

---

# Physician Involvement in Disease Management as Part of the CCM

Paul J. Wallace, M.D.

---

*Phase I of the voluntary chronic care improvement (CCI-I) under traditional fee-for-service Medicare initiative seeks to extend the benefits of disease management to an elderly population with comorbid chronic medical conditions. Active, sustained involvement of treating physicians, a historical deficit of disease management programs, is a CCI-I program goal. During the last decade, Kaiser Permanente, an integrated health care delivery system with more than 60 years of experience in managing the care of individuals and populations, has applied the chronic care model (CCM) to develop care management strategies for populations of patients with chronic medical conditions. Physician leadership and involvement have been key to successfully incorporating these practices into care. The scope of physician involvement in leading, developing, and delivering chronic illness care management at Kaiser Permanente is described as a basis for identifying opportunities to involve practicing physicians in the CCI-I.*

## INTRODUCTION

Deficiencies in the care of patients with chronic conditions loom large as key challenges for American health care (Institute of Medicine, 2001). No population is more challenged by chronic conditions than the elderly, and CCI-I under traditional fee-for-

service Medicare seeks to address gaps in their care by introducing disease and care management practices.

Mounting evidence points to disease management's effectiveness at improving care across populations and disease states (Ofman et al., 2004). At Kaiser Permanente, where internal disease management activities accelerated more than a decade ago, the impact of population-based approaches has been similar. For example, performance measures for the 500,000 Kaiser Permanente members with diabetes reveal substantial improvements in care processes and intermediate outcomes (Figure 1).

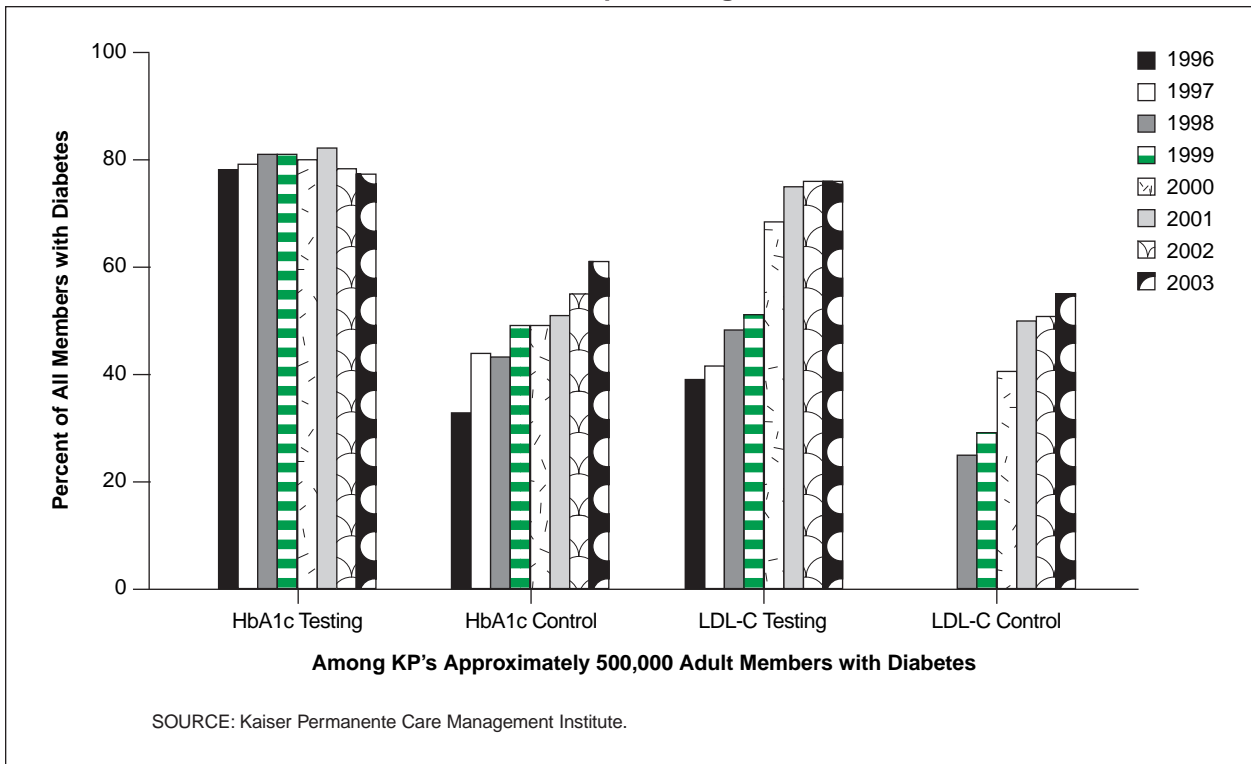
Early internal disease management efforts at Kaiser Permanente were organized and developed by disease states, similar to programs offered by external disease management companies. The condition-centric view of disease management persists as a theme in parts of the disease management industry; the National Committee for Quality Assurance (NCQA) (2005) Disease Management Accreditation and Certification Status List enumerates diagnoses for which each program is accredited or certified. Indeed, a condition-centric view of care is useful for historical trending, comparing populations, and linking with guidelines and the evidence base, which, for chronic condition care as well as the rest of medical care, remains largely organized by specific medical conditions and diagnoses.

However, a condition-centric view understates the reality and implications of chronic conditions, particularly among the elderly. Nine of 10 Medicare managed care

---

The author is with Kaiser Permanente. The statements expressed in this article are those of the author and do not necessarily reflect the views or policies of Kaiser Permanente or the Centers for Medicare & Medicaid Services (CMS).

**Figure 1**  
**Diabetic Glucose and Lipid Management: 1996-2003**



members with ischemic heart disease or congestive heart failure reported three or more chronic conditions, including diabetes, hypertension, chronic pain, depression, sensory deficits, and urinary incontinence, with an average of five comorbid conditions (Bierman, 2004). The prevalence of chronic comorbidity among Kaiser Permanente members is similar. Of members diagnosed with coronary artery disease, 38 percent also have diabetes. Among members with heart failure, 45 percent also have diabetes.

The high prevalence of comorbid conditions presents a fundamental challenge to a condition-centric model for disease management. At the level of individual patients, several issues are apparent: Is an individual with diabetes and congestive heart failure enrolled in two programs? How are duplicate interventions avoided? How must care protocols be adjusted to take comor-

bidities into account? At a systems level, how can physicians, expert at prioritizing and delivering care to meet the urgent needs of individual patients, best participate in increasingly complex health care that must be both systematic and individualized?

The CCM has helped Kaiser Permanente address this challenge. The CCM was introduced as part of a comprehensive effort to reconfigure clinical systems to address the needs of chronically ill patients within the primary care setting (Wagner, 1998; Wagner et al., 1996). The model emphasizes informing and activating patients and positioning physicians within proactive and collaborative practice environments. Optimizing the model elements—self-management support, community resources, organization of health care, delivery system design, decision support, and clinical information systems—

enables productive interactions between patients and their clinicians, as shown at <http://www.improvingchroniccare.org/change/model/components.html>. Productive interactions include regular assessment, tailoring of clinical management by protocol to specific patient needs, collaborative goal setting, a shared care plan, and sustained, tailored followup.

Disease management programs, whether designed as part of an integrated system, supplied by a disease management vendor, or representing a combination of both, include elements of the CCM. To date, disease management resources have been primarily directed at patients, rather than at clinicians involved in their care. Disease management at Kaiser Permanente and elsewhere has aimed to bolster patient self-management and active participation in care through activities complementary to the patient-physician relationship. Strategies for supporting patients in becoming active, informed participants have been identified and include education and improving self-management skills through frequent telephone, mail, and Internet contact (Casalino, 2005).

Techniques for creating physician buy-in for disease management activities have been explored in some detail (Waters et al., 1998; Leider, 2001), but programs have historically struggled to enlist the active support and participation of physicians in disease management activities. Substantial physician leadership and involvement is often lacking and may even be resisted. In this context, CCI-I providers may find challenging the program expectation that treating physicians will sustain an active role in managing patients while becoming integrated into the overall disease management process.

The Kaiser Permanente experience reveals that the CCM can drive broad physician involvement and enhance the acceptability and success of interventions.

In this article, we describe our experience with creating and sustaining substantial physician involvement in each component of the CCM.

Importantly, we do not intend to test or demonstrate the relative effectiveness or efficiency of physician involvement. Our aim is to identify how roles for physician input and involvement within the CCM are operationalized at Kaiser Permanente.

Although our learning has taken place within Kaiser Permanente's integrated care delivery system, the resulting insights can be generalized to other delivery models. The CCM is primarily concerned with the relationship between patient and provider. Further, health care delivery system characteristics do not bar implementation of the model (Wagner et al., 2001a; Wagner et al., 2001b).

## **CCM IMPLEMENTATION AT KAISER PERMANENTE**

### **Health System—Organization of Health Care**

Culture, organization of health care, and mechanisms throughout the health system promote safe, high quality care by:

- Visibly supporting improvement at all levels, beginning with senior leadership.
- Promoting effective improvement strategies.
- Altering benefits, when possible, to cover key elements of chronic care.
- Providing incentives supporting chronic illness care.
- Developing agreements that facilitate care coordination within and across organizations (Improving Chronic Illness Care, 2005a).

Within Kaiser Permanente, physicians are involved in all levels of decisionmaking, program design, and delivery of care.

Kaiser Permanente is a collaboration of three distinct legal business entities: the Kaiser Foundation Health Plan (KFHP), Kaiser Foundation Hospitals (KFH), and the Permanente Medical Groups (PMGs). KFHP includes the insurance and financing activities, KFH owns large portions of the physical assets of the delivery system, including hospitals and clinics, and the PMGs are responsible for care delivery. KFHP and KFH are referred to collectively as Kaiser Foundation Health Plan and Hospitals (KFHP-H).

### **Governing and Setting Strategy**

The eight regionally based PMGs are organized, operated, and governed as autonomous multispecialty group practices. Nationally, nearly 12,000 physician providers participate in the PMG partnerships or professional corporations. Each PMG has a medical services agreement with KFHP-H and assumes full responsibility for arranging and providing necessary medical care for members in the geographic region. The PMGs and their shared national entity, the Permanente Federation (Federation), partner with KFHP-H to govern the entire organization and develop strategy. Development and operations of population care and disease management programs reflect this shared governance.

### **Monitoring Quality**

Kaiser Permanente has a strong commitment to and significant investment in quality improvement over time, actively participating in national U.S. quality programs, including public accountability through NCQA, the National Quality Forum, and others. The Federation, PMGs, and KFHP-H include quality structures with shared accountability to the

highest levels of organizational governance. An internal process, the Medical Director's Quality Review, annually reviews key aspects of each region's performance, including a standards-based review of population care activities.

Group-based, as opposed to individual, incentives for performance and service satisfaction dominate at Kaiser Permanente and align incentives across specialties and health care team members. For example, in one region, medical centers receive a quality allocation in their operational budgets that represents monies at risk, based on performance. Retention of this strategic allocation is based on medical center performance on the quality portfolio. Management of chronic conditions populations is a cornerstone of the quality incentive allocation in all Kaiser Permanente regions.

### **Conducting Rapid Cycle Improvement Projects**

Operational investigations in the clinical setting, including busy physician practices, are common. For example, a clinic in the Northwest region was awarded a Robert Wood Johnson Foundation grant to study self-management among diabetic members, and the National Chronic Pain Domain Workgroup has shifted goals for 2005 to include supporting regional plan-do-study-act projects in medication management, utilization issues, and clinician-to-clinician communication.

### **Examining Benefits**

Chronic conditions management services are available to all Kaiser Permanente members as part of the prepaid capitation structure—no additional charge for care and disease management is assessed to members or health care purchasers (usually

employers or Medicare). Contracted benefit packages may include copayments and/or deductibles, although senior leadership in at least one region has waived applicable copayments for diabetes group visits and self-management classes.

### **Collaborating Across Regions to Improve Care**

Kaiser Permanente's Care Management Institute (KP-CMI) is a central hub where evidence-based guidelines, population care management programs, and rigorous common measurement systems are created. Front-line physicians are key to all KP-CMI efforts by leading and participating in workgroups, sharing information locally, and proposing regional innovations and perspectives.

### **CLINICAL INFORMATION SYSTEMS**

Clinical information systems organize patient and population data to facilitate efficient and effective care. They include such elements as timely reminders for patients and physicians, patient registries stratified for the provision of appropriate care, tools to facilitate individual patient care planning, sharing of information with patients and providers to coordinate care, and performance monitoring systems (Improving Chronic Illness Care, 2005b).

At Kaiser Permanente, the Federation and regional PMGs lead clinical information systems work in collaboration with the health plan. Until recently, regions developed independent systems. All regional systems included patient care registries integrated with or separate from the health record, depending on the presence and functionality of electronic health records. The decision to implement KP Health Connect, a nationwide integrated electron-

ic health record, was jointly made by representatives of the PMGs and the health plan.

### **Creating Information Systems**

With the step-wise implementation of KP HealthConnect over the next 3 years, disparate clinical information systems in the regions will be unified. Practicing physicians help define criteria by which members will be included in programwide patient care registries, reconcile any differences between regional definitions, and establish criteria for stratifying the population into risk groups.

A complementary effort is enabling additional KP HealthConnect population care management functions, such as advanced modeling and stratification capabilities, augmented patient and population tracking and performance reporting, expanded inreach and outreach, and resources for support of care/case management.

### **Aligning Physician and Patient Information**

Significant effort has gone into ensuring that clinical content physicians receive in the form of clinical guidelines and decision support tools is consistent with patient education materials. For instance, the patient information available nationally through the member Web site, [www.kponline.org](http://www.kponline.org), regarding asthma management was reviewed and approved by the physician lead of the asthma workgroup.

### **Population Care-Focused Management Tools**

Recent advances in panel-level management tools support physicians in identifying necessary tests, procedures, medications,

education, and other interventions for their patients across multiple diagnoses. Spreadsheets provide at-a-glance information on a physician's or a health care team's entire patient panel, including diagnoses, medications and dosages, recent lab values, necessary testing, and the like. The most advanced system presently in place tracks more than 40 variables important to managing patients with multiple comorbidities.

These tools are accessible to members of the care team, including case or population care managers, who review the information with the primary care physician. As KP HealthConnect is implemented, increasingly robust and customizable panel-level query functions will be available to physicians and other clinicians.

### **Monitoring Performance**

At Kaiser Permanente, physician- and team-level performance feedback on outcomes measures is common. (It should be noted that physician feedback generally is linked to modest financial incentives. At most, performance-based incentives range up to 5 to 10 percent of total compensation.)

Feedback to physicians may be either blinded or unblinded. In at least one region, unblinded feedback at the level of health care teams is believed to be responsible for double-digit gains in the number of patients at risk on angiotensin-converting enzyme inhibitors (ACE-I) and statins. Each team sees how their performance compares to the other teams in the region, which spurs a healthy sense of competition. On an annual basis, the health care team demonstrating the greatest success at meeting identified goals receives an award and a modest cash prize, which is generally used for a staff celebration. This strategy drives team-building, as well as clinical improvement.

### **Reaching Out and Following Up**

Databases resulting from the aggregation of multiple registries can be sorted at patient, physician practice, or more systemwide levels. This enables broad interventions and monitoring of health and resources needs for whole populations. For example, identification of all individuals with diabetes, coronary artery disease, and peripheral vascular disease undergirds a programwide initiative to ensure that every Kaiser Permanente member who can benefit from the risk-reducing effects of ACE-I, statins, and aspirin has the opportunity to do so. In all, more than 650,000 members fit the risk categories.

### **Evaluating Outcomes**

KP-CMI generates annual outcomes reports for priority conditions from its member-level data stores. These present comparative regional data and form the basis for discussions in domain workgroups about sources of variability and ways to decrease it across regions. Physicians and other clinicians participate in telephone conferences to discuss outcomes reports, identify priorities, and communicate these locally to their peers.

Care and case managers often conduct mail and telephone outreach activities. Primary care physicians screen a list of potential outreach recipients and eliminate those for whom treatment would be inappropriate or contraindicated. Physicians often make followup telephone calls to encourage high-risk patients to come in for a visit.

### **DECISION SUPPORT SYSTEMS**

Decision support systems promote clinical care that is consistent with scientific evidence and patient preferences by:

(1) embedding evidence-based guidelines into clinical practice, (2) sharing evidence-based guidelines and information with patients to encourage their participation, (3) using proven provider education methods, and (4) integrating specialist expertise and primary care (Improving Chronic Illness Care, 2005c).

PMGs lead the work of implementing decision support. Historically, regions have independently developed clinical guidelines and applied them at the point of care. Increasingly, physicians from all regions collaborate through KP-CMI to create shared national clinical guidelines and maintain a store of clinical knowledge for supporting ongoing practice improvement.

Workgroups for the priority population care domains at Kaiser Permanente—asthma, depression, diabetes, cancer, chronic pain, coronary artery disease, elder care, heart failure, weight management, and self-care and shared decisionmaking—convene clinicians from the regions to review the evidence and generate clinical guidelines, with the support of research methodologists and evidence-based medicine experts. Workgroup participants are front-line clinicians with active practices, and release time is funded for participation in this work.

Physicians recruited from the PMGs take Kaiser Permanente's national clinical leadership roles in priority domains. For instance, the physicians who have been clinical leads for the diabetes, asthma, chronic pain, and depression workgroups have maintained their roles for several years, serving as champions for implementation and improvement of care processes within the organization.

## **Providing Workflow Sensitive Point-of-Care Support**

Clinical guidelines must be integrated into physician workflow processes so that they are visible when care decisions are being made. At Kaiser Permanente, domain workgroup members who are practicing physicians have taken the lead in shifting the presentation of clinical guidelines away from notebook-encased lengthy presentations of available evidence and toward easily accessible summary formats, such as pocket cards, trifold brochures, and posters that hang in examination rooms. For instance, a poster in use in the Hawaii region covers key aspects of diabetes care, including blood sugar control, the use of ACE-I, aspirin, and statins to reduce the risk of adverse cardiovascular events, and annual foot, eye, and urine exams.

Comprehensive clinical guidelines and a broad range of clinical resource materials are also stored online, where rapid search capabilities and active links on key words take clinicians directly to topics they are interested in.

Another point-of-care strategy involves reminder sheets faxed by care managers the night before scheduled outpatient visits for members of population care registries. The reminder sheets summarize current lab values and medications and highlight any needed interventions, such as retinal exams or glycemic or lipid control screening tests.

The implementation of KP Health-Connect offers an opportunity to implement point-of-care decision support on an unprecedented scale. However, decisions about which tools to implement and the extent and range of decision support are

led by practicing physicians. Tools and templates will help front-line practitioners document, diagnose, treat, and manage patient health care needs. Some tools streamline workflow for clinicians by, for instance, reducing repetitive documentation or making orders or diagnoses easier. Others offer more pointed decision support by bringing together diagnoses, lab and imaging orders, medication and procedure orders, patient information, and supporting documentation in a template, for example.

Evidence-based guidelines must be available when decisions are made, and they must also be presented in ways that support physician workflow patterns. To that end, a series of working meetings have convened regional physicians, ancillary groups, KP HealthConnect programmers, and domain experts to walk through the process of care in order to understand the optimal interaction between clinical workflow, health care team member roles, KP HealthConnect tools, and clinical guidelines.

The result is a menu of alerts, reminders, and other tools that can be integrated into the electronic health record to guide care. For instance, “active guidelines” directly link web-based clinical information to indicated action steps within the open electronic health record. Clicking on an active pharmacotherapy guideline may generate a medication order page, for example. Importantly, these aids are customizable by individual regions to conform to local variations in care processes.

## **Physician Networks**

An important learning about improving chronic care is that clinical information systems and decision supports are necessary, but not fully sufficient, to create sustained change in physician behavior.

Clinical guidelines share explicit or formal knowledge, which has been written down and can be easily transferred. In contrast, much of the complexity of delivering chronic condition care remains implicit and harder to capture as clear advice or guidance. Examples of implicit knowledge relevant to promoting prepared, proactive practice teams include collective values, normative behavior, and evolving roles. Finally, tacit knowledge includes skills, insights, experiences, intuition, and judgment. It can be conveyed, although it is difficult to record or even fully articulate.

For overburdened primary care clinicians, the key questions regarding chronic conditions management are, “What changes should I make in my practice, and why?” and the linked, but different, “How do I do so?” Explicit knowledge found in guidelines answers only the first question. The shared experience of individuals includes implicit and tacit knowledge that answers the second question. The availability of explicit knowledge in the form of guidelines must be augmented with opportunities to obtain from trusted sources—often physician peers—tacit and implicit knowledge that allow its effective use. A primary goal of the KP-CMI Implementation Network is to provide venues—by telephone, virtual meetings, and in person—that promote the sharing of all three components of knowledge by a range of health care professionals and program administrators.

Clinical champions within Kaiser Permanente, primary care providers who have firsthand frontline experience with care innovations, serve a similar function. Early adopters of innovations and trusted colleagues, they help their peers acquire relevant explicit, implicit, and tacit knowledge and create momentum around particular areas of concern. They receive salary support for these activities.



## **DELIVERY SYSTEM DESIGN**

The delivery system design component of the chronic care model seeks to ensure the delivery of effective, efficient clinical care and self-management support. It includes such elements as assigning roles and distributing tasks among team members, using planned interactions to support evidence-based care, providing clinical case management services for complex patients, ensuring regular followup by the health care team, and giving care that patients understand and that fits with their cultural background (Improving Chronic Illness Care, 2005d).

Effective delivery system design leads to an environment conducive to the emergence of prepared, proactive practice teams. Physician leadership within the Kaiser Permanente delivery system is key to developing roles and structures that practicing physicians can further tailor to their situations and needs.

### **Tailoring Models of Care**

Integrating the management of multiple comorbid chronic conditions into primary care overwhelms even the most energetic physician without adequate support from other members of the health care team. Paradoxically, clinician experience and clinical judgment are critical to prioritizing multiple interventions for comorbid conditions. Kaiser Permanente's recently emerging models of care are helping to identify which aspects of care require the direct involvement of a primary care physician, how that can most efficiently occur, and which tasks can be offloaded to other members of the health care team.

In one region, a multidisciplinary team approach to panel management includes primary care physicians, registered nurses, nurse practitioners, clinical diabetes

educators, medical assistants, and receptionists. Once a month, the entire team reviews patient lists for the physician's chronic disease panel and agrees on next steps, which might include telephone reminders for upcoming appointments or labs, attaching dosage adjustment reminders to charts, and medication review and adjustment. Tasks are delegated according to team member roles. The results of this model of care have been impressive. In one year, statin use among members with diabetes and coronary artery disease increased from 37 to 73 percent, the percentage of members at ACE-I target dosages increased by roughly 16 percent, and beta-blocker use in post-myocardial infarction patients increased from 66 to 90 percent.

In another region, health care teams meet on a monthly basis to go over the entire list of registry-identified patients on a physician's panel, individual by individual. As each patient is discussed and his or her needs are identified, the appropriate member of the health care team is assigned any corresponding tasks. A receptionist, for example, may call the patient to schedule a needed visit, a medical assistant may mail lab slips or urine collection containers, and a nurse practitioner may adjust medications. Teams participating in this model of care have noted the importance of supporting the patient-physician relationship as primary; other team members explicitly underscore its importance during contacts, instead of allowing their interactions with patients to diminish it.

In another model of care, medical assistants help primary care physicians with population care management activities. A panel management tool includes data on hemoglobin A1c and lipid levels, blood pressure, pneumovax and flu vaccination status, retinal screening needs, aspirin, statin, and ACE-I

medications, and patient education. Each primary care provider has two 15-minute slots each week for reviewing the panel management tool for his or her patients.

A medical assistant follows up by calling patients to start or increase medications, mailing lab slips and/or urine cups, confirming that labs are current, and scheduling telephone or outpatient visits. Each medical assistant supports six to nine primary care providers and makes roughly 120 telephone calls a week. Under this model of care, the percentage of members with diabetes with a serum LDL-C <100 mg/dl increased by roughly 20 percent between the second quarter of 2003 and the fourth quarter of 2004.

In still another region, clinical pharmacists (PharmDs) use electronic chart reviews to identify members who could benefit from treatment with aspirin, ACE-I, and statins and initiate appropriate regimens with permission from each member's physician. Each PharmD is responsible for 600 to 900 members and contacts them to review and adjust treatment regimens. PharmDs receive lab and other reports regarding treatment.

Their success is documented in a recent article (Olson et al., 2005). Of members with documented coronary artery disease, 97 percent had appropriate lipid screening, compared to a baseline of 67 percent; 72 percent had LDL-C levels of less than 100 mg/dl, as opposed to 25 percent of the population before the program was initiated.

Still another model of care relies on special clinics, such as anticoagulation clinics, where physician extenders provide patient care under protocols written by physicians.

## **SELF-MANAGEMENT SUPPORT**

Through self-management support, patients are empowered and prepared to manage their health and health care. This

component of the chronic care model includes emphasizing the patient's central role in managing their health, using effective self-management strategies that include assessment, goal-setting, action planning, problem-solving, and followup, as well as organizing internal and community resources to provide ongoing self-management support to patients (Improving Chronic Illness Case, 2005e).

## **Referring to Self-Management Classes**

All regions have self-management education programs for members with diabetes. These include sessions dedicated to action planning, problem solving, and pattern management and are offered in multiple languages. More than 23,000 members in northern California, 4,000 members in Ohio, and 5,000 members in the Mid-Atlantic States took part in self-management classes in 2003. Curricula are developed with close involvement of physician advisors; lay leaders teach the classes. This represents a significant efficiency over individual education in the physician's office.

## **Conducting Group Visits**

Group visits, during which patients who share a diagnosis meet with a physician and other members of the health care team like pharmacists, clinical diabetes educators, and behavioral health specialists, provide an opportunity for members to support each other in self-management and to help each other develop effective problem-solving skills. The physician benefits from efficiently addressing the similar needs of several people during a finite time period.

More than 400 people at risk for adverse cardiovascular events attended group visits at a single southern California medical center over 7 months; not surprisingly, statin

and ACE-I usage rates rose 5 to 7 percent over the same time period. In 2003, more than 14,322 members in northern California with diabetes participated in group appointments. More than 9,000 members with diabetes in the Mid-Atlantic States and Ohio regions also attended group visits last year.

### **Creating Action Plans**

Kaiser Permanente physicians rely on action plans to help members self-manage complex chronic conditions. For instance, some members with diabetes titrate oral hypoglycemics at home. With a home glucose monitor and a clear idea of an appropriate blood glucose level, members titrate medications to keep glucose levels in line. The most important element of the program, according to involved physicians, is transferring the authority and responsibility for diabetes management to the patient. To accomplish this, a prescription is written for the patient to adjust medications as needed. If oral agents are ineffective, a similar prescription is written to titrate insulin as needed.

Other members complete a self-monitoring blood glucose worksheet and read it to a dedicated voicemail line or send it by FAX or e-mail. Physician extenders respond to the information 5 days a week. A prospective study matched 100 self-monitoring blood glucose participants with non-participating diabetic members of similar age, sex, insulin use, and HbA1c. Participation in the self-monitoring program significantly reduced the risk of hospitalization across all risk stratification categories.

### **Enhancing Interaction Skills**

Productive interactions that allow for empowered self-management by patients with chronic conditions require a shift in

the role of the physician. As power and authority to determine the action plan is shifted to the patient, the physician assumes the role of expert consultant and advisor.

Within Kaiser Permanente, tools like continuing education about motivational interviewing and scripts for interacting with patients about particular topics, such as end-of-life care, support the development of interaction skills that reflect the shifting balance of the patient-physician relationship.

## **COMMUNITY RESOURCES AND POLICIES**

By mobilizing community resources to meet the needs of patients, the chronic care model encourages patients to participate in effective community programs. Partnerships with community organizations support and develop interventions that fill gaps in needed service. Finally, advocacy for policies to improve patient care is also a component of this aspect of the CCM (Improving Chronic Illness Care, 2005f).

### **Mobilizing Community Resources**

Kaiser Permanente has partnered with several organizations, including TV Turnoff Week and HealthPartners, to offer support for chronic conditions management. For example, primary care physicians are supported in their efforts to encourage weight loss in overweight and obese patients by a partnership with HealthPartners that makes the 10,000 Steps® program available to all members.

An even more innovative mobilization of community resources occurred when a physician at the Oakland medical center noticed the discrepancy between the dietary patterns he encouraged patients to

adopt and the food items for sale at the medical center. The first Kaiser Permanente Farmer's Market resulted in 2002, bringing organic produce for sale into the medical center on Fridays. Patients, staff, physicians, and neighborhood residents are all regular customers, and 10 more Farmer's Markets are in place throughout California and Oregon. Nearly 30 others will begin in the coming year. The presence of the markets supports physicians recommending that their patients eat five servings of fruits and vegetables daily.

### **Advocacy**

A joint Kaiser Permanente/ Centers for Disease Control and Prevention Working Group on overweight and obesity involved regional physicians and included policy-relevant discussions. In August 2003, KP-CMI and Kaiser Permanente's Institute for Health Policy, along with the American Association of Health Plans, Centers for Disease Control and Prevention, Health Partners, the Robert Wood Johnson Foundation, and the Washington Business Group on Health, sponsored a roundtable discussion. Representatives, 47 in all, from a broad spectrum of providers, consumers, the food industry, health plans, community-based organizations, researchers, analysts, and policymakers generated recommendations in seven areas of concern. While the impact of these discussions on the daily work of most Kaiser Permanente physicians have not yet been felt, they supported the importance of advocacy in managing chronic conditions.

### **SUMMARY**

The CCI-I requires participating care management organizations to actively and fully engage practicing physicians in the

ongoing care of their patients with chronic conditions in conjunction with disease management programs. The experience of Kaiser Permanente in implementing disease and care management programs based on the CCM demonstrates the feasibility of doing so and illustrates roles for the physician as leader, program developer, and direct user of disease management capabilities in practice.

### **ACKNOWLEDGMENTS**

The author would like to express appreciation to Helen Pettay and Jim Bellows for their helpful comments and suggestions and to Jennifer Green for manuscript production and editorial support.

### **REFERENCE**

- Bierman, A.S.: Coexisting Illness and Heart Disease Among Elderly Medicare Managed Care Enrollees. *Health Care Financing Review* 25(4):105-117, Summer 2004.
- Casalino, L.P.: Disease Management and the Organization of Physician Practice. *Journal of the American Medical Association* 293(4):485-488, January 26, 2005.
- Improving Chronic Illness Care: Health System: Organization of Health Care. Internet address: <http://www.improvingchroniccare.org/change/model/healthsystem.html>. (Accessed 2005a.)
- Improving Chronic Illness Care: Clinical Information Systems. Internet address: <http://www.improvingchroniccare.org/change/model/clinicalinfo.html>. (Accessed 2005b.)
- Improving Chronic Illness Care: Decision Support. Internet address: [http://www.improvingchroniccare.org/change/model/dec\\_support.html](http://www.improvingchroniccare.org/change/model/dec_support.html). (Accessed 2005c.)
- Improving Chronic Illness Care: Delivery System Design. Internet address: [http://www.improvingchroniccare.org/change/model/deliv\\_design.html](http://www.improvingchroniccare.org/change/model/deliv_design.html). (Accessed 2005d.)
- Improving Chronic Illness Care: Self-Management Support. Internet address: <http://www.improvingchroniccare.org/change/model/smsupport.html>. (Accessed 2005e.)

Improving Chronic Illness Care: The Community—Resources and Policies. Internet address: <http://www.improvingchroniccare.org/change/model/community.html>. (Accessed 2005f.)

Institute of Medicine. *Crossing the Quality Chasm: A New Health System for the 21st Century*. National Academies Press. Washington, DC. 2001.

Leider, H.L.: HMOs Need to Share Gains of DM Programs. *Managed Care* 10(7):33-34, July 2001.

National Committee for Quality Assurance: Disease Management Accreditation and Certification List. Internet address: <http://www.ncqa.org/Programs/Accreditation/DM/dmaccrdstatus.htm>. (Accessed 2005.)

Ofman, J.J., Badamgarav, E., Henning, J.M., et al.: Does Disease Management Improve Clinical and Economic Outcomes in Patients with Chronic diseases? A Systematic Review. *American Journal of Medicine* 117(3):182-192, August 1, 2004.

Olson, K.L., Rasmussen, J., Sandhoff, B.G., et al.: Lipid Management in Patients with Coronary Artery Disease by a Clinical Pharmacy Service in a Group Model Health Maintenance Organization. *Archives of Internal Medicine* 165(1):49-54, January 10, 2005.

Wagner, E.H., Austin, B.T., and Von Korff, M.: Improving Outcomes in Chronic Illness. *Managed Care Quarterly* 4(2):12-25, Spring 1996.

Wagner, E.H.: Chronic Disease Management: What Will It Take to Improve Care for Chronic Illness? *Effective Clinical Practice* 1(1):2-4, August-September 1998.

Wagner, E.H., Austin, B.T., Davis, C., et al.: Improving Chronic Illness Care: Translating Evidence Into Action. *Health Affairs* 20(6):64-78, November/December 2001a.

Wagner, E.H., Glasgow, R.E., Davis, C., et al.: Quality Improvement in Chronic Care: A Collaborative Approach. *Joint Commission Journal on Quality Improvement* 27(2):63-80, February 2001b.

Waters, T.M., Budetti, P.P., Reynolds, K.S. et al.: Factors Associated with Physician Involvement in Care Management. *Medical Care* 39(7 Suppl 1):179-191, July 2001.

---

Reprint Requests: Paul J. Wallace, M.D., Kaiser Permanente, One Kaiser Plaza, 16th Floor, Oakland, CA 94612. E-mail: [paul.wallace@kp.org](mailto:paul.wallace@kp.org)