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Diagnosing mild cognitive impairment and dementia in primary care

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2016

document version

Publisher's PDF, also known as Version of record

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citation for published version (APA)

van den Dungen, P. (2016). *Diagnosing mild cognitive impairment and dementia in primary care*.

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Chapter 1

General introduction

The challenge of dementia

The worldwide prevalence of dementia is predicted to nearly double in the next 20 years, from around 36 million in 2010 to 66 million in 2030. This is due to ageing of the world population; a trend barely influenced by the recently reported decline in age-specific dementia incidence^{2,3}. The burden on health care systems in terms of costs and workforce (formal care) will increase proportionally^{4,5}. In parallel, the demand for care provided by close others (informal care) will grow. In health care systems with a gatekeeper like in the Netherlands, general practitioners (GPs) play a central role in the diagnosis and management of dementia. However, the results of several studies indicate that primary care for persons with dementia lacks structure and coherence⁶⁻¹⁰.

The overarching aim of this thesis is to improve our understanding of the important field of GP care for persons with cognitive decline or dementia and their relatives, by exploring current practice and experimenting with new strategies. Main questions are:

- What is the current diagnostic accuracy of GPs to diagnose dementia, at different stages of dementia?
- What are preferences of persons with, and of persons without cognitive impairment, regarding disclosure of a diagnosis of dementia?
- What is Dutch GPs' level of awareness of cognitive impairment among older persons without an established diagnosis of dementia?
- What is the effect of training GPs to diagnose mild cognitive impairment (MCI) and dementia and having them collaborate with a practice nurse in case finding of, and care for persons with MCI and dementia?

Dementia and mild cognitive impairment

Dementia; definition, clinical presentation and course

Dementia is an umbrella term describing a variety of neurological illnesses with common symptoms. In 2013, the American Psychiatric Association (APA) revised the criteria for the diagnosis of dementia, mainly in order to improve the recognition of dementia subtypes not debuting with amnesia¹¹. However, studies in this thesis used the criteria of the previous (fourth) version of the Diagnostic and Statistical Manual (DSM) of the APA¹². These criteria are:

- the presence of memory impairment and one or more of the following cognitive disturbances: aphasia; apraxia; agnosia or a disturbance in executive functioning.
- the cognitive deficits cause significant impairment in social or occupational functioning and represent a significant decline from a previous level of functioning¹².

The presentation and course of dementia vary. Presenting symptoms may comprise of memory deficits, personality changes, easy confusion, apathy or other symptoms¹³. While some dementia subtypes may progress fast, the most common subtypes generally progress over several years^{14–17}. Ultimately, people become completely dependent on others for all basic activities of daily living. In most cases, the need for care at some point exceeds the capacity of the informal caregiver. Consequently dementia often requires institutionalization¹⁸. At advanced stages, persons with dementia may display behavioural disturbances, loss of control over bodily functions and psychiatric symptoms, like delusions, hallucinations, emotional instability or anxiety.

Mild cognitive impairment (MCI); definition and course

MCI is defined as objective cognitive impairment beyond that expected for age and education level, but not severe enough to require help with usual activities of daily living or to cause significant impairment in social or occupational functioning^{19,20}.

Persons with MCI are at increased risk of dementia, but conversion rates depend on the criteria used²¹. In population samples, one year conversion rates ranged from 3% to over 20%, but three year conversion was less than 50%^{22,23}. Prediction of conversion in the individual patient remains difficult^{24,25}.

In our study we focus on both MCI and dementia because the demarcation between the two may be difficult to discern for GPs. Moreover, both MCI and dementia may have consequences for the subjective wellbeing of persons with MCI and their relatives (see below).

Experiences of persons with dementia and their relatives

Despite the major impact of the loss of cognitive functions and the negative feelings often evoked by the diagnosis, persons with dementia do not necessarily go through intense suffering and show varying degrees of awareness of their cognitive and functional

limitations^{26–28}. However, depending on their level of awareness of cognitive decline, their deficits may cause frustration and uncertainty about their identity, value and relationships. People with early stages of dementia may apply a variety of emotion-oriented coping strategies like denial, avoidance, minimization, normalization or acceptance and problem-oriented strategies like compensating or lowering their aspiration level^{26,29,30}.

As mentioned, relatives like spouses and children play an important role in the initial care for community-dwelling dementia patients. In the Netherlands, about 65% of care for persons with dementia is provided by relatives³¹. While this care task can be rewarding and fulfilling, it is also recognized as a major stressor^{32,33}. Informal caregivers are at increased risk of experiencing anxiety symptoms and depression compared with non-caregivers^{33–35}. The strongest predictors of such symptoms are the nature and intensity of care, and perceived positive aspects of providing care^{36,37}.

Experiences of persons with MCI and their relatives

Persons with MCI report that the loss of cognitive functions may induce stress and negative emotions^{38–40}. The aetiology and meaning of MCI are often unclear to people, and they may interpret their symptoms as age related⁴¹. Reactions to the diagnosis range from fear of advancement to dementia to relief because dementia is not present³⁸. Relatives of persons with MCI may experience a burden and are at higher risk of depressive symptoms. Roles may change and the relation with the patient may worsen. Relatives report a need for information about medical aspects of MCI and an increased need for support and services⁴².

Treatment of dementia

There is no cure for dementia. Meta-analysis of 127 studies reporting on a variety of endpoints (one to 42 studies per endpoint) demonstrated that non-pharmacological interventions reduce psychological and behavioural symptoms of the person with dementia, decrease caregiver burden and depression and improve subjective wellbeing and knowledge of the caregiver³⁶. For example, psychoeducation with active participation of the caregiver showed beneficial effects on all these endpoints. Other non-pharmacological interventions, like cognitive behavioural therapy have more specific effects (e.g. respite care reduced caregiver burden and depressive symptoms). Another meta-analysis of 23 studies showed that such interventions may reduce dysfunctional reactions of caregivers to behavioural and psychological symptoms of dementia⁴³. Effect sizes were small to moderate in both meta-

analyses. Moreover, multi-component psychosocial interventions were shown to delay admission to a long term care facility³⁶. Case management may reduce admissions to care homes and costs⁴⁴.

Pharmacological treatment with acetylcholinesterase inhibitors can temporarily alleviate symptoms, or delay progression of cognitive decline in a minority of persons with mild to moderate Alzheimer's disease (AD)^{45,46}. It can also have a small positive effect on functioning in this group⁴⁵. However, the clinical relevance is unclear and in practice these medicines are often discontinued because of side effects⁴⁷. For most other dementia subtypes, pharmacological interventions have not shown beneficial effects⁴⁸. Pharmacological treatment of behavioural disturbances with antipsychotics may decrease caregiver burden⁴⁹. However, overtreatment and side effects of these drugs are a concern⁵⁰.

Treatment of MCI

There are indications that psychotherapy may help persons with MCI to accept the diagnosis and that it increases acceptance, knowledge and skills in caregivers. There is modest evidence that aerobic exercise and mental activity have small but significant beneficial effects on, particularly executive, cognitive functioning of persons with MCI^{20,47}. Currently, no medications have proven to be effective for MCI^{51,52}.

Primary care

Dementia diagnostics in primary care

In countries with a gatekeeper health care system, the initial assessment of cognitive deficits is the responsibility of the GP. However, the diagnostic process in the primary care setting can be highly variable within and between practices and is often demand-led and rather unstructured^{6-9,53}.

Primary care dementia guidelines recommend straightforward diagnostic assessment when dementia is suspected⁵⁴⁻⁵⁷. However, GPs indicate that this is often not accomplished and persons with dementia and relatives may experience the period between the first consultation and a firm diagnosis as overly long⁵⁸⁻⁶³. The literature is inconsistent about the proportion of persons with dementia accurately diagnosed by GPs. To quantify the accuracy of GPs' dementia diagnoses, at different stages of dementia, we performed a systematic review of the literature on this subject (chapter 2).

Barriers to diagnosis may occur at the level of the person with dementia, relatives and at the physician level⁶⁴. Persons with dementia and caregivers were shown to delay seeking professional help for months to years after becoming aware of symptoms of cognitive decline^{65,66}. Reasons at the patient level or caregiver level include fear of confrontation, fear of the diagnosis and lack of awareness or misinterpretation of symptoms⁶⁴. Barriers to diagnosis at the physician level are also manifold, including diagnostic uncertainty, embarrassment to confront someone with the possibility of dementia, not wanting to stigmatize, own avoidance issues or fear of the disease and (experiencing) lack of time to adhere to the complex guidelines for diagnosing dementia^{62,63,67-72}.

However, it is unclear to what extent GPs are at all aware of cognitive decline in their persons and how this affects underdiagnosis of dementia. Therefore we investigated Dutch GPs' awareness of cognitive impairment in older persons without a diagnosis of dementia (chapter 5). In addition, we designed and executed a cluster randomised controlled trial (RCT) to improve case finding and management of dementia in primary care (chapter 4 and 6).

Recognition and diagnosis of MCI

MCI is often not recognized in primary care and the diagnosis is rarely documented in the medical records^{10,73}. However, this may also be related to MCI being a relatively new construct.

Disclosure of a diagnosis of dementia

Best practice recommendations for disclosure describe a careful and stepwise process. Steps include: exploration of the patient's ideas and expectations, exploration of preferences regarding disclosure, preparation for a possible diagnosis of dementia and disclosing the diagnosis⁷⁴. After disclosure GPs should provide tailored information, respond to emotions, and offer further support and guidance⁷⁴. Persons with dementia and caregivers do not always experience communication with professionals to meet these recommendations: sometimes there is not even a dialogue, or physicians make a dismissive impression^{60,75}. Among GPs, there is wide variation in attitudes regarding disclosure. Still, the majority does not fully disclose the diagnosis to the person with dementia^{61,62,76}. To quantify preferences regarding disclosure of a diagnosis of dementia among people with and without cognitive decline we reviewed and meta-analysed the literature on this subject (chapter 3). As part of this, we explored common reasons in favour of, as well as against disclosure.

Management of dementia in primary care

In countries with a gatekeeper system, GPs are well situated to play a role in the provision of medical care after establishment of a dementia diagnosis. However, avoidance and lack of coordination may make such care more complex than necessary. Although most GPs see it as their task to provide care for people with dementia, they also experience it as challenging, and do not necessarily embrace recommended aspects of management like care coordination or treatment of behavioural symptoms^{68,77}

GPs see it as their task to review medication, detect underlying psychiatric conditions and protect persons with dementia from dangerous situations⁷⁷. Despite recommendations in guidelines, GPs may not perform a needs assessment or make a long term plan⁷⁸. They may also not offer respite care or refer to a support group. The latter may be related to limited (knowledge of) available services^{79,80}. GPs do not necessarily see care management as their task and also the treatment of behavioural problems is experienced as difficult and unrewarding^{79,81}. Furthermore, they indicate a lack of reimbursement and time as important barriers to optimal dementia management^{77,81}. Resistance but also pressure from caregivers can make dementia management difficult and stressful⁸². From their perspective, caregivers report that GPs do not recognise their needs^{68,77}.

Management of MCI

Primary care dementia guidelines from different countries provide contradictory recommendations on the management of MCI ranging from offering reassessment of cognitive functioning, to management of cardiovascular risk factors or referral to memory services. Most guidelines lack recommendations on psychoeducation and support for persons with MCI⁵⁴⁻⁵⁷. To our knowledge, there is no evidence on what GPs tell to persons with MCI and whether they generally refer these people.

Evidence gaps and general outline of this thesis

There are several knowledge gaps around diagnosis, disclosure and treatment of persons with MCI and persons with dementia in primary care. Below we describe some of these gaps, describe the subsequent research questions and give a general outline of this thesis.

Chapter 2

Although it is known that underdiagnosing dementia is common in the primary care setting, studies on GPs diagnostic accuracy at the different stages of dementia are still scarce^{83,84}. In chapter 2 we present the results of a systematic review of studies that compared GPs' diagnoses of dementia at different stages, to a firm reference standard diagnosis of dementia (i.e. a specialist diagnosis or a diagnosis based on an extensive standardised assessment (e.g. CAMDEX)).

Chapter 3

GPs' routine in dementia disclosure may not meet patient preferences⁵⁸⁻⁶⁰. However, a synthesis of the evidence on preferences regarding disclosure of a diagnosis of dementia of persons without and of persons with cognitive impairment is missing. In chapter 3 we present a systematic review and meta-analysis of studies reporting proportions of persons wanting and not wanting to be informed about a diagnosis of dementia. In addition, we provide an overview of the most frequently encountered arguments for the different preferences.

Chapter 4

Research on interventions aimed at improving the diagnostic process (e.g. physician education; collaboration with practice nurses) is heterogeneous and shows inconsistent results. There are indications that such interventions can increase the rate of dementia diagnoses and improve adherence to diagnostic recommendations of dementia guidelines⁸⁵. Studied populations vary from entire older primary care populations to older people meeting frailty criteria or patients in whom GPs wanted to ascertain a diagnosis of dementia. There are no studies on the yield of case finding of MCI and dementia among older persons in whom GPs considered cognitive impairment or dementia possibly present. Moreover, none of the previous studies assessed whether the diagnostic interventions had beneficial or detrimental effects on the mental health of patients and relatives⁸⁵. In chapter 4 we describe the design of a cluster RCT testing the effect of a training for GPs to diagnose MCI and dementia, combined with case finding and subsequent support and care by a practice nurse. The intervention targeted older persons in whom GPs considered cognitive impairment or dementia possibly present. Outcomes were: 1) the number of diagnoses of MCI and dementia after one year, and 2) the mental health of the older persons and their relatives.

Chapter 5

It is unclear to what extent different barriers contribute to delayed or missed dementia diagnoses. Previous qualitative studies identified patient -, caregiver -, physician -, and health care system related barriers. To our knowledge, there is no current data on the proportion of older persons in whom GPs are at all aware of the presence of cognitive decline. This level of awareness determines whether interventions aimed to promote earlier diagnosis of dementia should either: 1) improve the recognition of cognitive deficits, 2) help GPs to overcome barriers to initiate diagnostic evaluation when they have recognized such deficits, or 3) both. In chapter 5 we describe a study in which we assess Dutch GPs' awareness of cognitive decline in their older patients by comparing their judgment on the presence or absence of cognitive deficits with a reference standard of cognitive functioning⁸⁶.

Chapter 6

In chapter 6 we present the results of the cluster RCT described in chapter 4, including a discussion of the limitations and a comparison with previous diagnostic studies. In addition, we provide some recommendations for future studies into case finding of dementia.

Chapter 7

In chapter 7, the general discussion of this thesis, we present the main findings of our research in the context of the current literature, a discussion of the limitations and methodological issues, and what they mean for the interpretation of our findings, and finally of the implications of our findings for clinical practice and future research.

References

1. Dutch Ministry of Health Welfare and Sports. The National Care for the Elderly Program. 2008. <http://www.beteroud.nl/ouderen/dutch-national-care-programme-for-the-elderly.html>. Accessed January 1, 2015.
2. Prince M, Bryce R, Albanese E, Wimo A, Ribeiro W, Ferri CP. The global prevalence of dementia: a systematic review and metaanalysis. *Alzheimers Dement*. 2013;9(1):63-75.e2. doi:10.1016/j.jalz.2012.11.007.
3. Schrijvers EMC, Verhaaren BFJ, Koudstaal PJ, Hofman A, Ikram MA, Breteler MMB. Is dementia incidence declining?: Trends in dementia incidence since 1990 in the Rotterdam Study. *Neurology*. 2012;78(19):1456-1463. doi:10.1212/WNL.0b013e3182553be6.
4. Wimo A, Winblad B, Jönsson L. The worldwide societal costs of dementia: Estimates for 2009. *Alzheimer's Dement*. 2010;6(2):98-103. doi:10.1016/j.jalz.2010.01.010.
5. RIVM. National Kompas Public Health. 2013. <http://www.nationaalkompas.nl/gezondheid-en-ziekte/ziekten-en-aandoeningen/psychische-stoornissen/dementie/>. Accessed January 1, 2015.
6. Parmar J, Dobbs B, McKay R, et al. Diagnosis and management of dementia in primary care: exploratory study. *Can Fam Physician*. 2014;60(5):457-465. <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=4020652&tool=pmcentrez&rendertype=abstract>. Accessed August 14, 2015.
7. Belmin J, Min L, Roth C, Reuben D, Wenger N. Assessment and management of patients with cognitive impairment and dementia in primary care. *J Nutr Health Aging*. 2012;16(5):462-467. <http://www.ncbi.nlm.nih.gov/pubmed/22555792>. Accessed August 14, 2015.
8. Pimlott NJG, Siegel K, Persaud M, et al. Management of dementia by family physicians in academic settings. *Can Fam Physician*. 2006;52(9):1108-1109. <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1783739&tool=pmcentrez&rendertype=abstract>. Accessed August 14, 2015.
9. Sivananthan SN, Puyat JH, McGrail KM. Variations in self-reported practice of physicians providing clinical care to individuals with dementia: a systematic review. *J Am Geriatr Soc*. 2013;61(8):1277-1285. doi:10.1111/jgs.12368.
10. Kaduszkiewicz H, Zimmermann T, Van den Bussche H, et al. Do general practitioners recognize mild cognitive impairment in their patients? *J Nutr Health Aging*. 2010;14(8):697-702. <http://www.ncbi.nlm.nih.gov/pubmed/20922348>. Accessed April 30, 2015.
11. American Psychiatric Association. Diagnostic and statistical manual of mental disorders (5th ed.). 2013.
12. American Psychiatric Association. Diagnostic and statistical manual of mental disorders (4th ed., text rev.). 2000.
13. Ismail Z, Smith EE, Geda Y, et al. Neuropsychiatric symptoms as early manifestations of emergent dementia: Provisional diagnostic criteria for mild behavioral impairment. *Alzheimers Dement*. June 2015. doi:10.1016/j.jalz.2015.05.017.
14. Samtani MN, Raghavan N, Novak G, Nandy P, Narayan VA. Disease progression model for Clinical Dementia Rating-Sum of Boxes in mild cognitive impairment and Alzheimer's subjects from the Alzheimer's Disease Neuroimaging Initiative. *Neuropsychiatr Dis Treat*. 2014;10:929-952. doi:10.2147/NDT.S62323.
15. Oh ES, Lee JH, Jeong S-H, Sohn EH, Lee AY. Comparisons of cognitive deterioration rates by dementia subtype. *Arch Gerontol Geriatr*. 53(3):320-322. doi:10.1016/j.archger.2010.12.008.
16. Olichney JM, Galasko D, Salmon DP, et al. Cognitive decline is faster in Lewy body variant than in Alzheimer's disease. *Neurology*. 1998;51(2):351-357. <http://www.ncbi.nlm.nih.gov/pubmed/9710002>. Accessed August 14, 2015.

17. Galasko DR, Gould RL, Abramson IS, Salmon DP. Measuring cognitive change in a cohort of patients with Alzheimer's disease. *Stat Med*. 19(11-12):1421-1432. <http://www.ncbi.nlm.nih.gov/pubmed/10844707>. Accessed August 14, 2015.
18. Caregiver- and patient-directed interventions for dementia: an evidence-based analysis. *Ont Health Technol Assess Ser*. 2008;8(4):1-98. <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=3377513&tool=pmcentrez&rendertype=abstract>. Accessed August 14, 2015.
19. Petersen RC, Smith GE, Waring SC, Ivnik RJ, Tangalos EG, Kokmen E. Mild cognitive impairment: clinical characterization and outcome. *Arch Neurol*. 1999;56(3):303-308. <http://www.ncbi.nlm.nih.gov/pubmed/10190820>. Accessed April 22, 2015.
20. Langa KM, Levine DA. The Diagnosis and Management of Mild Cognitive Impairment. *JAMA*. 2014;312(23):2551. doi:10.1001/jama.2014.13806.
21. Courtney DL. Dealing with mild cognitive impairment: help for patients and caregivers. *Clin Geriatr Med*. 2013;29(4):895-905. doi:10.1016/j.cger.2013.07.010.
22. Mitchell AJ, Shiri-Feshki M. Rate of progression of mild cognitive impairment to dementia--meta-analysis of 41 robust inception cohort studies. *Acta Psychiatr Scand*. 2009;119(4):252-265. doi:10.1111/j.1600-0447.2008.01326.x.
23. Busse A, Bischof J, Riedel-Heller SG, Angermeyer MC. Mild cognitive impairment: prevalence and predictive validity according to current approaches. *Acta Neurol Scand*. 2003;108(2):71-81. <http://www.ncbi.nlm.nih.gov/pubmed/12859282>. Accessed August 15, 2015.
24. Modrego PJ. Predictors of conversion to dementia of probable Alzheimer type in patients with mild cognitive impairment. *Curr Alzheimer Res*. 2006;3(2):161-170. <http://www.ncbi.nlm.nih.gov/pubmed/16611017>. Accessed August 15, 2015.
25. Prestia A, Caroli A, Wade SK, et al. Prediction of AD dementia by biomarkers following the NIA-AA and IWG diagnostic criteria in MCI patients from three European memory clinics. *Alzheimers Dement*. January 2015. doi:10.1016/j.jalz.2014.12.001.
26. De Boer ME, Hertogh CPM, Dröes R-M, Riphagen II, Jonker C, Eefsting JA. Suffering from dementia - the patient's perspective: a review of the literature. *Int Psychogeriatr*. 2007;19(6):1021-1039. doi:10.1017/S1041610207005765.
27. Mimura M. Memory impairment and awareness of memory deficits in early-stage Alzheimer's disease. *Tohoku J Exp Med*. 2008;215(2):133-140. <http://www.ncbi.nlm.nih.gov/pubmed/18577842>. Accessed July 6, 2015.
28. Duke LM, Seltzer B, Seltzer JE, Vasterling JJ. Cognitive components of deficit awareness in Alzheimer's disease. *Neuropsychology*. 2002;16(3):359-369. <http://www.ncbi.nlm.nih.gov/pubmed/12146683>. Accessed August 15, 2015.
29. Brodaty H, Connors MH, Xu J, Woodward M, Ames D. The course of neuropsychiatric symptoms in dementia: a 3-year longitudinal study. *J Am Med Dir Assoc*. 2015;16(5):380-387. doi:10.1016/j.jamda.2014.12.018.
30. Steeman E, de Casterlé BD, Godderis J, Grypdonck M. Living with early-stage dementia: a review of qualitative studies. *J Adv Nurs*. 2006;54(6):722-738. doi:10.1111/j.1365-2648.2006.03874.x.
31. Health Council of The Netherlands. *Dementia*.; 2002.
32. Mahoney R, Regan C, Katona C, Livingston G. Anxiety and depression in family caregivers of people with Alzheimer disease: the LASER-AD study. *Am J Geriatr Psychiatry*. 2005;13(9):795-801. doi:10.1176/appi.ajgp.13.9.795.
33. Pinquart M, Sörensen S. Differences between caregivers and noncaregivers in psychological health and physical health: a meta-analysis. *Psychol Aging*. 2003;18(2):250-267. <http://www.ncbi.nlm.nih.gov/pubmed/12825775>. Accessed August 12, 2015.
34. Cuijpers P. Depressive disorders in caregivers of dementia patients: a systematic review. *Aging Ment Health*. 2005;9(4):325-330. doi:10.1080/13607860500090078.

35. Cooper C, Balamurali TBS, Livingston G. A systematic review of the prevalence and covariates of anxiety in caregivers of people with dementia. *Int Psychogeriatrics*. 2006;19(02):175. doi:10.1017/S1041610206004297.
36. Pinquart M, Sörensen S. Helping caregivers of persons with dementia: which interventions work and how large are their effects? *Int Psychogeriatrics*. 2006;18(04):577. doi:10.1017/S1041610206003462.
37. Sörensen S, Duberstein P, Gill D, Pinquart M. Dementia care: mental health effects, intervention strategies, and clinical implications. *Lancet Neurol*. 2006;5(11):961-973. doi:10.1016/S1474-4422(06)70599-3.
38. Dean K, Wilcock G. Living with mild cognitive impairment: the patient's and carer's experience. *Int Psychogeriatr*. 2012;24(6):871-881. doi:10.1017/S104161021100264X.
39. Rickenbach EH, Condeelis KL, Haley WE. Daily stressors and emotional reactivity in individuals with mild cognitive impairment and cognitively healthy controls. *Psychol Aging*. 2015;30(2):420-431. doi:10.1037/a0038973.
40. Joosten-Weyn Banningh L, Vernooij-Dassen M, Rikkert MO, Teunisse J-P. Mild cognitive impairment: coping with an uncertain label. *Int J Geriatr Psychiatry*. 2008;23(2):148-154. doi:10.1002/gps.1855.
41. Beard RL, Neary TM. Making sense of nonsense: experiences of mild cognitive impairment. *Social Health Illn*. 2013;35(1):130-146. doi:10.1111/j.1467-9566.2012.01481.x.
42. Ryan KA, Weldon A, Huby NM, et al. Caregiver support service needs for patients with mild cognitive impairment and Alzheimer disease. *Alzheimer Dis Assoc Disord*. 24(2):171-176. doi:10.1097/WAD.0b013e3181aba90d.
43. Brodaty H, Arasaratnam C. Meta-analysis of nonpharmacological interventions for neuropsychiatric symptoms of dementia. *Am J Psychiatry*. 2012;169(9):946-953. doi:10.1176/appi.ajp.2012.11101529.
44. Reilly S, Miranda-Castillo C, Malouf R, et al. Case management approaches to home support for people with dementia. *Cochrane database Syst Rev*. 2015;1:CD008345. doi:10.1002/14651858.CD008345.pub2.
45. Birks JS, Grimley Evans J. Rivastigmine for Alzheimer's disease. *Cochrane database Syst Rev*. 2015;4:CD001191. doi:10.1002/14651858.CD001191.pub3.
46. Yang Z, Zhou X, Zhang Q. Effectiveness and safety of memantine treatment for Alzheimer's disease. *J Alzheimers Dis*. 2013;36(3):445-458. doi:10.3233/JAD-130395.
47. Lin JS, O'Connor E, Rossom RC, Perdue LA, Eckstrom E. Screening for cognitive impairment in older adults: A systematic review for the U.S. Preventive Services Task Force. *Ann Intern Med*. 2013;159(9):601-612. doi:10.7326/0003-4819-159-9-201311050-00730.
48. Schwarz S, Froelich L, Burns A. Pharmacological treatment of dementia. *Curr Opin Psychiatry*. 2012;25(6):542-550. doi:10.1097/YCO.0b013e328358e4f2.
49. Schoenmakers B, Buntinx F, De Lepeleire J. Can pharmacological treatment of behavioural disturbances in elderly patients with dementia lower the burden of their family caregiver? *Fam Pract*. 2009;26(4):279-286. doi:10.1093/fampra/cmp024.
50. Barnes TRE, Banerjee S, Collins N, Treloar A, McIntyre SM, Paton C. Antipsychotics in dementia: prevalence and quality of antipsychotic drug prescribing in UK mental health services. *Br J Psychiatry*. 2012;201(3):221-226. doi:10.1192/bjp.bp.111.107631.
51. Raschetti R, Albanese E, Vanacore N, Maggini M. Cholinesterase inhibitors in mild cognitive impairment: a systematic review of randomised trials. *PLoS Med*. 2007;4(11):e338. doi:10.1371/journal.pmed.0040338.
52. Loy C, Schneider L. Galantamine for Alzheimer's disease and mild cognitive impairment. *Cochrane database Syst Rev*. 2006;(1):CD001747. doi:10.1002/14651858.CD001747.pub3.

53. Somme D, Gautier A, Pin S, Corvol A. General practitioner's clinical practices, difficulties and educational needs to manage Alzheimer's disease in France: analysis of national telephone-inquiry data. *BMC Fam Pract.* 2013;14:81. doi:10.1186/1471-2296-14-81.
54. Dementia Guideline of the Dutch College of General Practitioners (third revision); NHG-Standaard Dementie (derde herziening). http://nhg.artsennet.nl/kenniscentrum/k_richtlijnen/k_nhgstandaarden/NHGStandaard/M21_std.htm. 2012. <https://www.nhg.org/standaarden/volledig/nhg-standaard-dementie#idm1540128>.
55. NICE. Dementia. Supporting people with dementia and their carers in health and social care. *clinical Guidel 42*. 2006.
56. Guidelines & Protocols Advisory Committee of the Ministry of Health of British Columbia. Cognitive Impairment: Recognition, Diagnosis and Management in Primary Care. 2014.
57. Development Group of the Clinical Practice Guideline of the Agency for Health Quality and Assessment of Catalonia. Clinical practice guideline on the comprehensive care of people with Alzheimer's disease and other dementias. 2010.
58. Connell CM, Boise L, Stuckey JC, Holmes SB, Hudson ML. Attitudes toward the diagnosis and disclosure of dementia among family caregivers and primary care physicians. *Gerontologist.* 2004;44(4):500-507. <http://www.ncbi.nlm.nih.gov/pubmed/15331807>. Accessed November 6, 2014.
59. Prorok JC, Horgan S, Seitz DP. Health care experiences of people with dementia and their caregivers: a meta-ethnographic analysis of qualitative studies. *CMAJ.* 2013;185(14):E669-E680. doi:10.1503/cmaj.121795.
60. Manthorpe J, Samsi K, Campbell S, et al. From forgetfulness to dementia: clinical and commissioning implications of diagnostic experiences. *Br J Gen Pract.* 2013;63(606):e69-e75. doi:10.3399/bjgp13X660805.
61. Moore V, Cahill S. Diagnosis and disclosure of dementia--a comparative qualitative study of Irish and Swedish General Practitioners. *Aging Ment Health.* 2013;17(1):77-84. doi:10.1080/13607863.2012.692763.
62. Kaduszkiewicz H, Bachmann C, van den Bussche H. Telling "the truth" in dementia--do attitude and approach of general practitioners and specialists differ? *Patient Educ Couns.* 2008;70(2):220-226. doi:10.1016/j.pec.2007.10.010.
63. Van Hout H, Vernooij-Dassen M, Bakker K, Blom M, Grol R. General practitioners on dementia: tasks, practices and obstacles. *Patient Educ Couns.* 2000;39(2-3):219-225. <http://www.ncbi.nlm.nih.gov/pubmed/11040721>. Accessed November 11, 2014.
64. Bradford A, Kunik ME, Schulz P, Williams SP, Singh H. Missed and delayed diagnosis of dementia in primary care: prevalence and contributing factors. *Alzheimer DisAssocDisord.* 2009;23(1546-4156 (Electronic)):306-314.
65. Speechly CM, Bridges-Webb C, Passmore E. The pathway to dementia diagnosis. *Med J Aust.* 2008;189(9):487-489. <http://www.ncbi.nlm.nih.gov/pubmed/18976188>. Accessed August 15, 2015.
66. Rimmer E, Wojciechowska M, Stave C, Sganga A, O'Connell B. Implications of the Facing Dementia Survey for the general population, patients and caregivers across Europe. *Int J Clin Pract Suppl.* 2005;(146):17-24. <http://www.ncbi.nlm.nih.gov/pubmed/15801187>. Accessed August 15, 2015.
67. Zantinge EM, Verhaak PFM, de Bakker DH, van der Meer K, Bensing JM. Does the attention General Practitioners pay to their patients' mental health problems add to their workload? A cross sectional national survey. *BMC Fam Pract.* 2006;7:71. doi:10.1186/1471-2296-7-71.
68. Van Hout HP, Vernooij-Dassen MJ, Jansen DA, Stalman WA. Do general practitioners disclose correct information to their patients suspected of dementia and their caregivers? A prospective observational study. *Aging Ment Health.* 2006;10(2):151-155. doi:10.1080/13607860500310468.

69. Aminzadeh F, Molnar FJ, Dalziel WB, Ayotte D. A review of barriers and enablers to diagnosis and management of persons with dementia in primary care. *Can Geriatr J.* 2012;15(3):85-94. doi:10.5770/cgj.15.42.
70. Smolders M, Laurant M, Verhaak P, et al. Which physician and practice characteristics are associated with adherence to evidence-based guidelines for depressive and anxiety disorders? *Med Care.* 2010;48(3):240-248. doi:10.1097/MLR.0b013e3181ca27f6.
71. Lugtenberg M, Zegers-van Schaick JM, Westert GP, Burgers JS. Why don't physicians adhere to guideline recommendations in practice? An analysis of barriers among Dutch general practitioners. *Implement Sci.* 2009;4:54. doi:10.1186/1748-5908-4-54.
72. Burgers JS, Grol RPTM, Zaat JOM, Spies TH, van der Bij AK, Mokkink HGA. Characteristics of effective clinical guidelines for general practice. *Br J Gen Pract.* 2003;53(486):15-19. <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1314503&tool=pmcentrez&rendertype=abstract>. Accessed August 16, 2015.
73. Mitchell AJ, Meader N, Pentzek M. Clinical recognition of dementia and cognitive impairment in primary care: A meta-analysis of physician accuracy. *Acta Psychiatr Scand.* 2011;124(3):165-183. doi:10.1111/j.1600-0447.2011.01730.x.
74. Lecouturier J, Bamford C, Hughes JC, et al. Appropriate disclosure of a diagnosis of dementia: identifying the key behaviours of "best practice". *BMC Health Serv Res.* 2008;8:95. doi:10.1186/1472-6963-8-95.
75. Robinson L, Gemski A, Abley C, et al. The transition to dementia--individual and family experiences of receiving a diagnosis: a review. *Int Psychogeriatr.* 2011;23(7):1026-1043. doi:10.1017/S1041610210002437.
76. Cahill S, Clark M, Walsh C, O'Connell H, Lawlor B. Dementia in primary care: the first survey of Irish general practitioners. *Int J Geriatr Psychiatry.* 2006;21(0885-6230 (Print)):319-324.
77. Schoenmakers B, Buntinx F, Delepeleire J. What is the role of the general practitioner towards the family caregiver of a community-dwelling demented relative? A systematic literature review. *Scand J Prim Health Care.* 2009;27(1):31-40. doi:10.1080/02813430802588907.
78. Chodosh J, Mittman BS, Connor KI, et al. Caring for patients with dementia: how good is the quality of care? Results from three health systems. *J Am Geriatr Soc.* 2007;55(8):1260-1268. doi:10.1111/j.1532-5415.2007.01249.x.
79. Turner S, Iliffe S, Downs M, et al. General practitioners' knowledge, confidence and attitudes in the diagnosis and management of dementia. *Age Ageing.* 2004;33(5):461-467. doi:10.1093/ageing/afh140.
80. Carter G, van der Steen JT, Galway K, Brazil K. General practitioners' perceptions of the barriers and solutions to good-quality palliative care in dementia. *Dementia.* April 2015. doi:10.1177/1471301215581227.
81. Hinton L, Franz CE, Reddy G, Flores Y, Kravitz RL, Barker JC. Practice constraints, behavioral problems, and dementia care: primary care physicians' perspectives. *J Gen Intern Med.* 2007;22(11):1487-1492. doi:10.1007/s11606-007-0317-y.
82. Teel CS. Rural practitioners' experiences in dementia diagnosis and treatment. *Aging Ment Health.* 2004;8(5):422-429. doi:10.1080/13607860410001725018.
83. Löppönen M, Riihää I, Isoaho R, Vahlberg T, Kivelä S-L. Diagnosing cognitive impairment and dementia in primary health care -- a more active approach is needed. *Age Ageing.* 2003;32(6):606-612. <http://www.ncbi.nlm.nih.gov/pubmed/14600001>. Accessed August 16, 2015.
84. Borson S, Scanlan JM, Watanabe J, Tu S-P, Lessig M. Improving identification of cognitive impairment in primary care. *Int J Geriatr Psychiatry.* 2006;21(4):349-355. doi:10.1002/gps.1470.
85. Mukadam N, Cooper C, Kherani N, Livingston G. A systematic review of interventions to detect dementia or cognitive impairment. *Int J Geriatr Psychiatry.* 2015;30(1):32-45. doi:10.1002/gps.4184.

86. Huppert FA, Brayne C, Gill C, Paykel ES, Beardsall L. CAMCOG--a concise neuropsychological test to assist dementia diagnosis: socio-demographic determinants in an elderly population sample. *Br J Clin Psychol*. 1995;34 (Pt 4):529-541. <http://www.ncbi.nlm.nih.gov/pubmed/8563660>. Accessed November 4, 2014.
87. Ferri CP, Sousa R, Albanese E, Ribeiro E, Honyashiki M. World Alzheimer Report. *Alzheimer's Dis Int London*. 2009.
88. Communities C of the E. Communication from the commission to the European parliament and the council on a European initiative on Alzheimer's disease and other dementias. 2009. http://ec.europa.eu/health/ph_information/dissemination/documents/com2009_380_en.pdf.
89. Burns A. International Journal of Geriatric Psychiatry. Editorial. *Int J Geriatr Psychiatry*. 2010;25(9):875. doi:10.1002/gps.2625.
90. Health D of. Living well with dementia: A National Dementia Strategy. *DH/SCLG&CP/SCPI/SR*. 2009.
91. Waldemar G, Dubois B, Emre M, et al. Recommendations for the diagnosis and management of Alzheimer's disease and other disorders associated with dementia: EFNS guideline. *Eur J Neurol*. 2007;14(1):e1-e26. doi:10.1111/j.1468-1331.2006.01605.x.
92. Carpenter. Reaction to a dementia diagnosis in individuals with Alzheimer's disease and mild cognitive impairment. *J Am Geriatr Soc*. 2008;56(1532-5415 (Electronic)):405-412.
93. Wilkinson H, Milne AJ. Sharing a diagnosis of dementia--learning from the patient perspective. *Aging Ment Health*. 2003;7(4):300-307. doi:10.1080/1360786031000120705.
94. Cornett PF, Hall JR. Issues in disclosing a diagnosis of dementia. *Arch Clin Neuropsychol*. 2008;23(3):251-256. doi:10.1016/j.acn.2008.01.001.
95. Weale A, Perry H, Brown S, et al. *Dementia: Ethical Issues*. London: Nuffield Council on Bioethics; 2009. [http://www.nuffieldbioethics.org/sites/default/files/Nuffield Dementia report Oct 09.pdf](http://www.nuffieldbioethics.org/sites/default/files/Nuffield%20Dementia%20report%20Oct%2009.pdf).
96. Livingston G, Levey G, Manela M, et al. Making decisions for people with dementia who lack capacity: qualitative study of family carers in UK. *BMJ*. 2010;341:c4184. <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=2923693&tool=pmcentrez&rendertype=abstract>. Accessed September 7, 2015.
97. Ferrara M, Langiano E, Di Brango T, De Vito E, Di Cioccio L, Bauco C. Prevalence of stress, anxiety and depression in with Alzheimer caregivers. *Health Qual Life Outcomes*. 2008;6:93. doi:10.1186/1477-7525-6-93.
98. Lewis SL, Miner-Williams D, Novian A, et al. A stress-busting program for family caregivers. *Rehabil Nurs*. 34(4):151-159. <http://www.ncbi.nlm.nih.gov/pubmed/19583056>. Accessed September 7, 2015.
99. Mittelman MS, Ferris SH, Shulman E, Steinberg G, Levin B. A family intervention to delay nursing home placement of patients with Alzheimer disease. A randomized controlled trial. *JAMA*. 1996;276(21):1725-1731. <http://www.ncbi.nlm.nih.gov/pubmed/8940320>. Accessed September 7, 2015.
100. Smits CHM, de Lange J, Dröes R-M, Meiland F, Vernooij-Dassen M, Pot AM. Effects of combined intervention programmes for people with dementia living at home and their caregivers: a systematic review. *Int J Geriatr Psychiatry*. 2007;22(12):1181-1193. doi:10.1002/gps.1805.
101. Hejl A, Høgh P, Waldemar G. Potentially reversible conditions in 1000 consecutive memory clinic patients. *J Neurol Neurosurg Psychiatry*. 2002;73(4):390-394. <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1738080&tool=pmcentrez&rendertype=abstract>. Accessed August 10, 2015.
102. Srikanth S, Nagaraja A V. A prospective study of reversible dementias: frequency, causes, clinical profile and results of treatment. *Neurol India*. 2005;53(3):291-294; discussion 294-296. <http://www.ncbi.nlm.nih.gov/pubmed/16230795>. Accessed September 7, 2015.

103. De Vugt ME, Riedijk SR, Aalten P, Tibben A, van Swieten JC, Verhey FRJ. Impact of behavioural problems on spousal caregivers: a comparison between Alzheimer's disease and frontotemporal dementia. *Dement Geriatr Cogn Disord*. 2006;22(1):35-41. doi:10.1159/000093102.
104. Birks J. Cholinesterase inhibitors for Alzheimer's disease. *Cochrane database Syst Rev*. 2006;(1):CD005593. doi:10.1002/14651858.CD005593.
105. Fillit H, Nash DT, Rundek T, Zuckerman A. Cardiovascular risk factors and dementia. *Am J Geriatr Pharmacother*. 2008;6(2):100-118. doi:10.1016/j.amjopharm.2008.06.004.
106. Cooper B, Bickel H, Schäufele M. Dementia diseases and minor cognitive impairments in elderly patients in general practice. Results of a cross-sectional study. *Nervenarzt*. 1992;63(9):551-560. <http://www.ncbi.nlm.nih.gov/pubmed/1407226>. Accessed September 7, 2015.
107. Valcour VG, Masaki KH, Curb JD, Blanchette PL. The detection of dementia in the primary care setting. *Arch Intern Med*. 2000;160(19):2964-2968. <http://www.ncbi.nlm.nih.gov/pubmed/11041904>. Accessed September 1, 2015.
108. Altman D, Deeks J, Gatsonis C, et al. *Cochrane Diagnostic Reviewers Handbook*, version 0.3. 2005.
109. Moher D, Liberati A, Tetzlaff J, Altman DG. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *BMJ*. 2009;339:b2535. <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=2714657&tool=pmcentrez&rendertype=abstract>. Accessed December 19, 2014.
110. Bradford A, Kunik ME, Schulz P, Williams SP, Singh H. Missed and delayed diagnosis of dementia in primary care: prevalence and contributing factors. *Alzheimer Dis Assoc Disord*. 2009;23(4):306-314. doi:10.1097/WAD.0b013e3181a6bebc.
111. Roth M, Tym E, Mountjoy CQ, et al. CAMDEX. A standardised instrument for the diagnosis of mental disorder in the elderly with special reference to the early detection of dementia. *Br J Psychiatry*. 1986;149:698-709. <http://www.ncbi.nlm.nih.gov/pubmed/3790869>. Accessed November 4, 2014.
112. Reisberg B. Diagnostic criteria in dementia: a comparison of current criteria, research challenges, and implications for DSM-V. *J Geriatr Psychiatry Neurol*. 2006;19(3):137-146. doi:10.1177/0891988706291083.
113. Hughes CP, Berg L, Danziger WL, Coben LA, Martin RL. A new clinical scale for the staging of dementia. *Br J Psychiatry*. 1982;140:566-572. <http://www.ncbi.nlm.nih.gov/pubmed/7104545>. Accessed September 7, 2015.
114. Juva K, Sulkava R, Erkinjuntti T, Ylikoski R, Valvanne J, Tilvis R. Staging the severity of dementia: comparison of clinical (CDR, DSM-III-R), functional (ADL, IADL) and cognitive (MMSE) scales. *Acta Neurol Scand*. 1994;90(4):293-298. <http://www.ncbi.nlm.nih.gov/pubmed/7839817>. Accessed September 7, 2015.
115. Jelle Visser P, Verhey FRJ, Jolles J, Jonker C. Course of minimal dementia and predictors of outcome. *Int J Geriatr Psychiatry*. 2002;17(9):835-841. doi:10.1002/gps.680.
116. Matthews FE, Stephan BCM, McKeith IG, Bond J, Brayne C. Two-year progression from mild cognitive impairment to dementia: to what extent do different definitions agree? *J Am Geriatr Soc*. 2008;56(8):1424-1433. doi:10.1111/j.1532-5415.2008.01820.x.
117. Ravaglia G, Forti P, Maioli F, et al. Conversion of mild cognitive impairment to dementia: predictive role of mild cognitive impairment subtypes and vascular risk factors. *Dement Geriatr Cogn Disord*. 2006;21(1):51-58. doi:10.1159/000089515.
118. Cook C, Cleland J, Huijbregts P. Creation and Critique of Studies of Diagnostic Accuracy: Use of the STARD and QUADAS Methodological Quality Assessment Tools. *J Man Manip Ther*. 2007;15(2):93-102. <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=2565607&tool=pmcentrez&rendertype=abstract>. Accessed September 7, 2015.

119. Eefsting JA, Boersma F, Van den Brink W, Van Tilburg W. Differences in prevalence of dementia based on community survey and general practitioner recognition. *Psychol Med*. 1996;26(6):1223-1230. <http://www.ncbi.nlm.nih.gov/pubmed/8931168>. Accessed November 4, 2014.
120. Penfield RD. A score method of constructing asymmetric confidence intervals for the mean of a rating scale item. *Psychol Methods*. 2003;8(2):149-163. <http://www.ncbi.nlm.nih.gov/pubmed/12924812>. Accessed September 7, 2015.
121. Olafsdóttir M, Skoog I, Marcusson J. Detection of dementia in primary care: the Linköping study. *Dement Geriatr Cogn Disord*. 11(4):223-229. doi:17241.
122. Pond CD, Mant A, Kehoe L, Hewitt H, Brodaty H. General practitioner diagnosis of depression and dementia in the elderly: can academic detailing make a difference? *Fam Pract*. 1994;11(2):141-147. <http://www.ncbi.nlm.nih.gov/pubmed/7958576>. Accessed September 7, 2015.
123. Leonard K, Masatu MC. Outpatient process quality evaluation and the Hawthorne Effect. *Soc Sci Med*. 2006;63(9):2330-2340. doi:10.1016/j.socscimed.2006.06.003.
124. Erkinjuntti T, Ostbye T, Steenhuis R, Hachinski V. The effect of different diagnostic criteria on the prevalence of dementia. *N Engl J Med*. 1997;337(23):1667-1674. doi:10.1056/NEJM199712043372306.
125. Boersma F, Eefsting JA, van den Brink W, Koeter M, van Tilburg W. Prevalence of dementia in a rural Netherlands population and the influence of DSM-III-R and CAMDEX criteria for the prevalence of mild and more severe forms. *J Clin Epidemiol*. 1998;51(3):189-197. <http://www.ncbi.nlm.nih.gov/pubmed/9495684>. Accessed September 7, 2015.
126. Pioggiosi P, Forti P, Ravaglia G, Berardi D, Ferrari G, De Ronchi D. Different classification systems yield different dementia occurrence among nonagenarians and centenarians. *Dement Geriatr Cogn Disord*. 2004;17(1-2):35-41. doi:10.1159/000074141.
127. Wancata J, Börjesson-Hanson A, Ostling S, Sjögren K, Skoog I. Diagnostic criteria influence dementia prevalence. *Am J Geriatr Psychiatry*. 2007;15(12):1034-1045. doi:10.1097/JGP.0b013e31813c6b6c.
128. Pentzek M, Wollny A, Wiese B, et al. Apart from nihilism and stigma: what influences general practitioners' accuracy in identifying incident dementia? *Am J Geriatr Psychiatry*. 2009;17(11):965-975. doi:10.1097/JGP.0b013e3181b2075e.
129. Boise L, Camicioli R, Morgan DL, Rose JH, Congleton L. Diagnosing dementia: perspectives of primary care physicians. *Gerontologist*. 1999;39(4):457-464. <http://www.ncbi.nlm.nih.gov/pubmed/10495584>. Accessed November 6, 2014.
130. Iliffe S, Wilcock J, Haworth D. Obstacles to shared care for patients with dementia: a qualitative study. *Fam Pract*. 2006;23(3):353-362. doi:10.1093/fampra/cmi116.
131. Downs M, Turner S, Bryans M, et al. Effectiveness of educational interventions in improving detection and management of dementia in primary care: cluster randomised controlled study. *BMJ*. 2006;332(7543):692-696. doi:10.1136/bmj.332.7543.692.
132. Perry M, Drašković I, Lucassen P, Vernooij-Dassen M, van Achterberg T, Rikkert MO. Effects of educational interventions on primary dementia care: A systematic review. *Int J Geriatr Psychiatry*. 2011;26(1):1-11. doi:10.1002/gps.2479.
133. Jedenius E, Wimo A, Strömqvist J, Andreasen N. A Swedish programme for dementia diagnostics in primary healthcare. *Scand J Prim Health Care*. 2008;26(4):235-240. doi:10.1080/02813430802358236.
134. Perry M, Melis RJF, Teerenstra S, et al. An in-home geriatric programme for vulnerable community-dwelling older people improves the detection of dementia in primary care. *Int J Geriatr Psychiatry*. 2008;23(12):1312-1319. doi:10.1002/gps.2128.
135. Vickrey BG, Mittman BS, Connor KI, et al. The effect of a disease management intervention on quality and outcomes of dementia care: a randomized, controlled trial. *Ann Intern Med*. 2006;145(10):713-726. <http://www.ncbi.nlm.nih.gov/pubmed/17116916>. Accessed June 15, 2015.

136. Chenoweth L, King MT, Jeon Y-H, et al. Caring for Aged Dementia Care Resident Study (CADRES) of person-centred care, dementia-care mapping, and usual care in dementia: a cluster-randomised trial. *Lancet Neurol*. 2009;8(4):317-325. doi:10.1016/S1474-4422(09)70045-6.
137. Lindeboom J, Schmand B, Tulner L, Walstra G, Jonker C. Visual association test to detect early dementia of the Alzheimer type. *J Neurol Neurosurg Psychiatry*. 2002;73(2):126-133. <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1737993&tool=pmcentrez&rendertype=abstract>. Accessed June 18, 2015.
138. Rami L, Molinuevo JL, Sanchez-Valle R, Bosch B, Villar A. Screening for amnesic mild cognitive impairment and early Alzheimer's disease with M@T (Memory Alteration Test) in the primary care population. *Int J Geriatr Psychiatry*. 2007;22(4):294-304. doi:10.1002/gps.1672.
139. Damian AM, Jacobson SA, Hentz JG, et al. The Montreal Cognitive Assessment and the mini-mental state examination as screening instruments for cognitive impairment: item analyses and threshold scores. *Dement Geriatr Cogn Disord*. 2011;31(2):126-131. doi:10.1159/000323867.
140. Van den Kommer TN, Comijs HC, Dik MG, Jonker C, Deeg DJH. Development of classification models for early identification of persons at risk for persistent cognitive decline. *J Neurol*. 2008;255(10):1486-1494. doi:10.1007/s00415-008-0942-3.
141. Kamat SM, Kamat AS, Grossberg GT. Dementia risk prediction: are we there yet? *Clin Geriatr Med*. 2010;26(1):113-123. doi:10.1016/j.cger.2009.12.001.
142. Iliffe S, Robinson L, Brayne C, et al. Primary care and dementia: 1. diagnosis, screening and disclosure. *Int J Geriatr Psychiatry*. 2009;24(9):895-901. doi:10.1002/gps.2204.
143. Koch T, Iliffe S. Rapid appraisal of barriers to the diagnosis and management of patients with dementia in primary care: a systematic review. *BMC Fam Pract*. 2010;11:52. doi:10.1186/1471-2296-11-52.

