APPENDIX C

IMPLEMENTATION AND RELATED-ACTIVITIES GRANT SUMMARIES

March 2005
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Project Name: Lompoc Elders in Managed Care Program  
Lead Agency: California Institute for Rural Health Management (CIRHM)  
Principal Investigator: Luisa Buada  
Implementation Grant: $850,000, January 2000-January 2001, terminated

Intervention

The project’s purpose was to provide care coordination for seniors living in rural Santa Barbara County and enrolled in PacifiCare/Secure Horizons Medicare managed care. It was to demonstrate that care management reduces utilization and health care costs.

The lead organization, the Lompoc Valley Community Healthcare Organization (LVCHO) is a community health system collaborative, made up of health and social service providers, employers, schools, civic institutions, and government officials (LVCHO 2000). LVCHO planned to use the Program for Elders in Managed Care (PEMC) grant to develop a care management program for seniors in managed care. Nursing care coordinators (NCC), available seven days a week, 12 hours per day, would work with seniors to coordinate medical and community services and to provide advice and guidance to patients and their caregivers. These care management services were expected to result in increased utilization of community services, decreased utilization of medical services, and decreased health care costs.

Underlying Hypothesis

Improving care coordination for frail seniors in managed care would have resulted in decreased health care costs and utilization and improved patient satisfaction.

Project Design

The study planned to enroll seniors in the City of Lompoc (located in rural Santa Barbara County) who were enrolled in PacifiCare/Secure Horizons and who were high users of services.

LVCHO planned to obtain data from PacifiCare/Secure Horizons, or from Meridian, the third-party administrator, on health care costs and utilization for all 2,500 PacifiCare/Secure Horizons members in the City of Lompoc. LVCHO was to identify the top 10 percent of users and request their participation and approval from their provider. They expected about 200 to participate in the intervention group, and they hoped to obtain 200 control cases from Medicare beneficiaries in the Lompoc area (LVCHO 2000). Intervention group participants were to receive NCC services. Utilization data were to be collected from PacifiCare or Meridian at the baseline, midway, and at the end of the study.

Project Implementation and Experience

Before any beneficiaries were enrolled, several problems arose, resulting in termination of the program’s grant in January 2001. The first problem was that the Medicare managed care market in Lompoc was changing rapidly. When the grant was awarded, PacifiCare/Secure Horizons was still contracting with the major independent practice association (IPA)—a key partner in the collaboration—but because of the IPA’s financial instability, PacifiCare terminated the contract with the IPA and decided to contract instead directly with the primary care
physicians. That changed the project dramatically. PEMC’s program office believed that this arrangement, in which only primary care physicians were at risk, was unlikely to be replicated in urban and suburban markets (Reuben 2001).

The program office was also concerned about the reliability of results from such a small sample size and whether LVCHO could have recruited 200 participants in the intervention group, given expected refusal rates. There were concerns about how utilization and cost data would be collected from PacifiCare or Meridian. In addition, the program office believed the control group was not well specified.

The project experienced changes in leadership. The lead organization originally was CIRHM, and the principal investigator originally was Luisa Buada. LVCHO was developed as CIRHM’s sister organization and eventually took over the program, with CIRHM taking a consulting role (Buada 2000). Buada’s involvement in the project ended when the lead organization changed and LVCHO did not establish a new coordinator.

Timeline of Grant Activities

<table>
<thead>
<tr>
<th>Activity</th>
<th>Date</th>
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<tbody>
<tr>
<td>Implementation grant awarded</td>
<td>January 2000</td>
</tr>
<tr>
<td>Program put on hold</td>
<td>April 2000</td>
</tr>
<tr>
<td>LVCHO submits revised proposal</td>
<td>November 2000</td>
</tr>
<tr>
<td>California HealthCare Foundation (CHCF)</td>
<td>January 2001</td>
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<tr>
<td>terminates grant</td>
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</tbody>
</table>

Evaluation Questions and Findings to Date

Dr. Harold Hunter of California State University at Long Beach was the independent evaluator. The study planned to use qualitative and quantitative evaluation methods. Investigators planned to collect cost and utilization data from PacifiCare or Meridian at baseline, at midway, and at the end of the study.

The evaluation planned to examine whether those in the intervention group had reduced medical service utilization, decreased referrals to specialists, and increased utilization of community resources. The evaluation was also going to examine how the beneficiaries and PacifiCare staff perceived the benefits of the care management (LVCHO 2000).

As no participants were enrolled in the study, there are no evaluation data.
REFERENCES


Intervention

This project aimed to expand the Intervention and Early Identification (IEI) Program—a pilot program developed by Seniors At Home (SAH), a division of Jewish Family and Children’s Services, and Brown and Toland Medical Group in 1993—to additional medical groups affiliated with Brown and Toland. In IEI, at-risk elderly patients were identified and referred to SAH, which then sent a social worker to make an in-home assessment and to provide care coordination as needed (CHCF 1998). In addition, the project provided training for office staff of primary care medical practices to learn to identify seniors who might benefit from care management services; these were known as geriatric resource persons (GRPs) (CHCF 1998). GRPs made referrals to the Seniors At Home program, which provides care management and coordinates resources such as home care, transportation, therapy, bill paying, and other volunteer services.

Underlying Hypothesis

Frail elders could benefit from referrals to care managers, which could result in reduced health care costs and improved health outcomes. The investigators “hypothesized that an older population with access to targeted care management through the IEI program would utilize the medical care system less” (JFCS 2001).

Project Design

To provide a basis for assessing results, the project randomized 24 Brown and Toland provider groups into two groups, with one subject to the intervention and the other not. Participants were eligible for the study if they were enrolled in Medicare managed care and in a Brown and Toland medical group with a UCSF primary care physician. A total of 1,098 seniors were enrolled in the study. Of these, 544 were from the 12 intervention practices and 554 were from the 12 control group practices (Rassen 2001).

In practices randomized into the intervention, office staff were to be trained to recognize seniors that were experiencing difficulties so that they could be referred to Seniors at Home. Initial estimates were that 8-10 percent of the study population would be identified by the GRP and/or physician as high risk and referred to Seniors At Home for case management services (JFCS 2001).

Participants in both the intervention and control groups were further divided into high-risk and low-risk groups. Participants were classified as high risk if they were over age 85, or had at least one hospitalization or emergency room visit, or nine or more PCP visits (Rassen 2001). A total of 519 participants were classified as high risk and 579 were classified as low risk. Those in the high-risk group were administered in-depth telephone surveys and those in the low-risk group were administered shorter, mail-in surveys. These surveys were administered baseline, and after six and twelve months. Administrative data was used to determine health care utilization
during this time period, and patients and caregivers were surveyed to determine quality of life and satisfaction with care (JFCS 2001).

**Project Implementation and Experience**

Ten GRPs were trained and working in nine of the twelve intervention practices (one practice had two GRPs) (Rassen 2001). (A total of 55 GRPs have been trained since the inception of the IEI program.) GRPs were trained to recognize the signs that an elderly person is experiencing difficulties that are greater than what occurs during the normal aging process and instructed in how to make a referral to SAH. Training involved a “ten-hour, three-week course certified for continuing education at a local university” (CHCF 1998). A training coordinator also followed up with the GRP on a monthly basis to answer any questions he or she had.

The number of patients recruited for the study was substantially less than original estimates had projected. In contrast to a planned study population of 3,000, from 26 eligible practices, only 1,098 participants were recruited from 24 participating practices (Rassen 2001).

Referrals to SAH were also much lower than expected. Ultimately, thirteen seniors in participating medical groups were referred to SAH who qualified for the study, seven from the control group and six from the intervention group (JFCS 2001).

In their own analysis of reasons for the disparity, JFCS places emphasis on marketplace pressures over the study period. Medicare HMOs were capping enrollment and pulling out of markets. This caused Brown and Toland to suffer serious financial losses at the time of the study. In November 1999, Brown and Toland sent a letter to physicians informing them that they should not make referrals to SAH, that these services would not be reimbursed, and “many [providers] became reluctant to refer patients for adjunct services, fearing their practices would be forced to bear the cost” (JFCS 2001). In addition, some providers and office staff (in both experimental and control groups) perceived that they already provided care management services to their patients; thus, they did not see a need to make a referral to an external care management service (JFCS 2001).

Project staff took action in an attempt to respond to these constraints on the demonstration. Two months after Brown and Toland sent a letter to physicians, SAH wrote to all Brown and Toland physicians, informing them that the study was grant funded and that all referrals would be done at no cost to them. SAH hosted seminars to inform providers of these services. In addition, in early 2000, SAH signed contracts with Medicare HMOs PacifiCare/Secure Horizons and Health Net to pay for services. Still, providers were confused and concerned about financial implications, and so stopped making referrals.
Timeline of Grant Activities

<table>
<thead>
<tr>
<th>Activity</th>
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<tr>
<td>Project begins</td>
<td>October 1998</td>
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<tr>
<td>Brown and Toland notifies physicians that they should not make referrals to SAH</td>
<td>November 1999</td>
</tr>
<tr>
<td>SAH signs contract with Health Net to pay for services</td>
<td>February 2000</td>
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<tr>
<td>SAH signs contract with PacifiCare/Secure Horizons to pay for services</td>
<td>Summer 2000</td>
</tr>
<tr>
<td>SAH implements second study to assess differences in outcomes of seniors receiving SAH services versus those who do not</td>
<td>March 2001</td>
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<tr>
<td>Project ends and final report submitted to CHCF</td>
<td>December 2001</td>
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Evaluation Findings

To evaluate the impact on health outcomes, costs, and patient satisfaction, investigators compared utilization of the study patients in treatment and control groups over time. Study participants were evaluated at baseline and after 12 months. Final data analysis showed that the IEI program was “not associated with lower health care costs or better outcomes,” and that this may have resulted from the fact that so few seniors were referred to the service (JFCS 2001). In fact, the project showed a significant increase in primary care physician visits and expenditures from baseline to follow-up for the treatment group relative to the control group. In addition, at the 12-month followup “15 percent of intervention and 10 percent of usual-care patients declined in activity of daily living (ADL) function; 4 percent fewer intervention and 2 percent fewer usual-care patients needed transportation to their physician’s offices; and for both groups, 14 percent had hospital admissions” (JFCS 2001). In sum, the investigators concluded that IEI did not reduce health care costs or improve outcomes but that this could have easily reflected the low referral rates for services (JFCS 2001).

The second aim of the study was a qualitative survey to determine the effectiveness of the GRP training. Interviews were conducted with the nine GRPs working in intervention practices (one GRP left near the end of the study); the interviews were conducted 12 months after the training took place. The study found that “all GRPs definitely felt the training benefited their patients, and they would recommend Seniors At Home to patients who might benefit even if they had to pay out of pocket” (JFCS 2001). Only one respondent reported not being satisfied with the way SAH communicated with him/her about his/her patients (JFCS 2001).

The third aim of the study involved a follow-up retrospective analysis assessing differences in health outcomes and costs between seniors who received SAH services and those who did not. This provided some ability to assess SAH service impact, even though the original design had not resulted in sufficient referrals to test SAH’s impact. The project matched patients receiving SAH services (from other medical groups) to those not receiving SAH services based on age, gender, the number of acute hospitalizations, and the ability to bathe independently (JFCS 2001).
However, it was not possible to evaluate whether differences in health outcomes and cost existed between patients who did and did not receive SAH services; this was because substantial differences between the treatment and comparison group that remained—despite the matching process—suggested that the comparison group was invalid (JFCS 2001).
REFERENCES


**Intervention**

On Lok Senior Health Services is a staff-model HMO that provides coordinated medical services and community-based services to frail seniors in San Francisco. On Lok was the model for the Centers for Medicare and Medicaid Services (CMS) Program for All-Inclusive Care for the Elderly (PACE) demonstration. Although seniors can benefit from On Lok’s coordinated care and community-based services, many choose not to participate because they are required to leave their current primary care physicians and to use On Lok’s doctors instead. About 20 percent of seniors referred to On Lok Senior Health Services refuse to participate for this reason (On Lok 1999).

This project’s purpose was to develop a network of providers so seniors can remain with their current providers and still participate in On Lok. On Lok established relationships with four providers in San Francisco and six providers in Fremont and established a network of nurse practitioners that would coordinate care among the providers and with On Lok’s interdisciplinary services (On Lok 1999). The goals were to give On Lok’s patients a greater choice of physicians, to promote community-based growth in On Lok, and to disseminate the PACE model more widely in the community (On Lok 1999).

**Underlying Hypothesis**

Seniors would have benefited from care management and community services offered through On Lok. Establishing a network of contracted physicians would have allowed seniors greater choice of providers and would have helped promote growth of the PACE model of care coordination for frail elders.

**Project Design**

Seniors could participate if they were older than 55 and had been certified by the California Department of Health Services as being nursing home-eligible (On Lok 1999). On Lok expected to be able to support 180 seniors in the participating San Francisco and Fremont provider practices (On Lok 1999). Fourteen participants were enrolled when the Health Care Financing Administration (HCFA, which became CMS in July 2001) required On Lok to suspend the program in May 2000.

**Project Implementation and Experience**

On Lok received a CHCF planning grant for October 1998 through September 1999. During this time, On Lok contracted with four physicians at the Chinese Community Health Care Association in San Francisco and with six physicians in the Washington Medical Group in Fremont. Reimbursement rates were established for primary care, specialty care, emergency room care, inpatient care, and outpatient diagnostic services (On Lok 1999). Policies and
protocols were established for coordinating care among the providers and On Lok’s home- and community-based services. Program enrollment began at the end of the planning grant phase, and 14 participants were enrolled at the beginning of the implementation grant in February 2000.

Because of its new rules prohibiting PACE demonstrations from using contracted physicians, HCFA ordered On Lok to terminate the program in May 2000 (On Lok 2000). The 14 participants were given the choice of remaining with their current providers and disenrolling from On Lok or remaining in On Lok and transferring to one of the staff physicians, and all chose to remain in On Lok (On Lok 2000). On Lok attempted to change its status from PACE demonstration to PACE provider, which would allow them to contract with physicians, but this was a lengthy process.

In addition, On Lok was required to get HCFA approval to expand into a new service delivery area (Fremont). This approval was granted in December 2000 (Hash 2000).

On Lok began negotiations with HCFA to relax the constraint on prohibiting contracting with physicians, and it was expected that the rules would be modified by fall 2002 (Shen 2002). By November 2001, however, PEMC was entering its third year, and the CHCF felt the program had been delayed for too long. CHCF announced it would not continue funding of the project, and the grant was officially terminated in April 2002 (Smith 2001).

### Timeline of Grant Activities

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<tr>
<td>Planning grant ends</td>
<td>September 1999</td>
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<tr>
<td>Implementation grant begins</td>
<td>February 2000</td>
</tr>
<tr>
<td>Program suspended and participants transferred to regular On Lok care</td>
<td>May 2000</td>
</tr>
<tr>
<td>HCFA allows expansion of PACE demonstrations to new service areas</td>
<td>December 2000</td>
</tr>
<tr>
<td>CHCF decides not to continue funding On Lok</td>
<td>November 2001</td>
</tr>
<tr>
<td>Implementation grant terminated</td>
<td>April 2002</td>
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### Evaluation Questions and Findings to Date

The program planned to use quantitative and qualitative evaluation methodologies. It planned to measure the following outcomes (On Lok 1999):

- Utilization: Hospital admissions, length of stay, nursing-home days, specialty utilization, home-care hours, day-center days
• Quality: Complaints and grievance rate, disenrollment rate, compliance to preventative health protocols (flu shots), accessibility (waiting time for appointments), falls, preventable infections, wandering, and medication errors

• Cost effectiveness: Decreasing utilization over time, though it was expected that utilization would increase at the beginning of the program because of more enhanced care management

Because the project was terminated early, no evaluation results are available.
REFERENCES


Intervention

This project consisted of the California sites participating in the national Chronic Care Network for Alzheimer’s Disease Initiative (CCN/AD) (CHCF 2001). The national project seeks to improve care to seniors and their family caregivers by developing new protocols and guidelines for diagnosing and treating dementia. There are a total of seven sites nationwide, of which two, San Francisco and Sacramento, are in California. At these two sites, three medical groups participated: Kaiser Permanente and California Pacific Medical Center/Brown and Toland (CPMC/B&T) in San Francisco, and Sutter Health in Sacramento (enrollment from Sutter Health ceased in December 2000).

Underlying Hypothesis

Care management interventions for seniors with dementia would result in reduced health care utilization/costs and increased member satisfaction, and coordinated care benefits should be included in Medicare HMO benefits (IOA 1998).

Project Design

The project design was based on the CCN/AD model, which consists of four phases: identification, diagnostic assessment, care management and caregiver support.

- **Identification of People with Possible Dementia.** The two-step identification process involves: (1) a tool with triggers to identify people who may have dementia; and (2) a brief family questionnaire to identify people who may have dementia.

- **Diagnostic Assessment.** Individuals identified in the first step as possibly having dementia are given a more in-depth assessment, which includes medical and other histories, physical examinations, mental status tests, laboratory tests, and imaging procedures.

- **Care Management.** The CCN/AD model includes blueprints to assist sites in developing protocols for medical and nonmedical care management.

- **Family Caregiver Information and Support.** Uses grids to identify information, programs, and services needed to achieve the objectives and to specify partners responsible (Coon, Dowling, and Feigenbaum 2004). Each participating medical group implements the CCN/AD model and tailors the interventions to best meet the needs of their organization (IOA 1998). Patients (and their associated family caregivers) at each of the medical centers are recruited to participate (Feigenbaum 2002a).
Kaiser Permanente’s design was a care management program that used a team approach. Primary care physicians (PCPs) and patient care coordinators (PCCs) were responsible for assessment and referrals. PCCs met with patients during physician visits and provided assistance via telephone and, in some cases, home visits. Local Alzheimer’s Association chapters, which were project partners, provided primary caregiver support (Coon, Dowling, and Feigenbaum 2004).

The CPMC/B&T project was designed somewhat differently from Kaiser’s. B&T is an independent practice association with more than 800 physicians (CCN/AD 1999). The project trained physicians to identify and diagnose patients with dementia. The B&T arm of the project also targeted offices with personnel who received training in geriatric issues through programs to develop geriatric resource persons. GRPs were especially trained to use triggers to help identify patients in need of dementia screening. B&T physicians conducted the initial screening/work-up, and once the patient was diagnosed, physicians either assumed responsibility for care management or made referrals to the local Alzheimer’s Association chapter to help coordinate care management (Coon, Dowling, and Feigenbaum 2004).

At Sutter Health, physicians conducted the initial screening and then referred appropriate patients to project staff (a social worker or geriatric nurse practitioner [GNP]). Project staff conducted additional assessments (including the patient’s health history, social history, mental health, and risk for falls) to help determine care coordination among the physician, project staff, local Alzheimer’s Association chapters, or other appropriate professionals and/or agencies (CCN/AD 1999).

As part of the national evaluation, each site collected utilization data from the managed care organization and from the local Alzheimer’s Association chapter. Further details on the evaluation are below.

**Project Implementation and Experience**

As of June 2002, 710 participants across all sites had been recruited, more than the 600 originally anticipated (Coon, Dowling, and Feigenbaum 2004). Most enrollees were recruited in the San Francisco site; 257 patients (and 256 caregivers) were recruited from Kaiser, and 89 patients (and 75 caregivers) were recruited from CPMC/B&T. Only 17 patients (and 16 caregivers) were recruited from Sutter Health in Sacramento before enrollment ceased.

Sutter Health experienced significant problems implementing the project. Because most PCP offices refused to cooperate with the project, it was difficult to enroll patients (CCN/AD 1999). Furthermore, the project administrator had a number of other obligations, saying she had reduced her time on the project to “about nil” and that it never had significant buy-in from the Sutter organization because it was funded by outside grants (CCN/AD 1999). Sutter also experienced financial losses and organizational changes that created difficulties for the project (Feigenbaum 2002b). The study ceased enrollment in December 2000, with only 33 participants (17 patients and 15 caregivers). It continues to provide care management services to the participants already recruited and to collect data and will develop a report on lessons learned at the project’s conclusion (Phillips 2000).
Brown & Toland Medical Group (BTMG), the management organization for B&T physicians that served as the lead organization for the B&T site at the beginning of the project, experienced severe financial losses and organizational changes as the demonstration proceeded. In August 1999, it was apparent that B&T was not going to be able to serve as the lead agency. Although key personnel remained the same, leadership was transferred to California Pacific Medical Center Research Institute (CPMCRI). CPMC is a major hospital system in California. CPMCRRI was to serve as a fiscal/administrative agent for the project.

This change in project leadership occurred in the midst of growing animosity between CPMC and BTMG. BTMG, which previously had referred all patients to CPMC hospitals, began to refer to other hospitals. CPMC was attempting to develop a provider network of its own and was trying to recruit B&T physicians into CPMC practices (Feigenbaum 1999). Ultimately, the relationship between BTMG and CPMC was described as “full of antagonism” (CCN/AD 2001).

CPMCRI required the project to secure additional grant funding before proceeding with the project, which resulted in recruitment delays (Feigenbaum, 2000). Although enrollment at Kaiser began in early 2000, enrollment at B&T didn’t begin until September 2000 (CCN/AD 2001). As a result, recruitment activities were extended through March 2002, initially, and then—at the request of the national project—extended again through June 2002. The project has received technical assistance in recruitment from the PEMC program office.

The project originally was scheduled to end on September 30, 2001, but in February 2002, PEMC granted a no-cost extension until February 2003 to complete the project, including the final report (Feigenbaum 2002a).

### Timeline of Grant Activities

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<thead>
<tr>
<th>Activity</th>
<th>Date</th>
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<tbody>
<tr>
<td>Project begins</td>
<td>April 1999</td>
</tr>
<tr>
<td>Lead agency transferred from B&amp;T to CPMCRRI</td>
<td>August 1999</td>
</tr>
<tr>
<td>First National Evaluation Team site visits</td>
<td>October 1999</td>
</tr>
<tr>
<td>National database developed, piloting and initial data transfers completed</td>
<td>April 2000</td>
</tr>
<tr>
<td>Enrollment at Sutter Health ceased because of financial and organizational challenges</td>
<td>December 2000</td>
</tr>
<tr>
<td>Second National Evaluation Team site visits</td>
<td>March 2001</td>
</tr>
<tr>
<td>Final report submitted to CHCF</td>
<td>December 2003</td>
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### Evaluation Findings

The national evaluation team, led by Connie Schmitz and David Bass, developed the evaluation methodology for the national project. The evaluation consisted of two components. The first was the overall national evaluation across all sites, including California. The second
was the evaluation in California, across the two project sites—Kaiser Permanente and CPMC/B&T.

The evaluation had four primary components: (1) analysis of the CCN/AD Uniform Database, which allowed for the study of health care and Alzheimer’s Association service use; (2) site visits, covering topics such as provider education, dementia identification and assessment, and ongoing care; (3) a provider survey, which focused on providers’ characteristics and CCN/AD’s effect on how they cared for dementia patients and family caregivers; and (4) a patient and caregiver telephone survey. Data from this survey and the uniform database were combined to analyze the effect on utilization outcomes and how patients and caregivers perceived the intervention and their care (Coon, Dowling, and Feigenbaum 2004).

This evaluation did not use a random assignment or comparison group design to determine the intervention’s impact on service use. Instead, the analysis of the CCN/AD Uniform Database involved comparing utilization during the six months prior to enrollment with utilization in that site during months one through six and months seven through twelve, following enrollment. Relative to the six months prior to enrollment, no statistically significant differences were found in primary care or specialty care physician visits or emergency room (ER) visits at either health care organization. However, when utilization for months seven through twelve was compared to the six pre-enrollment months, there were significant decreases at both sites in the number of specialty physician visits, and at their Kaiser site in emergency room visits, primary care visits, and specialty physician. A subgroup analysis that included only patients without any reported nursing home stays during the pre/post assessment periods found a significant reduction at Kaiser in ER visits within the first six months and significant reductions in ER visits, primary care visits at Kaiser and specialty care physician visits at both sites. In contrast to these findings, there were significant increases among Kaiser patients in terms of hospital days, noncustodial days in the nursing home, nursing homes days of any type, total nursing home stays and custodial nursing home stays at follow-ups. These increases may be a reflection of the higher levels of Kaiser patient impairment at enrollment and/or the progressive nature of dementia. The pre-post design does not permit comparison of stays to those not receiving the CCN/AD care management. Finally, although there were very few findings that indicated Alzheimer’s Association chapter services unequivocally reduced health care utilization, chapter care consultations and referrals appeared to play important roles in reducing physician specialty visits.

In addition to the analysis of health care utilization data, the National Evaluation Team conducted four site-visits, two of which were in-person visits, with the remaining two held via teleconference. The following are some of the “operational lessons” learned from the site visits (Coon, Dowling, and Feigenbaum 2004):

- Provide time for members of the managed care organization and the Alzheimer’s Association chapter to learn about each other’s culture;
- Create buy-in early in the project from key clinical and administrative staff;
- Clearly specify what will be demanded of partners at the project’s outset; and
- Periodically assess project milestones to monitor progress.
The study also involved a three-wave mail-in survey of providers to “evaluate provider understanding, use of, and attitudes towards the project tools for identification and assessment of dementia” (Coon, Dowling, and Feigenbaum 2004). The first wave was, on average, fourteen months after CCN/AD implementation, with the remaining two waves each occurring subsequently at nine-month intervals. Survey data were pooled across providers at Kaiser, B&T, and the Institute on Aging (IOA). The vast majority of providers (more than 85 percent) noted that the project tools would promote the identification of dementia at an earlier stage, facilitate dementia diagnosis, facilitate communication between clinical staff and the patient/family, and improve clinicians’ understanding of the abilities and impairments of dementia patients (Coon, Dowling, and Feigenbaum 2004). In addition, survey results showed a trend of increased use of the project tools and improved perceptions of the benefits of using them, but these differences were not statistically significant.

Finally, a survey of patients and caregivers was conducted to “investigate project enrollees’ receipt of and satisfaction with key components of high-quality care and care management” (Coon, Dowling, and Feigenbaum 2004). As with the provider survey, the patient/caregiver survey was conducted in three waves, the first being six to nine months following enrollment, with the remaining two waves occurring six months following the previous wave. Questions asked of patients included those about emotional strain, depression, and relationship issues. Among the topics covered with caregivers were satisfaction with physician care quality and the adequacy of information they had to care for the patient. Combined sample sizes at Kaiser and B&T for the first wave were 161 caregivers and 49 patients; for the second wave there were 113 caregivers and 37 patients; and for the third wave there were 94 caregivers and 29 patients. The following are selected examples of results from the patient/caregiver survey (Coon, Dowling, and Feigenbaum 2004):

- Patients reported better quality of care when they had received more help with daily living activities and when they had received more adequate information.\(^1\)
- Emotional strain was more likely to occur among patients reporting less adequate information and less provider assistance with treatment options.
- More than six in ten caregivers in the first wave reported having adequate information about daily living tasks, family issues, the Alzheimer’s Association, and patient services.

**Plans for Institutionalization and Dissemination of Results**

The Kaiser program activities, including the care map and family questionnaire, have been institutionalized and show promise for sustainability once the project funding ends. During the National Evaluation Team’s second site visit, it was noted that Kaiser was focusing on changes to their overall operations, not the specific CCN/AD project. Dr. Nguyen was quoted as saying, “It’s not a program. It’s a better way to care for dementia patients.” Another physician was

\(^1\) This relationship was only statistically significant in the first and second waves of the survey.
quoted as saying that there is no danger that PCCs will be terminated when project funding ends (CCN/AD 2001).

Participating Alzheimer’s Association chapters have institutionalized many of the project activities. A fax referral system was implemented to establish aid in making referrals for patients and families to community resources. Provider and community education programs have been established, and many managed care organizations have tailored the development of the tools to their own environments. More than 1,130 professionals have attended education programs sponsored by project partners (Feigenbaum 2002). These activities are expected to continue once project funding ends.

The national project and the California sites have begun disseminating findings. Project staff made presentations at the World Alzheimer’s Congress in Washington, DC, in July 2000 and at the Updates on Dementia Conference in Stanford, CA, in March 2001. National data were presented at the Gerontological Society of America meeting in Washington, DC, in November 2000. The CCN/AD model has been presented at conferences in Spain and Sweden (Coon 2003).
REFERENCES


Feigenbaum, Lawrence. “Letter to Andrea Gerstenberger requesting change of lead agency from Brown & Toland to California Pacific Medical Center Research Institute.” August 9, 1999.


Intervention

This project was a collaboration between the California Public Employees Retirement System (CalPERS) and the Long Term Care Group (LTCG), the agency that administers the long-term care benefit for CalPERS members. The purpose of the project was to assess whether a health care coaching program could foster and/or maintain aerobic and stretching exercise, facilitate participation in disease management and health promotion activities, and, through these processes, increase consumer empowerment and reduce hospital and psychoactive medication use. Participants were seniors enrolled in CalPERS long-term care coverage who were also enrolled in one of three Medicare HMOs: Kaiser Permanente, Health Net, or PacifiCare (Holland, et al. 2003a).

Underlying Hypothesis

Program participation was expected to: (1) empower the client to be effective at chronic disease self management; (2) encourage health promoting activity; and (3) teach the client and their family about how to approach their physician with questions about the management of their condition. The accomplishment of these goals was expected to be reflected in reduced risk factors for disability, including increased physical activity, improved chronic disease self-management (measured by reductions in hospital days/stays, psychoactive medication use, and depression), and improved self-efficacy in communicating with their primary care physician (Holland, et al. 2003a).

Project Design

Participating seniors consulted with a nurse health coach (NHC) who helped them develop a personalized Health Action Plan, in which the participant identifies health and behavioral changes he/she wishes to make, and identifies services and classes that would be useful in supporting these choices. The NHC periodically followed up with the participant to assess adherence to the Health Action Plan and any need for adjustments. The NHC also communicated regularly with the patient’s primary care physician, keeping him/her informed of the patient’s progress (Holland, et al. 2003a).

The central focus of the program was the nurse health coaching team that assisted participants with the development and implementation of Health Action Plans (Holland, et al. 2003a). In addition to this, there are a number of other supportive services sponsored by the program to help participants with adherence to the Health Action Plan, which are outlined in the project’s final report (Holland, et al. 2003a):
• **Program Social Worker:** Assisted participants with issues of depression, isolation or other mood issues. The social worker made mental health referrals, and conducted senior support groups.

• **Volunteer Health Mentors:** Health mentors were designed to be volunteers to help participants adopt healthy behaviors, but this component of the program was not fully implemented because participants lacked interest in having a health mentor.

• **Lifetime Fitness:** An exercise program for seniors that offered one-hour exercise classes for seniors with a wide range of physical abilities.

• **Self-Management of Chronic Conditions:** A six-session course designed to empower seniors in their management of chronic conditions.

• **Consulting Geriatricians:** Although not providing medical care directly to participants, consulting geriatricians provided guidance to the program’s nurses and social workers. In addition, consulting geriatricians taught classes (called “The Doctor Is In”) to participants. Classes educated participants about health issues such as osteoporosis, balance and fall prevention, and medication and supplements.

The project contracted with Eskaton, a housing and long-term care service provider located in Sacramento, to employ the Nurse Health Coach and provide services associated with the program, including social workers, health mentors, and health education classes. In addition, Eskaton was also the lead agency responsible for participant recruitment of the program implementation (LTCG 2000).²

The design of the intervention was based on a similar program, the Senior Wellness Project (SWP), developed and implemented by the University of Washington and Group Health Cooperative of Puget Sound (Holland, et al. 2003a). This model was chosen because the SWP had already been tested and had demonstrated some success. The primary components of the SWP were senior center-based physical and social activity programs, health education classes, and a geriatric nurse practitioner (Holland, et al. 2003a). The programs were different in the following ways: (1) LTCG used a population-based method to recruit participants, whereas physicians performed recruitment in the SWP; (2) LTCG participants were age 65 and older, rather than 70 and older in the SWP; and (3) LTCG participants were CalPERS members with a CalPERS long-term care insurance policy. The LTCG selection criteria caused participants to be younger (average age 72 versus 77 years) and healthier (for example, they had fewer hospital stays) than their counterparts in the SWP (Holland, et al. 2003a).

**Project Implementation and Experience**

The program identified seniors (over age 65) residing in Sacramento who: (1) were members of the CalPERS Long Term Care Program; (2) were enrolled in the Medicare risk program of Kaiser, Health Net, or PacifiCare; (3) had been diagnosed with at least one chronic condition that

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² The California Network, a nonprofit organization providing community-based services, was part of the collaboration during the planning phase, but later ceased participation.
put them at future risk of disability; (4) were living in an area served by at least one of the community centers being used by the program; (5) were owning a CalPERS long-term care insurance policy; and (6) were not receiving long-term care service benefits (Holland, et al. 2003a).

Enrollment began in January 2001 and closed in July 2001 (Holland, et al. 2003a). Total program enrollment was 504 participants, 249 of who were in the control group.

Enrollment was slightly lower than originally planned. The demonstration was originally planned to take place in two sites, Sacramento and Los Angeles, and it was expected that 1,150 CalPERS members would be eligible. However, when the investigators submitted the implementation grant proposal at the conclusion of the planning phase, they estimated that 500 seniors would participate. In addition, because of concerns among CHCF staff that two sites would be expensive and difficult to administer, implementation of the project was delayed until there was sufficient enrollment in the Sacramento site alone (Greenberg 1999a). There were also delays in the institutional review board (IRB) approval process involving three health plans and the university that led to delays in implementation.

### Timeline of Activities

<table>
<thead>
<tr>
<th>Activity</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning Grant Begins</td>
<td>February 1999</td>
</tr>
<tr>
<td>Planning Grant Ends</td>
<td>January 2000</td>
</tr>
<tr>
<td>Implementation Grant Awarded</td>
<td>January 2000</td>
</tr>
<tr>
<td>Implementation Activities Begin</td>
<td>July 2000</td>
</tr>
<tr>
<td>Enrollment of Pre-Trial Group</td>
<td>September 2000</td>
</tr>
<tr>
<td>Recruitment Goal Achieved</td>
<td>June 2001</td>
</tr>
<tr>
<td>6-Month Assessments Completed</td>
<td>December 2001</td>
</tr>
<tr>
<td>Augmentation Grant Awarded</td>
<td>February 2002</td>
</tr>
<tr>
<td>12-Month Assessments Completed</td>
<td>June 2002</td>
</tr>
<tr>
<td>Augmentation Activities Scheduled to End</td>
<td>March 2003</td>
</tr>
<tr>
<td>Evaluation Scheduled to End</td>
<td>April 2003</td>
</tr>
</tbody>
</table>

### Augmentation Grant

In February 2002, the project was awarded an augmentation grant of $60,000 to conduct more detailed process analyses and to conduct a feasibility study of serving a frailer/higher-risk population than was included in the demonstration. Details of each were outlined in a letter from David Reuben to Jan Eldred on January 31, 2002, recommending funding of the project:

- **More Detailed Process Analyses ($20,000)**. Detailed analysis of how the program really functions, examining how participants actually used the program. These analyses would include:
1. Analysis of the nature and number of encounters with each enrollee;

2. Analysis of issues enrollees chose to work on and special program interventions selected;

3. Analysis of the use of community services; and

4. Concordance versus discordance analysis.

- **Feasibility of Serving a Frailer/Higher-Risk Population Mini-Study ($40,000).** Determine the feasibility and potential benefit of expanding the program to a much frailer group. Because of the long-term care insurance underwriting process, it is possible to identify the group that did not pass underwriting and the nature of their functional impairments and chronic health conditions. The proposed study would answer the following questions:

  1. How would the programming and site of programming need to be modified in order to meet the needs of a frailer/higher risk population?

  2. Is there a progression in physical activity and rehabilitation that moves from one-on-one to group or even individual-level activities that can be facilitated by the LTCG model?

  3. What subgroups within this frailer population would be the most appropriate participants?

  4. What are the challenges to getting the participants to the program or getting the program to the participants? Can these be overcome? What kind and how much assistance might be brought into the home?

  5. Would this population be interested in such a program? What do they see as the greatest obstacles to their participation? What services/assistance might they be willing to pay for?

**Evaluation Findings**

The program selected Robert Newcomer at UCSF as the evaluator. The investigators sought to determine whether the activities of the program would reduce the risk of disability among participants by increasing physical activity, improving chronic disease self-management, and improved communication with their primary care physician (Holland, et al. 2003a).

Although the evaluation did not find evidence that the intervention succeeded in reducing hospital and emergency utilization, the project did attain its primary objective of promoting exercise. The study not only gained the participation of seniors in the treatment group, but also promoted them to at least maintain their stretching and exercise levels (Holland, et al. 2003a). About 90 percent of treatment group members continued to exercise at the study’s end; they did so at an average of 20 minutes more per week than their counterparts in the control group. The intervention succeeded to varying degrees regarding education in chronic condition management and consumer empowerment (Holland, et al. 2003a). For example, most (about 75 percent) did the recommended reading of “Living A Healthy Life With Chronic Conditions,” but less than one-third attended the health education courses. In addition to its primary objective of
promoting exercise, the intervention resulted in statistically significant decreases in depression levels—on average, participants experienced a 3-point decrease in depression (on a 15-point scale) compared to a 0.5 point reduction among control group members (Holland, et al. 2003a).
REFERENCES


Greenberg, Jay. “Background materials for status report on part one of feasibility study.” Email to Andy Gerstenberger, May 25, 1999b.


### Project Information

<table>
<thead>
<tr>
<th><strong>Project Name:</strong></th>
<th>Implementation and Evaluation of the Community Partners Project</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lead Agency:</strong></td>
<td>Kaiser Permanente Southern California Medical Group, TriCentral Continuing Care</td>
</tr>
<tr>
<td><strong>Principal Investigator:</strong></td>
<td>Nancy Gibbs and June Simmons</td>
</tr>
<tr>
<td><strong>Implementation Grant:</strong></td>
<td>$990,000 October 1998-July 2003</td>
</tr>
<tr>
<td><strong>Augmentation Grant:</strong></td>
<td>$58,620 –Awarded February 2002</td>
</tr>
</tbody>
</table>

### Intervention

Kaiser TriCentral sought to demonstrate that screening high-risk seniors and referring them to care managers who can provide geriatric care management would result in improved client outcomes and lower health care costs. In addition, this study sought to test varying levels of care management intensity and the impact of these different levels on health outcomes and health care costs. Seniors over age 65 enrolled in Kaiser Permanente’s TriCentral Region (the Los Angeles area) were screened to determine whether they could benefit from care management. In addition to the screening, seniors could be referred by various sources (for example, Kaiser Permanente health care professionals, community agencies, caregivers, family members, or the seniors themselves) (PICF 2003).

Seniors identified as being at risk were examined to determine whether they were eligible to participate in the study. Participants were at least age 65 and identified as being frail, as determined by medical care utilization, activity daily living/instrumental activity daily living (ADL/IADL) functioning, and cognitive impairment (PICF 2003).

Once admitted to the study, participants were randomized into one of four groups:

- Information and referral (I&R), in which seniors received a packet of information on Kaiser and community-based services that were specific to seniors’ conditions and geographical locations;
- Telephone care management (TCM), in which participants received a telephone consultation with a social worker who referred them to Kaiser and community-based services;
- Geriatric care management (GCM), which provided at least one home visit and ongoing care management for an eight-month period with a registered nurse or master’s-level social worker; and
- GCM with a purchase of service (POS) benefit, in which participants could receive a benefit of up to $2,000 for home- and community-based services, including in-home support services, transportation, respite care, and medical equipment. The care manager coordinates these benefits (PICF 2003).

Project partners were the Los Angeles County Area Agency on Aging (AAA) and the City of Los Angeles AAA. The AAAs are functions of city and county government and aim to

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3 The screening instrument was developed by Kaiser Permanente’s Center for Health Research and has been in use by Kaiser Permanente’s Northwest Region since the 1980’s.
develop home- and community-based services for seniors. In this project, they were helping to establish linkages between the public and private sectors (Kaiser 1998). Partners in Care Foundation was also a project partner.

**Underlying Hypothesis**

The main goal was to determine whether coordinating medical care, home- and community-based services, and long-term care results in improved patient health outcomes and reduced costs of care (Kaiser Permanente 1998).

The project also sought to determine if frail seniors who receive care management and coordination as a plan benefit for a period of time would be willing to pay out of pocket for the services once the benefit expires. The project also examined whether outcomes and participation differ for those who received services as a fully paid benefit for a limited time, as opposed to those who never received coverage for the services (Kaiser Permanente 1998).

**Project Design**

The study population consisted of seniors age 65 and over who were enrolled in Kaiser Permanente’s TriCentral region, who were identified as frail, and who had an inadequate or no caregiver. The project design evolved over time and therefore two separate studies were conducted. Under the original study, 464 enrollees were randomized into one of three groups: (1) information and referral; (2) geriatric care management; and (3) geriatric care management with a purchase of service benefit. The I&R group was expected to function as the control group.

Investigators realized early on, however, that the services provided in I&R by Kaiser TriCentral provided more of a care management function than they had expected or experienced in other regions; thus, the group was not an appropriate control group for the intervention. As a result, in May 2000, the investigators proposed modifying the study to introduce a second study (the first study would continue). A total of 452 seniors were enrolled in the second study group and were randomized to one of four groups: (1) information and referral; (2) telephone care management; (3) geriatric care management; (4) geriatric care management with a POS benefit. In the second study, I&R—the control group—received the minimum level of care management offered by Kaiser Permanente TriCentral at that time and involved mailing a referral package to the senior without telephone follow-up.

**Project Implementation and Experience**

Enrollment was lower than anticipated, partially due to the decision to end the first study early and begin a second study with four study groups. In the original proposal, it was expected that the sampling frame would include 2,500 Kaiser Permanente seniors (Kaiser Permanente

4 The information and referral in the first study group was “a short-term, but very robust, telephone care management intervention that provided assistance in arranging medical appointments, community care management, durable medical equipment, and other community services such as meals on wheels and transportation” (PICF 2003).
1998). At the time of the study modification, it was expected that 2,000 seniors would be referred for the second study; about 672 would be eligible to participate and about 560 would choose to participate, with 140 enrolled in each of the four groups (Gibbs & Simmons, 2000a).

A total of 452 seniors chose to participate and were enrolled in the second study (somewhat less than the projected 560). As noted above, these 452 seniors were randomized to one of four levels of care management (PICF 2003).

There has also been attrition over time due primarily to death and being too weak to complete the follow-up telephone assessment. For the four-month follow-up assessment, attrition was 7 percent, increasing to 41 percent at the twelve-month follow-up (PICF 2003).

During the first study period, the project encountered challenges in developing the POS option because Kaiser Permanente does not currently provide benefits for these services. New contracts had to be developed between Kaiser and the small community-based organizations that provide these services. It took several months for these arrangements to be put into place (PICF 2003). Moreover, in the first study, participants in the POS group could receive care management benefits for a year, but once they accessed home- and community-based services using their POS benefit, they had to use the full $2000 within three months. This caused care managers to delay recommending services, out of concern that participants would have a greater need later on (PICF 2003). This requirement was later revised so that participants would have six months from the time they entered care management services to utilize the POS benefit.

### Timeline of Grant Activities

<table>
<thead>
<tr>
<th>Activity</th>
<th>Date</th>
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<tbody>
<tr>
<td>Implementation grant awarded</td>
<td>October 1998</td>
</tr>
<tr>
<td>Second study added; enrollment in first study discontinued</td>
<td>May 2000</td>
</tr>
<tr>
<td>Enrollment for second study ended</td>
<td>September 2002</td>
</tr>
<tr>
<td>Augmentation grant awarded</td>
<td>February 2002</td>
</tr>
<tr>
<td>Project ends</td>
<td>July 2003</td>
</tr>
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</table>

### Augmentation Grant

The project was originally funded for $990,000. In January 2002, the project submitted a request for funds to complete additional analyses, totaling $167,620. CHCF chose to fund only a portion of the requested analyses, and awarded an augmentation grant of $58,620. Activities under the augmentation grant include:

- Conducting 18-month follow-up interviews with 400 participants from the second study to assess long-term effects of the intervention;
- Conducting case studies with participants and care managers to document the process of care for participants receiving information and referral and geriatric care management;
• Examining the cost-effectiveness of each of the three levels of care management with respect to personnel costs and caseload per unit of benefit to establish the business case for managed care organizations (CHCF 2002).

Evaluation Findings

David Cherin, Ph.D., a senior research consultant at the Partners in Care Foundation, was the evaluator. The evaluation structure consisted of analyzing quantitative and qualitative data, including managed care organization cost and service use data, AAA service-use data, and patient telephone interviews, which were conducted at enrollment and at 4, 12, and 18 months after enrollment. The evaluation tested whether participants in the four randomized samples experienced differences in outcomes.

A number of outcomes and indicators were assessed, including functional limitations, depression level, caregiver burden/stress, satisfaction, and reported use of services. To examine the process of care, 80 case studies (40 in both the TCM and GCM group) were conducted, which involved chart reviews and structured interviews with care managers (PICF 2003). Analysis of the case study data involved examining measures, such as the type of contact the care manager had with seniors, the proportion of time a care manager spent on care management activities (for example, assessment and coordinating services), and care managers’ understanding of the goals of the program in geriatric care management (PICF 2003).

Authors of the final report noted that “it is evident from the varied levels of analyses conducted and reported in this document that the interventions tested in this study did not have a significant impact on the dependent variables tested here” (PICF 2003). This suggests that the more intensive and more costly geriatric care management did not yield improvements in health outcomes relative to the control group. However, the report did present the following statistically significant, or otherwise notable, findings (PICF 2003):

• Each of the four intervention groups achieved a statistically significant decrease in caregiver burden/stress at twelve months after enrollment, but there were no significant differences relative to the I&R control group.

• There were significant reductions in depression for all three intervention groups relative to the I&R control group, but the final report noted that these differences were not clinically significant.

• A lower-than-expected proportion of participants—54 out of 124—that were offered the POS benefit ended up using it. The main reasons for this lack of use included: (1) a small proportion of POS recipients—only 10 to 15 percent—reported that they needed it; and (2) since recipients initially had only three months to use the benefit after they began using it, care managers often discouraged its use until a serious need arose. As noted above, the POS benefit was revised in the second study as a result.

5 June Simmons, one of the coprincipal investigators on the study, is the President and CEO of Partners in Care.
REFERENCES


**Intervention**

This project sought to demonstrate that integrated medical and social case management of high-risk frail elders is cost-effective and has a positive impact on patient outcomes. Participants are seniors who are: (1) enrolled in PacifiCare/Secure Horizons and in one of three participating Sharp HealthCare medical groups; and (2) over age 80 or over age 65 and identified as having a chronic condition or functional limitation. Participants are randomized into treatment and control groups.

The study extended the medical case management already being done by Sharp HealthCare to frail elders who have not reached event-based criteria for case management. Sharp HealthCare’s standard medical case management is available to control group members who meet criteria, and who, on a voluntary basis when newly enrolling with the medical group, respond to a health screening. Case managers review screening results, receive referrals from PCPs, and monitor service use data to identify at-risk cases for the PCP. In addition to the services, the treatment group received additional integrated medical/social case management, including in-home visits as required, but this involved mainly telephone assessments, education, coaching, and referrals to community-based services. All of the case managers were hired for the project—four are former Sharp HealthCare employees. Case managers monitored utilization data and attempted to make contact with participants not currently receiving active case management in the treatment group at least every six to eight weeks (Sharp HealthCare 2004).

**Underlying Hypothesis**

The purpose of this project was to evaluate the effects on patient outcomes and the cost-effectiveness of integrated medical and social case management for high-risk frail elders and to provide a model of case management to the Medicare managed care industry (Graves 2002).

**Project Design**

A probability sample of current Pacificare/Secure Horizons members who are at risk was randomized into intervention and control groups. Through PCP referral, the control group had access to case management already being undertaken by Sharp HealthCare. That program was largely targeted to post hospital care. The intervention group received the following:

- Baseline health screening for a probability sample of current at-risk members to update information on their physical and cognitive functioning and other potential risk factors.

- Case manager review of screenings and flagging of cases for PCPs to examine. Triggers included using less care than standard practice (having fewer PCP visits) or...
being high users of specific services including ER visits, hospital stays, durable medical equipment (DME) use, and receipt of certain procedures/treatment or drug regimens.

- Case managers’ continued review of utilization data on a regular basis to identify cases that warranted follow-up with the PCP.

- Case manager identification and intervention with patients who are not keeping appointments or not scheduling expected appointments.

- Case manager review of lab values and prescription refills and schedule of case follow-up if there were concerns about diet or drug regimen adherence.

- For patients reporting functional limitations or who were dependent on a family member or caregiver’s assistance, an in-home assessment (conducted by a case manager) to evaluate the patient’s living situation and caregiver’s capability.

- Regular contact between case manager and the patient’s caregiver to monitor the patient’s status and provide support to the caregiver as needed.

- Case manager coordination of discharge planning; home health care; stroke, orthopedic, and cardiac case managers; and nursing home case management (Sharp HealthCare 2000).

Participants were patients at Sharp HealthCare Centers who were enrolled in PacifiCare/Secure Horizons who were either: 1) over age 80 (lowered from 85 years in the original application); 2) over age 65 with at least one chronic condition (such as congestive heart failure, chronic obstructive pulmonary disease, diabetes, or coronary disease) or requiring assistance with at least one ADL/IADL. Participants at baseline could not be transplant recipients, have end stage renal disease, be terminally ill, or reside in a nursing home or Alzheimer’s facility; and they must have completed the screening questionnaire (CHCF 2001). Enrollment was completed in August 2001, with 1,552 participants enrolled in the treatment group and 1,541 enrolled in the control group (CHCF 2001).

**Project Implementation and Experience**

Enrollment targets were met, with 500 treatment and 500 control cases in each of three medical groups. The study was designed as three replications of the intervention, one in each medical group. The groups varied in capitation methodology and specialty mix.

The investigators had originally planned to conduct a separate analysis of 600 new Pacificare/Secure Horizons enrollees. However, this was discontinued because there were not sufficient numbers of new enrollees during the project’s enrollment window to complete the analysis.

Gayle Watkins, the original project manager, left Sharp HealthCare and Teresa Graves, one of the co-principal investigators, assumed the role as project manager (CHCF 2001). Jan Wischnia joined the project on a part-time basis and assumed some administrative duties for Graves (CHCF 2002).
The project was designed to provide compelling evidence for Sharp HealthCare to maintain the project after the funding ended. Case management activities were designed to integrate easily to medical group practices, and medical groups have since expressed a desire “to hire these case managers and incorporate their experience and methods” into their standard practice (Graves 2002). In addition, CHCF approved an augmentation grant to develop a classification system to standardize case management language describing problems, interventions, and goals (CHCF 2002). This work has been translated into a summary paper (Maravilla, et al. 2004). The augmentation grant extended the project until October 2003.

**Timeline of Grant Activities**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Date</th>
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<tbody>
<tr>
<td>Project begins</td>
<td>February 2000</td>
</tr>
<tr>
<td>Revised proposal submitted</td>
<td>April 2000</td>
</tr>
<tr>
<td>Enrollment ends</td>
<td>August 2001</td>
</tr>
<tr>
<td>Project ends</td>
<td>October 2003</td>
</tr>
</tbody>
</table>

**Evaluation Findings**

The method of evaluation was a randomized experiment; the study compared the outcomes of the treatment and control groups after 12 months to determine the effectiveness of the case management services. Robert Newcomer, Ph.D., of the University of California San Francisco was the evaluator. Cost and utilization data were obtained from Sharp HealthCare and Pacificare/Secure Horizons. Three types of outcomes were studied:

1. **Monitoring the Program’s Implementation.** This was done by monitoring case management activity and included monitoring the caseloads of case managers; the number of days in active status; the number of in-home and telephone assessments; the number of PCP visits; and the number of health plan and community-based services authorized.

2. **Effects of Case Management on Patient Outcomes.** The following utilization measures were studied: PCP, specialist, and ER utilization and costs; number of hospital admissions and total hospital days; nursing home admissions; hospice placements; and disenrollment rates.

3. **Cost-Effectiveness of Case Management Services.** This was done by comparing total costs of care for the treatment and control groups (Sharp HealthCare 2000).

The study involved conducting both unadjusted and multivariate analyses and found that the intervention did not have a significant impact on patient outcomes. The cost of the intervention was, on average, $0.35 per member per month and resulted in approximately seven hours of
contact between the case manager and the client. The final report provided some hypotheses for the lack of significant findings, which included the following (Sharp HealthCare 2004):

- Participants, who were high-risk individuals, were already receiving a relatively high level of PCP visits. Therefore, the case management services may have provided little benefit in addition to what patients were already receiving from their more intensive contacts with their PCP.

- Low baseline levels of hospital and nursing home use suggested that decreasing utilization to lower levels would have been difficult.

- Sharp HealthCare already had a posthospital case management program as part of its usual care. Since control group members were already receiving some case management, the difference between the treatment and control groups was smaller, thus lessening the probability of yielding statistically significant impacts.
REFERENCES


**Intervention**

The purpose of this project was to develop and implement a model where a care advocate (CA) works with frail or at-risk elders to coordinate care between the primary care provider and community-based care (PacifiCare 1998). The project was sponsored by Secure Horizons (PacifiCare’s health plan for Medicare beneficiaries), which was partnering with community service centers in the Los Angeles area.

Care advocates are master’s level care managers. A total of three CAs were hired to work at the two participating community centers (Wilber, et al. 2003). The CA worked with two or three participating medical groups to coordinate medical and community services for the seniors in his/her caseload. Activities included phone discussions or home visits to participants, providing culturally appropriate services, providing recommendations and referrals to community services, following up with participants to track progress, collecting utilization data, and updating the primary care provider on the patient’s progress (PacifiCare 1999).

Participants were randomized into intent-to-treat (ITT) and control groups, and were followed for 12 months during the intervention and for 12 months following it to determine their satisfaction, retention, and use of health care services (Wilber and Shannon 2003).

**Underlying Hypothesis**

The goal of the Senior Horizons ElderCare program was to demonstrate that care management can generate savings to health plans by reducing utilization of high-cost medical services. It was hoped that these results could be disseminated to other managed care firms and result in improved care for frail elders (PacifiCare 1999).

**Project Design**

The target population included members of Pacificare/Secure Horizons and participating medical groups in Los Angeles County. The population included all seniors over age 85 as well as seniors over age 65 who were identified as frail. Frail seniors were identified using an algorithm that took into account past and planned future hospitalizations, emergency room visits, and current medications. The algorithm, which was reported in the implementation grant proposal, is described below (PacifiCare 1999). Seniors were classified as frail if they scored a four or higher.
PacifiCare Algorithm for Identifying Frail Seniors Over 65

<table>
<thead>
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<th>Points</th>
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<tr>
<td>Hospitalizations in Past Year:</td>
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</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2 or more</td>
<td>2</td>
</tr>
<tr>
<td>Emergency Room Visits in Past Year:</td>
<td></td>
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<td>1</td>
<td>1</td>
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<tr>
<td>2 or more</td>
<td>2</td>
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<tr>
<td>Current Medications:</td>
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<tr>
<td>1-2</td>
<td>1</td>
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<tr>
<td>3-4</td>
<td>2</td>
</tr>
<tr>
<td>5 or more</td>
<td>3</td>
</tr>
<tr>
<td>Plans for Hospitalization in Next Year:</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>2</td>
</tr>
</tbody>
</table>

Certain groups of seniors were excluded, including those residing in nursing homes, those who live too far away from available services, those who were already participating in similar studies, and those who were unable to be contacted by telephone.

Project Implementation and Experience

Eligible seniors were randomized into ITT and control groups (PacifiCare 1999), with the CA coordinating care for those in the intervention group. The project originally planned to recruit 600 seniors in each group. However, enrollment was been difficult. In August 2000, a fourth medical practice, Talbert Medical Group, was added to help increase enrollment (Allen 2001). Enrollment was completed in June 2002, with 434 participants in the control group and 390 in the ITT group. Within the ITT group, because of attrition and refusal, only 271 seniors were assessed by CAs and only 251 accepted referral information from the care advocate (Wilber and Shannon 2003). Of the 251 ITT group members who took referral information, 65 percent of them were linked with home- and community-based services (Wilber and Shannon 2003).

Because enrollment was lower than expected, caseloads for CAs were reduced. It was originally expected that three CAs would each have a caseload of 200 seniors, (PacifiCare 1999). But by October 2001, CAs each had a caseload of about 60-75 clients (UCLA 2001).

Due to delays in enrollment, participants have been tracked for a shorter time than originally planned. In the implementation grant proposal, the investigators planned to enroll participants in three cohorts. The first would be tracked for two years, the second for a year and a half, and the third for one year. To standardize the intervention, the project changed its goal to tracking all participants for 12 months during the intervention and for 12 months following it.

The participating senior centers also changed over the course of the project. Jewish Family Services of Los Angeles was involved with the program from the beginning, and Jewish Family
and Children’s Services of Long Beach/West Orange County joined the collaboration during the planning phase.

### Timeline of Activities

<table>
<thead>
<tr>
<th>Activity</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>Planning grant begins</td>
<td>October 1998</td>
</tr>
<tr>
<td>Planning grant ends</td>
<td>September 1999</td>
</tr>
<tr>
<td>Implementation grant begins</td>
<td>January 2000</td>
</tr>
<tr>
<td>Enrollment period ends</td>
<td>June 2001</td>
</tr>
<tr>
<td>Tracking of participants ends</td>
<td>June 2002</td>
</tr>
<tr>
<td>Project ends</td>
<td>September 2003</td>
</tr>
<tr>
<td>Final report due to CHCF</td>
<td>November 2003</td>
</tr>
</tbody>
</table>

### Evaluation Findings

The method of evaluation was a randomized experiment. Kate Wilber, Ph.D., and colleagues at the University of Southern California’s Leonard Davis School of Gerontology were contracted as the evaluators. Results from the evaluation were presented in the project’s final report (Wilber and Shannon 2003).

The evaluation tracked three major outcomes: (1) consumer satisfaction; (2) member retention; and (3) utilization of insured health care services (Wilber and Shannon 2003). Despite the expectation that increasing access to home- and community-based services would improve satisfaction and retention, the intervention did not yield significant differences in these areas (Wilber and Shannon 2003). One unexpected finding was that there was a statistically significant decrease in mortality for the intent-to-treat group relative to the control group—7 percent of ITT group members died during the 12-month intervention period compared to 15 percent of control group members, but the reasons behind this finding were unclear (Wilber and Shannon 2003). Results for the utilization of health care services were mixed—there was a significant reduction in hospital admissions among ITT group members relative to the control groups but a significant increase in PCP and specialist services (Wilber and Shannon 2003).
REFERENCES


Intervention

The purpose of this project was to develop a strategy of dementia care management, test its effectiveness, and to improve the quality and outcomes for persons (and their caregivers) with Alzheimer’s Disease (AD) and related dementias. The project convened an AD task force, made up of representatives from provider organizations and community agencies in San Diego, California, which sought to accomplish the following: (1) to select a set of evidence-based quality improvement goals for the treatment of AD, based on which new mechanisms for coordinating care and services would be designed for persons with dementia and for their caregivers; and (2) to create a new strategy for improving AD care (that is, to create the Alzheimer’s Disease Coordinated Care for San Diego Seniors (ACCESS) care model). The dementia care quality goals, which were finalized in October 2000, included recommendations for steps to take in assessing the severity of a patient’s condition and caregiver adequacy and identifying care needs, the development of a treatment plan (including treatment for behavioral problems), caregiver education and support, and reporting requirements concerning suspected abuse and motor vehicle operation (UCLA 2000).

Participating provider groups (Kaiser Permanente San Diego, Scripps Clinic, and University of California San Diego HealthCare) and community agencies in San Diego (Alzheimer’s Association San Diego, Southern Caregiver Resource Center, and Meals-on-Wheels San Diego), led by the UCLA research team, designed and implemented the new AD care model. Individual clinics within these provider groups were randomized into treatment and control groups, with the treatment group implementing the new care model. Outcomes are being compared between seniors receiving care from provider groups that have implemented the guidelines (treatment group) and those that have not (control group). Clinics were matched to ensure that the treatment and control groups were similar. The community-based service agencies coordinated with the health plans to deliver an array of services across community settings for this special population with ongoing care needs.

Underlying Hypothesis

The study’s primary hypothesis was that a coordinated dementia care model would improve adherence to dementia care quality goals. The study also examined whether the intervention produced improvements in measures such as caregiver satisfaction, caregiver strain, patient health outcomes, provider knowledge and perceptions of care quality, and whether the intervention was cost-effective (Connor and Vickrey 2004).

Project Design

The study population consisted of seniors with a diagnosis of dementia who were receiving care from participating medical groups in San Diego (Kaiser Permanente, Scripps Clinic, and UCSD HealthCare) and their caregivers. Clinics within these provider groups were randomized into intervention and control groups. A total of 408 patient/caregiver pairs were recruited (213
from Kaiser Permanente, 127 from Scripps Clinic, and 68 from UC San Diego). Of the 408 participant pairs, 238 were in the intervention group (Connor and Vickrey 2004).

**Project Implementation and Experience**

Enrollment was consistent with expectations. The original goal was to mail recruitment materials to 1100 patient/caregiver pairs and to enroll 550 pairs (Vickrey 2002b). In June 2002, the study design was revised and the recruitment goal was modified to 425 pairs. The investigators expected an attrition rate of 15 percent, to result in a final full sample of 361. However, it was expected that claims and administrative data could be obtained from a larger population of about 415 enrollees (Vickrey 2002c).

The project partners had some difficulties with enrollment, and took some steps to increase enrollment. Prior to mailing the initial caregiver surveys, cash payments to caregivers for completing surveys were increased from $10 to $20 to more adequately reflect the time for completing the survey. Additional pairs of clinics were added at Kaiser Permanente and Scripps Clinic, and all UCSD HealthCare clinics were invited to participate in the study; this resulted in a total of 18 clinics across the three healthcare organizations. Finally, the project partners included seniors enrolled in Medicare fee-for-service (FFS) at UCSD HealthCare and at Scripps Clinic to increase the sample size (Vickrey 2001a).

There were also some staffing and personnel changes. During 2001, Thomas Pamilla replaced Ronald Hendrix as a community representative liaison after Dr. Hendrix resigned from the San Diego Alzheimer’s Association. Dr. Marjorie Pearson was added as a UCLA co-investigator in February 2001. In September 2001, Joshua Chodosh was added as a UCLA co-investigator (Vickrey 2001b). Richard Della Penna stepped down as the Kaiser Permanente principal investigator and was replaced by Lisa Heikoff, M.D. (Vickrey 2002a).

Because of some delays in IRB approval (Vickrey 2002a) and in recruitment, CHCF granted the project a no-cost extension until December 2003 (Jackson-McCall 2002).

The project partners secured funding from other sources for supplemental activities. They obtained funding from the California Department of Aging to purchase and customize a Web-based case management software program and hand-held computer tablets for enhancing the ACCESS disease management/care manager-based model. The Archstone Foundation provided funding to assist in translation requirements for non-English speaking participants and to translate materials into Spanish that were distributed to community agencies. The California Department of Health and Human Services provided funding for adding a Medicare FFS population from Scripps Clinic and UCSD HealthCare to determine differences in outcomes for FFS and managed care enrollees (Vickrey 2001a).

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6 Each pair of additional clinics consisted of one intervention and one control clinic.
Timeline of Grant Activities

<table>
<thead>
<tr>
<th>Activity</th>
<th>Date</th>
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<tbody>
<tr>
<td>Project began</td>
<td>February 2000</td>
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<tr>
<td>Quality goals developed by community task force</td>
<td>October 2000</td>
</tr>
<tr>
<td>Recruitment of seniors into the study began</td>
<td>July 2001</td>
</tr>
<tr>
<td>Two-day care manager training conducted</td>
<td>August 2001 &amp; January 2002</td>
</tr>
<tr>
<td>Provider education sessions presented</td>
<td>January 2002 – February 2003</td>
</tr>
<tr>
<td>Extension granted until December 2003</td>
<td>February 2002</td>
</tr>
<tr>
<td>Project ends</td>
<td>December 2003</td>
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</tbody>
</table>

Evaluation Findings

The study compared outcomes from patients (and their caregivers) receiving care at clinics in which the care model was implemented (the treatment group) and those clinics in which usual care was provided. Data were obtained from caregiver and provider surveys, clinic staff interviews, medical records, and administrative data. The study also undertook a qualitative analysis to assess barriers to implementation and to help explain how the guidelines affected outcomes (Connor and Vickrey 2004).

The evaluation analyzed both primary and secondary outcomes. Primary outcomes involved the degree of adherence to the dementia-care guidelines. Results for primary outcomes presented in the final project report used the 12-month follow-up caregiver survey; analyses currently being conducted are using data from the 18-month follow-up caregiver survey, in addition to data from medical records (Connor and Vickrey 2004). Among the secondary outcomes were caregiver satisfaction, caregiver strain, patient health outcomes, provider knowledge and perceptions of care quality, extent of implementation of the intervention, and a cost-effectiveness analysis. Analyses of secondary outcomes, currently in progress, will employ the following data sources: 12- and 18-month follow-up caregiver surveys; a provider survey; interviews with provider organization staff/directors; and medical record abstraction.

Analyses conducted thus far found that intervention-group caregivers were more likely to have adhered to 21 of the 29 processes of care for dementia, suggesting that the intervention had beneficial impacts on dementia-care quality. In addition, the intervention appeared to have had little impact on provider knowledge or attitudes favorable to dementia care, although “intervention clinic providers perceived that there was better availability of resources and care coordination for dementia patients compared to perceptions of usual-care clinic providers (p < 0.01)” (Connor and Vickrey 2004).
REFERENCES


RELATED-ACTIVITIES GRANTS
**Intervention**

The purpose of this project was to develop a consumer satisfaction measurement tool for the PACE program. PACE is required to measure enrollee satisfaction, as a Medicare+Choice provider, but the program found that there were not any existing measures that were suited for the frail population served by PACE, or for the cultural and geographical diversity of the population, and that measured the range of services provided by PACE. CHCF and the Archstone Foundation funded this project.

**Underlying Hypothesis**

New instruments were needed to accurately measure the satisfaction of PACE enrollees. This was needed to ensure that enrollees were having their needs met and that services were being used appropriately.

**Project Design**

Two instruments were developed: Version A was used for participants who had normal cognitive function; Version B was used for participants who had mild or moderate cognitive impairment. Interviewers used a set of five channeling questions to determine if participants should receive Version A or B or if the participant’s cognitive impairment was too severe to participate. Participants were randomly selected from PACE sites in eight states: California, Colorado, Massachusetts, New York, Oregon, South Carolina, Texas, and Washington. Two PACE staff and four contract interviewers conducted all of the interviews.

Interviews were designed to assess satisfaction with eight categories of services provided by PACE, including transportation, number of aids in the center, recreation therapy, medical services, meals, rehabilitative therapy, social work, and home care (Dobell 2002a). For each service area, three dimensions were examined: (1) interpersonal process; job performance; and (3) system adequacy. These dimensions often included smaller subdimensions as well.

Interviews were conducted at PACE community service centers. A total of 339 Version A interviews and 146 Version B interviews were conducted. Interviews for Version A participants were conducted in a single, half-hour sitting, while interviews with Version B participants were conducted in short periods throughout the day, within five minutes after the patient received the specific service. (Note: Home health was not examined in Version B because participants would need to be interviewed within five minutes of having received the service, which was not possible with home-based services.)
Project Implementation and Experience

Before this project began, PACE conducted a two-year preliminary study to determine whether any existing consumer measurement tools could be used for the PACE population. Program staff examined more than 60 tools and, where possible, interviewed the developers of those tools. Program staff determined that none of the existing tools would be acceptable for the PACE population. However, this preliminary study did reveal to PACE staff several necessary features that were later incorporated into the newly designed measurement tool, including:

- Face-to-face interviews;
- Separate instruments for those with full cognitive functioning and those who are mild or moderately cognitively impaired, and an instrument to channel respondents into the correct interview group;
- Conducting interviews as close as possible to the location where care is received;
- Conducting interviews with an interviewer who is not already known to the respondent, in order to encourage more candid responses; and
- Scripted interviews with specific questions and corresponding response options (Dobell 2002a).

Versions A and B were developed and first pilot tested on a small group of respondents (40 for Version A and 24 for Version B). The instruments were revised based on the results of the pilot tests and were then administered in the field.

The contract was first awarded for two years, from July 1999 through June 2001, for an amount of $265,122 (CHCF 1999). The project time period was later extended to September 20, 2001 (Dobell 2002b). The project also received additional funding of $50,000 to support additional interviews and data analysis beyond what was initially planned. The additional funding allowed the project to develop Version B for those who are cognitively impaired, rather than just the single evaluation tool, and to test the tools in languages other than English (such as Spanish and Chinese) to examine language and cultural issues (Dobell 2001). The total amount received from CHCF was $315,122 (Dobell 2002b).

Timeline of Grant Activities

<table>
<thead>
<tr>
<th>Activity</th>
<th>Date</th>
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<tbody>
<tr>
<td>Grant awarded</td>
<td>March 1999</td>
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<tr>
<td>Project begins</td>
<td>July 1999</td>
</tr>
<tr>
<td>Project ends</td>
<td>September 2001</td>
</tr>
<tr>
<td>Final report submitted to CHCF</td>
<td>February 2002</td>
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</tbody>
</table>
Evaluation Findings

**Version A**: A total of 339 interviews were completed in three rounds of pilot testing. However, significant changes were made to the protocol after the first round of testing, so most of the analysis focused on the 211 interviews conducted in the second and third rounds, 11 of which were re-interviews (see below) (Dobell 2002a).

- **Reliability.** Six of the eight services exceeded 0.70, the criterion for acceptable reliability, and four services exceeded 0.80. In addition, 11 participants were interviewed once, and again three days later to determine the level of consistency in their responses. Results indicated 94 percent agreement on items in the two sets of tests.

- **Validity.** The study analyzed the association between the overall satisfaction score and the satisfaction score for specific services. Seven of the eight items showed moderate to substantial associations (except for aides in the center). Correlations ranged between 0.40 and 0.69 for seven of the eight items.

**Version B**: A total of 146 Version B interviews were completed during the three rounds of pilot testing. However, the protocol changed substantially for the third round of testing, so analysis focused on the 78 interviews conducted in that round (Dobell 2002a).

- **Reliability.** Only two of the seven services studied (transportation and social work) met the 0.70 objective.

- **Validity.** Two of the service-satisfaction items (rehabilitative therapy and social work) showed high association, and three services (medical services, meals, and transportation) showed moderate association.

Overall, the results indicated that Version A was fairly reliable, though some modifications are necessary for the section on aides in the home to improve reliability. Version B demonstrated low reliability and will need to be revised before it is used more extensively, but it still showed that seniors with mild-to-moderate cognitive impairments could participate in a survey of consumer satisfaction if it was tailored to their needs (Dobell 2002a).
REFERENCES


**Intervention**

Project IMPACT was a nationwide study that evaluated the effects of a disease management programs for elders with depression. Participants were eligible if they were over age 60 and had been diagnosed with depression and were receiving primary care in one of the participating medical groups. Participants were randomized into either a treatment group that receives specialized care management for depression or a control group that receives normal care. Participants in the intervention group received the services of a depression clinical specialist, who coordinated care and acted as an interface between the patient and provider. Participants were evaluated at baseline and at 3 months, 6 months, 12 months, 18 months, and 24 months. The study compared outcomes between participants receiving care management and those receiving usual care.

**Underlying Hypothesis**

Patients with depression would experience improved outcomes if their care is better managed to address their needs.

**Project Design**

Project IMPACT had a total of eight study sites nationwide, including the coordinating center and seven pilot sites. The Hartford Foundation funded five of the pilot sites and provided the primary funding to the UCLA Coordinating Center. However, when the proposals for the pilot sites were selected, the Hartford Foundation chose not to fund the Kaiser Permanente Hayward site, despite the submission of a strong proposal, because the foundation had already selected the Kaiser Permanente San Diego site and was looking for greater organizational and geographic diversity (PEMC Program Office). Therefore, the California HealthCare Foundation provided funding for the Kaiser Hayward pilot site and an additional pilot site in California, the Desert Medical Group. CHCF also provided additional funding to support the UCLA Coordinating Center. The center oversaw the project’s implementation and data analysis and coordinated dissemination activities, such as preparing articles for publication in scholarly and lay journals and presenting at conferences (Unutzer 2002). In September 2001, responsibility for managing the project was transferred from the Oakland office of the California HealthCare Foundation to the Program for Elders in Managed Care program office (Eldred 2001).

**Project Implementation and Experience**

The study population consisted of adults over age 60 who had been diagnosed with depression and were in managed care and received primary care at one of the participating medical centers. The following were excluded: those with active alcohol abuse, severe cognitive
impairment, active suicidal ideation, bipolar affective disorder (manic depression), or those in active psychiatric treatment (Unutzer 2000). The project aimed to recruit about 250 participants at each site. Nationally, the sites recruited a total of 1,801 participants. Enrollment and baseline evaluations were completed in August 2001 and 12-month evaluations were completed in August 2002.

Treatment for participants in the control group was provided at the patient’s regular primary care site. In addition to having the services of the primary care physician, patients also had access to the care manager—the depression clinical specialist (DCS). The DCS provided patient education on depression, close follow-up and monitoring of symptoms, and brief psychotherapy. The DCS met with the PCP once a week to review and discuss all cases (Unutzer 2003a).

In February 2000, Project IMPACT added a diabetes substudy. IMPACT participants with diabetes at baseline were invited to participate and those consenting were given blood tests to determine hemoglobin A-1c levels at baseline, 6 months, and 12 months (Hunkeler 2002).

**Kaiser Permanente**

The participating medical group was the Hayward Medical Center. (The center was later moved to Union City.) As of August 2001, when enrollment was completed, Kaiser had enrolled 258 participants, including 129 in the intervention group and 129 in the control group. Of these, 48 were in the diabetes substudy, 25 in the intervention group, and 24 in the control group (Hunkeler 2002).

**Desert Medical Group**

The Desert Medical Group recruited patients who were enrolled in managed care and receiving treatment at one of the four participating clinics (Hoffing 1999). The pilot enrolled a total of 245 participants, slightly under the goal of 250 per site. Of these, 31 were diabetes patients (Hoffing 2002).

The original CHCF funding for the UCLA Coordinating Center was $349,933. In February 2001, CHCF awarded an additional $200,000 to the UCLA Coordinating Center for additional data analyses, which included adding follow-up at 18 and 24 months. The project was extended from March 2004 to June 2005 to allow completion of this analysis (Smith 2001).

**Timeline of Grant Activities**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Date</th>
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<tbody>
<tr>
<td>CHCF grants awarded to UCLA Coordinating Center and Kaiser Permanente pilot site</td>
<td>January 1999</td>
</tr>
<tr>
<td>CHCF grant awarded to Desert Medical Group pilot site</td>
<td>March 1999</td>
</tr>
<tr>
<td>Project IMPACT adds diabetes substudy</td>
<td>February 2000</td>
</tr>
<tr>
<td>UCLA Coordinating Center receives additional funding from CHCF for analysis and extension to 2005</td>
<td>February 2001</td>
</tr>
<tr>
<td>Activity</td>
<td>Date</td>
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<tr>
<td>----------------------------------------------</td>
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</tr>
<tr>
<td>Enrollment ended</td>
<td>August 2001</td>
</tr>
<tr>
<td>CHCF transfers oversight of grant to PEMC</td>
<td>September 2001</td>
</tr>
<tr>
<td>12-month follow-up evaluations complete</td>
<td>August 2002</td>
</tr>
<tr>
<td>Kaiser pilot study ends</td>
<td>December 2002</td>
</tr>
<tr>
<td>Desert Medical Group pilot study ends</td>
<td>June 2003</td>
</tr>
<tr>
<td>UCLA Coordinating Center grant ends</td>
<td>June 2005</td>
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</table>

**Evaluation Findings**

The evaluation compared outcomes between seniors and control groups in the intervention. Participants were surveyed at baseline and at 3 months, 6 months, 12 months, 18 months, and 24 months. Study items included depressive symptoms, somatic symptoms, health status, pain, level of functioning, health-related quality of life, severity of comorbid medical illness, overall quality of life, attitudes about depression treatment, process of care, adherence to treatment, utilization of services, and health care costs (Langston 1998).

Results from baseline and 6-month and 12-month assessments were available from the national project and were published in a December 2002 *Journal of the American Medical Association* article (Unutzer, et al. 2002). Results from the individual California sites are not yet available. Full details of the national results are available in articles published in the *Journal of the American Medical Association* and the *Journal of American Geriatrics Society* (Unutzer, et al. 2002 and Unutzer 2003b). An earlier paper describes the design of the study (Unutzer, et al. 2001).

The investigators found that, at the 12-month follow-up, there were significant differences between the intervention and control groups in all health outcomes studied. Participants in the intervention group reported “less health-related impairments in work, family, and social functioning, and better quality of life” than patients in the control group (Unutzer, et al. 2002). Participants in the treatment group were also more likely to receive antidepressants and psychotherapy (Unutzer 2003a).

About half of the participants in the intervention group experienced a 50 percent reduction in depressive symptoms, compared with only 19 percent in the control group. In addition, 25 to 30 percent of participants in the intervention group reported being completely free of depressive symptoms, compared with only 8 percent in the control group (Unutzer, et al. 2002).

Participants in the intervention group also reported greater satisfaction with depression treatment, lower severity of depression, less functional impairment, and a greater quality of life than those in the control group (Unutzer, et al. 2002).

The investigators noted possible reasons that the rates of depressive symptoms remained high in the intervention group, which included a high rate of comorbid medical conditions (participants had an average of 3.2 chronic medical illnesses, and 65 percent reported experiencing chronic pain); ambivalence about depression treatment; and lower intensity of depression treatment for the elderly population (Unutzer, et al. 2002).
The average cost of treating each participant was estimated to be $553 for the 12-month Project IMPACT intervention (Unutzer, et al. 2002).

Treatment group members who had arthritis (n=1001) had less pain, better functioning, and a better quality of life than their counterparts in the control group. Treatment group members experienced lower rates of suicidal ideation than those in the control group (Lin, et al. 2003, Unutzer 2003a).

PCP surveys showed that the PCPs were very happy with the program. PCPs made a large number of referrals to the program (particularly at the Kaiser site), which was further evidence that PCPs were happy with the program (Unutzer 2003a).

After 12 months, more than twice as many treatment group members had substantial improvement in depression, compared to treatment group members, in all eight sites. “This really works, in eight out of eight sites.” (Unutzer 2003a).
REFERENCES


Program for Elders in Managed Care. “Depression in the Elderly: Testing a New Model for Treatment.” Write-up to CHCF Board with recommendation for funding. No date.


Intervention

The purpose of this project was to develop a set of guidelines and a geriatric diabetes tool kit for care of older patients with diabetes, and to pilot test these guidelines and the tool kit in two to three clinical practices.

Underlying Hypothesis

The underlying hypothesis was that developing an evidence-based set of guidelines and providing tools for practitioners would improve care for elders with diabetes.

Project Design

This study was divided into four phases, each of which is discussed in greater detail below:

1. Modification and augmentation of existing geriatric guidelines to enhance appropriateness for older persons with diabetes in managed care.
3. Recruitment of sites for the pilot test and selection and modification of site-specific interventions.

Modification and augmentation of existing geriatric guidelines to enhance appropriateness for older persons with diabetes in managed care. The investigators identified existing guidelines for the care of older persons with diabetes, from sources such as the American Diabetes Association (ADA), the Agency for Healthcare Research and Quality (AHRQ), the Health Employer Data Information Set (HEDIS), and the Department of Veterans Affairs (VA), among others. The investigators consulted with geriatricians and diabetes experts to assemble a set of 12 to 25 guidelines for caring for this population and an expert panel reviewed the draft guidelines and recommended revisions.

This work was conducted in collaboration with the American Geriatrics Society (AGS). The diabetes care guidelines were presented at the annual plenary session of the AGS meeting and published in the May 2003 supplement of the Journal of the American Geriatrics Society (CHCF/AGS 2003). Drs. Mangione and Brown played a leading role in the development of a Web-based, online course (“Continuing Medicare Education“) designed to teach providers about the guidelines. To date, 550 providers have accessed this Web site and have completed at least a portion of the curriculum (Malone-Mangione communication, 2004). Because of the popularity
of this Web site with providers, Dr. Malone recently asked Drs. Mangione and Brown if the Web site could remain active for an additional 12 months. Dr. Mangione also presented the diabetes care guidelines during a 2004 AGS symposium and in the 2004 NIA-sponsored Invitational Summer Research Institute for Social Scientists. Shortly after the presentation of the guidelines, Dr. Mangione was appointed to a two-year position on the National Diabetes Quality Improvement Alliance, which is a group of national representatives from the diabetes community who are dedicated to developing and maintaining a national performance measurement set for diabetes care. Recently Dr. Mangione was re-appointed for a second two-year term. In this capacity she is able to “mainstream” the care recommendations for elders with diabetes and to provide a geriatric perspective for the revision and development of quality indicators for diabetes care.

**Development of a geriatric diabetes tool kit.** The investigators created a diabetes tool kit, or “a menu of potential clinical interventions to improve diabetes care in managed care and VA settings.” These can include: (1) patient-level interventions (such as telephone reminders for appointments, patient workbooks, tools to assist with the management of multiple medications, a six-hour curriculum for patients in Spanish and English administered by nurse-level diabetes educators with PowerPoint slides and a workbook); (2) provider-level interventions (for example, provider education on treatment for diabetes); and (3) provider group or health plan level interventions (such as case management for elders with diabetes). The tool kit has been adapted for use in specific clinical settings by the provider group intervention team, which consists of members of the expert panel and representatives of the commercial and VA pilot studies.

**Recruitment of sites for the pilot test and selection and modification of site-specific interventions.** After the tool kit was approved by the expert panel and managed care and VA representatives, the investigators met with provider groups and health plans to recruit for the pilot test. The provider groups/health plans received copies of the tool kit and modified the guidelines as needed to fit their practice. Both interventions, currently underway at Sharp HealthCare in San Diego and at the Department of Veterans Affairs, West Los Angeles Medical Center, involve classes for participants. For the Sharp HealthCare intervention, four classes were integrated into a diabetes education course. Registered nurses lead three classes for the VA intervention (Mangione and Brown 2004). In addition, providers of participants in the Sharp HealthCare intervention who screened positive for geriatric syndromes (such as cognitive dysfunction, urinary incontinence, depression, falls, and polypharmacy) were provided with feedback to address the problem.

**Pilot testing of the geriatric diabetes tool kit.** In the last six months of the study, the tool kit will be pilot tested in two to three provider groups. The pilot test will examine participation among provider groups and aspects of the tool kit that are “most feasible to implement,” and it will develop and test patient, provider, and health plan surveys. Success for the pilot testing will be determined as follows (Mangione and Brown 2001):

- Provider group participation rates;
- Whether provider groups can identify treatment and control samples;
- Patient participation rates and willingness to provide informed consent;
• Whether data collection strategies (such as surveys) are feasible for a larger evaluation of the tool kit; and
• Whether provider groups are willing to complete the survey.

Project Implementation and Experience

CHCF was concerned about the potential for the development of “dueling” guidelines and required that the grantee involve in the project key representatives of other organizations involved in diabetes guidelines development. As a result, the national advisory panel includes experts in diabetes care from the Department of Veterans Affairs, Centers for Medicare & Medicaid Services, Centers for Disease Control and Prevention, National Institute of Diabetes & Digestive & Kidney Diseases, American Diabetes Association, and the American Geriatrics Society. AGS uses its infrastructure to disseminate the guidelines to the national community of providers who care for elderly patients.

The final guidelines were presented at the May 2003 annual meeting of the American Geriatrics Society and were published in the May 2003 supplement of the *Journal of the American Geriatrics Society* (CHCF/AGS 2003). The guidelines are rated according to the quality and strength of the evidence supporting them. They covered a range of topics, including aspirin use, smoking, hypertension, glycemic control, cholesterol monitoring, depression, eye and foot exams, cognitive impairment, urinary incontinence, and falls (CHCF/AGS 2003). The key points in the guidelines are:

• The best care for diabetes is individualized therapy.
• It is important to reduce cardiovascular risk by treating hypertension and dyslipidemia.
• It is important to screen regularly for illnesses that occur more often for seniors with diabetes, including cognitive impairment, urinary incontinence, falls, persistent pain and polypharmacy (Mangione 2003).

There were three pilot test sites, including Sharp HealthCare in San Diego, UCLA Primary Care Network, and the Department of Veterans Affairs, West Los Angeles Medical Center. However, the UCLA site was dropped because of the tight project timeline and IRB-related delays that greatly decreased the feasibility of conducting a pilot study. Currently, pilot tests at Sharp HealthCare in San Diego and the West Los Angeles VA are underway.

In April 2003, CHCF granted formal approval to the project to allocate unused grant funds to subcontract with RAND to develop and test a tool for predicting mortality and functional decline in elders with diabetes. This tool was designed to help providers in identification of elders with diabetes who are at the greatest risk of functional decline in the next two years, and those at greatest risk for mortality over the next two years and five years (Eldred 2003). The CMS data use-agreement for this analysis has been executed, but CMS has not provided RAND with the data necessary to conduct the analysis. CHCF also granted approval for the project to carry over unspent grant monies to augment intervention activities in the pilot tests, including the
patient and provider surveys and chart retrieval and extraction (Eldred 2003). CHCF has since approved a no-cost extension to the project, which is now scheduled to end on August 31, 2004.

**Timeline of Grant Activities**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Date</th>
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<tbody>
<tr>
<td>Project begins</td>
<td>November 2001</td>
</tr>
<tr>
<td>Expert panel met to review guidelines</td>
<td>April 2002</td>
</tr>
<tr>
<td>Draft of guidelines is available for peer review</td>
<td>November 2002</td>
</tr>
<tr>
<td>Recruitment for pilot sites began</td>
<td>February 2003</td>
</tr>
<tr>
<td>Approval to develop tool for predicting mortality and functional decline</td>
<td>April 2003</td>
</tr>
<tr>
<td>Final guidelines published</td>
<td>May 2003</td>
</tr>
<tr>
<td>Final report due</td>
<td>August 2004</td>
</tr>
</tbody>
</table>

**Evaluation Findings**

The research questions that were studied are:

- How does modifying existing diabetes and geriatric guidelines by improving their appropriateness and creating targeted recommendations affect the care of older persons with diabetes in managed care?

- What is the best way to implement and evaluate selected guideline-based interventions for site-specific pilot tests that will take place during the second year of the study (Mangione 2003)?

Evaluation for Phases I-III (development of the guidelines/tool kit and recruitment of pilot sites) was qualitative. The Phase IV evaluation was based on the interventions in each of the two sites.

Main outcomes to be evaluated include:

- Provider group participation rates;
- Success in the identification of intervention and control populations;
- Patient participation rates;
- Evaluation of data quality and missing data rates from administrative, medical record, and survey sources; and
- Overall qualitative assessment of whether a larger-scale evaluation of the tool kit will be feasible in the California market (Mangione and Brown 2001).
Preliminary results from the Phase IV evaluation (the pilot tests) primarily involved a patient survey, which collected data on the 106 participants in the baseline sample (52 control and 54 intervention) and 82 participants at three months (38 control and 44 intervention) (Mangione and Brown 2004). Control and intervention groups were similar at baseline. Based on these three-month follow-up results, most participants responded favorably to the intervention and reported improvements, such as better confidence in their understanding and skills related to diabetes (93 percent), aging (70 percent), and medication management (74 percent) (Mangione and Brown 2004). In addition, six out of seven of the providers serving intervention-group patients gave positive reviews of the intervention; most “strongly agreed” that the intervention both helped with patient care and benefited providers (Mangione and Brown 2004).
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Personal communication from Dr. Michael Malone to Dr. Carol Mangione, July 14, 2004.