Models of Physician Education for Alzheimer's Disease and Dementia: Practical Application in an Integrated Network

Rose M. Harvey a b c, Kathy J. Horvath a b c, Sharon A. Levine b d & Ladislav Volicer b c

a School of Nursing, Bouvé College of Health Sciences, Northeastern University, Boston, MA
b Boston University School of Medicine, Boston, MA
c E.N.R. Memorial Veterans Hospital, Bedford, MA
d Geriatrics Section, Boston University Medical Center, Boston, MA

Published online: 11 Oct 2008.

To cite this article: Rose M. Harvey, Kathy J. Horvath, Sharon A. Levine & Ladislav Volicer (2006) Models of Physician Education for Alzheimer's Disease and Dementia: Practical Application in an Integrated Network, Clinical Gerontologist, 29:2, 11-23, DOI: 10.1300/J018v29n02_03

To link to this article: http://dx.doi.org/10.1300/J018v29n02_03
Models of Physician Education for Alzheimer’s Disease and Dementia: Practical Application in an Integrated Network

Rose M. Harvey, RN, DNSc
Kathy J. Horvath, RN, PhD
Sharon A. Levine, MD
Ladislav Volicer, MD, PhD

ABSTRACT. Two models were used to provide ongoing education about Alzheimer’s disease for primary care physicians in a Veterans Health Administration (VHA) network including 8 facilities. The Train the Trainer model developed by the John A. Hartford Foundation and the American Geriatrics Society was used to prepare physician leaders to conduct Memory Loss Tool Kit sessions for colleagues in their VHA settings. Videoconference techniques were used to present case-based Grand Rounds about best practices around particular patient situations. Methods and evaluation of both programs are discussed. Successful
follow-through by physician leaders requires ongoing incentives and support. The Videoconference Grand Rounds Program requires skill to initiate and maintain effective technology. Both programs demonstrate successful outcomes.

KEYWORDS. Practicing physician education, Alzheimer’s disease education, Train the Trainer, videoconferencing, physician leaders, Memory Loss Tool Kit

Ongoing education for primary care physicians about dementia signs and symptoms, current treatment models, and availability of resources are essential in the face of increasing Alzheimer’s disease (AD) in a growing elderly population (Hebert et al., 2003). Although primary care physicians express interest in learning about dementia (Robinson, Barry, Renick, Bergen, & Stratos, 2001) they are limited in their ability to diagnose dementia by increased patient loads; shortened visit time; lack of knowledge about symptoms, diagnostic methods and treatment options; a disease that many patients and families would rather hide than discover; and perceptions that a specific diagnosis is not essential (Barrett, Haley, Harrell, & Powers, 1997; Boise, Comicioli, Morgan, Rose, & Congleton, 1999; Knopman, Donohue, & Gutterman, 2000).

Other articles in this special section on physician education for Alzheimer’s disease and related dementias describe innovative approaches and attest to the need for multiple interventions to change physician behavior. We believe these new approaches to physician education, like all practice improvements, need to be adapted to fit the available resources in any particular setting (Volicer, Mills, Hurley, & Warden, 2004). Further, there is a need for experiential learning, the direct observation and discussion of specific patient/family situations where clinical judgment is demonstrated and where the interdisciplinary nature of dementia care can be addressed (Dreyfus & Dreyfus, 1986; Wandel, 2003). Finally, there is a need for ongoing education of physicians and other clinical providers as new tools and treatments for dementia become available, for example, the dialogue about the best tools for cognitive screening which is described below. Considering these factors, the Boston University Alzheimer’s Disease Center (BUADC) and the Veterans Health Administration (VHA) worked collaboratively to
implement and evaluate a model of education for physicians and other clinical providers in the Veterans Integrated Services Network (VISN) 1, which encompasses the VHA facilities in New England.

One of the primary aims of the Education Core of the BUADC is to “Improve clinical skills of physicians with a focus on primary care providers and early detection of Alzheimer’s disease.” The BUADC is based at the Boston University Medical Center and the Edith Nourse Rogers Memorial Veterans Hospital, Bedford, MA. The Bedford VHA is one of the host facilities for the New England Geriatric Research Education and Clinical Center (GRECC), which works closely with the BUADC Education Core in achieving its goals. The GRECC faculty members are experts in the care of patients with dementia and serve as “opinion leaders” (Gifford et al., 1999) within the VISN. The most effective method to change physician behavior—interactive, skill-based education (Davis et al., 1999)—is available in the GRECC host facilities in Bedford and Boston. What we needed, however, was a model of dementia education that provided interactive capabilities to the 6 other facilities in the VISN.

We planned two programs to achieve our goal of improving physicians’ and other providers’ clinical skills in caring for the person/family with dementia in VISN facilities. The first program was the practicing physician, Train the Trainer education program (PPEP) to develop Physician Leaders at each of the 8 VHA facilities in VISN 1. The second program is an ongoing bimonthly interdisciplinary videoconference series called Case Studies in Dementia. We will describe these two programs and illustrate their potential to change practice.

PRACTICING PHYSICIAN EDUCATION PROGRAM

Methods

The first program was conducted using the Train the Trainer model developed, implemented, evaluated, and disseminated by the John A. Hartford Foundation and the American Geriatrics Society (Robinson & Barry, 1999). Levine and colleagues (Levine, Stratos, Robinson, Barry, 2002) reported use of the Practicing Physician Education Program (PPEP) model to train 69 Physician Leaders who conducted 101 Tool Kit Presentations for 1,100 Community Physician participants. These Community Physicians reported high satisfaction with peer teacher facilitation skills; improvement in self-reported knowledge, attitude and
office based practice; and a high percentage of practitioners who developed plans for evaluation and education of patients with memory loss.

The Train the Trainer program uses a Memory Loss Tool Kit, which contains professional resources and patient education materials including a Review of Alzheimer’s Disease with references, a Clinical Process Guide for managing memory loss, Case Studies, Resources for education and service, and numerous Tools for assessment and evaluation. Expert faculty, who were trained in teaching skills, presented Physician Leaders with teaching techniques to help them engage peer learners in active discussions of case studies and use of the resources provided in the Tool Kit. The purpose of the PPEP is to train Physician Leaders to conduct the Tool Kit sessions, which demonstrate use of the Tool Kit materials and resources to colleagues in their own facility or community. Expert faculty teach Physicians Leaders how to provide an appropriate learning climate, maintain control of a session, establish and communicate goals for the session, promote understanding, retention, and self directed learning, and provide evaluation and feedback. Learning the content in the Tool Kits, i.e., assessment and care planning for memory loss, is a byproduct of the training for Physician Leaders, not the primary purpose.

We recruited Physician Leaders from the VISN through its Director of Geriatrics and Extended Care and the Education Director. They made announcements and distributed fliers at VISN education meetings. We also sent e-mails to educators and physicians at the specific facilities. Six primary care physicians, 1 geriatrician, and 1 adult and a geriatric nurse practitioner registered for the one and one half day session. The primary care physicians were staff members, a medical director, a chief of primary care, an attending physician, and firm medical leaders from the Geriatrics and Primary Care Services.

On day one of the Train the Trainer program, our Expert Faculty asked Physician Leaders to introduce themselves and share their reasons for attending. The Expert Faculty then presented an overview of the program and reviewed specific teaching principles, methods, and behaviors which would prepare the Physician Leaders to provide Tool Kit presentations to their colleagues. The Expert Faculty asked Physician Leaders to review the Tool Kit and Facilitator Guide that evening for “homework.” On the second day, one of the Expert Faculty demonstrated a “presentation” of the Tool Kit. This was followed by a debriefing session during which Physician Leaders applied principles of teaching/facilitation to the Tool Kit presentation they had observed. Because family teaching is an important part of dementia care, we asked a
representative of the Massachusetts Alzheimer’s Disease Association to discuss the resources available to physicians, patients, and caregivers from the Alzheimer’s Association. Finally, a member of our organizing team discussed issues designed to assist the Physician Leaders in planning their own Tool Kit sessions including the materials and support that would be available to them as well as providing continuing medical education credits. We asked each Physician Leader to conduct two Tool Kit sessions in their home VA facility.

**Evaluation**

Physician Leaders evaluated program objectives as to whether they (1) gained sufficient mastery of teaching skills to facilitate 2 hour Memory Loss Tool Kit sessions for community based physicians; (2) gained sufficient mastery of content to facilitate Tool Kit sessions; (3) could identify two conceptual tools for improving teaching including an educational framework for analyzing teaching and critical aspects of teaching; and (4) could describe behaviors and methods useful for teaching Tool Kit content. Using a 1 to 5 scale (1 = not at all; 5 = completely), seven Physician Leaders responded with 4 or 5 to all objectives, and one indicated a 3 for each of the last two objectives. We considered this to be a high achievement of facilitation and content objectives of the program and believed the Physician Leaders would begin to plan Tool Kit sessions in their own facilities. The first Tool Kit session was conducted 2 months later. The Physician Leader reported some difficulties related to “covering” the material and interruptions by participants being late or leaving early but was in general positive about the experience and received positive feedback from the participants. This Physician Leader conducted two more Tool Kit sessions. Community based participants at those Tool Kit sessions (N = 5, N = 3, N = 2) were 4 primary care MDs, 3 RN/NPs, and 3 PACs (one from Geriatrics, one “student” and one unknown). Larger sessions were planned; however, there were drop-outs at the last moment because of schedule changes or illness. Participants completed the continuing medical education evaluation, which was part of the Memory Loss Tool Kit material. The evaluation response indicated that 10 to 70% (M = 39%) of the material presented was new to participants. The range represents the varied backgrounds of attendees, but nevertheless demonstrates the need for providing this information. Tool Kit session participants reported an increase in their knowledge and skill related to memory loss as a result of the sessions. All agreed that the Physician Leader’s facilitation skills were high.
Attendees’ also agreed that the value and quality of the Tool Kit sessions were high. No other Physician Leaders conducted Tool Kit sessions.

Eight months after the Train the Trainer session, we sent e-mails to the eight Physician Leaders asking, “What are the barriers you see to conducting the Tool Kit session in your setting?” We received three replies. One Physician Leader said that personal health and family needs made it impossible to hold sessions, which would take time from patients and teaching; and another indicated that the Geriatric Department already had training in place so there were duplicate efforts going on. The Physician Leader who conducted the training sessions reported that the Train the Trainer session had been helpful to him in conducting the Tool Kit sessions. He felt that practitioners who attended the Tool Kit sessions had a favorable response to the training sessions and that demands on primary practitioners’ time were the greatest barrier to their participation in the Tool Kit sessions. This Physician Leader also reported conducting a pharmacy review of Donepezil in his setting and found that the practitioners who were writing most of the scripts were those who attended the Tool Kit sessions. This is not an expected outcome of the Tool Kit sessions but may be an interesting practice measure to follow.

**Discussion**

Although the VA has networking and education systems in place and seemed to be an ideal setting for training Physician Leaders to facilitate Memory Loss Tool Kit sessions, there was limited follow through with Tool Kit sessions. We made Tool Kits and continuing medical education credits readily available, provided an e-mail list serve for supportive communication, and we provided money for session lunches. Physician Leaders said they believed in the importance of the Tool Kit sessions, but that lack of time and local support deterred them from conducting the sessions. Our future challenge will be to obtain departmental support for time off from regular responsibilities to enable physicians to facilitate or attend the Memory Loss Tool Kit sessions. It may also be important to provide more ongoing interaction, support, and encouragement to Physician Leaders to conduct sessions. Such support may better “enable” physicians to conduct sessions for colleagues (Davis et al., 1999). Increased focus on nursing education has also been suggested (Larson, Chernoff, & Sweet-Holp, 2004) since nurses provide most of the direct care to elderly in nursing homes and in home care. We have
the opportunity to include more nurses in subsequent Train the Trainer sessions.

DEMENTIA VIDEOCONFERENCE ROUNDS

At the same time that PPEP was conducted, the New England GRECC began a series of videoconference presentations on the topic of dementia. The dementia videoconference rounds connect the 8 facilities in the New England VISN by video monitor. The program became a natural vehicle to maintain communication with the PPEP physician leaders and promote ongoing interaction and support. In addition to the video connection, we provided a telephone conference call option for those who did not have access to the video equipment or who had equipment failure. With access to the audio portion of the program and advance distribution of handouts, a participant can still have a valuable education experience.

We structured the program series in a Grand Rounds type format. Grand Rounds is an educational activity that is familiar to all the professional staff. Every other month, Geriatrics Grand Rounds is a dementia videoconference titled *Case Studies in Dementia*. Because the program is scheduled into the noon hour, participants can use lunch/break time to attend this educational activity. Food is not provided, but many attendees bring a “brown bag” because it may be the only time in the day for a meal break.

In contrast to the usual Grand Rounds, which is a didactic presentation, the Dementia Videoconference is case-based. Our premise is that continuing education in diagnosis and treatment of dementia, even with proven effective educational strategies, is necessary but not sufficient to improve patient care. Diagnostic criteria and treatment principles, often in the form of “best practices,” cannot represent fully what is happening in the clinical situation. In everyday clinical practice there are values, traditions, and uncertainties that present as indeterminate situations (Schon, 1987). The members of a practice community, e.g., a clinical team, an inpatient unit, a home care program, etc., must have ongoing dialogue about what will constitute good practice for their patient population. Thus, “best” practice requires skilled performance that combines state-of-the-science knowledge and techniques with experiential learning to develop clinical judgment (Dreyfus & Dreyfus, 1996) for the real-world problems of persons with memory loss and their families. The goals of the case-based videoconference are to provide interactive
dialogue about best practice for dementia care in our patient population, and specific case studies to build clinical judgment. The following example about the issue of cognitive screening and early identification of impairment is illustrative of a practice community, the need for ongoing interaction, and the particulars of a patient situation that require clinical judgment in application of the current standards for practice.

**Case Illustration**

Based on an initial learning needs assessment, and more importantly, the participants’ questions and concerns in the first few programs, we developed a learning module on screening for cognitive impairment using a clock drawing task (CDT). The first component was a case presentation to demonstrate the usefulness of screening for dementia, the choice of cognitive test instruments, and the treatment benefits for the person and family. The patient situation that was presented is one that is familiar to primary care providers. During a routine primary care visit, the provider learns that Mr. “G,” who is 79 years old, lives with his wife, and has three children, experienced the unexpected death of his daughter four months ago. He has several symptoms of depression including anorexia, insomnia, hopelessness, and helplessness. He is tearful during the visit when speaking about his daughter’s death as well as his previous military history. There is no previous diagnosis of Post-Traumatic Stress Disorder. Mr. G. has a significant cardiac history with two previous myocardial infarctions (MI) and current hypertension and hyperlipidemia. His father, two brothers, and now his daughter have died from MI. The patient’s son reports that Mr. G. has had memory changes in the past 1 to 1.5 years and Mr. G. states, “I know I’m having more trouble with my memory recently.” Mr. G. plays golf 4 times per week and drives approximately 15,000 miles per year. Recently, he got lost travelling between two local destinations. At this visit, Mr. G. is oriented to date and converses easily about most current events in the newspaper. In contrast, he has trouble remembering his grandchildren and thinks the 1986 World Series of Baseball (an eventful season for the Boston Red Sox) was last season.

In order to gain more information about his cognitive status, Mr. G. was asked to draw a clock and set the hands at ten past eleven. In response, Mr. G. drew a rectangle with numbers around the edge of two sides. Next to the numbers he wrote “10 past 11.” Even without a formal score, it was apparent from the clock drawing that Mr. G. should be referred for neuropsychological testing and he agreed to this
recommendation. Full neuropsychological testing revealed clinical depression, moderate to severe visuospatial impairment, and cognitive deficits consistent with both vascular dementia and Alzheimer’s disease. The treatment plan included a referral for psychological counseling and antidepressant medication, brain imaging, optometry consult, and repeat neuropsychological testing in six months. In the videoconference, we emphasized the benefits of cognitive screening to develop the treatment plan.

The second module was a skill-based didactic session focused on the administration and scoring of the CLOX (Royall, Cordes, & Polk, 1998), so the providers would have the procedural details to use a CDT in their practice. Notably, within GRECC and the VHA community of practitioners who are leaders in dementia care, there is a dialogue about the best tools for dementia screening and the circumstances under which it is appropriate to use them. While the Mini-Mental Status Exam (MMSE) (Folstein, Folstein, & McHugh, 1975) is the cognitive assessment tool that is most familiar to practitioners, our providers perceive it as too lengthy to use as a screening tool in primary care. More importantly, it has been shown to produce false positive results (White et al., 2002), which have serious implications for creating fear and anxiety for patients and families and unnecessary testing. There also is a dialogue within the broader scientific community about the appropriateness of cognitive screening in primary care (Borson, 2004) and the growing recognition that cognitive screening should be conducted only after “triggers” indicate that there is a likelihood of cognitive impairment. For example, the Chronic Care Networks for Alzheimer’s disease (1998) initiative has a website where it has posted a publication that includes tools for assessment of dementia and also a rationale for removing a high-risk screening tool from their packet of information.

The third component of the learning module on early identification of dementia will be a 6-month follow-up discussion of Mr. G’s response to the antidepressant medication and psychological counseling and further treatment approaches, both pharmacologic and non-pharmacologic, for his cognitive decline. Participants expressed a strong interest in learning in more depth the nature of his current problems, the family issues and the need for advanced planning for the inevitable changes that dementia will require. This third session will emphasize the interdisciplinary nature of an optimal treatment plan for a person/family with dementia and the community resources that can assist both family and professional caregivers.
Evaluation

To date, the program evaluation has been primarily formative in nature and follows, in part, the principles of the Rapid Cycle Model for continuous quality improvement (Langley, Nolan, Nolan, Norman, & Provost, 1996; Nelson, Batalden, & Ryer, 1998; Volicer, Mills, Hurley, & Warden, 2004). This model emphasizes the importance of small tests of change to try new ideas before full implementation. It assumes that all changes will need to be adapted to work in a particular system. The model also provides a framework to maintain progress despite initial setbacks through the PDSA (Plan-Do-Study-Act) Cycle, which is used repeatedly in a trajectory of continuous improvement.

We discovered after the first two sessions that we had too many technical problems to proceed. We suspended the program for six months and focused on the infrastructure that was needed to make the program successful. For example, a Video Support Team E-mail list serv was developed so the technical support leaders would receive all communications about the program and become familiar with the needs of the faculty. We also learned that monthly programs were too frequent to allow the time necessary to prepare each session and thus we adopted the current bimonthly format. The videoconference technology allows for live interaction, but requires a well-controlled and coordinated telelesson plan so the session runs smoothly and effectively. Training in videoconference technology for successful distance learning for the program directors, offered by the VHA Employee Education System, was indispensable (Darnall, 2000).

We have conducted four sessions this academic year. Attendance has risen from 11 participants at the first session to 40 at the fourth session. Attendees for the most recent session included 6 physicians, 11 advanced practice nurses, 7 registered nurses, 5 social workers, 3 psychologists, 2 occupational therapists, and 1 pharmacist plus 2 pharmacy interns (3 attendees did not return evaluations). Notably, several attendees traveled 20–30 minutes from community-based outpatient clinics to participate in the videoconference at the closest hospital facility. One physician and two psychologists who could not attend the live broadcast requested a videotape recording of the skill-based program on conducting a CDT. In addition to the interaction during the program, some participants have communicated with the program director between sessions to suggest topics and to share clinical successes. For example, one physician shared his success using the Mini-Cog (Borson, Scanlan, Brush, Vitaliano, & Dokmak, 2000) for dementia screening in primary
We asked him to share this experience with others to add to our dialogue about “best practices” for our patients.

Participant evaluations have indicated that we are meeting the program objectives, which are to (1) identify the key features of the case for clinical decision making (72%); (2) discuss the clinical and ethical issues presented (72%); and (3) compare treatment options for addressing the issues (82%). Eighty-five per cent of attendees said they would use the information to enhance their clinical practice. We also reviewed videotapes of our presentations and noted that the flow between speakers and the use of slides needs to be improved for more effective learning. Written comments indicate that attendees want to learn more about managing cardiovascular risk factors for dementia patients, discuss more fully the benefit of pharmacologic agents, and learn how to manage the issue of driving and dementia.

Discussion

Although the initial effort to install the technology and have it perform without interruption took some time and effort, the resulting product is quite successful. The videoconference technology has created an ongoing dialogue about dementia patient care with a group of primary care providers who are motivated by their desire to improve care to their patients with dementia. The GRECC and BUADC expert knowledge and skill is being transferred to a practice community that extends to other facilities in the network through the respective physician leaders including those who were trained in the PPEP. The Grand Rounds format seems the most feasible for primary care providers, and although there are obvious time limits, the series is ongoing and we will continue to address the problems that are most pressing for the clinicians. This program has confirmed our belief that there is a need for experiential learning that takes into consideration the patient-specific factors that are relevant in any clinical encounter and that require clinical judgment. Further, everyday practice occurs in a social context with interdisciplinary providers who have an ongoing dialogue about what constitutes good practice for their patient population.

REFERENCES


Received: 08/01/04
Revised: 04/01/05
Accepted: 06/03/05