



## Care Management: The Next Level of Innovation for Kaiser Permanente

By Peter Juhn, MD  
Neil Solomon, MD  
Helen Pettay

*“Care management is coordinated health care for logical groupings of members intended to prospectively improve, maintain, or limit the degradation of their functional status.”*

More than 50 years ago Kaiser Permanente (KP) pioneered the development of high-quality, cost-effective, integrated health care. To achieve better health for members, Sidney Garfield, MD, KP’s physician founder, advocated a population-based approach to care through early detection and management of disease. It was a concept that set the industry standard for decades to come. We now stand at a new threshold in clinical management—one that will leverage the talents of our medical groups and our vast clinical experience to the lasting benefit of our members. The next level of innovation is care (or disease) management. Care management is a comprehensive systems approach to medical care that combines the latest medical knowledge on the best clinical methods, population-based outcomes measurement and evaluation, and advanced practice tools.

A national entity that can synthesize knowledge on the best clinical approaches from within and outside KP, then work in concert with local Permanente medical groups to create, implement, and evaluate effective and efficient health programs, can be a powerful catalyst for quality improvement. This is the essential vision of the Care Management Institute (CMI). Understanding how to prevent the complications of chronic illnesses, development of a range of analytical and care management tools, and rapid dissemination and adoption of successful care approaches using the latest technologies and learning models will form the core of CMI’s work.

Our providers, customers, and members are increasingly aware of care management, as the basic concept is not new. However, with its history as an integrated care delivery system, its extensive clinical databases, its clinical management expertise, and its large membership, KP offers a unique setting in which to design, develop, and deploy integrated care approaches that fulfill the promise of care management.

For you, the individual physician working at KP today, CMI hopes to offer up-to-the-minute scientific knowledge and tools that support you in practicing the art of medicine. The critical challenge for you, as for a professional in any field, is one of judgment: How do you take this generalized body of knowledge and evaluate it in the context of your individual patient? The goal of disease management is not to achieve uniformity of practice; it is to achieve uniformity of superior outcomes.

This article will discuss the opportunities of care management for KP and will discuss the design and implementation plans of CMI. Although we view “care

management” and “disease management” as synonymous, we will use the term “care management” because it encompasses more than just populations defined by diseases. For example, pregnant women or healthy people who have no disease but who are at risk of developing one might benefit from a care management program.

### What Is Care Management?

Care management is coordinated health care for logical groupings of members and is intended to prospectively improve, maintain, or limit the degradation of their functional status. Coordinated means that care is delivered by teams of varying composition. Logical groupings refers to disease-specific groups such as patients with chronic disease (for example, diabetes), or acute illnesses such as upper respiratory infections. In addition to patients with these diseases, other distinct populations of patients such as pregnant women, frail elderly or NICU graduates are included under the logical groupings term. Prospective means that each member has a customized care plan that reflects the severity as well as the nature of the particular disease or condition. Prevention and health maintenance are pursued aggressively, functional status is monitored longitudinally, and deterioration is addressed early in the disease process.

By focusing on members who have common conditions and by synthesizing the best available clinical evidence, care management can lead to several desirable outcomes: healthier, more satisfied members; more motivated and prepared providers; and improved process efficiencies.

The conditions most amenable to this approach share a number of characteristics: high treatment costs, high prevalence, evidence-based treatments, unusual variation in practice, and care fragmentation in current practice. Asthma, diabetes, depression, and heart disease are some of the conditions for which CMI will be developing care management programs. Important elements in these care management programs will be:

- team care that optimizes the unique skills of different health care professionals
- timely and credible outcome measurement and feedback
- evidence-based treatment guidelines and protocols
- patient education and empowerment programs
- computer-aided decision-support tools.



PETER JUHN, MD is the Executive Director of Kaiser Permanente’s Care Management Institute at the Program Offices. not pictured NEIL A SOLOMON, MD is the Clinical Strategies Consultant in the Care Management Institute. not pictured HELEN PETTAY is the Communications Manager for the Care Management Institute.



### How will Care Management Alter Kaiser Permanente?<sup>1</sup>

Care management is the next step in the evolution of health care delivery. The following sections describe some of the changes care management will bring and their impact on members, providers, and the KP Program.

#### From the Perspective of Members

Under care management, the provider team will aggressively educate members about their condition so that they will better understand how to care for themselves and when to tap into the care management support system. Productive interactions with the care system and the resulting positive feedback will increase the likelihood that members will become more proactive in disease awareness and self-monitoring. When members feel empowered, connected to, and involved in the care process—and become healthier as a result—satisfaction will rise even as the number of interactions with KP goes down.

#### From the Perspective of Providers

A multidisciplinary team of providers with diverse areas of expertise will work together to address all aspects of members' care in a thorough and systematic manner. The nonphysician care coordinator will serve as the point of entry to other providers, a clearinghouse for educational materials, and a sounding board for both member and provider concerns. Decision-support tools and the latest science on diagnosis and treatment will be readily accessible to all providers. From the providers' point of view, the member-provider interaction will be optimally time-efficient because members will see the most appropriate provider in a given situation and will participate in adjunct educational initiatives.

#### From the Perspective of the Program

By immediately establishing a foothold in this emerging application of medicine and management, KP will be seen as an innovator. In the near future, care management is likely to be viewed as an imperative, rather than an option, by purchasers, health plans, and medical groups. We have little to lose, and much to gain, by aggressively rising to the challenge. We can help define the market for care management. With the successful design and implementation of care management programs, KP will ensure its continued leadership in managed care.

#### The Care Management Institute as an Organizing Principle<sup>2</sup>

To our members, their employers, and their communities, true value from health care means healthier

As we work together to improve the health of our members, CMI invites you to share your ideas, your innovations, and your successes with one another. One forum for doing so is the Kaiser Permanente Clinical Practice Exchange (KP Exchange). KP Exchange is a password-protected, online web-based Internet site hosted on a secure server. The URL is: <http://www.kpexchange.org/>.

and more productive lives. The Care Management Institute was created to deliver such value. CMI draws its strength from the unified efforts of Kaiser Foundation Health Plan and the Permanente Medical Groups. The vision of CMI is nationally consistent, evidence-based, cost-effective delivery of health care customized to the individual member.

CMI is one of several offspring resulting from the historic National Partnership Agreement between Health Plan and The Permanente Federation, with the latter representing the Permanente Medical Groups. CMI's governance is shared between the parent organizations, with Health Plan funding the initiative and the Federation leading and managing it. CMI has a separate organizational identity and is truly a working collaboration between Health Plan and the Medical Groups. CMI's physician staff are members of The Federation, and its nonphysician staff are Health Plan employees. CMI has its own Board of Directors, which is composed of senior leaders from both Health Plan and the Permanente Medical Groups.

Through the work of the Institute, Permanente physicians have the opportunity to shape the next generation of health care. CMI represents a consolidated internal approach to change, and can be a clear voice for KP to communicate this future to the rest of the health care community.

Success for the Institute ultimately will be measured by its positive impact on health outcomes, on process efficiency, and on community image. Although it will be important to produce and provide access to clinical improvement knowledge such as care management programs or successful practices, most critical to CMI's success will be the rapid adoption and implementation of this knowledge by individual providers, leading to behavior change and performance improvement.

#### Implementation Approach

We have examined learning theories and their practical application within KP, because this continuous learning by providers will be the cornerstone of CMI's imple-

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mentation approach. Common individual, group, and organizational elements that create an environment for successful learning have been identified. Fostering supportive attitudes and active participation, promoting teamwork, creating a shared vision, and providing resources that work together to generate learning and change. CMI will use these and other innovative approaches to facilitate continuous learning among care providers, both as part of the specific implementation of CMI programs and generally within the Program.

### Implementation Infrastructure

To achieve rapid adoption and sustained implementation of best clinical practices, we are developing an implementation infrastructure guided by several key principles: focused investment of resources, team-based professional learning, and outcome accountability. This development focuses on building three capabilities: an implementation network, provider learning teams, and a fund for implementation assistance.

#### First Capability: Implementation Network

The broadest component in the implementation infrastructure is a network of implementation professionals extending across all local service areas at KP. Individuals in this network actively promote and directly engage in the adoption and implementation of best clinical practices in each of their respective lo-

cal areas. They are trained extensively by Institute and Program experts and learn from experiences of others in the network. They are the access and distribution arm of CMI.

Each qualifying local area hires two implementation professionals with funds supplied by CMI. These "implementation duos" are tightly integrated with the local area's quality improvement functions and cognizant of the uniquely defining cultural and market characteristics of the locale. The implementation duos include a Physician Implementation Manager and an Implementation Coordinator.

The physician is chosen by the local medical group to lead the implementation of best practices in that local area, and is accountable to the local Medical Group leadership and to CMI. Extensive training and support is provided by CMI and the other members of the network (eg, initial intensive training followed by quarterly updates and monthly teleconferences or conference calls). The implementation coordinator is a project manager-level person hired by the local area to assist the Physician Implementation Manager.

#### Second Capability: Provider Learning Teams

As a means to promote the rapid cycling of incremental process improvements, CMI supports the development of provider learning teams in local areas. These teams are loosely modeled after the Practice Enhancement for Physicians (PEP) program in the Southern California Permanente Medical Group. Small groups of providers meet every two weeks for approximately two hours to identify issues, solve problems using analytical data, and to customize and implement successful practices.

#### Third Capability: Fund for Implementation Assistance

The Fund for Implementation Assistance (FIA) is a strategic investment fund with the purpose of catalyzing the implementation of care management programs for targeted patient populations. Funds are granted to local areas on a competitive basis to support implementation of care management programs that are likely to improve member health status and satisfaction, to more efficiently deliver care, and to actively leverage KP's knowledge resources. More specifically, these funds support implementation of CMI programs for defined member groups in local areas.

#### Applied Learning Initiative

CMI sponsors the Applied Learning Initiative (ALI), a research and development program dedicated to discovering successful methods of rapid and sustainable behavior change through enhanced professional learning. The ALI effort focuses on innovative learning and practice change strategies (ie, beyond the scope



Karen Sharples, RPh, pharmacist and diabetes educator, and William Ward, MD, with the Northwest Permanente Medical Group, help member Calvin Mobbs learn to manage his diabetes. The Care Management Institute's Integrated Diabetes Care Program is based in part on the Diabetes Care Program in KP-Northwest. All KP Regions participated in the development of CMI's Diabetes Care Program.

of the formal provider learning teams) such as “just-in-time tools,” effective use of self-paced medical education programs, and academic detailing with peers. An advisory group will be established to guide these R&D efforts. A national knowledge repository of innovative strategies also will be a part of these efforts.

### CMI Content Development

Content for CMI is developed using three general approaches. The choice of approach will be determined by the priorities established by the CMI Board of Directors and the presence of existing programs for priority clinical areas.

#### 1. Best Practices Support and Transfer

In cases where there are highly successful programs or successful clinical practices, CMI works with the developers to facilitate a program’s transfer and adoption at new sites. In these situations, CMI evaluates quality of the program, assesses potential problems, provides technical support during its transfer, and assists in modifying the program to fit recipient needs. Such programs might include the Bright Systems Pediatric Program from Northern California or the Hemodialysis Program from Southern California.

#### 2. Care Management Program Synthesis

In circumstances where multiple programs exist without one clearly superior program, or where piecemeal approaches are in place without a comprehensive program, CMI synthesizes the best aspects of the existing components into an integrated care management program. CMI convenes meetings of KP experts to evaluate existing programs and their component parts, supports the synthesis of components into the integrated approach, and customizes the program for local areas interested in its implementation. CMI also is responsible for supporting and refining the program over time. The current national KP Diabetes and Asthma Initiatives represent examples of this approach.

#### 3. Care Management Program Creation

When no programs exist for a given condition, CMI develops programs de novo, relying on the principles and processes used to create programs for other populations. The full development process requires guideline development, assessment of the cost-effectiveness of program alternatives, creation of a model of care, development of patient education/



Marta Vielhaber, MD, in the Ohio Permanente Medical Group, shows member Daniel Patterson how asthma can affect the lungs. The OPMG participated in several workgroups during the development of the Care Management Institute’s Integrated Asthma Care (IAC) program. They also participated in a research project for asthma outcomes management and quality improvement conducted by the Managed Health Care Association and the Health Outcomes Institute. That research helped greatly to inform the development of CMI’s Asthma Program.

empowerment tools, creation of provider enhancement tools and training for their use, and evaluation mechanisms for the program.

Creation of these components of the integrated program involves collaboration with existing teams within the Program. For example, the Southern California Guidelines Development Group, the Northern California Health Education Department, and the care management experience in the Northwest might all support parts of a new program.

At any given time, a portfolio of programs relying on these different development methods is likely to be in progress. Development priorities are based on analysis of internal data, external literature, and expert interviews on market needs within KP. Conditions expected to show high return from care man-






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agement include diabetes, asthma, heart disease, depression, stroke, and low back pain. In addition, life stages offering opportunities for integrated management include pregnancy, infancy, and aging.

The specific components and the complete care management programs are developed with input from existing KP successful practices, documented efficacy, and shared insights from experts in the field within and outside KP. When possible, this development follows an evidence-based approach, particularly in evaluating the available medical literature. We also plan to hold focus groups to solicit input from members for whom the programs are designed.

### Technology Tools

The practice of medicine relies upon collection, analysis, and interpretation of information, resulting in informed decision-making. The digital electronic revolution has made it possible to transform medical information and observations into an electronic format. At the same time, advances in telecommunications have enhanced our ability to share information at distances with relative ease. CMI develops technologies to promote Programwide dissemination of knowledge and continual learning for clinicians.

### KP Exchange

The Kaiser Permanente Clinical Practice Exchange (KP Exchange) is an online, web-based Internet site developed by the Institute to support KP clinicians and staff in the care of their members. As CMI develops, KP Exchange will play a significant role as a national tool for clinical information exchange. The website address is: <http://www.kpexchange.org/>.

As a virtual meeting place that revolutionizes Program communication, KP Exchange stands to fulfill several of CMI's goals:

- Improve physician and staff satisfaction and effectiveness
- Enhance continuity of care
- Promote the accountability of physicians and nonphysician managers for clinical quality
- Serve KP care providers in local markets by tailoring CMI products to meet their needs
- Incorporate feedback from local markets in future product development.

### Fostering Convergence of Knowledge with Clinical Information Systems

As the Program builds a clinical information system (CIS), the Institute provides a context in which CIS becomes embedded into the design of the overall care delivery process. For example, the Institute plans to deliver CIS-embedded, data-driven algo-

rithms; CIS-embedded decision support; CIS-embedded care management tools and processes; and, for members, CIS-enabled prompts for preventive and follow-up care, as well as linkages and interactions for member health information.

### Summary

The vision of an integrated, population-based care management program that uses the best of science while supporting the individual physician's art may sound as ludicrous today as prepaid group practice sounded 50 years ago. But by harnessing the talents of people, technology, and research in new ways, KP has the opportunity once again to transform the way health care is delivered in this country. CMI invites all of you to help in the challenge.

### CMI Products

Many of CMI's products are available on KP Exchange. For more information about specific studies, products, or consultative services, please telephone the Care Management Institute at (510) 271-6426.

The following is a list of CMI products and services to date:

#### Integrated Diabetes Care Manual

Components include:

- Clinical Practice Guideline
- Protocols—Clinical pathways to assist with the implementation of guidelines
- Recommended model of care and stratification methodology
- Recommended care coordination program with implementation steps
- Group visit implementation steps
- Curriculum for patient education
- Tip sheets—one-page tear sheets for reinforcement of patient education practices
- Outcomes measures and technical specifications
- 1997 member survey
- 1997 outcomes report
- 1997 resource manual (snapshot of current local activities surrounding the care of adults with diabetes)
- Tools for implementation: lifestyle questionnaire, chart form, action plan, and patient wallet card.

#### Integrated Asthma Care Manual

Components include

- Clinical practice guideline
- Protocols—Clinical pathways and behavior change methodologies to assist with the implementation of guidelines

- Recommended model of care and stratification methodology
- Recommended care coordination program with implementation steps
- Curriculum for patient education (pediatric and adult)
- Outcomes measures and technical specifications
- 1998 member survey (adult)
- 1997 resource manual (snapshot of current local activities surrounding the care of patients with asthma or COPD)
- Tools for implementation (pediatric and adult versions available): asthma record (initial visit chart form), urgent visit asthma records, medication and severity assessment pocket card, action plans, asthma diaries, environmental assessment, key educational messages for providers

#### Special Studies

- Targeting Care Management: A study that

prospectively identifies a subset of patients in an evolving acute state likely to be hospitalized

- Hb<sub>A1C</sub>/Health Status Performance Measurement Project: A Study in Progress
- The Breast Cancer Surgery Study: Impact of Length of Stay on Medical Outcomes
- A Study on Hospital Discharge of Newborns Following Vaginal Birth in the Northern California Region
- Consultation on the design and analysis of the effectiveness of medical interventions
- Consultation on collection and analysis of data for disease registries, service utilizations, and outcomes measures. ❖

#### References

1. This section adapted from "White Paper on Disease Management at Kaiser Permanente" by Neil Solomon, MD, October 1996.
2. This section adapted from "CMI Practice Plan" by Peter Juhn, MD, Jodi Cupp, Barry Linder, MD, Rachelle Mirkin, Neil Solomon, MD, and Valerie Tolou-Shams, November 1997.



Unfinished Dominican monastery, built in the 1700s, Culiapan, Oaxaca, Mexico. Photographed by Janet Neuburg, MD, NWP. Her work can also be found featured on the cover, and on page 18.