Published in final edited form as:

Am J Alzheimers Dis Other Dement. 2010 May ; 25(3): 248–254. doi:10.1177/1533317509357734.

Discussing Dementia-Related Behaviors During Medical Visits for People With Alzheimer's Disease

Amanda E. Hunsaker, MPH¹, Karen Schmidt, PhD², and Jennifer H. Lingler, PhD, RN, FNP³

¹School of Social Work, University of Pittsburgh, Pittsburgh, PA, USA

²Department of Oral Biology, University of Pittsburgh School of Dental Medicine, Pittsburgh, PA, USA

³Department of Health and Community Systems, University of Pittsburgh School of Nursing, Pittsburgh, PA, USA

Abstract

Research suggests that caregivers appreciate support from primary care physicians (PCPs) regarding dementia care; however, there remains a need for studies examining the role that PCPs play in behavior management. The purpose of this study was to quantitatively characterize the discussion on dementia-related behaviors (DRBs) during PCP visits and compare findings to an independently administered assessment of DRBs exhibited within a period of 4 weeks prior to the PCP visit. Twenty-five PCP visits of persons with dementia, in which caregivers coattended the visit, were audio-recorded and analyzed for occurrence of DRB discussion. Disruptive behaviors were reported by 80% of caregivers via independent assessment, yet discussed in 23% of medical visits. Dementia-related behavior discussion occurred in visits where caregivers independently reported significantly higher behavior frequency and behavior-related burden. Implications of findings for ways PCPs can assist the caregiver in behavior management are discussed.

Keywords

dementia-related behaviors; primary care; caregivers; Alzheimer's disease

Introduction

Dementia-related behaviors (DRBs) are common manifestations of dementia and may be present in as many as two thirds of patients with dementia at diagnosis.¹ Dementia-related behaviors have been reported to increase caregiver burden,^{2,3} yield more burden to the caregiver than physical health problems,⁴ have a stronger relationship to caregiver burden than other dementia symptoms,⁵ and significantly decrease the quality of life of the person with dementia.⁶

Recent work suggests that caregivers have an active interest in receiving advice and emotional support from physicians regarding dementia care,⁷ yet may be reluctant to seek needed medical care due to lack of knowledge regarding the symptomatology of

© The Author(s) 2010

Corresponding Author: Amanda E. Hunsaker, School of Social Work, University of Pittsburgh, 2117 Cathedral of Learning, Pittsburgh, PA 15260, USA, aeh30@pitt.edu.

Declaration Conflict of Interest The authors declared no conflicts of interest with respect to the authorship and/or publication of this article.

Alzheimer's disease (AD), including behaviors related to dementia.⁸ Physicians in turn describe frustration with family expectations, availability of medical services, and their overall ability to manage patients with dementia.⁹ They report particular discomfort with giving advice on DRBs, possibly due to a lack of knowledge of dementia management or resources available in the community, which caregivers might seek.^{10,11}

Many individuals that currently have a diagnosis of AD receive care for AD from their primary care physician (PCP). Constraints of care identified by PCP practices (ie, limited time with patients, reimbursement issues) are compounded by the complexity of caring for patients with AD, which can be significantly affected by DR behavioral changes. Yet, DRBs are one aspect of AD that can be managed and can significantly reduce the burden for the caregiver, depending on PCP awareness of the presence of, and disruption imposed by, such behaviors.

Behavioral assessment in primary care is limited by time providers spend with patients. Primary care providers rely on caregivers to alert them to DRBs in the patient and related care management issues.¹¹ The examination of PCP-patient communication has generally focused on dyadic interaction, with little investigation of what role a caregiver might play in these dynamics. Addressing issues of DRBs with caregivers in a primary care setting calls for a new approach to physician-patient communication. Especially lacking are explorations of how issues specific to AD or dementia occur among provider-patient-caregiver triads.

The study presented here examines audio-recorded triadic discussions during primary care visits of individuals with dementia. We examined whether caregivers who endorsed the presence of DRBs on an independent assessment also discussed those behaviors more frequently with the PCP. We hypothesized that caregivers discussed behaviors with the PCP if the behaviors were exhibited recently. We anticipated that occurrence of discussion on DRBs was more likely if the PCP initiated the discussion or the caregiver reported a higher level of behavior-related burden. Finally, we explore the nature and frequency of DR issues discussed by the triad.

Methods

Participants were recruited from the University of Pittsburgh Alzheimer Disease Research Center (ADRC). Care recipients were participants in the ADRC research registry and were recruited along with their spousal or adult child caregiver. Eligibility criteria for care recipient participants were that they have a diagnosis of probable or possible AD in the mild-to-moderate stage and be community dwelling. Of the care recipients and caregivers approached regarding the study, 51% agreed to participate. Primary care providers of care recipients who agreed to study participation were identified from ADRC research assessment records, verified by the care recipient and caregiver, and recruited to the project. Seventy-six percent of primary care providers (n = 23) gave written consent to participate in an audio-recording of the care recipient's next regularly scheduled visit.

The study received approval from the Institutional Review Board of the University of Pittsburgh. Written informed consent was obtained from each triad member, and the care recipient's next regularly scheduled visit was audio-recorded. No research staff remained in the examination room while the visit and recording took place. Immediately following the visit, or post visit, demographics were collected for each triad participant. Caregivers completed the Revised Memory and Behavior Problems Checklist (RMBPC), providing a report of behavior frequency and related burden. Care recipients' global cognitive functioning was assessed using the Mini Mental State Examination (MMSE).¹² A

comprehensive description of the study procedures, including a detailed summary of the recruitment process, has been previously reported.¹³

Revised Memory and Behavior Problems Checklist

The RMBPC is a 24-item scale that measures the frequency of DRBs and degree of caregiver burden related to each behavior on a 5-point scale.¹⁴ Three categories of behaviors are included in the scale: memory-related, disruptive, and depressive behaviors. The RMBPC was administered to caregivers immediately following the primary care visit (post visit). The RMBPC has been reported to have good validity and reliability.^{14,15} The Cronbach α coefficient is .85 for the behavior frequency scale and .93 for the caregiver burden scale.¹⁵

Coding of In-Visit Dementia and DRB Discussion

Audio-recordings of each primary care visit were coded using the Multi-Dimensional Interaction Analysis method.¹⁶ This method examines the process of triadic communication, including the direction and quality of verbal interaction and the content of topics discussed during the visit. The MDIA was found to have satisfactory validity, including internal consistency and construct validity. Reliability of trained coders ranges from 80% to 90%.¹⁶

For this study, DR topics (eg, complaints of memory problems and forgetfulness, changes in functional performance related to cognitive impairment, agitated behaviors, completion of an MMSE, antidementia medications, and dementia study participation) were coded from each visit recording. The initiator (PCP, caregiver, or care recipient) of each DR topic discussion was also coded. An additional content area, DR caregiver issues, was coded for when this type of discussion occurred. Dementia-related caregiver issues included any discussion on caregiver burden, support group attendance or interest, distribution of care responsibilities, and caregiver physical health. For discussion on DR topics and caregiver issues, the quality of support offered by the PCP to the caregiver was coded. Quality support scores were as follows: 0 = *no support required/not applicable*; 1 = *no support offered at all, when support is needed*; 2 = *minimal support*; 3 = *appropriate gratitude*; 4 = *extensive gratitude and support*. MDIA coding was completed by the study's principal investigator (JHL) and the first author (AEH), using a blinded rating system.

Using the above coding, the following variables created the MDIA data set: (1) whether dementia was discussed during the visit; (2) who (primary care provider, caregiver, care recipient) initiated discussion on dementia; (3) whether caregiver issues were discussed during the visit; and (4) the level of support offered by the primary care provider to the caregiver regarding caregiver issues. Each of these variables is later referred to as occurring in visit.

Separate from the MDIA coding process, the content of each audio-recording related to the discussion on dementia and DRs was coded using the memory-related and disruptive behaviors included in the RMBPC as a template. Each behavior on the RMBPC was coded for (1) whether the behavior was discussed and (2) which triad members (PCP, caregiver, or care recipient) verbally participated in the discussion on each behavior. Although this rating was not completed by a coder who was blind to caregiver report of DRBs, audio-recordings were coded independently of the self-report data collected post visit using the RMBPC.

Memory-related behaviors, as listed in the RMBPC, include forgetting recent events, repeating questions, losing things, forgetting the day, forgetting significant past events, reduced concentration, and difficulty finishing tasks. Disruptive behaviors include verbal aggression, threats to hurt others, threats to hurt self, destroying property, behavior dangerous to self or others, talking loudly and rapidly, behavior embarrassing to the

caregiver, and waking the caregiver up at night. A category of “other” was added to each behavior type to account for any behaviors that are not a part of the RMBPC scale. Additionally, the categories General Memory-related Behaviors and General Disruptive Behaviors were added to code for generalized discussion on either type of behavior. Depression behaviors that were not coded as disruptive and memory-related behaviors, those causing the most distress for caregivers, were the focus of analysis. As was true for the MDIA-developed variables, these variables will also be referred to as occurring in visit.

Participant Demographics

Demographic characteristics (age, race, and gender) were collected for each triad member. Relationship of the caregiver with the care recipient was additionally collected. Other primary care provider characteristics include the number of years the PCP has been practicing and the number of patients with AD the PCP currently treats.

Analyses

Basic descriptive statistics were used to summarize the demographic characteristics of each triad member, the RMBPC frequency and distress scores, and the primary care visit discussion codes. Mean MMSE scores for the care recipient, reporting scoring for serial 7s and WORLD versions, and caregiver relationship with care recipient are also summarized using descriptive statistics. Frequencies were generated to examine characteristics of the in-visit discussion, including (1) dementia discussion; (2) initiation of dementia discussion by PCP, caregiver, and care recipient; (3) DRB discussion; (4) memory-related and disruptive behavior discussion; and (5) caregiver issues’ discussion. An average of quality of support was measured for support given by the primary care provider to the caregiver in relation to discussion on dementia and discussion on caregiver issues.

The frequencies of caregiver’s independent report of occurrence of each behavior in the past 4 weeks (post visit) were summarized and compared to the frequencies of discussion on each behavior during the primary care visit. The McNemar test of significance for related variables was used to compare in-visit discussion on memory-related and disruptive behaviors to caregiver report of behaviors post visit. Fisher exact tests were used to examine associations between in-visit discussion of DRBs and (1) participant gender (PCP and caregiver); (2) discussion of caregiver issues (yes or no); and (3) initiator of dementia discussion (PCP or caregiver). This test of significance was used due to small cell sizes. Independent sample *t* tests were used to compare the following group means across whether DRBs were discussed in visit: (1) RMBPC frequency and distress scores from the post-visit assessment; (2) PCP age, years in practice, and number of patients with AD; and (3) caregiver age.

Results

In all, 23 primary care providers, 25 caregivers, and 25 care recipients participated in the study. A total of 25 primary care visits were recorded and then coded for discussion on dementia and DRBs. One primary care provider met with 3 different care recipient/caregiver dyads and another PCP met with 2 care recipients. One care recipient/caregiver dyad met with 2 separate primary care providers: a nurse practitioner followed by a geriatrician. Table 1 summarizes the characteristics of each triad participant. All triad members were predominantly White; over half of caregivers and care recipients were female, while 70% of PCPs were male. Care recipients were moderately impaired (mean MMSE = 18, range 11-26). Caregivers had average RMPBC frequency and distress scores ($M = 27.9$, range 5-59; $M = 16.3$, range 0-40), similar to those reported in other studies.^{1,14}

Table 2 provides a summary of dementia and behavior variables coded from the primary care visit audio-recordings. Dementia was discussed in almost 90% of all visits, and in approximately half of these visits (47.8%), the dementia discussion was initiated by the PCP. Caregivers initiated dementia discussion in almost twice as many visits as care recipients (34.8% vs 17.4%). Quality of support given by primary care providers to caregivers during dementia discussion was moderate to appropriate in all cases ($M = 3.0$, no range). Dementia-related behaviors were discussed in over three quarters of the visits (76.9%). Memory-related behaviors were discussed 3 times more often than disruptive behaviors (69.2% vs 23.1%). Caregiver issues were discussed in almost one half of the visits (46.2%). Quality of support given by primary care providers to caregivers regarding caregiver issues was also moderate to appropriate ($M = 3.2$; range 2-4).

Table 3 compares the percentages of in-visit discussion on DRBs versus post-visit caregiver report of behaviors. Although 100% of caregivers reported 1 or more memory-related behavior had been exhibited by the care recipient in the past month, only 70% of visits contained discussion on memory-related behaviors. Care recipient's difficulty remembering recent events was the most commonly discussed behavior, occurring in 23.1% of visits. Overall, a range of other memory-related behaviors were discussed, including starting but not finishing things (11.5%) and difficulty concentrating on a task (11.5%), forgetting what day it is (7.7%), asking the same question over and over (7.7%), and losing or misplacing things (3.8%), though they were less frequently discussed in visit than reported post visit. Each memory-related behavior item on the RMBPC was reported as occurring by at least 60% or more of caregivers, with trouble remembering recent events and asking the same question over and over reported by all but 1 caregiver. In-visit discussion on memory-related behaviors was not significantly related to post-visit report of memory-related behaviors.

Disruptive behaviors were reported by 80% of caregivers via independent assessment, yet discussed in only 23% of medical visits. In-visit discussions of disruptive behaviors were generally limited to arguing, irritability, or complaining (19.2%), with "other" disruptive behaviors being reported by 7.7% of caregivers. Review of the audio-recordings revealed that these "other behaviors" consisted specifically of wandering and disinhibition. Arguing, irritability, or complaining was the most common behavior endorsed during the post-visit interview (60%), while every other disruptive behavior on the RMPBC was reported by at least 1 caregiver. In-visit discussion on disruptive behaviors was significantly related to post-visit report of disruptive behaviors (McNemar test, $P < .001$).

Relations of primary care provider and caregiver characteristics to DRB discussion are reported in Table 4. No significant differences were found in PCP characteristics, including demographics, number of years in practice, number of patients with AD, and initiation of dementia discussion, when comparing these characteristics to whether DRBs were discussed in visit. Mean RMBPC frequency and burden scores were significantly higher for caregivers who participated in DRB discussion during the primary care visit ($t = 2.19$, $P = .039$; $t = 2.50$, $P = .020$). Discussion on DRBs was not significantly related to caregiver demographics, relationship to care recipient, caregiver initiation of dementia discussion, or in-visit discussion on caregiver issues.

Discussion

To our knowledge, this is the first study to directly examine the discussion on DRB during primary care visits. Overall, caregivers reported far fewer behaviors to the primary care providers than they actually observe within their loved ones. Disruptive behaviors were reported by 80.0% of caregivers but were discussed in just 23.1% of visits. This discrepancy may reflect a perception by caregivers that these behaviors, while endorsable upon formal

questioning, are too minor to be raised during a primary care visit. This is troublesome, given that many of the behaviors endorsed during the post-visit interview would be considered clinically actionable (eg, waking others at night, engaging in potentially dangerous behaviors, aggressiveness). By contrast, caregivers were more forthcoming with reports of memory-related behaviors during office visits, discussing such behaviors with PCPs almost 70% of the time when they were present. This finding is consistent with prior research indicating that memory symptoms are a common topic of discussion at medical appointments involving older adults who are accompanied by caregivers.

Potential Reasons Behind the Underreporting of DRBs

In contrast to our hypothesis, although most discussions of dementia were initiated by PCPs, discussion on DRBs is not necessarily more likely to occur when the PCP initiates the general discussion on dementia. This finding implies that the caregiver may be just as likely as the primary care provider to steer the conversation toward behaviors. Yet, such reporting requires caregivers to raise a potentially sensitive topic into which the patient, present in the examination room, may have little insight. The investigation of reasons by Adelman and colleagues¹⁷ that individuals accompanying older patients may not raise memory as a topic of conversation identified the following barriers: (1) discomfort with discussing memory problems when the patient was present; (2) not having it come to mind at the time of the visit; and (3) not being a priority topic when there were many topics to discuss during this first visit. Each of these reasons could also affect the discussion on DRBs during the visit.

Implications for Practice and Research

Discussing potentially sensitive topics during primary care visits involving multiple parties may be interpersonally challenging, but as this report indicates, failing to do so may lead actionable clinical symptoms to go undetected by providers. Both care providers and caregivers may benefit from training on how to successfully navigate the discussion on sensitive topics such as DRBs in primary care settings.

Having caregivers that take an assertive role in the primary care visits of their loved ones can potentially create a time for the caregiver to work with the PCP on finding ways to manage and cope with behaviors. Primary care providers should be prepared to offer support and advice to caregivers, which can alleviate caregiver stress related to behaviors. It is noteworthy that the PCP visit is often a time when the caregiver will air their own care-related issues with the PCP, which occurred in almost half of the visits in the current study. How the PCP responds when the caregiver alludes to their own physical and emotional status is critical in developing a strong rapport with the caregiver and patient and also provides an opportunity for the PCP to suggest and discuss caregiver support options. In fact, 1 study reported that caregivers desire and appreciate acknowledgment of their role as a caregiver, in addition to assistance with behavior management.¹⁸

Because most dementia care interventions focus on providing knowledge and support to the caregiver, few have examined what kinds of information and support could be beneficial to primary care providers and caregivers who are partnering to manage patient care. Programs aimed at educating PCPs in assessing and treating AD have thus far been met with success.^{19,20} Chodosh and colleagues²¹ reported on a dementia care management study for primary care providers and caregivers, whose aim was to increase the quality of dementia care. The intervention included care management (ie, social service referrals, care planning, caregiver self-management support) and primary care provider education modules on dementia. The authors found that the quality of care for both the patients with dementia and their caregivers was better for those participating in the intervention group. Specifically, caregivers in the

intervention group reported receiving as much help as was needed from the primary care provider in managing DRBs.

Finally, professional support offered to caregivers from other primary care-based staff, including nurses and social workers, may be an area of future study. Disruptive behaviors were overall reported infrequently in visits, indicating that caregivers may be hesitant to divulge behavior issues if they do not perceive the primary care provider to be a source of support. Other health care staff, trained in patient education protocols and knowledgeable regarding social service referral opportunities, may be a more effective source of support than the PCP. Although PCPs have been shown to identify the types of supportive programming that might be helpful to caregivers in managing dementia,²² they may lack awareness of the specific services available within the community especially targeted toward managing behaviors, the quality of those services, and the related costs. Primary care-based nursing and social work staff may be better suited to provide these service referrals to caregivers and care recipients. One review of 3 primary care-based dementia management programs describes the role of social work-trained dementia care managers that work with PCPs, assisting in the diagnostic evaluation and disease management of dementia.²³ A “toolkit” provided by the dementia care manager to the PCP includes pharmacological and nonpharmacological guidelines for treating behavioral symptoms related to dementia, that may be further elucidated and carried out by the dementia care manager.

Limitations

The current study had a small sample size, limiting the ability to make inferences about causation. Larger samples are needed to better understand the relationship between in-visit dementia discussion and independent caregiver report of behaviors. The study was also limited by the racial homogeneity of the sample, although it is representative of the Pittsburgh metropolitan area.²⁴ Additionally, a longitudinal examination of triadic primary care visits might better elucidate the evolution of the dementia discussion among the triad. Because this study was cross-sectional in design, any previous or future discussion on dementia and related behaviors was not captured. A longitudinal design would provide a better picture of the overall discussion on dementia and DRBs among triad members. Finally, a qualitative study of caregiver preferences and attitudes regarding the discussion on DRBs during primary care visits might further elucidate the reasons caregivers hesitate to explore these issues with the PCP.

Conclusions

To summarize, this study found that (1) DRBs were discussed in the majority of visits, with memory-related behaviors being discussed more often than disruptive behaviors; (2) while disruptive behaviors were reported in a post-visit assessment by 80% of caregivers, they were discussed in just 23% of primary care visits; and (3) behavior-related caregiver burden is significantly correlated with discussion on behaviors during the primary care visit. As a high level of caregiver burden is known to be associated with DRBs, it is important for both primary care providers and caregivers to introduce the discussion on DRBs during the PCP visit. Educating primary care providers in how to provide assistance with behaviors and providing family caregivers with the tools to get the support they need from PCPs are both areas warranting further examination.

Acknowledgments

Funding The authors disclosed receipt of the following financial support for the research and/or authorship of this article: a seed money award from the University of Pittsburgh Institute for Doctor-Patient Communication

(Principal Investigator [PI]: JHL) and National Institutes of Health grant P50 AG05133 (PI: Lopez) as well as a Brookdale Foundation Leadership in Aging Fellowship (JHL).

References

1. Teri L. Behavior and caregiver burden: behavioral problems in patients with Alzheimer disease and its association with caregiver distress. *Alzheimer Dis Assoc Disord* 1997;11(Suppl 4):S35–S38. [PubMed: 9339271]
2. Gallicchio L, Siddiqi N, Langenberg P, Baumgarten M. Gender differences in burden and depression among informal caregivers of demented elders in the community. *Int J Geriatr Psychiatry* 2002;17(2):154–163. [PubMed: 11813279]
3. Torti FM, Gwyther LP, Reed SD, Friedman JY, Schulman KA. A multinational review of recent trends and reports in dementia caregiver burden. *Alzheimer Dis Assoc Disord* 2004;18(2):99–109. [PubMed: 15249854]
4. Donaldson C, Tarrier N, Burns A. Determinants of carer stress in Alzheimer's disease. *Int J Geriatr Psychiatry* 1998;13(4):248–256. [PubMed: 9646153]
5. Bedard M, Pedlar D, Martin NJ, Malott O, Stones MJ. Burden in caregivers of cognitively impaired older adults living in the community: methodological issues and determinants. *Int Psychogeriatr* 2000;12(3):307–332. [PubMed: 11081952]
6. Hurt C, Bhattacharyya S, Burns A, et al. Patient and caregiver perspectives of quality of life in dementia: an investigation of the relationship to behavioural and psychological symptoms in dementia. *Dement Geriatr Cogn Disord* 2008;26(2):138–146. [PubMed: 18679028]
7. Burns R, Nichols LO, Martindale-Adams J, Graney MJ, Lummus A. Primary care interventions for dementia caregivers: 2-year outcomes from the REACH study. *Gerontologist* 2003;43(4):547–555. [PubMed: 12937333]
8. Ayalon L, Areán PA. Knowledge of Alzheimer's disease in four ethnic groups of older adults. *Int J Geriatr Psychiatry* 2004;19(1):51–57. [PubMed: 14716699]
9. Boise L, Camicioli R, Morgan DL, Rose JH, Congelton L. Diagnosing dementia: perspectives of primary care physicians. *Gerontologist* 1999;39:457–464. [PubMed: 10495584]
10. Boise L. Improving dementia care through physician education: Some challenges. *Clin Gerontol* 2005;29(2):3–10.
11. 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):1487–92. [PubMed: 17823840]
12. Folstein MF, Folstein SE, McHugh PR. Mini-mental state. A practical method for grading the cognitive state of patients for the clinician. *J Psychiatr Res* 1975;12(3):189–198.
13. Lingler JH, Martire LM, Hunsaker AE, Greene MG, Dew MA, Schulz R. Feasibility of a patient-driven approach to recruiting older adults, caregivers, and clinicians for provider-patient communication research. *J Am Acad Nurse Pract* 2009;21:377–83. [PubMed: 19594656]
14. Teri L, Truax P, Logsdon R, Uomoto J, Zarit S, Vitaliano PP. Assessment of behavioral problems in dementia: the Revised Memory and Behavior Problems Checklist. *Psychol Aging* 1992;7(4):622–31. [PubMed: 1466831]
15. Johnson MMS, Wackerbarth SB, Schmitt FA. Revised Memory and Behavior Problems Checklist. *Clin Gerontol* 2000;22(3/4):87–108.
16. Charon R, Greene MG, Adelman RD. Multi-dimensional interaction analysis: a collaborative approach to the study of medical discourse. *Soc Sci Med* 1994;39(7):955–65. [PubMed: 7992128]
17. Adelman RD, Greene MG, Friedmann E. Discussions about cognitive impairment in first medical visits: older patients' perceptions and preferences. *Am J Alzheimers Dis Other Dement* 2004;19(4):233–238. [PubMed: 15359561]
18. Glasser M, Rubin S, Dickover M. Caregiver views of help from the physician. *Am J Alzheimers Dis Other Dement* 1989;4(4):4–11.
19. Austrom MG, Hartwell C, Moore PS, Boustani M, Hendrie HC, Callahan CM. A care management model for enhancing physician practice for Alzheimer disease in primary care. *Clin Gerontol* 2005;29(2):35–43.

20. Harvey RM, Horvath KJ, Levine SA, Volicer L. Models of physician education for Alzheimer's disease and dementia: practical application in an integrated network. *Clin Gerontol* 2005;29(2):11–23.
21. Chodosh J, Berry E, Lee M, et al. Effect of a dementia care management intervention on primary care provider knowledge, attitudes, and perceptions of quality of care. *J Am Geriatr Soc* 2006;54(2):311–317. [PubMed: 16460384]
22. Werner P. Family physicians' recommendations for the treatment of Alzheimer's disease. *Am J Alzheimers Dis Other Dement* 2007;21(6):403–410. [PubMed: 17267372]
23. Cherry DL, Hahn C, Vickrey BG. Educating primary care physicians in the management of Alzheimer's disease: using practice guidelines to set quality benchmarks. *Int Psychogeriatr* 2009;21(Suppl 1):S44–S52. [PubMed: 19288963]
24. U.S. Census Bureau. State & County Quickfacts: Allegheny County, PA. [May 27, 2008]. <http://quickfacts.census.gov>

Table 1

Triad Member Characteristics

Characteristic	Primary Care Provider (N = 23)	Caregiver (N = 25)	Care Recipient (N = 25)
Female, N (%)	7 (30%)	19 (76%)	15 (60%)
Mean age (range)	49.8 (33-73)	67.6 (46-83)	79.3 (69-92)
Race			
White	20 (87%)	22 (88%)	22 (88%)
African American	1 (4%)	3 (12%)	3 (12%)
Asian	2 (9%)		
Caregiver relationship to care recipient			
Spouse		16 (64%)	
Daughter		9 (36%)	
Mean MMSE score, serial 7s (range)			18.08 (11-26)
Mean MMSE score, WORLD (range)			20.85 (12-27)
Mean RMBPC frequency score (range)		27.9 (5-59)	
Mean RMBPC distress score (range)		16.3 (0-40)	
Mean number of years in practice (range)	18.8 (3-42)		
Mean number of patients with AD (range)	69.8 (3-270)		

Abbreviations: AD, Alzheimer's disease; MMSE, Mini-Mental State Examination; RMBPC, Revised Memory and Behavior Problems Checklist.

Table 2Dementia Variables Coded From Primary Care Visit Audio-Recordings^a

Variables	N (%)
Dementia discussed during visit	23 (88.5%)
Dementia discussion initiator	
PCP	11 (47.8%)
Caregiver	8 (34.8%)
Care recipient	4 (17.4%)
DR behavior discussion	20 (76.9%)
Disruptive behaviors	6 (23.1%)
Memory-related behaviors	18 (69.2%)
Caregiver issues discussed during visit	12 (46.2%)

Abbreviations: DR, dementia-related; PCP, primary care provider.

^a Number and percentage for each variable refer to the number (percentage) of triads in which the discussion on each topic (or initiation of discussion) occurs.

Table 3Comparison of In-Visit Versus Post-Visit Dementia-Related Behavior Reporting^a

Behavior	In-Visit	Post-Visit
Memory-related behaviors	18 (69.2%)	25 (100.0%)
1. Asking the same question over and over	2 (7.7%)	24 (96.0%)
2. Trouble remembering recent events	6 (23.1%)	24 (96.0%)
3. Trouble remembering significant past events	0	18 (72.0%)
4. Losing or misplacing things	1 (3.8%)	17 (68.0%)
5. Forgetting what day it is	2 (7.7%)	20 (80.0%)
6. Starting but not finishing things	3 (11.5%)	15 (60.0%)
7. Difficulty concentrating on a task	3 (11.5%)	20 (80.0%)
8. Other memory-related behavior	0	N/A
9. General discussion on memory	13 (50.0%)	N/A
Disruptive behaviors	6 (23.1%)	20 (80.0%) ^b
1. Destroying property	0	1 (4.0%)
2. Doing things that embarrass you	0	7 (28.0%)
3. Waking you or other family members up at night	0	8 (32.0%)
4. Talking loudly and rapidly	0	3 (12.0%)
5. Engaging in behavior that is potentially dangerous to self or others	0	5 (20.0%)
6. Threats to hurt others	0	1 (4.0%)
7. Aggressive to others verbally	0	5 (20.0%)
8. Arguing, irritability, and/or complaining	5 (19.2%)	15 (60.0%)
9. Other disruptive behaviors	2 (7.7%)	N/A
10. General disruptive behavior	0	N/A

Abbreviation: N/A, not applicable.

^aDementia-related behaviors assessed post visit are reported as occurring in the past 4 weeks.^bMcNemar test, $P < .001$ (2-tailed).

Table 4**PCP and Caregiver Factors Related to DR Behavior Discussion**

	<i>t</i>	<i>P</i> Value ^a
PCP Factors		
Initiation of discussion on dementia		1.000
Age	1.11	.283
Sex, % female		1.000
Number of years in practice	0.83	.419
Number of patients with AD	-0.65	.521
Caregiver factors		
Initiation of discussion on dementia		.628
Relationship, % spouse		.630
Age	0.19	.855
Sex, % female		.000
RMBPC frequency score	2.19 ^b	.039
RMBPC burden score	2.50 ^b	.020
Discussion on caregiver physical/emotional status during visit		.065

Abbreviations: AD, Alzheimer's disease; DR, dementia-related; PCP, primary care provider; RMBPC, Revised Memory and Behavior Problems Checklist.

^a*P* values for independent-samples *t* tests or Fisher exact test are reported.

^b*P* < .05 (2-tailed).