*CANADIAN BEST PRACTICE RECOMMENDATIONS FOR STROKE CARE*

# ASSESSMENT AND MANAGEMENT OF DEPRESSION AND COGNITION POST STROKE

*UPDATE 2013*

**Dr. Gail Eskes**
**Department of Psychiatry**
**Dalhousie University**
**Chair, Writing Group for Mood and Cognition Post Stroke**



## Objectives

- Become familiar with the 2013 updates to the recommendations for the management of mood and cognition following stroke
- Review the following highlights of the 2013 updates:
  - Increased guidance on screening and management options for post stroke depression
  - Revised definitions for vascular cognitive impairment
  - Updates on screening and management of vascular cognitive impairment



## Mood and Cognition for Stroke Writing Group Members

| Name | Expertise | Location |
|---|---|---|
| Gail Eskes | Chair, Neuropsychology | Halifax, NS |
| Oscar Benavente | Neurology | Vancouver, BC |
| Sandra Black | Neurology | Toronto, ON |
| Deirdre Dawson | Occupational Therapy | Toronto, ON |
| Elizabeth Gilchrist | Neuropsychology | Edmonton, AB |
| Theresa Green | Nursing | Calgary, AB |
| Tammy Hopper | Speech-Language Pathologist | Edmonton, AB |
| Adam Kirton | Pediatric Neurologist | Calgary, AB |
| Andrew McClure | Lawson Health Research Institute | London, ON |
| Paige Moorhouse | Geriatrics | Halifax, NS |
| Louise Nichol | Occupational Therapy | Winnipeg, MB |
| Kirk Nylen | Knowledge Translation | Toronto, ON |
| Katherine Salter | Psychology | London, ON |
| Sylvain Lanthier | Neurology | Montreal, QC |
| Gabrielle DeVebers | Pediatric Neurology | Toronto, ON |
| Mubeen Rafay | Pediatric Neurology | Winnipeg, MB |

## External Reviewers –Mood and Cognition for Stroke

| External Reviewer | Expertise | Location |
|---|---|---|
| Philip Gorelick | Neurology | Illinois, USA |
| Krista Lanctot | Psychiatry and Pharmacology | Ontario |
| Stewart Longman | Neuropsychology | Alberta |
| Elizabeth Skidmore | Occupational Therapy | Pennsylvania, USA |

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## Best Practices and Standards Working Group

| Name | Professional Role | Location |
|---|---|---|
| Phillips, Stephan Co-Chair | Stroke Neurologist, Queen Elizabeth II Health Sciences Centre; Professor, Division of Neurology, Faculty of Medicine, Dalhousie University | Nova Scotia |
| Bayley, Mark Co-Chair | Physiatrist; Associate Professor, University of Toronto Acquired Brain Injury, Physical Medicine & Rehabilitation Toronto Rehabilitation Institute | Ontario |
| Graham, Ian | Senior Scientist, Centre for Practice-Changing Research, The Ottawa Hospital Research Institute; Associate Professor, School of Nursing, University of Ottawa | Ontario |
| Gubitz, Gord | Stroke Neurologist, Director, Neurovascular Clinic, Queen Elizabeth II Health Sciences Center. Assistant Professor of Medicine (Neurology), Dalhousie University | Nova Scotia |
| Harris, Devin | Emergency Physician, St. Paul's Hospital Clinical Associate Professor, Department of Emergency Medicine, University of British Columbia | British Columbia |
| Joiner, Ian | Director, Stroke, Heart and Stroke Foundation of Canada | Canada |
| Lafferty, Katie | Executive Director, Canadian Stroke Network | Canada |
| LeBrun, Louise-Helene | Stroke Neurologist, Directeur du Centre des maladies vasculairescérébrales du Centre Hospitalier de l'Université de Montréal (CHUM ) | Quebec |
| Lindsay, Patrice | Director of Performance and Standards, Canadian Stroke Network | Canada |
| Markle-Reid, Maureen | Staff Lead, Canadian Best Practice Recommendations for Stroke Care Nurse Specialist, Associate Professor, School of Nursing and Associate Member, Clinical Epidemiology and Biostatistics, *McMaster* University | Ontario |
| Millbank, Robin | Manager, Professional Development and Training, Canadian Stroke Network | Canada |
| Smith, Eric | Associate Professor, Dept of Clinical Neurosciences, Radiology and Community Health Sciences Member, Hotchkiss Brain Institute, University of Calgary | Alberta |
| Rowe, Sarah | Physiotherapist, Vancouver Coastal Health | British Columbia |

## Post Stroke Depression (PSD)

- ***Taking Action*** in the areas of mood and cognition following stroke is critical
- The occurrence of post-stroke depression, even if subtle or mild, affects 30% to 60% of patients who have experienced a stroke within the first year after onset.
- Of equal concern is the large number of family members and informal caregivers who also begin to experience depressive symptoms in the post-stroke recovery phase.

## *Taking Action* for PSD

- Recent reports have shown that there is inconsistent screening and monitoring of patients for post-stroke depression in all settings
- Delays in comprehensive assessment and management of mood issues may result in poor outcomes and slower recovery.
- The first steps for healthcare professionals in ***TAKING ACTION*** for mood changes are:
  - to understand the frequency of occurrence for PSD in patients and caregivers
  - build screening for the symptoms of depression into regular workflows
- Screening should occur through all stages and settings following a stroke, including:
  - in acute care, rehabilitation, prevention clinics
  - outpatient and community settings (including primary care, home care and long-term care).

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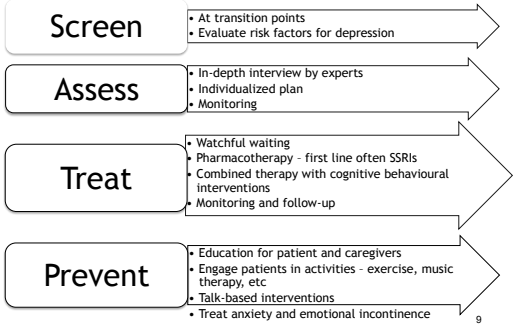
## Post Stroke Depression

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## Best Practice Recommendation 7.1 Identification and Management of Post-Stroke Depression (PSD)

All patients with stroke should be considered to be at **high risk** for post-stroke depression (PSD), which can occur at any stage of recovery.

*Common risk factors: Increased functional dependence and having a history of pre-stroke depression may be the two most salient risk factors for the development of PSD.*

*Also - increasing stroke severity, presence of cognitive impairment*

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## 7.1.1 Screening for Post stroke Depression:

i. All patients with stroke should be screened for depressive symptoms using a validated tool. [Evidence Level A]

ii. Screening should also include evaluation of risk factors for depression, particularly a history of depression. [Evidence Level C]

iii. Screening should take place at various stages throughout the continuum of stroke care [Evidence Level C]. Stages of care may include:

   a) during acute care stay, particularly if evidence of depression or mood changes are noted
   b) following hospital discharge from the emergency department or inpatient setting to an outpatient or community-based healthcare setting
   c) throughout rehabilitation within inpatient, outpatient, and home-based settings, according to client progress
   d) periodically, following discharge to the community, during follow-up appointments and/or during periodic health assessments with primary care practitioners and consulting specialists.

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## 7.1.2 Assessment for Post stroke Depression:

i. Patients identified as being at risk for depression during screening should be managed by a healthcare professional with expertise in diagnosis and management of depression in stroke patients. If required, a referral should be made to an appropriate mental health specialist (e.g., psychiatrist or psychologist) [Evidence Level C].

ii. Further assessment by the mental healthcare professional may include:

   a) More in-depth interview for the purpose of assessment and diagnosis based on accepted diagnostic criteria (e.g., Diagnostic and Statistical Manual of Mental Disorders) [Evidence Level B];
   b) Population-specific assessment measures (e.g., children, elderly, persons with co-morbid neuropsychiatric conditions) [Evidence Level C];
   c) Determination of appropriate course of treatment and individualized management plan
   d) Post-treatment assessment and follow-up as needed.

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## 7.1.3 Treatment and Management Modalities:

**A. Pharmacotherapy**

i. Patients with mild depressive symptoms or those diagnosed with minor depression may initially be managed by "watchful waiting"*

   a) Pharmacological treatment should be considered/started if the depression is persistent and interferes with clinical goals, or worsens [Evidence Level B]

ii. Patients diagnosed with a depressive disorder following formal assessment should be considered for a trial of antidepressant medication

** Watchful waiting is defined as a period of time when the patient who displays mild depressive symptoms is monitored closely without additional therapeutic interventions to determine whether the mild depressive symptoms will improve. The timeframe for watchful waiting varies in the literature somewhere between 2 to 4 weeks. It is often described as including suggestions to the patient for self-help strategies and participation in exercise.*

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## 7.1.3 Treatment and Management Modalities

**A. Pharmacotherapy**

iii. No one drug class has been found to be superior for PSD treatment. Side effect profiles, however, suggest that some selective serotonin reuptake inhibitors (SSRI's) may be favoured in this patient population.

- Choice of an antidepressant medication will depend upon symptoms of depression, potential known side effects of the medication, particularly in the child or older adult, drug interactions with other current medications and underlying disease conditions. *(Medications Table)*

iv. Response to treatment should be monitored regularly by a health professional with expertise in mental healthcare. Monitoring should include evaluation of any changes in the severity of depression, review of potential side effects, and update of ongoing management plans.

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## 7.1.3 Treatment and Management Modalities (cont.):

**A. Pharmacotherapy**

**v.** If a good response is achieved, treatment should be continued for a minimum of six months before slowly withdrawing the antidepressant.

- *Examples of a 'good response' may be indicated by positive changes in thoughts and self-perceptions (e.g., hopelessness, worthlessness, guilt), emotional symptoms (e.g., sadness, tearfulness), and improved motivation to carry out daily activities.*

vi. Following initial treatment for PSD, patients should continue to be monitored for recurrence of depressive symptoms, as part of ongoing comprehensive stroke management [Evidence Level C]. The involvement and feedback of family and caregivers can be an important component of ongoing monitoring.

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## 7.1.3 Treatment and Management Modalities

**B. Non-Pharmacological as Adjunctive Treatment**

i. There is inadequate evidence at present to support the use of psychotherapy as monotherapy in the treatment of PSD.

ii. Treatment for PSD may also include psychotherapy as an adjunct in combination with antidepressants and/or longer-term option to prevent relapse. This approach, while supported by evidence in other populations, requires more research in stroke populations [Evidence Level C].

a. Different options that have been explored in small studies have included cognitive behavioural therapy (CBT) and problem solving therapy. although the methodological details of the therapies have not been well described. These therapies could be considered where appropriate at the discretion of the mental health expert [Evidence Level C]

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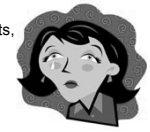
## 7.1.3 Treatment and Management Modalities

**C. Other Mood Symptoms (Anxiety)**

i. Patients with marked anxiety should be offered psychotherapy [Evidence level B].
   a. Although evidence is limited in stroke patients, pharmacotherapy may be considered as an adjunct to psychotherapy.



**D. Post Stroke Emotional Incontinence (PSEI)**

i. In cases of severe, persistent or troublesome tearfulness, patients may be given a trial of antidepressant medication [Evidence Level A]. Side effect profiles suggest that some selective serotonin reuptake inhibitors may be preferred over others for this patient population.

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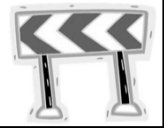
## 7.1.4 Prevention of Post Stroke Depression

i. Although, emerging data on the use of pharmacotherapy as a preventive intervention for post stroke depression is encouraging, routine use of prophylactic antidepressants is not recommended in post-stroke patients, at this time [Evidence Level A].
   a. Further research is required to define at risk patients, choice of antidepressant agents, optimal timing and duration of intervention [Evidence Level A].

ii. Non-pharmacological, talk-based interventions including problem-solving therapy and motivational interviewing may be used to enhance rehabilitation and prevent depression post stroke [Evidence Level B].

iii. Engaging patients in activities such as exercise or music therapy may also have a beneficial effect on mood post-stroke [Evidence Level C].



## 7.1.5 Ongoing Monitoring, Support and Education

i. Patients should be given information and education about the potential impact of stroke on their mood and that of family and caregivers;
   – patients and families should be provided with the opportunity to talk about the impact of stroke on their lives at all stages of care

ii. Patients and their caregivers should have their psychosocial and support needs assessed and reviewed on a regular basis (at least annually) as part of long-term stroke management [Evidence level C] by primary care practitioners and consulting specialists.

iii. For patients who experience some degree of communication challenge or deficits following stroke, appropriate strategies for screening of possible PSD should be implemented to ensure adequate assessment and access to appropriate treatment

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## Screening Tools for PSD

- Patient Health Questionnaire (PHQ9)
- Hospital Anxiety and Depression Scale (HADS)
- Geriatric Depression Scale (GDS)





## Patient Health Questionnaire (PHQ9)

- **Format**
  - Multiple choice, 9 questions with 4 options
- **Cut-off**
  - Scores ≥ 10 indicate need for further assessment
- **Notes:**
  - Can be self-administered or administered by a clinician through an interview

**PATIENT HEALTH QUESTIONNAIRE-9 (PHQ-9)**

Over the last 2 weeks, how often have you been bothered by any of the following problems? (Use "✓" to indicate your answer)

| | Not at all | Several days | More than half the days | Nearly every day |
|---|---|---|---|---|
| 1. Little interest or pleasure in doing things | 0 | 1 | 2 | 3 |
| 2. Feeling down, depressed, or hopeless | 0 | 1 | 2 | 3 |
| 3. Trouble falling or staying asleep, or sleeping too much | 0 | 1 | 2 | 3 |
| 4. Feeling tired or having little energy | 0 | 1 | 2 | 3 |
| 5. Poor appetite or overeating | 0 | 1 | 2 | 3 |
| 6. Feeling bad about yourself — or that you are a failure or have let yourself or your family down | 0 | 1 | 2 | 3 |
| 7. Trouble concentrating on things, such as reading the newspaper or watching television | 0 | 1 | 2 | 3 |
| 8. Moving or speaking so slowly that other people could have noticed? Or the opposite — being so figgety or restless that you have been moving around a lot more than usual | 0 | 1 | 2 | 3 |
| 9. Thoughts that you would be better off dead or of hurting yourself in some way | 0 | 1 | 2 | 3 |

For office coding: _0_ + _____ + _____ + _____
=Total Score: _____

If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

| Not difficult at all | Somewhat difficult | Very difficult | Extremely difficult |
|---|---|---|---|
| 0 | 0 | 0 | 0 |

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## Hospital Anxiety and Depression Scale

- **Format**
  - Multiple choice, 7 questions per subscale with 4 options;
- **Cut-off**
  - Scores ≥ 11 for total scale or HADS-D ≤ 4-7 indicate need for further assessment
- **Notes:**
  - Can be self-administered or administered by a clinician through an interview

Chart 1 – Hospital Anxiety and Depression Scale

This questionnaire will help your physician to know how you are feeling. Read every sentence. Place an "X" on the answer that best describes how you have been feeling during the LAST WEEK. You do not have to think too much to answer. In this questionnaire, spontaneous answers are more important.

A 1) I feel tense or wound up:
3 ( ) Most of the time
2 ( ) A lot of the time
1 ( ) From time to time
0 ( ) Not at all

D 2) I still enjoy the things I used to enjoy
0 ( ) Definitely as much
1 ( ) Not quite so much
2 ( ) Only a little
3 ( ) Hardly at all

A 3) I get a sort of frightened feeling as if something awful is about to happen
3 ( ) Very definitely and quite badly
2 ( ) Yes, but not too badly
1 ( ) A little, but it doesn't worry me
0 ( ) Not at all

D 4) I can laugh and see the funny side of things
0 ( ) As much as I always could
1 ( ) Not quite as much now
2 ( ) Definitely not so much now
3 ( ) Not at all

A 5) Worrying thought goes through my mind
3 ( ) A great deal of the time
2 ( ) A lot of the time
1 ( ) From time to time but not too often
0 ( ) Only occasionally

D 6) I feel cheerful
3 ( ) Not at all
2 ( ) Not often
1 ( ) Sometimes
0 ( ) Most of the time

A 7) I can sest at ease and feel relaxed
0 ( ) Definitely
1 ( ) Usually
2 ( ) Not often
3 ( ) Not at all

D 8) I feel as I am slowed down
3 ( ) Nearly all the time
2 ( ) Very often
1 ( ) Sometimes
0 ( ) Not at all

A 9) I get a sort of frightened feeling like butterflies in the stomach
0 ( ) Not at all
1 ( ) Occasionally
2 ( ) Quite often
3 ( ) Very often

D 10) I have lost interest in my appearance
3 ( ) Definitely
2 ( ) I don't take so much care as I should
1 ( ) I may not take quite as much care
0 ( ) I take just as much care as ever

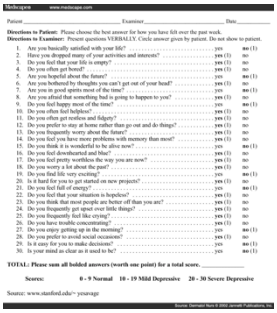
A 11) I feel restless, as if I had to be on the move
3 ( ) Very much indeed
2 ( ) Quite a lot
1 ( ) Not very much
0 ( ) Not at all

D 12) I look forward with enjoyment to things
0 ( ) As much as I ever did
1 ( ) Rather less than I used to
2 ( ) Definitely less than I used to
3 ( ) Hardly at all

A 13) I get sudden feeling of panic
3 ( ) Very often indeed
2 ( ) Quite often
1 ( ) Not very often
0 ( ) Not at all

D 14) I can enjoy a good TV or radio program or book
0 ( ) Often
1 ( ) Sometimes
2 ( ) Not often
3 ( ) Very seldom

## Geriatric Depression Scale



Medscape www.medscape.com

Patient_____ Examiner_____ Date_____

**Directions to Patient:** Please choose the best answer for how you have felt over the past week.
**Directions to Examiner:** Present questions VERBALLY. Circle answer given by patient. Do not show to patient.

1. Are you basically satisfied with your life? ..... yes no (1)
2. Have you dropped many of your activities and interests? ..... yes (1) no
3. Do you feel that your life is empty? ..... yes (1) no
4. Do you often get bored? ..... yes (1) no
5. Are you hopeful about the future? ..... yes no (1)
6. Are you bothered by thoughts you can't get out of your head? ..... yes (1) no
7. Are you in good spirits most of the time? ..... yes no (1)
8. Are you afraid that something bad is going to happen to you? ..... yes (1) no
9. Do you feel happy most of the time? ..... yes no (1)
10. Do you often feel helpless? ..... yes (1) no
11. Do you often get restless and fidgety? ..... yes (1) no
12. Do you prefer to stay at home rather than go out and do things? ..... yes (1) no
13. Do you frequently worry about the future? ..... yes (1) no
14. Do you feel you have more problems with memory than most? ..... yes (1) no
15. Do you think it is wonderful to be alive now? ..... yes no (1)
16. Do you feel downhearted and blue? ..... yes (1) no
17. Do you feel pretty worthless the way you are now? ..... yes (1) no
18. Do you worry a lot about the past? ..... yes (1) no
19. Do you find life very exciting? ..... yes no (1)
20. Is it hard for you to get started on new projects? ..... yes (1) no
21. Do you feel full of energy? ..... yes no (1)
22. Do you feel that your situation is hopeless? ..... yes (1) no
23. Do you think that most people are better off than you are? ..... yes (1) no
24. Do you frequently get upset over little things? ..... yes (1) no
25. Do you frequently feel like crying? ..... yes (1) no
26. Do you have trouble concentrating? ..... yes (1) no
27. Do you enjoy getting up in the morning? ..... yes no (1)
28. Do you prefer to avoid social occasions? ..... yes (1) no
29. Is it easy for you to make decisions? ..... yes no (1)
30. Is your mind as clear as it used to be? ..... yes no (1)

**TOTAL: Please sum all bolded answers (worth one point) for a total score.**_____

**Scores: 0 - 9 Normal 10 - 19 Mild Depressive 20 - 30 Severe Depressive**

Source: www.stanford.edu/~yesavage

Source: Dermatol Nurs © 2002 Jannetti Publications, Inc.

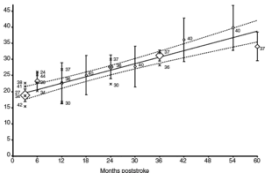
- **Format**
  - Yes/no format, 30 items
- **Cut-off**
  - Scores $\geq$ 11
- **Notes:**
  - Can be self-administered or administered by a clinician through an interview



## Vascular Cognitive Impairment (VCI)

- ***TAKING ACTION*** in the areas of mood and cognition following stroke is critical
- Vascular cognitive impairment refers to the cognitive and behavioural disorders associated with cerebrovascular disease.
- VCI can range from mild cognitive deficits to frank dementia.
- Up to one third of patients will experience dementia within one year after stroke.

Cumulative incidence of dementia up to 60 months post stroke




***Pendlebury, 2012***



## *Taking Action* for VCI

- Vascular cognitive impairment affects up to 60% of stroke survivors.
- VCI is associated with poor recovery and decreased function in everyday activities and may require long term, ongoing management
- The first steps for healthcare professionals in ***TAKING ACTION*** for cognitive changes are:
  - to understand the frequency of occurrence for VCI in patients
  - build screening for the symptoms of VCI into regular workflows
- Screening should occur through all stages and settings following a stroke, including:
  - in acute care, rehabilitation, prevention clinics
  - outpatient and community settings (including primary care, home care and long-term care).

## Vascular Cognitive Impairment

**Screen**
- At transition points
- Include risk factors for vascular disease

**Assess**
- In-depth assessment by experts
- Include evaluation of function and safety
- Individualized rehabilitation plan

**Treat**
- Client centered and functional goals
- Strategy and/or direct skill training
- Pharmacotherapy – manage vascular risk factors; cholinesterase inhibitors
- Combined therapies
- Monitoring and follow-up

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## 7.2 Vascular Cognitive Impairment and Dementia Recommendations

**What is Vascular Cognitive Impairment**?

- Continuum of severity of cognitive deficits
- Syndrome with cognitive impairment affecting at least one cognitive domain (e.g., attention, memory, language, perception or executive function) and with evidence of clinical stroke or subclinical vascular brain injury.
- VCI encompasses a large range of cognitive deficits, from relatively mild cognitive impairment of vascular origin (VaMCI) to Vascular Dementia (VaD), the most severe form of VCI.
- VCI also plays an important role in patients with Alzheimer's disease (AD) pathology who have coexisting vascular lesions.

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## 7.2 Vascular Cognitive Impairment and Dementia Recommendations

**Pattern of cognitive deficits:** There is likely to be an underlay of attention and executive function deficits, such as slowed information processing, impairments in the ability to maintain task set or shift from one task to another and deficits in the ability to hold and manipulate information (e.g., working memory).

**Pattern of vascular pathology**: There is a range of vascular pathology, including multiple cortical infarcts, multiple subcortical infarcts, covert ("silent") infarcts, strategic infarcts, small-vessel disease with white matter lesions and lacunae, and brain hemorrhage.

*Diagnosis criteria for vascular cognitive impairment following stroke has been defined by Gorelick et al (2011)*

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## Best Practice Recommendation 7.2 Vascular Cognitive Impairment and Dementia

All patients with vascular risk factors and stroke or TIA should be considered at **increased risk** for vascular cognitive impairment, particularly those with cognitive, perceptual or functional changes

*Common risk factors associated with VCI include hypertension, diabetes, TIA, stroke, white matter disease, cardiac disease and/or sleep apnea*

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## 7.2.1 Screening for VCI

i. Patients with significant vascular risk factors for VCI, should be considered for VCI screening. [Evidence Level A]
ii. Screening for VCI should be conducted using a validated screening tool, such as the Montreal Cognitive Assessment test [Evidence Level C]. (See Table)
iii. Screening to investigate a person's cognitive status should address arousal, alertness, attention, orientation, memory, language, agnosia, visual-spatial/perceptual function, praxis, and executive function. Executive function screening may include assessment of initiation, insight, planning and organization, judgment, problem solving, abstract reasoning, and social cognition [Evidence Level C].

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## 7.2.1 Screening for VCI (cont.)

iv. Post-stroke patients with suspected cognitive impairment should also be screened for depression, given that depression has been found to contribute to vascular cognitive impairment. A validated screening tool for depression should be used [Evidence Level A]. *Refer to recommendation 7.1 for additional information*

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## 7.2.1 Screening and Assessment

v. Patients who demonstrate cognitive impairments in the screening process should be managed by a healthcare professional with expertise in the assessment and management of neurocognitive functioning.

This assessment should include cognition, perception and/or function as appropriate to guide comprehensive management [Evidence Level B]. If required, a referral should be made to an appropriate cognitive specialist [Evidence Level C].

a. Additional assessments should be undertaken to determine: the nature and severity of cognitive impairments as well as the presence of remaining cognitive abilities and strengths;
b. The impact of deficits on function and safety in activities of daily living and instrumental activities of daily living, and occupational and school functioning should also be assessed;
c. The results of these assessments should be used to guide selection and implementation of appropriate remedial, compensatory and/or adaptive intervention strategies according to client-centred goals and current or anticipated living environment (e.g., to help with discharge planning). [Evidence Level B].

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## 7.2.2 Timing of Screening and Assessments

i. All patients considered at high risk for cognitive impairment should be assessed periodically throughout the stages of care as indicated by the severity of clinical presentation, history and/or imaging abnormalities to identify cognitive, perceptual deficits, depression, delirium and/or changes in function [Evidence Level C].
ii. Stages of care across the continuum may include:
   a. during presentation to emergency when cognitive, perceptual or functional concerns are noted;
   b. during acute care stay, particularly if cognitive, perceptual or functional concerns, or evidence of delirium is noted;
   c. throughout rehabilitation within inpatient, outpatient, and home-based settings, according to client progress;
   d. following hospital discharge from the emergency department or inpatient setting to an outpatient or community-based healthcare setting.

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## 7.2.2 Timing of Screening and Assessments (cont.)

iii. While assessment at different stages of care is important for guiding diagnosis and management, it is also important to be aware of the potential impact of multiple assessments on both the validity of the results as well as on the patient (e.g., test fatigue, practice effects). [Evidence Level B].
iv. Effects of age must also be considered, particularly in children with stroke where outcomes will evolve in parallel with development and deficits may not be fully realized until many years later [Evidence Level C].

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## 7.2.3 Management of Vascular Cognitive Impairment

i. Vascular risk factors (e.g., hypertension, atrial fibrillation) should be managed aggressively to achieve optimal control of the pathology underlying cognitive impairment following a stroke or TIA [Evidence Level A]. *Refer to section 2, Prevention of Stroke, for additional information*

ii. Interventions should be tailored according to the following considerations:
   a. Goals should be patient-centred and sensitive to the values and expectations of patient, family and caregivers [Evidence Level B]
   b. Goals should be developed in the context of both the cognitive impairments as well as patients' intact cognitive abilities, with the aim to facilitate resumption of desired activities and participation (e.g., self-care, home management, leisure, social roles, driving, volunteer participation, financial management, return to work) [Evidence Level B].

*NOTE: Issues such as intensity and dose of therapy, stage of treatment, and impact of severity of deficits can modify effectiveness of therapy, and require more research.*

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## 7.2.3 Management of Vascular Cognitive Impairment (cont.)

iii. Evidence for interventions for cognitive impairment is growing, although more research is required. Interventions with the patient can be broadly classified as either compensatory strategy training, or direct remediation/cognitive skill training. These approaches are not mutually exclusive, and, depending upon the impairments and goals, may be offered together.

*NOTE: It should be noted, however that if the level of impairment has reached the moderate dementia stage, interventions may be more focused on providing education and support for the caregiver in addition to, or in lieu of, cognitive rehabilitation with the patient.*

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## 7.2.3 Management of Vascular Cognitive Impairment (cont.)

iii. Interventions
   **a. Compensatory Strategy training** focuses on teaching strategies to address impairments and is often directed at specific functional limitations in activities of daily living to promote independence. Certain types of strategy training have been shown to be effective for improving attention, memory, language, praxis and executive function domains. [Evidence Level B].
   **b. Direct remediation/cognitive skill training** focuses on providing intensive specific training to directly improve the impaired cognitive domain. Computer-based training has been shown to be effective in improving attention and working memory impairments as well as language impairments [Evidence Level B].

iv. Patients with cognitive impairment and evidence of changes in mood (e.g., depression, anxiety), or behavioural changes on screening should be referred and managed by an appropriate mental healthcare professional [Evidence Level B]. *Refer to recommendation 7.1 for additional information.*

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## 7.2.4 Pharmacotherapy for Vascular Cognitive Impairment

i. Patients with evidence of vascular cognitive impairment should be managed by a physician with expertise in vascular cognitive impairment for further assessment and recommendations regarding pharmacotherapy [Evidence Level C].

ii. Cholinesterase inhibitors should be considered for management of vascular cognitive impairment diagnosed using the National Institute of Neurological Disorders and Stroke (NINDS) – Association Internationale pour la Recherche et l'Enseignement en Neurosciences (AIREN) diagnostic criteria [Evidence Level B].

   a. There is fair evidence of small magnitude benefits for donepezil in cognitive and functional outcomes, with less robust benefits on global measures [Evidence Level B]. Donepezil can be considered ~~as~~ a treatment option for vascular dementia. More research is needed on the benefits of donepezil for vascular cognitive impairment.

   b. There is fair evidence of small magnitude benefits for galantamine on cognition function and behaviour in mixed Alzheimer and cerebrovascular disease. Galantamine can be considered a treatment option for mixed Alzheimer and cerebrovascular disease [Evidence Level B].

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## Assessment Tools for VCI in Stroke Patients

- Montreal Cognitive Assessment test (MoCA)


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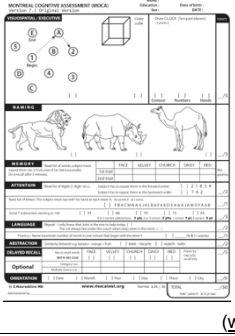


- The MoCA was designed as a rapid screening instrument for the detection of mild cognitive impairment.
- The MoCA assesses the following cognitive domains:
  - attention and concentration
  - executive functions
  - memory
  - language
  - visuo-constructional skills
  - conceptual thinking
  - calculations
  - orientation

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## SUMMARY

- Depression and cognitive deficits are common post-stroke
- These changes result in poor stroke outcomes
- Screening, assessment and management are needed
- For more information, visit: http://www.strokebestpractices.ca/
- Other resources:
  - Evidence Based Review of Stroke Rehabilitation: http://www.ebrsr.com/
  - StrokeEngine: http://strokengine.ca/

(www.mocatest.org)

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## Thank you for your attention

QUESTIONS?

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