E-Appendix 3

Addition of 2010-2013\* Literature Update to 2010 DADIO Evidence List

**1. Variables with evidence for or against (categories A, B, D or E)**

i) Useful Field of View (UFOV) – category A

- Class I x1 (1), Class IIa x1 (2), Class IIb x 4 (3-5,50)

ii) Clinical Dementia Rating (CDR) – category A

- Class I x 4 (1,6,7,56), Class IIb x 5 (8,10,11, 12,13)

iii) Mini Mental-State Exam (MMSE) – category B

- Positive Association: Class I x 2 (14,56), Class IIb x 12 (10,14-22,51,54,58)

- No Association, Class IIb x 7 (9,23-28); No studies with negative association.

iv) Dementia Presence – category B

Class IIa x 3 (29-31). Class IIb x 14 (3-5,17,23,32-35,37-39,53,37)

v) Reduced Driving Exposure – category B

- Class IIb x 5 – 3 negative (5,8,39), 2 positive (17, 23)

vi) Presence of MCI – category B

- Class IIb x 4 – 3 positive (9,36,55), 1 negative (52)

vii) Trail Making Test Part A – category B

- Positive Association: Class I x 3 (48,51,59) Class IIb x 2 (3,56)

- No Association: Class IIb x 3 (5,54,55)

viii) Trail Making Test Part B – category B

- Positive Association: Class I x 2 (48,51), Class IIb x 3 (35,40,55)

- Negative Association: Class I x 1 (59) Class IIb x 3 (3,5,54)

**2. Variables with insufficient evidence for or against (category C rating):**

1. Gender –IIb x 6, 5 of which showed no association (4,7,23,35,40); 1 showed males higher risk (38)
2. Age – IIb x 8, 4 of which showed no association (4,23,35,40); 4 showed age risk factor (3,6,7,15)
3. Education – IIb x 3, 2 of which showed lower education risk (7,40), one showed no difference (15)
4. Rural/Urban (no studies)
5. Duration of Dementia – IIa x1 (29), IIb x 2 (9,23)
6. Judgement/Awareness/Insight – IIb x1 (37)
7. Drinking - IIb x1, not significant (23)
8. Cholinesterase inhibitors – IIb x1 (41)
9. Psychotropics/CNS Drugs - IIb x 2 (42,43)
10. DM - IIb x 1 (21)
11. Agitation – IIb x1 (44)
12. Other Neuropsychiatric findings – IIb x1 (44)
13. Self Report - IIb x 2 w no association (13,37)
14. Caregiver Report - IIb x 4, one with association (37), remainder with no association (13,42,45)
15. Previous Crashes - IIb x 1 (40)
16. License Status - IIb x1 – no association (46)
17. Driving Habits Questionnaire - IIb x 1 (21), IIa x1(15), several items only, different in each study
18. Continues Driving AMA - IIb x 1 (33)
19. Driver Co-Pilot - IIIb x 1 (47)
20. Other cognitive tests : HVLT discrimination - I x 1 (48), BNT - I x 1 (1), Functional reach- IIb x 1 (3), Search errors - I x 1 (1), Search RT - I x 1 (1), Search slope errors - I x 1 (1), Slope false alarm - I x 1 (1), Maze Master - I x 1 (59), Text should read: Maze Master - I x 2 (59), IIb x 1 (40) ,Trails A/B scaled – I x 1 (59), Text should read: Trails A/B scaled - I x 1 (59), WAIS Digit Symbol – I x 1 (1), Picture memory – I x 1 (1), AVLT – IIb x 2 (3,5),Text should read: AVLT - II b x 2 (3,5), WMS sub-items – I x 1 (1), Class IIa x 1 (30) were initially rated D, but reclassified as C with the italicized rules, Digit Span - positive association, I x 1 (51), No association, IIb x 1 (55), Motor Free Visual Perception Test – I x 1 (51), Short Blessed Test – I x 1 (51), Rapid Pace Walk – I x 1 (51), Modified Stroop Test - IIb x 1 (55), Clock Drawing Test – I x 1 (51), Grooved pegboard - II b x 1 (50), RCFT copy/recall - IIb x 1 (50), Block Design - IIb x 2 (50,54), Snellgrove Maze Test – I x 1 (51), Benton Visual Retention Test (errors) - IIb x 1 (50).

\*Note that references 50-57 below were new for the DD-DT study. While reference 54 was published long prior to 2010, it was not captured in the DADIO evidence list. References 58 and 59 were erroneously omitted from the 2010 list of evidence.

**As an added support, Iverson et al’s AAN review in 2010 (49) indicated the following levels of support for variables as useful for identifying unsafe drivers with dementia:**

CDR scale (Level A); A caregiver’s rating of a patient’s driving ability as marginal or unsafe (Level B); A history of traffic citations (Level C); A history of crashes (Level C); Reduced driving mileage (Level C); Self-reported situational avoidance (Level C); MMSE scores of - 24 (Level C); Aggressive or impulsive personality characteristics (Level C).

**In addition, the following tools were used as supporting references:**

1. Third Canadian Consensus Conference on Diagnosis and Treatment of Dementia (Feldman HH, Jacova C, Robillard A, Garcia A, Chow T, Borrie M, Schipper HM, Blair B, Kertesz A, Chertkow H. Diagnosis and treatment of dementia: 2. Diagnosis. Canadian Medical Association Journal. 2008:178(7):825-36).

2. Dalhousie University Geriatric Medicine Research Unit “Driving and Dementia Decision Support Tool” (available at <http://nibw.ca/wp-content/uploads/2010/03/Decisioin-Support-tool.pdf>).

3. Champlain Dementia Network/ Regional Geriatric Program of Eastern Ontario “Driving and Dementia Toolkit for Health Professionals (available at www.rgpeo.com/en/health-care-practitioners/resources/driving.aspx).

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