

A Care Management Model for Enhancing Physician Practice for Alzheimer Disease in Primary Care

Mary Guerriero Austrom, PhD

Cora Hartwell, ANP

Patricia S. Moore, MSN, RN, CNS, CDE

Malaz Boustani, MD, MPH

Hugh C. Hendrie, MB, ChB, DSc

Christopher M. Callahan, MD

Mary Guerriero Austrom is affiliated with the Department of Psychiatry, the Indiana Alzheimer's Disease Center, and the Indiana University Center for Aging Research, Indiana University School of Medicine, Indianapolis, IN 46202.

Cora Hartwell is affiliated with the Division of General Internal Medicine and Geriatrics, Indiana University School of Medicine, Indianapolis, IN 46202.

Patricia S. Moore is affiliated with the IU Medical Group, Indiana University School of Medicine, Indianapolis, IN 46202.

Malaz Boustani is affiliated with the Indiana University Center for Aging Research, the Division of General Internal Medicine and Geriatrics, and the Regenstrief Institute, Inc., Indiana University School of Medicine, Indianapolis, IN 46202.

Hugh C. Hendrie is affiliated with the Department of Psychiatry, the Indiana Alzheimer's Disease Center, the Indiana University Center for Aging Research, and the Regenstrief Institute, Inc., Indiana University School of Medicine, Indianapolis, IN 46202.

Christopher M. Callahan is affiliated with the Indiana University Center for Aging Research, the Division of General Internal Medicine and Geriatrics, and the Regenstrief Institute, Inc., Indiana University School of Medicine, Indianapolis, IN 46202.

Address correspondence to: Mary Guerriero Austrom, PhD, Department of Psychiatry, 541 Clinical Drive, CL, Indiana University School of Medicine, Indianapolis, IN 46202-5111.

This study was supported by NIH grant P30 AG 10133 and R01 HS 10884-01 from the Agency for Healthcare Research and Quality.

Clinical Gerontologist, Vol. 29(2) 2005
Available online at <http://www.haworthpress.com/web/CG>
© 2005 by The Haworth Press, Inc. All rights reserved.
doi:10.1300/J018v29n02_05

ABSTRACT. Previous research has indicated that passive distribution of educational material by itself has little impact on physician behavior. In this paper, a collaborative care management program for the treatment and management of dementia in primary care (The PREVENT Study) is described. The essential components of the integrated program are: 1) a comprehensive screening and diagnosis protocol; 2) a multidisciplinary team approach coordinated by a geriatric advance practice nurse; and 3) a proactive longitudinal tracking system. The key role of the geriatric nurse practitioner is emphasized. While the clinical trial is still on-going, we can report that the intervention has been well received by primary care physicians, patients and their families. *[Article copies available for a fee from The Haworth Document Delivery Service: 1-800-HAWORTH. E-mail address: <docdelivery@haworthpress.com> Website: <<http://www.HaworthPress.com>> © 2005 by The Haworth Press, Inc. All rights reserved.]*

KEYWORDS. Dementia, primary care, care management, geriatric nurse practitioner, urban minority population

Alzheimer's disease (AD) represents one of the major public health problems facing our country today. The costs of AD, both emotional and economic, are very high. A 1991 study estimated the total cost associated with AD, including direct costs of care, unpaid caregiver costs, disability and premature mortality, was \$173,932 per patient for an annual national (U.S.) cost of \$67 billion (Ernst and Hay, 1994). The emotional burden on family members is also enormous. Family members, typically the spouse or daughter, provide the bulk of caregiving. These family members must deal with the physical demands of providing care over many years, while watching their loved one lose the very essence of their being (Guerriero, Austrom, and Hendrie, 1990).

Most patients with AD and their families are seen initially in primary care settings. However, AD is frequently unrecognized by primary care physicians. In one study, nearly 75% of patients found to have moderate to severe cognitive dysfunction did not have a dementia diagnosis recorded in their medical record (Callahan, Hendrie, and Tierney, 1995). Prior research suggests that improvements in primary care for older adults can be achieved through systems-level interventions, such as collaborative care management (Wells, Johnson, and Salyer, 1998; Simon, Katon, VonKorff, Imitzer, Lin, and Walker, et al., 2001;

Katzelnick, Simon, Pearson, Manning, and Kobak, et al., 2000). These interventions, such as those designed for late life depression, provide additional resources for the management of depressed patients and demonstrated improved patient outcomes. However, the efficacy of these system-level interventions is unproven for older adults with dementia.

Our interdisciplinary research team participated as a site in the Improving Mood Promoting Access to Collaborative Treatment [IMPACT] Program. The IMPACT Program included collaborative care among primary care physicians, patients, geriatric medicine specialists, geriatric psychiatrists, and a depression care manager. The depression care manager implemented a personalized treatment plan and provided proactive follow-up care guided by protocols of stepped care. This model proved highly successful in the treatment of late life depression where 45% of intervention patients had a 50% or greater reduction in depressive symptoms from baseline compared with only 19% of usual care participants (Unutzer, Katon, Callahan, Williams, Hunkeler, Harpole, et al., 2002).

Based on this successful program, we have undertaken to assess a similar model for helping primary care physicians provide best practice dementia care, using the most recent management guidelines for AD (Knopman, DeKosky, Cummings, Chui, Corey-Bloom, and Relkin, et al., 2001; Doody, Stevens, Beck, Dubinsky, Kaye, and Gwyther, et al., 2001; Small, Rabins, Barry, Buckholtz, DeKosky, and Ferris, et al., 1997). The purpose of this paper is to describe our model and to report on the acceptability of this program with patients and primary care physicians.

THE PREVENT STUDY

Our NIH-supported PREVENT study [Providing Resources Early to Vulnerable Elders Needing Treatment for Memory Loss] is administered in a university-affiliated primary care practice serving a medically indigent population. The older population cared for in this practice is approximately 68% women, 63% African American, and 43% have ≤ 8 years of education. The essential components of this integrated program are (1) a comprehensive screening and diagnosis protocol; (2) a multi-disciplinary team approach to care coordinated by a geriatric advanced practice nurse [GAPN]; and (3) a proactive longitudinal tracking system.

All consenting patients 65 years and over are screened for cognitive impairment during their regularly scheduled primary care visit using a six-item screen (Callahan, Unverzagt, Hui, Perkins, and Hendrie, 2002). Patients scoring below the threshold on this screen are then administered a more comprehensive 18-item instrument, the Community Screening Instrument for Dementia [CSI“D”] (Hall, Gao, Emsley, Ogunniyi, Morgan, and Hendrie, 2000). For patients with evidence of cognitive impairment on the CSI“D” a comprehensive clinical assessment is performed using a structured informant interview, neuropsychological testing, neurological and physical evaluations, and chart review for relevant laboratory testing and brain imaging (Hendrie, Ogunniyi, Hall, Baiyewu, Unverzagt, and Gureje, et al., 2001). Patients with a diagnosis of probable or possible AD using the NINDS-ADRDA (McKhann, Drachman, Folstein, Katzman, Price, and Stadlan, 1984) criteria are invited to participate in the study. Patients who consent are then randomly assigned to the treatment or control group.

An interdisciplinary consensus team including the GAPN, a social psychologist, a geriatrician, and a geriatric psychiatrist, guides treatment recommendations based on published practice guidelines. These guidelines include dementia-specific pharmacological considerations, such as the use of cholinesterase inhibitors, vitamin E, aspirin, or modifications of their existing drug regimen to minimize central nervous system side effects. These recommendations are presented to the primary care physician by the GAPN. In addition, the recommendations stress non-pharmacological psychosocial interventions for the day-to-day management of behavioral and psychological symptoms related to dementia (BPSD) (Guerriero Austrom, Damush, Hartwell, Perkins, Unverzagt, and Boustani, et al., 2004). These non-pharmacological psychosocial interventions are implemented through the education and support provided to family caregivers by the GAPN. Thus, the GAPN facilitates the collaboration among the patient, the family, the primary care physician, and the interdisciplinary resource team. In addition, the patients and caregivers are invited to participate in monthly support group meetings that provide further counseling and education about the disease to caregivers, and a moderate exercise program for the patients (Guerriero Austrom et al., 2004).

The minimum intervention that all treatment group caregivers and patients receive includes advice on communication skills; caregiving coping skills; legal and financial advice; exercise guidelines with a guidebook and videotape; as well as the Caregiver Guide (Alzheimer’s Association). Based on the caregiver’s responses, individualized

recommendations are made regarding specific BPSD or caregiver distress. Following the initial assessment, the GPN meets separately with the primary care physician [PCP] and with the patient and family members. This provides the GPN the opportunity to discuss issues and answer questions or address concerns related to the diagnosis, prognosis, and treatment recommendations with both the PCP and the patients and their family. At this meeting, the intervention recommendations are implemented.

One to two weeks following the initial meeting, the GPN telephones the caregiver to assess tolerance to medications, answer any questions related to the patient's behavior, and to reinforce the intervention recommendations. Caregivers are reminded and encouraged to bring their individualized protocol binder to all contacts with the GPN. At one month following the initiation of the intervention, the GPN meets face-to-face with the patient and family, reviews progress, and addresses any new or continuing concerns they may have. The face-to-face meetings and telephone contacts are repeated at 4-week intervals.

At two months, the GPN reviews the patient's and caregiver's progress with the clinical treatment team. It should be noted that the GPN has the option of contacting the primary care physician or the clinical treatment team at any time at her discretion. All family members are encouraged to call the GPN at any time with questions or concerns. If the patient remains stable after 3 months of the intervention, the face-to-face meetings are scheduled at 3-month intervals. The intervention lasts for 12 months. In addition to the guidelines targeted specifically to dementia, the GPN also helps coordinate patient and caregiver contact with other clinic appointments, provides recommendations to improve medication adherence and will make a home visit to accommodate participants' schedules and needs. Caregivers are given updated handouts for their individual protocol binders based on information received from the semi-structured interview. Specific protocols activated for the patient are discussed with the caregiver and a corresponding handout is given to them for reinforcement (Guerriero et al., 2004).

The Vital Role of the GPN

It has become quite clear that the effectiveness of this intervention depends on the key role played by the GPN. Our GPNs are well trained in dementia management practices and familiar with primary care settings. They coordinate the care between patients, family members, and the PCPs, while implementing the intervention and providing

closely monitored follow-up with each patient and their family members. In addition, they attend the regularly scheduled patient exercise and family support group meetings (Guerriero Austrom et al., 2004).

Initially, some of the PCPs expressed surprise at the unrecognized dementia diagnosis in patients they may have been caring for over several years. Others already realized that the patient was demented but did not want to make the diagnosis, feeling that there is little that can be done. In addition, AD is a very sad diagnosis to reveal to patients and families and some physicians express the concern that they do not want to label patients too early, especially if they anticipate no change in their clinical management. Because of these issues, a mutually respectful relationship between the GAPN and the primary care physician is vital.

Several factors are important to the nurses' success in establishing a good relationship with the primary care physician. It helps the process a great deal when the GAPN is already familiar with the primary care settings and the population served. In this manner, they are already viewed as part of the team. For example, one of the GAPNs (CH) worked in the primary care center for many years prior to the study and was a key member of a previous collaborative care management intervention. The GAPNs have found that the initial meeting with the physician is best conducted face-to-face. It is useful to ask for a certain amount of time and stick to it, for example, *I need 3 minutes of your time, is now a good time? If not now, when?* It is important to keep the information brief and factual; most primary care physicians are extremely busy. Through their own training, physicians have been taught to exchange complex clinical information with other physicians in very brief interactions guided by a specific structure, content, and order of information. They expect the same of an advanced practice nurse who must dovetail her clinical work with the natural flow of the clinic. The GAPNs have also found that it is helpful to give the physicians a written copy of the information or request and to be prepared to provide evidence to support the team's recommendations. For example, some recommendations have been to reduce anti-cholinergic medications in patients with an AD diagnosis receiving cholinesterase inhibitors due to the potential increased risk for delirium development and the need to use anti-depressants for patients scoring high on the depression subscale of the Memory and Behavior Problems Checklist (Zarit, Orr, and Zarit, 1985). An additional valuable benefit to working with GAPNs is that they need only verbal approval to begin the intervention process; the GAPN can take responsibility for writing orders (including medications), implementation, and follow-up. Subsequent contacts can be done via phone, e-mail, and electronic

patient progress notes. It is also important to identify for the primary care physicians how the GAPN improves their efficiency. Many of the patients in this study have very complex psychosocial issues, the management of which can be extremely time consuming and most physicians do not have that kind of time available. The GAPNs are providing valuable psychosocial assistance to patients and families.

For the Physician

From the perspective of the physician, they welcome the additional resources provided to their patients by the GAPN in the management of this complicated disorder. In particular, they appreciate the information provided by the diagnostic and treatment team meetings and the additional contacts which are provided to the patient between the physician visits. These additional resources are welcome especially when dealing with this highly vulnerable, socio-economically disadvantaged population who also has a high rate of co-morbid illnesses and multiple psychosocial stressors. A comment from one of our primary care physicians, in response to our questions about the intervention process and working with the GAPN, exemplifies the PCPs' general response to the PREVENT intervention.

The treatment team's direct facilitation of treatment is the most useful aspect. I am open to anything that will facilitate my provision of high-quality, effective healthcare for my patients, so this would be included. If I could choose between continuing the PREVENT intervention or abandoning it, I would certainly choose to continue it ...

DISCUSSION

In the PREVENT study, we are following the model suggested by Wells et al. by providing additional resources to the primary care physician to assist in managing demented patients and their families. This intervention is being tested in a clinical trial and patient enrollment is still ongoing. We cannot yet comment on the intervention's clinical effectiveness. However, we can report that the intervention has been well received by primary care physicians, patients, and their families. The physicians are now questioning the team diagnosis and treatment recommendations much less than was initially the case. In addition, the

physicians' written notes are also including references to the PREVENT protocols demonstrating the successful integration of the program into their day-to-day provision of care.

Previous research on the assessment of the efficacy of these models has suggested that passive distribution of educational material or guidelines to physicians has little impact on physician behavior. Several studies have demonstrated the limited effect of educational programs on physicians' performance (Grimshaw and Russell, 1993; Davis and Taylor-Vaisey, 1997). Educational programs, absent changes in the system of care, typically produce only limited changes in provider behavior (Davis, O'Brien, Freemantle, Wolf, Mazmanian, and Taylor-Vaisey, 1999; Thomson, Freemantle, Wolf, and Davis, Oxman, 1999). Collaborative care management, which implements best practices through a team approach that brings additional resources to the primary care environment offers great hope for improving the care of older adults with dementia.

REFERENCES

- Callahan CM, Hendrie HC, and Tierney WM. (1995). Documentation and evaluation of cognitive impairment in elderly primary care patients. *Annals of Internal Medicine*, 122(6):422-429.
- Callahan CM, Unverzagt FW, Hui SL, Perkins AJ, and Hendrie HC. (2002). A six-item screener to identify cognitive impairment among potential subjects for clinical research. *Medical Care*, 40(9):771-781.
- Davis D, and Taylor-Vaisey A. (1997). Translating guidelines into practice: a systematic review of theoretic concepts, practical experience and research evidence in the adoption of clinical practice guidelines. *CMAJ*, 157:408-416.
- Davis D, O'Brien MA, Freemantle N, Wolf FM, Mazmanian P, and Taylor-Vaisey A. (1999). Impact of formal continuing medical education: Do conferences, workshops, Rounds and other traditional continuing education activities change physician Behavior or health care outcomes? *JAMA*, 282(9):867-874.
- Doody, RS, Stevens JC, Beck C, Dubinsky RM, Kaye JA, Gwyther L, et al. (2001). Practice parameter: management of dementia (an evidence-based review). Report of the Quality Standards Subcommittee of the American Academy of Neurology. *Neurology*, 56(9):1154-1166.
- Ernst RL, and Hay JW. (1994). The U.S. economic and social costs of Alzheimer's disease revisited. *American Journal of Public Health*, 84:1261-1264.
- Grimshaw JM, and Russell IT. (1993). Effect of clinical guidelines on medical practice: a systematic review of rigorous evaluations. *Lancet*, 342:1317-1322.
- Guerrero Austrom, M and Hendrie, HC (1990). Death of the personality: The grief response of the Alzheimer's disease family caregiver. *American Journal of Alzheimer's Care and Related Disorders and Research*, March/April, 16-26.
- Guerrero Austrom M, Damush TM, Hartwell CW, Perkins T, Unverzagt FW, Boustani M, Hendrie HC, and Callahan CM. (2004). Development and Implementation of

- Non-pharmacological Protocols for the Management of Patients with Alzheimer Disease and Their Families in a Multi-racial Primary Care Setting. *The Gerontologist*, 44(4).
- Hall KS, Gao S, Emsley CL, Ogunniyi AO, Morgan O, and Hendrie HC. (2000). Community Screening Interview for Dementia [CSI-“D”]: Performance in Five Disparate Study Sites. *International Journal of Geriatric Psychiatry*, 15:521-531.
- Hendrie HC, Ogunniyi A, Hall KS, Baiyewu O, Unverzagt FW, Gureje O, Gao S, Evans RM, Ogunseyinde AO, Adeyinka AO, Musick BS, and Hui SL. (2001). Incidence of dementia and Alzheimer disease in two communities. *JAMA*, 285(6): 739-747.
- Katzelnick D, Simon G, Pearson S, Manning W, and Kobak K. (2000). Depression management programs. *Archives of Family Medicine*, 8:689-670.
- Knopman DS, DeKosky ST, Cummings JL, Chui H, Corey-Bloom J, Relkin N, Small GW, Miller B, and Stevens JC. (2001). Practice parameter: diagnosis of dementia (an evidence-based review). Report of the Quality Standards Subcommittee of the American Academy of Neurology. *Neurology*, 56(9):1143-1153.
- McKhann G, Drachman D, Folstein M, Katzman R, Price D, and Stadlan EM. (1984). Clinical diagnosis of Alzheimer’s disease: report of the NINCDS-ADRDA work group under the auspices of Department of Health and Human Services Task Force on Alzheimer’s Disease. *Neurology*, 34(7):939-944.
- Simon GE, Katon WJ, VonKorff M, Imitzer J, Lin EHB, Walker EA, Bush T, Rutter C, and Ludman E. (2001). Cost-effectiveness of a collaborative care program for primary care patients with persistent depression. *Am J Psychiatry*, 158:1638-1644.
- Small GW, Rabbin PV, Barry PP, Buckholtz NS, DeKosky ST, Ferris SH, et al. (1997). Diagnosis and treatment of Alzheimer’s disease and related disorders: consensus statement of the American Assoc. for Geriatric Psychiatry, the Alzheimer’s Assoc., and the Amer. Geriatrics Society. *JAMA*, 278(16):1363-1371.
- Thomson MA, Freemantle N, Wolf F, Davis DA, and Oxman AD. (1999). Educational meetings, workshops and preceptorships to improve the practice of health professionals and health care outcomes (Cochrane Protocol on CD-ROM). Oxford, England: Cochrane Library, Update Library, Update Software; issue 1.
- Unutzer J, Katon W, Callahan C, Williams JW Jr, Hunkeler E, Harpole, Hoffing M, Della Penna RD, Noel PH, Lin EH, Arean PA, Hegel MT, Tang L, Belin T, Oishi S, and Langston C, for the IMPACT Investigators. (2002). Improving Mood-Promoting Access to Collaborative Treatment. Collaborative care management of late-life depression in the primary care setting: a randomized controlled trial. *JAMA*, 288(22):2836-2845.
- Wells N, Johnson R, and Salyer S. (1998). Interdisciplinary collaboration. *Clinical Nurse Specialist*, 12(4):161-168.
- Zarit SH, Orr NK, and Zarit JM. (1985). *The hidden victims of Alzheimer’s disease*. New York: New York University Press.

Received: 08/01/04

Revised: 04/01/05

Accepted: 06/03/05

Copyright of *Clinical Gerontologist* is the property of Haworth Press and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.

Copyright of *Clinical Gerontologist* is the property of Haworth Press and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.