

# Quality Improvement



# Clinical Practice Innovation

53 brief abstracts with  
outcome results and actions



links to full-text articles

The  
Permanente Journal

[www.kp.org/permanentejournal](http://www.kp.org/permanentejournal)

# OUTPATIENT — TEAM

## **Introducing the “Teamlet”: Initiating a Primary Care Innovation at San Francisco General Hospital**

<http://xnet.kp.org/permanentejournal/spr08/teamlet.html>

The 15-minute visit cannot meet the health care needs of patients in primary care. In the Family Health Center, the “Teamlet” practice innovation—a clinician and a health coach—was implemented to expand the traditional medical visit into previsit, visit, postvisit, and between-visit care.

## **Puentes Clinic: An Integrated Model for the Primary Care of Vulnerable Populations**

[http://xnet.kp.org/permanentejournal/winter08/Puentes\\_clinic.html](http://xnet.kp.org/permanentejournal/winter08/Puentes_clinic.html)

This integrated model to address the needs of a medically vulnerable population of homeless and injection-drug users emphasizes open access, outreach, groups, and a team approach to care. Emergency Department- and urgent care-visit rates decreased, simultaneous with increased primary care visits.

## **Improving Chronic Care: The “Guided Care” Model**

[http://xnet.kp.org/permanentejournal/winter08/chronic\\_care.html](http://xnet.kp.org/permanentejournal/winter08/chronic_care.html)

In a new model now being tested by Johns Hopkins and Kaiser Permanente in the Baltimore-Washington, DC area, a registered nurse, working in a practice with several primary care physicians, conducts eight clinical processes for 50-60 multimorbid patients, including: assessment, planning care, monitoring, coaching, chronic disease self-management, educating and supporting caregivers, coordinating transitions between providers and sites of care, and access to community services.

## **Whole Person Health for the Whole Population: One-Year Evaluation of Health Coaching**

[http://xnet.kp.org/permanentejournal/Fall07/health\\_coaching.html](http://xnet.kp.org/permanentejournal/Fall07/health_coaching.html)

This article reports on a personal health coaching service, powered by analytics, implemented for 277,000 patients. The positive impact includes quality outcomes—improved glycemic control—and overall patient satisfaction.

## **Understanding Panel Management: A Comparative Study of an Emerging Approach to Population Care**

<http://xnet.kp.org/permanentejournal/SUM07/panel-management.html>

This report examines the successes and problems of this rapidly spreading form of team assistance to primary care physicians in management of populations of patients. An important component consists of communication, largely by telephone, by highly knowledgeable medical assistants.

## **Systems Approaches to Improve Quality, Performance, and Efficiency in the Care of Older Adults**

<http://xnet.kp.org/permanentejournal/spring07/systems.html>

Using the Assessing Care of the Vulnerable Elderly study, David Reuben, MD, UCLA Chair of Geriatrics, reviews the current state of health care to identify barriers—insufficient cognitive capacity and the health care system that really is not a system—and to explore individual and systems efforts to improve outpatient care: delegate activities to patients, minimize data recording time, quality improvement, and population-based health care.

# INPATIENT

## **Developing Minimally Invasive Surgery Centers Within Kaiser Permanente: The Integrated Multidisciplinary Experience of Los Angeles**

<http://xnet.kp.org/permanentejournal/spr09/MIS.html>

Although there are unique issues for each specialty, many common issues, such as anesthetic considerations, organizing operating room teams, standardization of disposable products and electrosurgical units, testing and implementation of new equipment, postoperative care, education, simulation, training, and research are effectively and efficiently addressed through a multidisciplinary approach and complete integration.

## **Early Discharge Study for Premature Infants: Singapore General Hospital**

<http://xnet.kp.org/permanentejournal/Fall08/infants.html>

At Singapore General Hospital, premature infants had a median birth weight of 1210 g. Discharge traditionally occurred when infants were medically fit and weighed 2000 g. The length of hospital stay was reduced 59.8%, primarily by improved discharge planning, revised guidelines (mean discharge at 1915 g), and nurses' active preparation of parents psychologically and mentally for care of their babies at home.

## **A 36-Hospital Time and Motion Study: How Do Medical-Surgical Nurses Spend Their Time?**

<http://xnet.kp.org/permanentejournal/sum08/time-study.html>

In the first hospital environmental study to quantify how nurses spend their time, 767 nurses were randomized to two protocols at 36 hospital medical-surgical units within 17 health care systems and 15 states. Documentation consumed most nursing practice time (35.3%), followed by medication administration (17.2%), and care coordination (20.6%). Patient care activities only accounted for 19.3%.

## **The Dartmouth Atlas Applied to Kaiser Permanente: Analysis of Variation in Care at the End of Life**

[http://xnet.kp.org/permanentejournal/winter08/Dartmouth\\_Atlas.html](http://xnet.kp.org/permanentejournal/winter08/Dartmouth_Atlas.html)

The *Dartmouth Atlas* method for examination of variation in care at the end of life was replicated by Kaiser Permanente (KP). Although KP inpatient care use rates were 25% to 30% lower and hospice use rates were higher than in the surrounding communities, there was still two- to four-fold variation in inpatient care use across KP geographic areas. Results reinforced emphasis on palliative care for patients with chronic conditions and on earlier transitions to hospice.

## **Decreasing Medication Discrepancies Between Outpatient and Inpatient Care Through the Use of Computerized Pharmacy Data**

<http://xnet.kp.org/permanentejournal/spring07/decreasing.html>

This study provides an example of a positive impact of modern computer technology and upon the quality of medical care.

## **Perioperative Tight Glycemic Control: The Challenge Of Bariatric Surgery Patients and the Fear of Hypoglycemic Events**

<http://xnet.kp.org/permanentejournal/spring07/perioperative.html>

Although tight glycemic control has resulted in improved outcomes, fear of hypoglycemia has been an important barrier to implementation. This triple-arm prospective trial demonstrates improved hyperglycemic control in Henry Ford Health System bariatric surgery patients with no increase in hypoglycemia.

# QUALITY — PATIENT SAFETY

## VOHS AWARDS:

### **Collaborative Cardiac Care Service: A Multidisciplinary Approach to Caring for Patients with Coronary Artery Disease**

<http://xnet.kp.org/permanentejournal/sum08/cardiac-care.html>

A Collaborative Care Service has, through lifestyle modification, medication initiation and adjustment, patient education, laboratory monitoring, and management of adverse events improved cholesterol screening, and reduced low-density lipoprotein cholesterol level and all-cause mortality associated with CAD, and has improved patient and physician satisfaction.

### **The Kaiser Permanente National Total Joint Replacement Registry**

<http://xnet.kp.org/permanentejournal/sum08/joint-replacement.html>

As of March 31, 2007, the Total Joint Replacement Registry recorded 16,945 primary total hip arthroplasties (THA) and 2144 revisions (11.2%); and 30,815 total knee arthroplasties (TKA) and 1794 revisions (5.5%). Statistically significant findings include: older age and higher American Society of Anesthesiology risk scores for revision THAs. Osteoarthritis is the most common diagnosis for THA and TKA, and aseptic loosening and instability are most common for revision THAs and TKAs.

### **A Multidisciplinary Approach to Transition Care: A Patient Safety Innovation Study**

[http://xnet.kp.org/permanentejournal/Fall07/transition\\_care.html](http://xnet.kp.org/permanentejournal/Fall07/transition_care.html)

This article describes a systematic and comprehensive program for dealing with the problems inherent in a complex health system necessitating frequent transfers of responsibility among providers. There is concentration on avoidance of medication errors and coordination of outpatient care.

### **Early Start: An Integrated Model of Substance Abuse Intervention for Pregnant Women**

<http://xnet.kp.org/permanentejournal/SUM07/early-start.html>

Because of prior success with substance-abuse problems in pregnant women, a new program was developed, tested, and widely transferred, resulting in significantly lower rates for placental abruption, preterm labor, and stillbirth. Key elements are universal screening and embedment of substance-abuse specialists within Obstetrics Departments.

### **Controlling High Blood Pressure**

<http://xnet.kp.org/permanentejournal/summer06/control.html>

Several interventions boosted the Mid-Atlantic Region HEDIS score to the top in KP for controlling high blood pressure in hypertensive patients—a blood pressure measurement competency program; consistent physician, team and patient education; mandatory measurement in all clinical encounters; an IT system to alert, trend and feedback blood pressure measurements.

### **Operation Innovation: A New Level of Care and Service for Breast Cancer Screening, Detection, and Treatment**

<http://xnet.kp.org/permanentejournal/summer06/operation.html>

This innovation project—comprised of mammography outreach and timely diagnosis—resulted in the Southern California Riverside Area leading KP in breast cancer screening, and then transferring the best practice.

## LAWRENCE AWARDS:

### Northwest Simulation Center—Sharpens Clinical and Communication Skills for Individuals and Teams

<http://xnet.kp.org/permanentejournal/spr09/simulation.html>

Many authorities have suggested that some variant of team training is likely to reduce human error in operating rooms, Emergency Departments, resuscitation teams and other settings within health care—where human interaction is common and where breakdowns in communication and teamwork can have critical consequences. The Kaiser Sunnyside Medical Center Regional Simulation Center achieves this end.

### Ohio Safety Action Teams

<http://xnet.kp.org/permanentejournal/spr09/safety.html>

Following the implementation of a new process—“Images-to-Operating-Room”—a survey of all Safety Action Team (SAT) participants showed they knew more about building a reliable process, their job satisfaction increased, patient safety was improved, and the gains were sustained. The plan is to continue SATs which are readily transferable to other areas and facilities.

### Implementation of a High-Alert Medication Program

[http://xnet.kp.org/permanentejournal/spr08/high-alert\\_medication.html](http://xnet.kp.org/permanentejournal/spr08/high-alert_medication.html)

High-alert medications—500,000 doses annually through Kaiser Permanente Northern California—carry a high risk of alarm, with potential clinical outcomes from administration errors. With program introduction, a statistically significant drop in errors occurred for 23 consecutive months. As of November 30, 2007, 232 days had passed without a negative event. The multidisciplinary group standardized handling, enhanced education, and developed monitoring functions.

### Promoting Patient Safety: The Rapid Medical Response Team

<http://xnet.kp.org/permanentejournal/SUM07/patient-safety.html>

With teams of an ICU charge nurse and a respiratory therapist, and directed primarily at non-ICU medical and surgical patients, this program reduced adverse events, deaths, and unneeded ICU transfers. Readiness to initiate the process and education of the staff were major elements.

### The Southern California Perinatal Patient Safety Project

<http://xnet.kp.org/permanentejournal/summer06/perinatal.html>

The 2005 Lawrence Patient Safety Transfer Award-winning project was implemented by the Southern California Region. The implementation challenges and successes are presented here.

### Patient Safety Executive Walkarounds

<http://xnet.kp.org/permanentejournal/summer06/walkaround.html>

The 2005 Lawrence Patient Safety Award-winning project, developed by the KP San Diego Region, is a prescribed, systematic process for facilitating regular dialogue between caregivers and senior organizational leaders to improve patient safety, and has resulted in a dramatic increase in identification and resolution of patient safety concerns.



# TECHNOLOGY

## **Investing in Health IT: A Stimulus for a Healthier America**

[http://xnet.kp.org/permanentejournal/spr09/health\\_IT.html](http://xnet.kp.org/permanentejournal/spr09/health_IT.html)

Congress should explore investing in the nation's health care delivery system. KP HealthConnect securely connects 8.7 million people to their physicians, their health care teams, their personal health information, and the latest medical knowledge, leveraging the integrated approaches to health care available at KP. It's not just about digitizing the visit: it's about using visit data to inform and ultimately to transform care delivery.

## **Information Technology Innovation**

<http://xnet.kp.org/permanentejournal/Fall08/information.html>

Information technology innovations are assessed for physician and patient use. A large-scale example is Kaiser Permanente's Sidney R Garfield Center for Health Care Innovation—a care delivery simulation laboratory. On a small scale is a trial of the use of a 1-lead electrocardiogram rhythm strip transmitter in the form of a wallet placed against the chest and connected to a cell phone that tracks rhythm disturbances.

## **From Wolfman to Medicine Man: Podcasting for Clinicians**

[http://xnet.kp.org/permanentejournal/spr08/podcasting\\_for\\_clinicians.html](http://xnet.kp.org/permanentejournal/spr08/podcasting_for_clinicians.html)

If Gen-X youth can walk about with tens of gigabytes—thousands of their favorite tunes—nestled in MP3 players the size of a short stack of credit cards—could this technology make life better in clinical medicine? Learn how to glimpse the clever, technically sophisticated world of medical podcasting: audio files.

## **A Conversation with David Bates, MD, MSc, Chairman of the American Medical Informatics Association**

[http://xnet.kp.org/permanentejournal/spr08/David\\_Bates\\_interview.html](http://xnet.kp.org/permanentejournal/spr08/David_Bates_interview.html)

In an interview, Harvard Professor of Medicine, David Bates, MD, speaks on recent progress toward widespread health information technology adoption; why decision-support tools are now more important than ever; and the necessity to develop the next generation of health informatics professionals.

## **Implementing the Electronic Medical Record in the Exam Room: The Effect on Physician-Patient Communication and Patient Satisfaction**

<http://xnet.kp.org/permanentejournal/spring07/implementing.html>

Introducing the computer into the exam room raises important questions about physician-patient communication and patient satisfaction. Patient satisfaction scores were compared to evaluate how scores changed as physicians started using computers in the exam room. Results show no significant changes in patient satisfaction overall. However, if the patient felt actively involved and perceived that the physicians liked the computer, high levels of satisfaction were reached.

**MyChart—A New Mode of Care Delivery:  
2005 Personal Health Link Research Report**

<http://xnet.kp.org/permanentejournal/spring07/mychart.html>

A secure member Web site where registered patients may view portions of their medical record and exchange secure messages with their primary care physicians was evaluated on the basis of a survey, content analysis, and physicians logs. The survey found that patients used e-mail messaging appropriately, thereby reducing the rate of primary care visits and phone calls. Patients' high satisfaction was based on: questions were answered, completeness and timeliness of answers, desired results achieved, courtesy of responses, and patients' influence over decisions.

**Obesity in the Kaiser Permanente Patient  
Population and Positive Outcomes of Online  
Weight-Management Programs**

<http://xnet.kp.org/permanentejournal/spring07/obesity.html>

The effects of obesity in the Kaiser Permanente population are reviewed and two nationally available online self-care weight management programs are discussed: 1) "Balance"—participants lost significantly more weight than controls, had fewer office visits, and greater satisfaction; 2) "10,000 Steps" (Health-Partners)—31% of participants reported being "more fit."

**Decreasing Medication Discrepancies Between  
Outpatient and Inpatient Care Through the  
Use of Computerized Pharmacy Data**

<http://xnet.kp.org/permanentejournal/spring07/decreasing.html>

This study provides an example of a positive impact of modern computer technology upon the quality of medical care. Medication discrepancies in admission orders, discharge summaries, and three-month prescription refills were all reduced when a computerized pharmacy database was actively used to reconcile medications.

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

<http://xnet.kp.org/permanentejournal/winter07/people.html>

Through the use of technology—telephone appointments, secure messaging, and the Panel Support Tool for population care management—the 21st Century Care Innovation project is improving patient care delivery and developing a more fulfilling and sustainable work environment for physicians.

**Total Panel Ownership and the Panel Support  
Tool –“It’s All About the Relationship”**

<http://xnet.kp.org/permanentejournal/summer06/panel.html>

The Northwest and Hawaii regions embarked on a transformation of the Care Delivery System that empowers and supports the team: a focus on relationship; a dedicated core team owns the care of the panel; innovators are allowed to emerge; and the team has the tools to support the care of the panel. The Panel Support Tool is Web based, compliments HealthConnect, and easily assesses the health needs of any single patient or any cross-section of the physician's panel.

# COMMUNICATION

## **Relationship of a Physician's Well-Being to Interactions with Patients: Practices of the Highest Performing Physicians on the *Art of Medicine* Patient Survey**

<http://xnet.kp.org/permanentejournal/Fall08/editorialstudy.html>

In a trusting relationship, physicians who, according to patient surveys, satisfy their patients best described that as doctors they are “part of the medicine” through several empathetic activities: respect, attention and presence, listening, connection, reassurance and support, touch, knowledge, explanation and education. This medicine has a powerful therapeutic treatment effect and is responsible for physicians’ sense of feeling valued, of making an important contribution, of making a difference, and of creating personal and professional well-being.

## **A Clinical Communication Strategy to Enhance Effectiveness and CAHPS Scores: The ALERT Model**

<http://xnet.kp.org/permanentejournal/sum08/ALERT-model.html>

The US Agency for Healthcare Research and Quality surveys patients and rates health plans on metrics, including four questions assessing the patients impression of the physician’s communication skills: listened carefully, explained things understandably, respected what the patient said, and spent enough time. The authors detail how to improve communication in these areas to achieve the established beneficial clinical results of effective communication.

## **Five-Year Experience: Reflective Writing in a Preclinical End-of-Life Care Curriculum**

[http://xnet.kp.org/permanentejournal/spr08/end-of-life\\_care.html](http://xnet.kp.org/permanentejournal/spr08/end-of-life_care.html)

Analysis of 829 medical students’ reflection essays (2002-2007)—522 out-of-class and 307 in-class—identified four themes related to caring for dying patients: emotional response, communication support, shift from curing to caring, and feeling ill-prepared.

## **What Is Trying to Happen Here? Using Mindfulness to Enhance the Quality of Patient Encounters**

[http://xnet.kp.org/permanentejournal/spr08/patient\\_encounters.html](http://xnet.kp.org/permanentejournal/spr08/patient_encounters.html)

Mindful self-awareness is a disciplined means of directing attention to the thoughts, affect, intentions, and physiologic shifts that occur moment to moment, and is a way of promoting optimal outcomes in patient encounters, such as the formation of an empathetic relationship.

## **A Decade of Experience with a Multiday Residential Communication Skills Intensive: *Has the Outcome Been Worth the Investment?***

[http://xnet.kp.org/permanentejournal/Fall07/communication\\_skills.html](http://xnet.kp.org/permanentejournal/Fall07/communication_skills.html)

This study of videotaped, role-play practice with actors for 525 physicians cites significant effects: change in habits, patient satisfaction, and physician satisfaction—all sustained over time.

## **Communication Practices of Physicians With High Patient-Satisfaction Ratings**

<http://xnet.kp.org/permanentejournal/winter07/communication.html>

Videotaped clinic visits and follow-up interviews reveal that the highest rated physicians focus on the patient’s agenda and draw out their story with active listening responses, which builds a personal connection and relationship.

## COMMENTARY

### SCPMG University: Helping New Physicians Adapt and Succeed

<http://xnet.kp.org/permanentejournal/winter09/SCPMG.html>

An individual's first few months with an organization are crucial. During that period, professionals develop a sense of what is important, what the organization expects from them, and what they can expect in return. Mean scores, from first-year, pre- to postprogram surveys, improved significantly on 11 of 14 items demonstrating the success of the University program in helping physicians adapt to their new positions, thus laying the foundation for a successful career within the medical group.

### Isn't it Time to Stop Accepting Handouts for our Educational Efforts?

<http://xnet.kp.org/permanentejournal/spr09/educational.html>

Commercial support for continuing education risks distorting educational content, invites bias, and endangers professional commitment to evidence-based decision making. The Permanente Medical Groups are leading a ban on commercial support for accredited organizations that provide continuing education, especially because it is not the size of the gift, but the gifting itself that creates the desire to reciprocate.

### Attaining Comprehensive Health Care Improvement is Imperative

[http://xnet.kp.org/permanentejournal/spr09/health\\_care.html](http://xnet.kp.org/permanentejournal/spr09/health_care.html)

Two physicians are on journeys to improve health care. Lawrence Weed, MD, (problem-oriented medical record) explores how practitioners process and apply information, using "knowledge couplers" for decisions based on quality data input rather than on recall. Donald Berwick, MD, believes that the key to higher quality is understanding and improving 100 core work-flow processes covering 95% of all patient care. We need both approaches.

### Dissemination of Innovation: The Will to Change an Organization

<http://xnet.kp.org/permanentejournal/sum08/innovation.html>

For an innovative organization to become a learning organization requires innovation dissemination. The top ten dissemination mistakes in organizational change are cited, including: assuming that information alone will influence decision making, and advocating single interventions as the solution to a problem.

### The Integral Model: Answering the Call for Whole Systems Health Care

[http://xnet.kp.org/permanentejournal/spr08/integral\\_model.html](http://xnet.kp.org/permanentejournal/spr08/integral_model.html)

Integral Health Care—an emerging new model—acknowledges multiple dimensions of living, healing, and curing that go beyond reduction of symptoms. Tools include: a ten-minute mindfulness break; working together in teams to make shared decisions; expanding to meet your patient's needs and perspectives; and finding new ways to stay open to new ideas.

### Innovation in Our Nation's Public Hospitals: Interview with Five CEOs and Medical Directors

<http://xnet.kp.org/permanentejournal/winter08/innovation.html>

Prominent leaders talk about: developing an integrated system with community clinics and neighborhoods; and, for an ever larger, diverse, and immigrant population, a new simultaneous translation system; and training future doctors by involving them in the hospital's quality improvement committees and clinical projects.



### **Confronting the Uncomfortable: Health Plans and Health Disparities: A Moral Dilemma in a Morally Driven Industry**

[http://xnet.kp.org/permanentejournal/winter08/moral\\_dilemma.html](http://xnet.kp.org/permanentejournal/winter08/moral_dilemma.html)

Health plans, in fulfilling their obligation to provide a reliable, safe, and secure system of care to millions of users, must also assume a leading role in demonstrating a commitment to abrogate the destructive role of racism and social injustice upon the health care of all Americans.

### **Social Science Interventions in Medicine Produce Medical Science Outcomes**

[http://xnet.kp.org/permanentejournal/Fall07/social\\_science.html](http://xnet.kp.org/permanentejournal/Fall07/social_science.html)

Scientific disciplines like psychology, sociology, and anthropology contribute significantly to medical practice and to the objective outcomes sought through medical science.

### **Quality through Sustainability and Transferability**

<http://xnet.kp.org/permanentejournal/SUM07/transferability.html>

Is an innovative practice that improves quality sustainable? Can it be transferred to other sites in a whole system of care for a large population? The future of American medicine depends on an affirmative answer to these important questions. The Original Articles in this issue demonstrate the importance of sustainability and transferability in the process of quality innovation. Beyond knowledge of the technical issues involved, cultural issues present the most significant challenge.

### **Transforming Medicines**

<http://xnet.kp.org/permanentejournal/SUM07/medicines.html>

Patients undergoing treatment with certain CAM systems (ayurveda, traditional Chinese medicine, and naturopathy) may experience and value *nonspecific, whole-person, or transformational* changes as essential components of the healing process.

### **Doctors and Nurses Using an Electronic Health and Medical Record: Research Studies Offer Multiple Views of 21st Century Health Care**

<http://xnet.kp.org/permanentejournal/spring07/overview.html>

Relationship between doctors and patients is built on continuous communication, requiring multiple modes and encounters. With the developing electronic capability that doctors and patients now have, they can complement their traditional forms of interaction—office visit, hospital visit, and telephone—to form quicker and deeper relationships than previously possible; and both can access data in a common electronic medical record.

### **A Next Step: Reviewer Feedback on Quality Improvement Publication Guidelines**

<http://xnet.kp.org/permanentejournal/winter07/nextstep.html>

Despite the intensity of designing and enacting QI studies to improve the processes, reliability, and safety of medical care, doctors have historically not captured or reported their data and findings with enough systematic rigor. Publication guidelines can benefit researchers, editors, reviewers, and physician readers.

### **Empathy: In a Moment, a Powerful Therapeutic Tool**

<http://xnet.kp.org/permanentejournal/fall06/empathy.html>

The highest-performing physicians by patient satisfaction survey create a therapeutic moment for the patient (during a visit) to which they ascribe a treatment effect. These physicians believe that relationship is the necessary context and describe several empathetic activities that produce this moment, including: attention and presence, listening, connection, reassurance and support, explanation, and understanding.

## The Permanente Journal

**Mission:** *The Permanente Journal* is published for physicians, practitioners, and nurses to create and to deliver superior health care through the principles and benefits of Permanente Medicine.

**Permanente Medicine** is preventive, innovative, evidence-based, population care practiced by a multispecialty group, using an electronic health and medical record, and focused on patient relationships and outcomes.

**Circulation:** 25,000 print readers per quarter, and accessed by 501,000 unique Web readers in 2008 from 164 countries of the world.