10.1080/08946566.2011.584045
- Iris, M., Ridings, J. W., & Conrad, K. J. (2010). The development of a conceptual model for understanding elder self-neglect. *The Gerontologist*, *50*(3), 303–315.

# **Stepping On**

Clemson, L., Cumming, R., Kendig, H., Swann, M., Heard, B., & Taylor, K. (2004). The effectiveness of a community-based program for reducing the incidence of falls in the elderly: A randomized trial. *The American Geriatrics Society*, *52*, 1487–1494.

# **Structured Decision Making®**

- Johnson, K., Bogie, A., Flasch, S., & Wagner, D. (2008, April). Feasibility and design of an adult protective services risk validation study. Retrieved from National Council on Crime and Delinquency website:
  - http://nccdglobal.org/sites/default/files/publication\_pdf/feasibilityofriskassessment.pdf