Innovation

People Using Technology to Transform Care: The 21st Century Care Innovation Project

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I feel like this is the 'doing things differently' that we've been talking about for the past 20 years.

– Sandra Barton, MD, Tualatin, Oregon (Northwest Region)

What is Dr Barton talking about and how is this possible? Dr Barton and many other primary care clinicians across Kaiser Permanente (KP) are part of a pilot project called the *21st Century Care Innovation Project.* The purpose of this project is to leverage the use of KP HealthConnect™ (an organizationwide electronic health record system) to transform care and create thriving physician practices.

The Health Plan and delivery systems of KP, like the rest of the nation's health care systems, are facing significant cost pressures from employer groups and the largest single purchaser—Medicare. There is increasing risk of losing customers who can't afford insurance premiums. Adding pressure to KP's cost position in the market is its multibillion dollar strategic investment in KP HealthConnect and the need to rebuild aging facilities.

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For primary care practitioners, the model for delivering care is still based on a production model where patients move through a complex system. The majority of work for physicians and staff revolves around dealing with what is in front of them in the moment. There is little time, room, or incentive for changing work to create flexibility and capacity to meet the growing needs of members. Now more than ever, there is a need to transform care delivery so that health care is more cost effective, convenient, and satisfying for KP members and provides a fulfilling work environment for clinicians and staff.

Design

In September 2005, the KP Partnership Group (KPPG)[a] chartered the 21st Century Care Innovation Project in collaboration with the Institute for Healthcare Improvement (IHI). The project outcome is to improve patient care delivery by making primary care more patient centered, and simultaneously developing a more fulfilling and sustainable work environment for physicians and staff (Table 1 and Figure 1). This collaboration of KP labor partners and nine innovation teams from five KP regions and Group Health Cooperative focuses on changing the work they do, not just improving efficiency (Table 2). The overall direction for designing a new primary care model was established by leaders from the Permanente Medical Groups and Kaiser Foundation Health Plan and Hospitals and built from the tenets of the Blue Sky vision.[1]

Innovation Teams

While each of the multidisciplinary 21st Century Care Innovation teams works locally on redesign, representative team members meet together frequently by phone and in person to share ideas, successes, and failures. This collaboration speeds the rate of change and multiplies the innovative ideas that teams test and transfer. IHI faculty[b] attends team meetings and works individually with each team to understand their work and help them refine their changes.

At least one labor representative participates on each team, and regional labor partners have been involved in all the teams' work. *"The Strategic Labor Management Partnership is extremely important when introducing an innovation project. The 21st Century Care Innovation Project has been successful because people are working in an integrated fashion. People on the*

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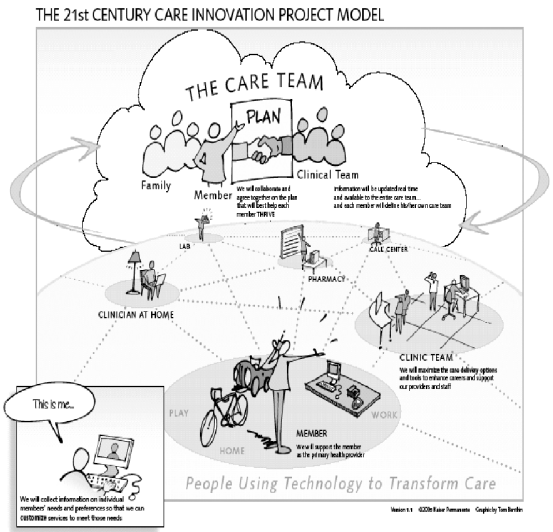

Figure 1. The 21st Century Care Innovation Project model.

Table 1. Conceptual model for the 21st Century Care Innovation Project

Teams are encouraged to test a variety of changes in order to create a new paradigm of health/health care delivery that:

- Transforms the delivery system to be patient centered
- Cares for our patients as total beings—caring for the whole person, not just a disease or condition
- Empowers patients to be more proactive and engaged in their care
- Includes all members of the care team in supporting the patient's care—because information is available
- Ensures that the work environment is sustainable and healthy for our physicians and staff
- Integrates and leverages technology to improve care delivery
- Eliminates waste in the system by doing things right the first time

frontline have great ideas for improvement and they are giving those ideas to their team to make changes," says Claudine Salama, National Project Coordinator—KP HealthConnect, Coalition of KP Unions, AFL-CIO.

The innovation teams also include one or more KP members who attend weekly meetings to ensure the work stays patient centered. *"Just having a member in the room changes the conversation. I can no longer say, 'Our patients want X; I need to ask first," says Internist Sean Riley, MD, of the Skyline team in Colorado.* Members' suggestions have included: the expected response time for return messages, what they want accomplished in group visits, and how clinicians and staff can develop stronger relationships with them.

What is Changing?

After 12 months of quality improvement work, a new paradigm for primary care delivery is emerging. By leveraging KP HealthConnect the teams have created new workflows that have resolved some patients' problems without a face-to-face encounter. This creates capacity by reducing the demand for traditional office visits. Health care teams now organize the work of the day, week, and month instead of reacting to the daily visit schedule.

1. The Telephone Appointment Visit

In Hawaii, Internist and Pediatrician Todd Kuwaye, MD, and Family Practitioner Samir Patel, MD, used to start each day with a room full of patients waiting to see them and the pressure of multiple member messages and appointment requests building up throughout the day.

Today, these physicians spend the first two hours of their clinical day returning messages from patients who either want an appointment or have some other need. The doctors resolve many medical issues on the phone, and, if necessary, schedule a telephone or office visit for later in the day. *"I love the variety … It's not all one-to-one, face-to-face visits anymore. We are doing a lot more visits by phone and group visits and therefore there are fewer office visits. This helps keep things fresh and different," explains Dr Patel from the Nanaikeola Clinic. "I feel like, as a team, we can meet the needs of the panel much more adequately than before. We're able to be proactive. Our job isn't to just take care of the people in front of us. We can meet more needs, even the needs of people who haven't contacted us, and we can feel good about this."*

I can no longer say, 'Our patients want X; I need to ask first," says Internist Sean Riley, MD, of the Skyline team in Colorado.

In the Southern California Region's Whittier facility, José Goncalves, MD, a family medicine physician, has a similar experience. He now spends one 1/2-day per week on scheduled telephone visits. This approach allows him to care for 15 patients in a half day versus 11-12 in the old system. His patients are satisfied that they have greater access to their primary care physician (PCP) and they avoid a copay and avoid travel on Los Angeles's crowded freeways.

"The new work of the 21st Century Care Innovation Project has increased my flexibility. I feel closer to my patients," says Dr Goncalves. "When they don't need to come in, I can take care of them by phone or e-mail.

Table 2. 21st Century Care Innovation Teams

Colorado: Skyline, Southwest
Group Health Cooperative: Burien
Hawaii: Nanaikeola, Maui Lani
Mid-Atlantic States: Camp Springs
Northwest: Longview-Kelso, Tualatin
Southern California: Whittier

When they do need to come in, I can say, 'Why don't you come in right now; I have time.'"

Patients who have received these calls express surprise and are thrilled to talk to their doctor and resolve their problem quickly versus having to come in to the medical office to receive care.

The Evolution of the Telephone Appointment

While most physicians have made telephone calls to patients throughout their careers, there are some important changes the teams are testing. In some cases, patients are being offered a choice of a scheduled office visit or a scheduled telephone appointment visit (TAV) when they call the call center. TAVs are also being scheduled by the clinic staff for a follow-up visit. Internist and Pediatrician, Chris Shaw, MD, from the Longview-Kelso, Washington team (Northwest Region) says, "*What's nice with booked telephone visits is they say, 'Dr Shaw will call within this time period,' so it gives me a cushion and I don't feel the pressure of people waiting in the waiting room. This makes my day better and patients think phone visits are great.*"

In other cases, patients are offered a call back from their physician (in a one-to-four-hour time period) instead of immediately booking an appointment. TAVs are also occurring on an ad hoc basis when a physician looks at his/her schedule several days in advance and notices a scheduled appointment for something that could be handled over the phone. The teams call this "fishing." Patients who have received these calls express surprise and are thrilled to talk to their doctor and resolve their problem quickly versus having to come in to the medical office to receive care.

In general, telephone visits are increasing and office visits are decreasing (Figure 2).

2. Secure Messaging

Use of secure messaging (confidential e-mail) by clinicians and patients is similarly changing demand for care and creating new capacity. Teams are experimenting with sending previsit e-mails to patients to begin a dialogue prior to the office visit, to better plan the visit, and to nurture their relationship. Patients are pleased to converse with their PCP through secure messaging. Physicians have commented that they can resolve patients' needs through secure messages. With the resulting reduction in office visits, more time is available for patients who need a face-to-face visit. This experience is consistent with the formal secure messaging study conducted in the Northwest Region.

3. Population Care Management

Missed opportunities for better patient care now appear through the use of tools like the Panel Support Tool (PST), KP HealthConnect, and registries. With the increased capacity through the use of the telephone and secure messaging, the 21st Century Care Innovation teams are exploring ways to care for their whole panel of patients. Medical assistants who previously spent considerable time rooming patients for office visits, now have time with clinician team members to experiment with patient outreach (population care management) and engage patients in their own care (collaborative care management).

The PST—a sortable, Web-based member database populated with the medical information of a physician's entire panel of patients—was codeveloped by Northwest, Hawaii, and KP-Information Technology to pro-

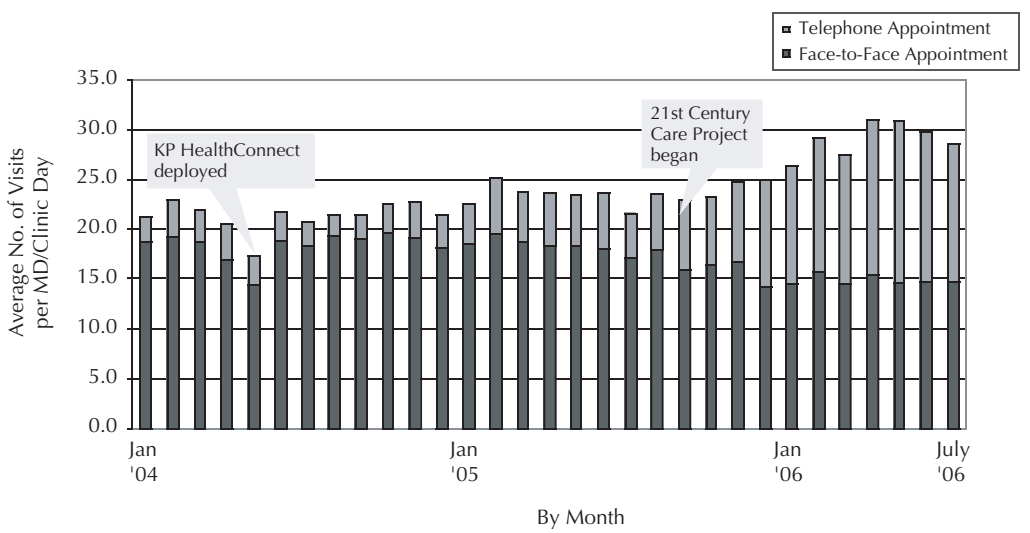

Figure 2. Trend of office visits and telephone visits at the Nanaikeola Medical Office in Hawaii.

vide a stratified snapshot of unmet medical and preventive needs for each patient.[2] Currently available for the Hawaii and Northwest teams, this tool assists the physician and the care teams in prioritizing the outreach activities for the physician, nurse, and medical assistant to improve patient care.

Dr Shaw says *"MAs and LPNs are calling members (on behalf of the physician) who are overdue for a mammogram, cholesterol check, or Pap smear."* He continues, *"On a short-term basis, we are doing more so it isn't saving time, but in the long term, taking care of all of the patient's needs will reduce enormously the unfilled care needs, or even worse, complications."*

Stacey Johnson, Clinical Assistant on the Camp Springs, Maryland team (Mid-Atlantic States Region), says, *"The patients are surprised when I call. Working with them outside of the office makes them more comfortable with me. I like it because I get to do more in my day than checking blood pressures and weights; I'm more connected to the patients."*

Involving the Entire Care Team

As the teams' gain a better understanding of caring for their whole panel, they are also trying to utilize all the members of their care team within their licensure to address unmet needs. Nurse Practitioners are taking a key role in providing group appointments and outreach for patients with multiple comorbidities. Nurses are making outreach calls regarding medication compliance and relaying lab results. Many MD/RN/MA teams are now located in close proximity, often in the same office, to exchange information more easily, which equips the team to more effectively handle questions and messages from patients.

In addition, KP HealthConnect ensures all medical and health care is documented and available to team members when they need it. This has served to increase the competence and confidence level of everyone on the team.

"Having a nurse share my office has really increased our team work. We can share information and I don't feel like I alone have the responsibility to provide care to my entire panel. I can count on any member of our team to pitch in. Everyone works at their highest scope of practice and potential," states Dr Samir Patel from the Nanaikeola Team.

Dr Shaw concurs, "*We are sharing the workload. When there are complex health care issues to talk with the patient about, I make the call. When there are suggested tests and advice, others on the staff are making the calls. We all help patients get what they need. The big benefit of working as a team is to be able to do more with limited time and resources. We have the flexibility to double, sometimes triple, how many problems we can solve for patients."*

Many of the teams are extending the traditional view of the care team beyond the MD, RN, LPN and MA, to include receptionists. At one facility, the Medical Intake Specialists (MIS), who greet and register patients, remind them of overdue preventive care needs and, with the patients' permission, schedule an appointment with the ancillary department on the spot. Teams are also experimenting with expanding team membership to integrate other caregivers, including pharmacists, phlebotomists, nutritionists, behavioralists, and call center agents.

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The Voice of Members

Although member satisfaction with telephone visits is being evaluated using a new survey developed by KP National Market Research, the results from existing Medical Office Visit surveys demonstrate that the changes the teams are making have an impact.

The Whittier team has shown improved satisfaction in "Seeing a Provider When Needed," Appointment Access, and Overall Visit Experience (16%, 8% and 7% respectively) between September 2005 and June 2006. The Longview-Kelso team has seen similar patient satisfaction improvement during the same time frame with an increase in Overall Care (from 71% to 86%), Receptionist Courtesy and Respect (89% to 92%), and Physician and Clinician Interest and Attention (83% to 91%).

Where Do We Go From Here?

Can we draw conclusions about primary care transformation from the 21st Century Care Innovation Project work today? The nine months of available feedback and data indicate short-term improvement, but to effectively evaluate the impact of the changes requires more results.

The project team is collecting a consistent set of utilization, cost, quality, and member and physician/staff satisfaction data across all of the teams. These results should be available in the first quarter of 2007. The innovation teams are refining their new workflows to validate that they are sustainable over time. Teams will continue to test new ways to engage members in managing their health including more expansive use of KP HealthConnect Online features. In 2007, the package of changes developed by the original nine teams will be given to a new set of medical office teams to determine if the experience can be repeated and even improved.

Teams are in the early stages of transformation: something new is taking place. The 21st Century Care Innovation teams are gaining confidence that the changes they are making build upon each other to provide a new and better care system for members, and a more satisfying, sustainable work life for physicians and staff. Physicians and staff are energized, and members are very interested in the new ways KP can deliver care. With support from their local and regional leaders, the teams have had the opportunity to understand what the work is and should be, rather than simply accepting inherited processes. *"I feel like this is the 'doing things differently' that we've been talking about for the past 20 years. We have preliminary data to show that we are meeting the needs of our panel with fewer office visits and that they are not going to other PCPs or urgent care. We are 'touching' more patients than we used to be able to,"* says Dr Barton, MD, internist. *"I can say, 'I love my job.' I wouldn't have said that before. If we spend the time to perfect this over the next 6-18 months, it will be sustainable."*

… members are very interested in the new ways KP can deliver care.

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[a] The KPPG chartered a subgroup to oversee the work. The subgroup includes Louise Liang, MD, Senior Vice President of Quality and Clinical Systems; Jack Cochran, MD, Executive Medical Director, Colorado Permanente Medical Group; Bruce Perry, MD, Executive Medical Director, The Southeast Permanente Medical Group; Mary Ann Thode, President, Northern California Kaiser Foundation Health Plan and Hospitals; Claudine Salama, National Project Coordinator—KP HealthConnect, Coalition of KP Unions, AFL-CIO.

[b] IHI faculty include Marie W Schall, MA, Director; Kevin Nolan, MA, Senior Fellow; Charles M Kilo, MD, Greenfield Health System; and Gordon Moore, MD, University of Rochester Department of Family Medicine.

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What is it about KP HealthConnect that makes this Work Possible?

"See the work. Share the work. Change the work."

While **telephone visits** could have been (and were on a small scale) provided previously, the teams have found that KP HealthConnect enables greater ease, efficiency, and scale. With KP HealthConnect all the relevant patient information is easily accessed by the provider during a telephone visit. "Real-time" processing (notes, lab orders, Rx orders) is possible during a telephone visit. Work is completed during the telephone visit with few or no hand-offs required.

KP HealthConnect makes handling **incoming patient messages** more efficient. Each member of the team can access and resolve any request or problem within their scope of practice when s/he has time. For example, a physician can attach to messages in the RN/MA's in-basket between seeing patients in the office and resolve problems then and there. For requests requiring communication among team members that communication can happen asynchronously—eliminating the need for both parties to be available at the same time in the same space.

For **patient outreach and population care management**, addressing health maintenance alerts can become more than just the clinician's responsibility. The receptionist can schedule overdue screening appointments for patients. MAs can pend orders for the physicians that will address care whenever they have an interaction with the member (eg, flu shot clinic). In addition, health maintenance information available to the care team is simultaneously available to the member via kp.org.

For **collaborative care planning**, teams are experimenting with using the After-Visit Summary to provide patients with documentation of their goals and personal action plans. Colorado is leading the development of a simple tool for recording (via drop-down menus) personal action plans in the chart (aka a "smart widget").

For **e-Visits**, one Hawaii team is experimenting with sending electronic questionnaires to patients to more effectively capture key clinical signs/symptoms from the patients via secure messaging.