Collaborative Research Grant Initiative: Mental Wellness in Seniors and Persons with Disabilities

Operating Grant Final Report

Screening for Early Identification of Mental Health Issues in Seniors: The Development of an Evidence-Based, Standardized, User-Friendly Toolkit for Use in the Primary Care Setting

FEBRUARY 28, 2014 – Dr. Bonnie Dobbs
**Plain Language Summary**

Mental illnesses such as dementia and depression are common in the senior population. However, these illnesses often go unnoticed by health care professionals. This typically results in poor health and reduced quality of life for those seniors who are living with a mental illness that is untreated. Increased detection of mental illnesses in seniors is needed, particularly by health care professionals in primary care settings where seniors commonly present for assessment and treatment of other health conditions.

The goal of this study was to develop a ‘Screening Toolkit’ to be used by health care professionals (e.g., doctors, nurses, etc.) to increase detection of the five most common mental illnesses in the senior population in Alberta. These mental illnesses are anxiety, dementia, depression, psychoses, and substance (e.g., alcohol) abuse. A number of screening tools (tests) were identified from the research literature for four of the five illnesses, with no screening tools identified for psychoses. Tests that had the highest degree of accuracy in identifying those with a mental health illness and those without a mental health illness were selected for inclusion in the toolkit. The tests included in the Screening Toolkit for Mental Health Disorders in Seniors are based on many years of research. Each of the tests in the toolkit has been shown to be accurate in helping health care professionals to identify the mental illness for which they were designed to identify. All of the tests are ‘senior friendly’ in that they are paper and pencil tests that do not take a long time to administer, and all are ‘non-proprietary’ which means there is no cost for using them.

To assist in the ‘uptake’ of the screening tools, we have included paper-based instructions and video demonstrations on how to administer and score the tests. We also have included a list of factors that health care professionals can use to identify individuals at risk for mental health illnesses. In addition, a list of resources available in the community for patients and their families is included. Finally, to help make the toolkit readily available to health care professionals, we created both a paper-based and on-line version of the toolkit. The toolkits will be distributed to health care professionals in the primary care setting throughout Alberta over the next six months.

**Executive Summary**

There have been repeated calls for standardized ‘screening’ for mental health disorders for seniors, with the goal of enhancing detection and more timely intervention. The primary objective of this study was to develop a standardized, user-friendly toolkit for the early identification of mental health disorders in seniors for use in both rural and urban primary care settings in Alberta.

Systematic reviews of the literature were conducted for anxiety, dementia, depression, psychoses, and substance (alcohol) abuse disorder. Included studies met specific criteria (e.g., conducted in a primary care setting; involved community-dwelling individuals 65 years of age and older; utilized a gold standard for diagnosis of the disorder; employed cut point(s) and reported statistics on sensitivity and specificity of the tool(s) studied). Screening tools were identified for four of the five disorders, with all tools having a high degree of sensitivity and specificity, demonstrable ease to administer and score, and currently available on a non-proprietary basis (i.e., available to health care professionals at no cost). An Expert Panel provided validation of the choice of tools selected for use in the toolkit. Consensus Groups, comprised of primary health care professionals (e.g., physicians, nurse practitioners, etc.), provided input on the feasibility of use of the identified tools. To assist health care professionals in identifying individuals who may be at-risk for developing a mental health disorder, we developed a list of the factors, based on the extant research literature, that are associated with mental health disorders. This list includes factors such as age, gender, health status, current stressors, the quality and/or absence of social relations, and...
lack of access to transportation. These factors may affect identification and/or access to care. This list of factors also is suitable for use in everyday practice. We also identified resources available in the community for patients and their families. All of the materials noted above have been included in our Screening Toolkit for Mental Health Disorders in Seniors.

As a part of toolkit development and knowledge dissemination, it was important to involve end-users and policy makers at the health service and government levels early in the research. A Steering Committee was struck to assist with identifying and linking with strategic stakeholders and to inform on the strategy for toolkit uptake and implementation. The final step in the process was the development of a distribution plan for dissemination of the Screening Toolkit for Mental Health Disorders in Seniors to health care professionals in primary care settings throughout Alberta.

The development and distribution of this toolkit represents an important and foundational step toward increasing rates of early detection, and improving treatment of mental disorders for seniors in Alberta.

RESEARCH OVERVIEW

Objective(s)

The primary objective of the study was to develop a standardized, user-friendly toolkit for the early identification of mental health disorders (i.e., anxiety, dementia, depression, psychoses, and substance [alcohol] abuse disorder) in seniors for use in both rural and urban primary care settings in Alberta.

Background

In 2004, the Alberta Government identified the need for improvements to addiction and mental health services, and assigned priority status to the development of a provincial mental health plan for Alberta to address that need. Notably, findings from the Demographic Planning Commission (2008) echoed that call due, in part, to the recognition of the high prevalence of mental health disorders in the current senior population. Specifically, 1 in 5 seniors in Alberta were treated for a mental health disorder in 2005-2006, with an anticipated increase in prevalence rates over the next several decades as a result of the aging of the baby boomers (MacCourt, Wilson, & Tourigny-Rivary, 2011; Statistics Canada, 2006). In the context of Alberta’s aging population, recent evidence suggests that most mental health services for seniors are provided in primary care or long term care settings (Canadian Collaborative Mental Health Initiative, 2006). Evidence also suggests that identification rates of these disorders in the primary care setting are low (Anderson, Parent, & Heustis, 2002; Conn, 2002; Rabins, 1996; World Health Organization, 2013). It is not surprising, therefore, that there have been repeated calls for standardized screening for mental health disorders in individuals aged 65 and older, with the goal of increasing detection and more timely intervention.

Approach and Methods

A multi-phased, multi-method approach was used to achieve the proposed objective, with an overview of the methodologies and results for each segment of the study described below.

Phase 1 – Systematic Literature Reviews

Seven electronic databases (Medline, PsycINFO, AgeLine, Cochrane Database of Systematic Reviews, Cochrane Central Register of Controlled Trials, Abstracts in Social Gerontology, Web of Science®) were searched for articles from database inception to July 2011 for anxiety; from database inception to April 2011 for dementia; from database inception to August 2010 for depression; from database inception to August 2011 for psychoses; and from database inception to August 2011 for substance (alcohol) use disorders to identify studies evaluating the psychometric properties of screening tools in seniors in the primary care setting. The primary care setting was defined as family medicine/general practice, and community health care. Key words (e.g., ‘name of psychological test’, ‘sensitivity’, ‘specificity’, ‘positive predictive value’, ‘negative predictive value’, etc.) were employed. Hand-searching of reference lists of identified articles was also used to identify potential studies. All searches were restricted to English-language articles.
To be eligible, studies had to 1) be original research; 2) include community-dwelling individuals 65 years of age or older; 3) utilize an established gold standard or reference standard for diagnosis of the disorder; and 4) employ a cut point(s) and report the sensitivity, specificity, positive and negative predictive values of the screening tools. Studies recruiting participants who were non-English speakers were excluded. The gold standard/reference standard often was defined as diagnosis of the disorder based on Diagnostic and Statistical Manual of Mental Disorders (DSM) criteria: DSM-4th Edition Text Revision (DSM-IV-TR) (American Psychiatric Association, 2000), DSM-4th Edition (DSM-IV) (American Psychiatric Association, 1994), DSM-3rd Edition Revised (DSM-III-R) (American Psychiatric Association, 1987), DSM-3rd Edition (DSM-III) (American Psychiatric Association, 1980), or the International Classification of Disease 10th Edition (ICD-10) (World Health Organization, 1992). Non-primary research (i.e., editorials, commentaries, letters to the editor, narrative reviews, technology reports, or systematic reviews) were excluded.

Two reviewers independently screened the titles and abstracts of identified studies, using a standardized eligibility criteria form. Studies were excluded if both reviewers agreed that eligibility criteria were not met. For studies identified by one or both reviewers as meeting the inclusion criteria, the full-text version was retrieved and reviewed independently by two authors, utilizing a standardized data extraction form. Any disagreement was resolved by consensus.

For studies meeting the inclusionary criteria, information regarding location of the study, year of publication, study setting, study design, study period, sample size, characteristics of participants, the disorder-screening tool(s) under investigation, the gold standard utilized, and outcomes of interest were extracted. Pairs of study team members independently extracted the data. Any disagreements were resolved by consensus. Finally, the Quality Assessment of Diagnostic Accuracy Studies (QUADAS) (Whiting, Rutjes, Reitsma, Bossuyt, & Kleijnen, 2003; Whiting et al., 2006) was used to assess the quality of the included studies. The QUADAS is a structured 14-item checklist with acceptable validity and reliability (Mann, Hewitt, & Gilbody, 2009) and is recommended by the Cochrane Diagnostic Test Accuracy Working Group as a quality assessment tool for systematic reviews (Mann et al., 2009; Reitsma et al., 2009). Pairs of study team members rated the methodological quality of included studies. Discrepancies were resolved by consensus.

Flow charts of the data extraction process for the five disorders are provided in Figures 1 through 5. Overall, as shown, 6 studies met the inclusionary criteria for anxiety, 43 studies for dementia, 17 studies for depression, 0 studies for psychoses, and 4 studies for substance (alcohol) abuse disorders.
Figure 1. Flow-diagram for study selection on anxiety screening tools for the senior population.

2,907 Potentially Relevant Citations Identified by Electronic Search

Duplicates Removed = 508
Irrelevant Studies Excluded Based on Title/Abstract = 2,271

128 Articles Retrieved and Evaluated in Full-Text Version

# Studies Excluded Based on Full-Text Review:
- Non-Senior Population Study = 94
- Non-Primary Study = 1
- Non-Primary Care Setting = 12
- Non-English Version of Screening Tool = 5
- Outcome Not Our Interest = 10

6 Studies Met Inclusion Criteria
Figure 2. Flow-diagram for study selection on dementia screening tools for the senior population.

14,931 Potentially Relevant Citations Identified by Electronic Search

- Duplicates Removed = 5,351
- Irrelevant Studies Excluded Based on Title/Abstract = 9,342

238 Articles Retrieved and Evaluated in Full-Text Version

# Studies Excluded Based on Full-Text Review:
- Non-Senior Population Study = 61
- Non-Primary Study = 11
- Non-Primary Care Setting = 9
- Non-English Speaking Participants = 44
- Improper Gold Standard Used = 9
- No Gold Standard Reported = 2
- Improper Outcome Calculated = 2
- Outcome Not Our Interest = 12
- Small Sample Size = 1
- Duplicate = 2
- Unrelated Topic = 8
- No Information on Age = 1

76 Studies Met Initial Inclusion Criteria

# Studies Excluded Based on Further Review:
- Non-Senior Population Study = 1
- Non-Primary Care Setting = 1
- Non-English Speaking Participants = 6
- No Gold Standard Reported = 5
- Improper Outcome Calculated = 1
- Misclassification of Dementia = 1
- Not a Screening Tool = 1
- No Overall Sensitivity or Specificity for 65+ Age Group = 1
- No Cut point or Sensitivity or Specificity = 1
- Age Not Specified = 1
- Abstract Only Available = 1
- Diagnostic Test Not a Screening Tool = 1
- Other = 12

43 Studies Met Final Inclusion Criteria
**Figure 3. Flow-diagram for study selection on depression screening tools for the senior population.**

- 7,138 Potentially Relevant Citations Identified by Electronic Search

  - Duplicates Removed = 2,297
  - Irrelevant Studies Excluded Based on Title/Abstract = 4,736

- 105 Articles Retrieved and Evaluated in Full-Text Version

  - # Studies Excluded Based on Full-Text Review:
    - Non-Senior Population Study = 53
    - Non-Primary Study = 9
    - Non-Primary Care Setting = 12
    - Non-English Version of Screening Tool = 1
    - Improper Gold Standard Used = 7
    - Outcome Not Our Interest = 7
    - Small Sample Size = 2
    - Multiple Publications = 1
    - Duplicate Study = 1
    - Assess Diagnostic Test Instead of Screening Tool = 2

- 10 Studies Met Inclusion Criteria from Electronic Search

- 7 Studies Met Inclusion Criteria from the Hand Search of Bibliographies

- 17 Studies Met Inclusion Criteria
Figure 4. Flow-diagram for study selection on psychoses screening tools for the senior population.

1,882 Potentially Relevant Citations Identified by Electronic Search

Duplicates Removed = 251
Irrelevant Studies Excluded Based on Title/Abstract = 1,608

23 Articles Retrieved and Evaluated in Full-Text Version

# Studies Excluded Based on Full-Text Review:
- Non-Senior Population Study = 8
- Non-Primary Study = 0
- Non-Primary Care Setting = 3
- Non-English Speaking Participants = 1
- Improper Gold Standard Used = 5
- Outcome Not Our Interest = 4
- Small Sample Size = 2

0 Studies Met Inclusion Criteria
Figure 5. Flow-diagram for study selection on substance (alcohol) abuse screening tools in seniors.

2,446 Potentially Relevant Citations Identified byElectronic Search

Duplicates Removed = 394
Irrelevant Studies Excluded Based on Title/Abstract = 1,934

118 Articles Retrieved and Evaluated in Full-Text Version

# Studies Excluded Based on Full-Text Review:
- Non-Senior Population Study = 88
- Non-Primary Study = 1
- Non-Primary Care Setting = 16
- Non-English Version of Screening Tool = 2
- Irrelevant Studies = 1
- Outcome Not Our Interest = 3
- Gold Standard Not Reported = 2
- Using Screening Tool as Gold Standard = 1

4 Studies Met Inclusion Criteria
Phase 2 – Toolkit Development Process

Steering Committee

As part of toolkit development and knowledge dissemination, it was important to involve end-users and policy makers at the health service and government levels early in the research. A Steering Committee was established with Terms of Reference developed to assist with identifying and linking with strategic stakeholders and to inform a strategy for toolkit uptake and implementation.

Responsibilities of the Steering Committee were to:

- Assist the investigators in identifying strategic stakeholders,
- Act as a resource for linkages to strategic stakeholders,
- Assist in establishing formal liaison (internal and external) with all appropriate groups/provincial and/or regional initiatives,
- Contribute to overall planning and decision-making on study tasks related to stakeholder engagement (e.g., consensus group forums),
- Assist in development of a strategy for toolkit uptake and implementation, and
- Become an ambassador for the study and provide the team with strategic knowledge related to the uptake and implementation of the toolkit by stakeholders.

An initial in-person Steering Committee Meeting was held October 10, 2012 with three of the Steering Committee members followed by separate phone and in-person meetings with the remaining two Steering Committee members. The objectives of the meeting were for the Steering Committee members to 1) provide input on a provincial stakeholder list of key individuals and/or organizations that have the potential to inform on the development of the toolkit, and 2) initiate discussion and inform a strategy for toolkit uptake and implementation.

The objectives of the meeting were realized, with valuable input received from Steering Committee members. A final meeting with members of the Steering Committee will be held in the spring of 2014 as part of our knowledge dissemination strategy.

Expert Panel Meeting

An important step in the selection of screening tools for the identified mental health disorders was to receive input from experts in the field on the scientific validity of the tools that were identified for inclusion in the toolkit. Toward that end, an Expert Panel meeting was held in December of 2013. Expert Panel members were Dr. Don Schopflocher, Dr. Gus Thompson, and Dr. Cam Wild.

Prior to the meeting, Expert Panel members were provided with the flow diagrams for study selection for each of the disorders, an overview of the QUADAS per item scoring from included studies for each of the disorders, the characteristics of included studies for each of the disorders ordered by gold standard (e.g., sample size, screening tool investigated, gold standard, cut points, and sensitivities and specificities) for review prior to attending the meeting.

The objectives of the Expert Panel meeting were to 1) discuss the scientific properties (e.g., sensitivity, specificity, positive predictive value, negative predictive value) and validity of the screening tools identified for inclusion in the final toolkit, and 2) obtain feedback on other attributes and/of aspects of the tools that should be taken into consideration before making a ‘final’ selection of tools for inclusion in the toolkit.

The objectives of the meeting were realized, with valuable input received from Expert Panel members. Two recommendations most salient to this report were the inclusion of the PHQ-9 (Patient Health Questionnaire - 9 item Version) (depression) and of the AUDIT-C (substance [alcohol] abuse) as potential candidate tools in the screening toolkit.

Based on the results of the systematic reviews (e.g., psychometric properties of the tools) and pre-defined criteria (e.g., short administration time, paper and pencil-based, ease of scoring, non-
proprietary), the study team, in consultation with the Expert Panel, identified the following screening tools as candidates for each of the four mental health disorders¹.

**Anxiety**
Guy's/Age Concern Scale (Lindesay, Briggs, & Murphy, 1989)
HADS-A (Hospital Anxiety Depression Scale - Anxiety subscale) (Zigmond & Snaith, 1983)

**Dementia**
DemTect (Kalbe et al., 2004)
Mini-Cog (Borson, Scanlan, Brush, Vitallano, & Dokmak, 2000)
MMSE (Folstein, Folstein, & McHugh, 1975)

**Depression**
GDS-15 (Geriatric Depression Scale [15 item Version]) (Sheik & Yesavage, 1986)
GDS-30 (Geriatric Depression Scale [30 item Version]) (Yesavage et al., 1982)
PHQ-9 (Patient Health Questionnaire [9 item Version]) (Kroenke, Spitzer, & Williams, 2001)
PHQ-2 (Patient Health Questionnaire [2 item Version]) (Kroenke, Spitzer, & Williams, 2003)

**Substance (Alcohol) Abuse**
AUDIT-C (Babor, Higgins-Biddle, Saunders, & Monteiro, 2001)
CAGE (Ewing, 1984)
Single-Item Screeners (Quantity and Frequency) (Dawson, Pulay, & Grant, 2010)

**Primary Care Consensus Group Meetings²**
The next step of the study involved the acquisition of feedback from health care professionals in the primary care setting. Health care professionals in the primary care setting across the province were identified through initial contact (phone and/or email) with all Primary Care Networks (PCNs) in the province. The study was explained to the Director/Manager, followed by a request for recommendations of individuals from their PCN that would be appropriate for our meeting (e.g., doctors, nurses, etc.). Those individuals were sent emails and/or contacted by phone and invited to participate in one of the four videoconference sessions. Formal letters of invitations were sent to all participants who indicated an interest in and the ability to participate in a videoconference session.

The four videoconferences were held in June and July of 2013. Each videoconference opened with a ‘Welcome’ and introductions. Background information was provided (e.g., prevalence of mental health disorders in the senior population, need for increased detection, differentiation between screening vs. case finding, objectives of study), followed by the objectives of the videoconference session.

Specifically, the objectives were to 1) provide participants with an overview of the study including the need for identifying mental health conditions in seniors, and 2) receive feedback from participants on the clinical applicability, implementation of the screening tools, and dissemination strategies for the Screening Toolkit for Mental Health Disorders in Seniors in the primary care setting.

Information was then presented on the screening tools for each of the four disorders. The information consisted of prevalence of the disorder, the flow chart of the screening tools identification process, screening tools identified and selected for the toolkit, followed by a visual and verbal description of each of the tools and attributes (e.g., time and ease of administration, scoring, psychometric properties, etc.) across each of the four mental health disorders. The final 30 minutes of the videoconference session was devoted to a discussion on implementation and dissemination of the Screening Toolkit for Mental Health Disorders in Seniors. Relevant information was recorded by the Research Coordinator, with that information utilized during the development of the ‘dissemination of

¹ Recall that there were no screening tools identified for psychoses.
² We had originally planned to hold Primary Care Professional Consensus Group Days, with representation of health care professionals across Alberta. However, our initial conversations with health care professionals indicated that videoconferencing sessions would be more efficient timewise and would facilitate the ability to participate.
the screening toolkit phase’ of the study. Participants were then asked to complete the online survey (see Appendix A for an overview of the questions included in the survey). Ethics approval was obtained from the University of Alberta’s Health Research Ethics Board prior to the administration of the survey.

Results of the Survey
Twenty-two health care professionals completed the survey. The majority of the sample self-identified as nurses (59%), with 14% self-identifying as management, 9% as physicians, and 18% as other (e.g., social workers and pharmacists). The majority (59%) of respondents indicated that one of their areas of expertise was seniors, 46% rated mental health as one of their areas of expertise, 41% dementia, 36% depression, 23% anxiety, 9% addictions, and 9% psychoses. The majority of respondents (73%) had six years or greater experience as a health care professional.

When asked about how well do you think each of the screening tools will perform in correctly identifying either depression, anxiety, dementia or substance abuse disorder in seniors presenting in primary care?, the vast majority (90% and higher, respectively) responded with good to excellent. When asked about how receptive do you think patients will be in completing the tool?, the majority (90% and higher) respond with good to excellent on all the screening tools, with the three substance (alcohol) use screening tools rated somewhat lower (CAGE [74%], AUDIT-C [84%], single-item screeners [79%]). Each tool’s ease of administration by clinic staff was rated good to excellent by the majority of respondents (95% and higher, respectively). With respect to each tool’s ease of administration by physicians, the ratings of good to excellent by the respondents were as low as 68% for the DemTect and as high as 95% for the PHQ-9 and single-item screeners, with the remaining screening tools being in the range of 80% to 90%. Each tool’s applicability to the needs of a primary care setting was rated as good to excellent by the vast majority (95% and higher, respectively).

Final Selection of Screening Tools for the Screening Toolkit for Mental Health Disorders in Seniors
Following the Expert Panel meeting and the Consensus Group videoconferences, the study team reviewed the feedback from both groups on the identified candidate screening tools. The study team also continued to gather information on the status of the candidate screening tools. Based on that information, three tools were removed from the candidate list of tools, with one tool added. Information on the deletions and addition is provided below.

Anxiety
Following the Expert Panel and Consensus Group videoconference, we discovered that the HADS-A is a proprietary test. As such, the HADS-A was excluded as a screening tool for anxiety in the Screening Toolkit.

Dementia
The Mini-Mental State Examination (MMSE) was identified as a candidate test in our systematic reviews, and data were extracted relative to its psychometric properties. However, the MMSE is now a proprietary test, with a cost of approximately $1.85 (Canadian) per test3. As such, the MMSE was excluded as a screening tool for dementia in the toolkit. For information on the copyright of the MMSE, see Newman and Feldman (2011). It also is the case that despite the MMSE being proprietary, MMSE scores are required by Blue Cross for reimbursement of cognitive enhancer medications for those with dementia (Alberta Blue Cross, n.d.; Alberta Health and Wellness, 2012). Currently, there is a screening tool for dementia available to health care professionals that provides an algorithm for calculation of a MMSE score. The tool is called the DemTect (Kalbe et al., 2004) and was developed as a sensitive, ‘generic’ tool to detect mild cognitive impairment and early dementia. The tool has a high degree of accuracy in identifying those with a dementia and those without a dementia, with administration and scoring times comparable to the MMSE. Because of the

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3 MMSE forms are available in packages of 50 at a cost of $83 US (includes shipping costs to Edmonton) as of February, 2014.
need for MMSE scores for reimbursement of cognitive enhancer medication in those with a dementia, we included the DemTect in the Screening Toolkit for Mental Health Disorders in Seniors.

**Depression**
A review of the psychometric data on the PHQ-9 indicated that the psychometric properties of this tool were comparable to the other selected tools for depression. As such, the tool was included in the final list of screening tools. Meta-analyses were conducted for both the GDS-15 and the GDS-30. Results of those meta-analyses indicated that the sensitivity and specificity of the GDS-15 were slightly better than the GDS-30. Given the shorter administration time and more favourable psychometric properties of the GDS-15, the GDS-15 was included in the Screening Toolkit for Mental Health Disorders in Seniors and the GDS-30 was eliminated.

**Substance (Alcohol) Abuse**
A review of the psychometric properties (e.g., sensitivity, specificity, positive predictive value, negative predictive value) for the AUDIT-C indicated that those values were not comparable to the screening tools originally selected (e.g., the CAGE and the single-item screeners). As such, the AUDIT-C was removed from the list of candidate screening tools. Finally, a review of the psychometric properties for the single-item screeners for alcohol abuse indicated that the single-item screener (Quantity) had favourable psychometric properties. However, the psychometric properties for the single-item screener (Frequency) for alcohol abuse were less favourable in the senior population. As such, the single-item screener (Frequency) was removed from the list of candidate screening tools for substance (alcohol) abuse.

Screening tools included in the Screening Toolkit for Mental Health Disorders in Seniors are shown in Table 1.

<table>
<thead>
<tr>
<th>Mental Health Disorder</th>
<th>Screening Tool</th>
</tr>
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<tbody>
<tr>
<td>Anxiety</td>
<td>Guy’s/Age Concern Scale</td>
</tr>
<tr>
<td>Dementia</td>
<td>DemTect, Mini-Cog</td>
</tr>
<tr>
<td>Depression</td>
<td>GDS-15 (Geriatric Depression Scale [15 item Version]), PHQ-2 (Patient Health Questionnaire [2 item Version]), PHQ-9 (Patient Health Questionnaire [9 item Version])</td>
</tr>
<tr>
<td>Substance (Alcohol) Abuse</td>
<td>CAGE, Single-Item Screener (Quantity)</td>
</tr>
</tbody>
</table>

**Production of the Screening Toolkit for Mental Health Disorders in Seniors**
Paragon Publishing was contracted to work with the study team in the production of a paper-based version of the screening toolkit. A logo was developed to create a unique identity for the Screening Toolkit for Mental Health Disorders in Seniors.

Toolkit contents include an introduction to the issue, introductory sections for each of the disorders, copies of the screening tools, administration and scoring instructions, resources for patients and families, communication tips for introducing the screening tools in the clinical setting, and accompanying materials. Accompanying materials include information on the web-based version of the toolkit, web-based videos on administration and scoring each of the tools included in the toolkit, and availability of a USB Flash Drive/Thumbnail containing the same videos. A web-based version of the Screening Toolkit for Mental Health Disorder in Seniors will be available in Spring, 2014.

**Key Findings**
The main finding of the study is that appropriate screening tools can be successfully identified using the research method and study design employed. The systematic literature reviews were a valuable method for identifying psychometrically sound tools specific to seniors in the primary care setting. The
Expert Panel consultations validated the scientific merit of the selected tools, the Consensus Group feedback addressed feasibility and uptake, and the Steering Committee provided guidance, stakeholder connection, and knowledge dissemination feedback to maximize implementation. The outcome is a toolkit – the *Screening Toolkit for Mental Health Disorders in Seniors* - that is designed to meet the needs of the primary care setting and upon implementation has the opportunity to improve detection and treatment of mental illnesses in seniors.

**Conclusions**

Mental illness remains largely under-diagnosed in the general population of adults 65 years of age and older. As seniors receive health care services mainly in primary care settings, enhancing primary care professionals’ capacity to detect and diagnose mental illness can lead to higher detection rates and improved treatment outcomes. The major deliverable of this study – a toolkit for screening for mental illness among seniors accessing primary care health care services – will enable primary care service providers to easily screen for four of the top five mental health disorders affecting seniors in Alberta (i.e., anxiety, depression, dementia, and substance [alcohol] abuse). The toolkit also provides information on the associated psychosocial factors that may affect identification and/or access to care. The anticipated gain is earlier identification which in turn can inform on treatment and, ideally, improve outcomes for seniors in Alberta. It also is anticipated that successful implementation of the toolkit will lead to standardization of mental health screening in primary care across Alberta, which fulfills Alberta Health Services’ mandate of increasing mental health care in primary care.

**Implications for Policy or Practice**

The availability of a standardized, evidence-based screening toolkit for detecting the top four mental health disorders for seniors in the primary care setting has the potential to influence both policy and practice. By connecting with stakeholders throughout the course of the research, much interest, enthusiasm, and anticipation was generated. Service providers, practitioners, and policy makers have already articulated intentions of how the toolkit could be used in their settings, such as contributing to depression pathway development which would influence which tools would be incorporated into standard practice in health care settings, and implementation of the screening tools into programs such as seniors’ health and home care. Health care practitioners in primary care voiced the benefit of having an accessible and well-researched toolkit that they can readily implement or add to their current assessment protocols. Knowledge dissemination is an important component to influencing policy and/or practice change.

**Directions for Further Research**

Directions for future research include an evaluation of the impact of the screening tool in everyday practice (e.g., evaluation of impact of availability and use of the screening tools for increased detection of the four mental health disorders in seniors in the primary care setting). Evaluation of the impact of the availability and use of the screening tools on health care professionals’ confidence in detecting and managing the four most prevalent mental health disorders in seniors in the primary care setting also would be informative. Finally, although more difficult to study, a cost-benefit analysis of earlier detection of the four prevalent mental health disorders in seniors would be informative from both a policy and practice perspective.

**Knowledge Dissemination and Translation Activities**

Knowledge dissemination related to the *Screening Toolkit for Mental Health Disorders in Seniors* study to date has consisted of dialogue with Steering Committee members, Primary Care Consensus Group videoconference participants, a facilitated session at the 2013 Found in Translation conference, as well as one-on-one conversations with interested stakeholders. Many of the suggestions from stakeholders have been incorporated into our dissemination strategy.

In line with suggestions from our stakeholders, we plan to give targeted presentations to health care professionals in the primary care setting across the province. These meetings will occur in-person and via videoconference sessions. Our primary objectives of these meetings will be to foster awareness of the *Screening Toolkit for Mental Health Disorders in Seniors*, present pertinent information on the toolkit, and
answer questions regarding administration and scoring of the screening tools. We also plan to disseminate results of the study at a number of upcoming conferences including the Canadian Geriatrics Society 34th Annual General Meeting, the 43rd Annual Scientific and Educational Meeting with the Canadian Association on Gerontology, Found in Translation 2014, and the 2014 Family Medicine Forum. These conferences are held between March and December of 2014.

**Principal Applicant (Team Leader)**

<table>
<thead>
<tr>
<th>Name</th>
<th>Position Title</th>
<th>Topics of interest</th>
</tr>
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<tbody>
<tr>
<td>Dr. Bonnie Dobbs</td>
<td>Professor, Department of Family Medicine, University of Alberta</td>
<td>Gerontology, safety and mobility for medically at-risk drivers, seniors’ mental health</td>
</tr>
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**Project Partners (Team Members)**

<table>
<thead>
<tr>
<th>Name</th>
<th>Position Title</th>
<th>Role</th>
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<tbody>
<tr>
<td>Dr. Diane McNeil</td>
<td>Director, Promotion, Prevention &amp; Community Initiatives, Addiction &amp; Mental Health, Alberta Health Services</td>
<td>Co-Investigator (i.e., data collection, data analysis, data synthesis, knowledge translation, etc.)</td>
</tr>
<tr>
<td>Anita Saini</td>
<td>Research Coordinator, The Medically At-Risk Driver Centre, Department of Family Medicine, University of Alberta</td>
<td>Research Coordinator (i.e., data collection, data analysis, data synthesis, knowledge translation, etc.)</td>
</tr>
<tr>
<td>Ms. Sarah Carr</td>
<td>Director, Seniors Policy and Community Partnerships Government of Alberta</td>
<td>Steering Committee</td>
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<td>Ms. Lynne Mansell</td>
<td>Vice President, Seniors Health Strategic Clinical Network Alberta Health Services</td>
<td>Steering Committee</td>
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<td>Ms. Cathy Pryce</td>
<td>Vice President, Addiction and Mental Health Strategic Clinical Networks Alberta Health Services</td>
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<tr>
<td>Ms. Reverdi Darda</td>
<td>Executive Director, Primary Care, Community &amp; Rural and Chronic Disease Management Alberta Health Services</td>
<td>Steering Committee</td>
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<tr>
<td>Ms. Signe Swanson</td>
<td>Director Case Management, Coordinated Access/Transition Services Primary and Community Care Alberta Health Services</td>
<td>Steering Committee</td>
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<tr>
<td>Dr. Don Schopflocher</td>
<td>Associate Professor, Faculty of Nursing, Associate Professor, Centre for Health Promotion Studies, University of Alberta</td>
<td>Expert Panel Member</td>
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<tr>
<td>Dr. Gus Thompson</td>
<td>Research Associate, Institute of Health Economics Edmonton, Alberta</td>
<td>Expert Panel Member</td>
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<tr>
<td>Dr. Cam Wild</td>
<td>Acting Director and Professor, Centre for Health Promotion Studies Director, Addiction and Mental Health Research Laboratory, University of Alberta</td>
<td>Expert Panel Member</td>
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**PUBLICATIONS AND PRESENTATIONS**

**Manuscripts in Preparation**


**Presentations**


**ABOUT THE ALBERTA MENTAL HEALTH RESEARCH PARTNERSHIP PROGRAM**

The Alberta Mental Health Research Partnership Program is comprised of a broad-based multisectoral group, representing service providers, academic researchers, policy makers and consumer groups, working together to improve the coordination and implementation of practice-based mental health research in Alberta.

The mission of the Research Partnership Program is to improve mental health outcomes for Albertans along identified research priority themes, by generating evidence and expediting its transfer into mental health promotion, prevention of mental illness, and innovative service delivery.

The Research Partnership Program sets out to increase Alberta’s excellence and output of mental health research findings, and to better translate these findings into practice improvements.
**REFERENCES**


Appendix A

Consensus Group Survey Questions

Title of Research Study:
Screening for Early Identification of Mental Health Issues in Seniors: The Development of an Evidence-Based, Standardized, User-Friendly Toolkit for Use in the Primary Care Setting

Principal Investigator:
Dr. Bonnie M. Dobbs, Professor, Department of Family Medicine, University of Alberta

Co-Investigator:
Dr. Diane C. McNeil, Director, Promotion, Prevention and Community Initiatives, Addiction and Mental Health, Alberta Health Services

Instructions:
After completing the few questions on demographics, please indicate your rating, using the rating scale, for the anxiety and depression screening tools for each of the five questions on attributes of the tools, followed by your ranking of the anxiety and depression screening tools. Your responses will be combined with responses from others. This will assist the group in 'short-listing' the tools. The data collected will be kept confidential. Completing this survey will be taken as your consent to participate in this research study. Again, our sincere thanks for completing the survey.

Demographic Information
1. Professional Affiliation (check your primary affiliation):
2. Areas of Expertise/Specialization (check as many as apply):
3. Organization you are affiliated with
4. Position
5. Years of Experience

Screening Tool Questions
6. Based on the information from our systematic review, how well do you think each of the screening tools listed below will perform in correctly identifying the <name of disorder> in seniors presenting in primary care? (Excellent, Good, Poor, Very Poor)
7. Based on information that we have provided (a copy of the screening tool), how receptive do you think patients will be in completing the tool? (Excellent, Good, Poor, Very Poor)
8. Based on the administration instructions for each of the screening tools, how would you rate the tool's ease of administration by clinic staff? (Excellent, Good, Poor, Very Poor)
9. Based on the administration instructions for each of the screening tools, how would you rate the tool's ease of administration by physicians? (Excellent, Good, Poor, Very Poor)
10. Based on your review of the information (tool itself, reliability and validity, administration instructions), how would you rate the applicability of this tool to the needs of a primary care setting? (Excellent, Good, Poor, Very Poor)
11. Finally, please rate your overall preference, by rank-ordering the screening tools, starting with your highest preference (Rank #1) to your second highest preference (Rank #2)
12. Additional comments on the screening tools (Open-Ended Format)
13. What format of the tool would you most likely use? (Electronic Format Only, Paper-Based Format Only, Both Electronic and Paper-Based, Other)
14. What resources would you find helpful if you were to use one or more of the screening tools? (Training Videos on Administration?, Training Videos on Scoring?, Instruction Manuals?)
15. What additional information should the toolkit contain? (Open Ended)
16. What barriers do you foresee in implementing the toolkit at your site? (Open Ended)
17. What advantages do you foresee in implementing the toolkit at your site? (Open Ended)