The James A Vohs Award

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20 Vohs Honorable Mention: The Kaiser Permanente Therapy Management Strategy. Beth A Martin, RN, MBA; Reg Warren, PhD; Carol Barnes, MS, PT, GCS; Glenn Gade, MD; Paul Barrett, MD; and Robin Gunning, MD
Because of perceived inconsistency in several aspects of care in skilled nursing facilities and in other long-term care institutions, measures of function and quality were applied to patients in a number of these facilities. Outcome measures showed improved quality with no increase in amount of care.

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Written management protocols are an established component of childhood asthma self-management. The authors explored various formats in terms of patient and parent comprehension and preference, concluding that pictures, color, and ease of reading were important components of preference.

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Ronald R Louie, MD
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Soul of the Healer
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The Permanente Journal is always interested in considering artwork by Kaiser Permanente clinicians and employees. If you would like to submit art for consideration for the cover or interior of The Permanente Journal, please use the following guidelines:
Send us a high-quality color photograph of your art no smaller than 4x5 and no larger than 8x10. For cover art submission, portrait orientation is preferred. Please include a cover letter explaining Kaiser Permanente association, art background, medium and a brief statement about the artwork (description, inspiration, etc). Electronic and e-mail submissions are accepted, 600 dpi resolution is required.
**Original Research**

41 Financing Clinical Trials Research at Kaiser Permanente.
Steve Stoller, PhD, MPH

KP is in a unique position to engage in industry-sponsored clinical trials because of its large, diverse, and representative population, access to that population, excellent data systems, and quality of patient care. Determining actual research costs is complex, and negotiating with industry takes time and experience. Kaiser Foundation Research Institute (KFSR) has developed a comprehensive system for costing clinical and research services and is prepared to provide support that includes budgeting for proposals and negotiating clinical research contracts.

**Health Systems**

53 Addressing the Challenge of New Medical Technologies: One Permanente Clinician’s View—Part II. Paul Wallace, MD

Dr Wallace continues his informative discussion from the last edition of The Journal by presenting guidelines for clinicians on the integration of new technology into their practice.

58 CPC Corner—Positive Results from Clinician-Patient Communication Programs at Kaiser Permanente: A Physician’s View. Steven M Levine, MD

Dr Levine presents a personal testimony on the favorable impact that the clinician-patient communication programs have had on his internal medicine practice.

**External Affairs**

66 A New Front in the Battle to Preserve Our Reputation. Allan Mann

In the past, critics questioned our ability to deliver quality health care and we responded by publicizing our research, our clinical excellence and our many awards and honors. Allan Mann describes our current task: to promote our integrity. He offers practical methods by which each of us can, in our day-to-day interactions, maintain our integrity and promote a positive image of KP.
Tom Janisse, MD, Editor-in-Chief

In our continuing effort to meet the needs of KP clinicians, The Permanente Journal Editorial Team once again surveyed our readership for feedback and comments between November 2000, and March 1st, 2001.

Survey Method
The initial survey appeared as an insert in the Fall 2000 issue with a duplicated survey on our TPJ Web site. We complemented these in January with a follow-up electronic mail reminder, encouraging one of several response options. People returned their surveys in the following ways: 63% paper mail, 26% fax, 6% Web, 5% e-mail. I cite these methods to demonstrate how our readers, following national trends, are increasingly utilizing electronic communication. Keeping pace with the most desirable and convenient methods that people employ to learn new information and to communicate with each other is essential.

Overall Satisfaction
In answer to the question, “Overall, how would you rate your satisfaction with The Permanente Journal?” clinicians were 85% highly satisfied (30% excellent and 55% good) versus 6% dissatisfied (3% fair and 3% poor). Ten percent cited average, which we designated neutral; however, given our national competitor general and specialty journals, we consider average as favorable. Our readers were more highly satisfied (85%) in 2000/2001 than in 1998 (71%), a 14% increase.

Sample Size and Confidence
The sample size of 610 on a clinician readership base of 15,700 gives the survey results a 95% confidence level of representing our population. Each region responded in a near equivalent percentage of 4%, except for the Northwest, which had a 20% response rate. (I attribute this to my ability to reach all NW clinicians more readily by electronic reminders and our extra step of mailing a second hardcopy of the survey to each clinician.) The high NW response rate is of particular note when viewed alongside the national statistics. The satisfaction/dissatisfaction rates in the NW so closely reflects the interregional rates, it confirms a high degree of confidence in the overall results. In addition, this cross-regional similarity suggests a common set of needs and practices of Permanente clinicians.

General Comments and Sections
Looking specifically at the “General Comments,” clinicians were most satisfied with “The look” (graphics, photography, and art) (87%), and as a “Forum for clinicians to express their talents in the humanities” (84%). It is gratifying that Permanente clinicians create “the look” and “the humanity” with...
their photographs and paintings, and their poetry and stories. Readers were also highly satisfied with “Best practices” (82%), “Fosters a spirit of Permanente community” (81%), “Practical information” (74%), and “New information” (71%) (Figure 1).

In the “Sections” area of the survey, clinicians were most satisfied with “Permanente Abstracts” (82%), followed by “Clinical Contributions” (79%), “Soul of the Healer” (78%), “Editors’ Comments” (76%), “Health Systems” (73%), “Original Research” (72%), and “External Affairs” (67%) (Figure 2).

Who Reads TPJ?
Using the survey respondents as a readership proxy, 85% of our readers are physicians and 15% affiliated clinicians; 73% are specialists, and 27% are primary care. Eighty-five percent of clinicians say TPJ is published often enough, 10% too often, and 5% not often enough. Eighty-six percent say the issues are the right length, 12% too long, and 2% too short. TPJ also has a readership which is largely a mystery to us—those who access us online in growing numbers.

TPJ Online
One of the more surprising survey comments we heard was “Something online might be read more.” Since we have been online with a TPJ Web site, since 1997, and linked to the KP home page and to PKC, we must conclude that we haven’t marketed our Web site well enough. Many people access our site, as evidenced from two automatic site reports we receive: “Daily Unique Visitors” (Figure 3) and a “Web Site Search Engine Activity Report.” The first report captures each instance a different (unique) person visits the site, not just how many “hits” (clicks) the site receives (which could involve one person clicking on six or seven pages on one visit to the site). The report notes daily activity charted by month (2470 unique visitors in March), and a previous month, running-average comparison (and 2433 visitors in February). The most common TPJ Web site use is on weekdays, with use consistently falling 60% on the weekends. We don’t have a way yet of identifying who is visiting the site, however we can track how people are arriving at our site, for example search engines, direct links from other web sites, and domains (i.e., AOL.com, Pacbell.com, Earthlink.net, and Home.com).

The second report, “Web Site Search Engine Activity Report,” notes the daily number of queries (Table 1), and keywords queried (Table 2: “Top 20 Keywords for February/March”). Because of the domain identification, we know that many of the people accessing our site are from outside KP. This is a measure of the health care con-

![Figure 3. Daily Unique Visitors at TPJ Web site.](image-url)
editors' comments

The Permanente Journal/ Spring 2001/ Volume 5 No. 2

consumers' interest in medical information and in Permanente Medicine. The same remarkable tracking technology we used might, with some imagination, someday be used to help clinicians learn more about the desires and interests of patients in their own practices.

In addition, TPJ is now listed on “MedNets”—an international research site with proprietary search engines for every specialty in medicine searching only medical databases.

Current TPJ Web site capabilities are addressed later in this editorial.

Most Common Comments

Ninety-seven clinicians (16%) made comments on their surveys. The most common comment (24%) is a variation of “The journal gives us pride that Permanente produces such a nice piece of work. It clearly elevates PMG.” Bookends of the comments we received range from “I am surprised at how many articles are meaningful to me in each issue,” to “In my opinion, we should cease publication because the journal makes a negligible contribution to medical science,” and “Stop this magazine; spend the money on more staff and patient care.” In addition, there are always several comments on the physical aspects of the journal, ie, about the “fancy” paper we use. Surprisingly, the perceived “thicker, slicker” paper we use costs the same from our printer as the thinner paper more common in other national journals. In any case, we are constantly re-exploring paper options to reduce costs, while maintaining the quality.

There are thousands of clinicians served by the journal, and almost as many opinions and perspectives. While responding to the opinions of our readers and integrating their ideas, we will continue to work to create a high quality publication, both in print and on-line.

We are pleased with comments like: Especially like the blend of medicine and the humanities.”

Table 2. Top 20 Keywords for February/March
(Not including common words such as “the”)

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Most desired topics for the future

The most requested topic area for future articles relates to daily medical practice:

• “More focus on coping with the everyday challenges of being a busy clinician.”
• “Ways to improve your practice (not really covered in ‘best practices,’) more along the lines of ‘continuing improvement team’: clinical, nursing, reception, quality of life.”
• “Coping with a fast-paced practice with too many patients.”
• “Electronic charting.”
• “Advice by experienced MD to junior doctors on handling difficult patients.”
• “Patient-physician communication.”
• “How to behave in the exam room.”
• “Techniques to improve efficiencies of a physician’s practice in daily activities.”
• “Computers and PDAs in medical practice.”

On time (or lack of time):

• “Not enough time to read journals because my practice is so busy.”
• “I only have time to scan it.”
• “I put it in my reading pile and never look at it again.”

On daily practice area:

• “Pharmaceutical issues.”
• “Prescribing patterns.”
• “Dealing with direct-to-consumer advertising.”

On complementary and alternative medicine:

• “Spirituality, mindfulness, patient care”
• “Value of ‘alternative medical therapies’ for specific medical conditions.”
• “More ‘healing’ articles.”

On Permanente:

• “History of the PMGs.”
• “Personalities of the past.”
• “Outstanding physicians.”
• “Permanente people: profiles of interesting, inspiring, off-beat, cutting-edge people.”

On pediatrics:

• “More Pediatrics articles.”
• “More Pediatrics topics.”
• “More Pediatrics care.”

On specialties:

• “More specialty emphasis.”
• “A section each issue devoted to specialty areas.”
• “Information on online sites that provide easily utilized
clinical information based on specialty.”
• “Every issue should have a review article by a specialist geared toward primary care.”
• “Surgical issues.”
• “From each specialty: ‘what every clinician should know about …’”

On clinician well-being:
• “More on the human side of being a doc.”
• “Cultivate nurturing work environment.”
• “Culturally competent care.”
• “Physician burn-out.”
• “Over a year ago, I saw an article for ‘Care for Caregivers’ about Lisa Beesley-Lippman and the Southern California caregivers. I contacted Lisa, we brought the program to Northern California. It was a marvelous experience. It would never have happened without TPJ. Thanks!”
• “Medical ethics.”
• “Anger management.”

On pain:
• “Chronic pain.”
• “Pain management.”
• “Pelvic pain.”
• “New research on chronic pain.”
• “Pain control.”
• “Treatment of chronic pain.”

On the psychosocial:
• “More mental health issues.”
• “Psychosomatic illness.”
• “Stress illness.”
• “Psychological assessment.”
• “Obesity and eating disorders.”
• “Addiction medicine.”
• “Integration of counseling in everyday practice.”

What’s Coming in TPJ
Here is our list of future theme issues based on listening to clinicians and responding to survey comments:
• Summer 2001: Patient Safety
• Fall 2001: Clinician Work Environment
• Winter 2002: Pediatrics
• Spring 2002: Annual Vohs Awards for Quality
• Summer 2002: Complementary & Alternative Medicine
• Fall 2002: Sub-Specialty Reviews

On clinician well-being:
• “More on the human side of being a doc.”
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• “Culturally competent care.”
• “Physician burn-out.”
• “Over a year ago, I saw an article for “Care for Caregivers” about Lisa Beesley-Lippman and the Southern California caregivers. I contacted Lisa, we brought the program to Northern California. It was a marvelous experience. It would never have happened without TPJ. Thanks!”
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• “Integration of counseling in everyday practice.”

Conclusions
Physicians and clinicians strongly support The Permanente Journal and cite high overall satisfaction with its content, format, appearance, and periodicity. Our evolution toward a best practice publication, and a best practice communication and learning tool, is enhanced with clinician use and advice.

When clinicians and patients best access information and learn new knowledge using print versus electronic forums is still not understood, and continues to evolve. Print and electronic communication vehicles each have unique advantages and shortcomings. Both have a place and often complement each other when integrated. TPJ will maintain, and enhance, both forums looking for the greatest advantages for clinicians and patients.

When clinicians can offer their patients medical literature, authored and published by Permanente, to confirm their treatment recommendations, it can be a powerful inducement to patient adherence and improved efficacy and medical outcomes. ❖
Change has been the elemental constant of medicine since the days of Hippocrates; historically it has taken place in scientific advances. Today change occurs more than ever in the realm of how care is delivered to the patient. From a new specialty to team-based care, Kaiser Permanente is an active agent in creating positive change.

Dr Diane Craig's report in this edition of The Permanente Journal on the national Kaiser Permanente Hospitalist meeting demonstrates how rapidly the changes in health care have occurred over the past few years. For generations primary care physicians have been responsible for hospitalized patients, dividing their time and focus between the office and hospital rounds. Today, the new specialist area of Hospitalists has emerged to fill a growing need. Isn't is amazing how readily and quickly a new process of care is accepted?

I believe the transition of many health care organizations, including Kaiser Permanente, to team-based care will impact ambulatory care just as dramatically as the Hospitalist programs have impacted hospital care. (I define “team-based care” as a small unit of caregivers including receptionists, medical assistants, nurses, associate providers, and physicians working together to care for a definable population of patients.)

It is my opinion that the extent to which the health care team works together will correlate directly with how much improvement in service, quality, and professional satisfaction the team will attain. How each discipline contributes to the patient's care experience and how interdependent the team members are when it comes to patient flow (not practicing in silos with separate schedules, but rather all team members participating in a fluid care process in which all help each other out) will all define how effectively a team works together.

Why an emphasis on teams? I believe that highly functioning teams are the only viable method of meeting the increasing demands and expectations of a large panel of patients while at the same time enhancing the professional well-being of all team members. The best approach to a high-stress work environment is to have a team deal with the stressors together rather than leaving each individual to fend for themselves.

During my 20 plus years with Kaiser Permanente, I have had opportunities to witness several high performing teams. Here are some of my learnings:

1. The effectiveness of the physician team leader is the most frequent direct predictor of the team’s level of performance. It’s the leading, not the managing, that makes the difference.
2. The team needs to know what is expected of them and needs crystal-clear, regular feedback on these expectations. The closer the performance measurements (eg, patient satisfaction, cost, quality measurements, People Pulse scores) are to the team, the more impact the feedback will have on their performance.
3. Since we know that one of the most important drivers of professional satisfaction is the level of influence that clinicians have over their work, involvement of team members in the functioning of the module is essential. Regular team meetings, team interviews and input on new team applicants, and team leader involvement in reward and corrective action of team members may sound strikingly different than present processes—but therein lies the value!

In the future I would like to see the Health Systems section of The Permanente Journal present the experiences you have had working on health care teams. I’m very interested in your personal testimonies. Are health care teams simply a fad, or are they in fact the future building block for our success? We want to hear from the Permanente community—what do you think? E-mail your thoughts and ideas to me at Lee.Jacobs@kp.org. ✤
Relation between hospital primary angioplasty volume and mortality for patients with acute MI treated with primary angioplasty vs thrombolytic therapy

CONTEXT: Institutional experience with primary angioplasty has been suggested as a factor in selecting a reperfusion strategy for patients with acute myocardial infarction (AMI). However, no large studies have directly compared outcomes of primary angioplasty vs thrombolytic therapy as a function of institutional experience.

OBJECTIVE: To compare outcomes among patients with AMI who were treated with primary angioplasty vs thrombolytic therapy at hospitals with different volumes of primary angioplasty.

DESIGN: Retrospective cohort.

SETTING: A total of 446 acute care hospitals with 112 classified as low volume (≤49 procedures) based on their annual primary angioplasty volume, 223 as intermediate volume (50-49 procedures) and 111 as high volume (≥50 procedures) based on their annual primary angioplasty volume.

PATIENTS: A total of 62,299 patients with AMI treated with primary angioplasty or thrombolytic therapy from June 1, 1994, through July 31, 1999.

MAIN OUTCOME MEASURE: In-hospital mortality.

RESULTS: Mortality was lower among patients who received primary angioplasty compared with those who received thrombolysis at hospitals with intermediate volumes (4.5% vs 5.9%; P < .001) and high volumes (3.4% vs 5.4%; P < .001) of primary angioplasty. At low-volume hospitals, there was no significant difference in mortality between patients treated with primary angioplasty vs those treated with thrombolysis (6.2% vs 5.9%; P = .58). Adjusting for differences in demographic, medical history, clinical presentation, treatment, and hospital characteristics did not significantly alter these findings.

CONCLUSIONS: In this study, patients with AMI treated at hospitals with high or intermediate volumes of primary angioplasty had lower mortality with primary angioplasty than with thrombolysis, whereas patients with AMI treated at hospitals with low angioplasty volumes had similar mortality outcomes with primary angioplasty or thrombolysis.

Effectiveness and economic impact associated with a program for outpatient management of acute deep vein thrombosis in a group model health maintenance organization

BACKGROUND: Controlled clinical trials have demonstrated that outpatient administration of low-molecular-weight heparin to patients with acute deep vein thrombosis (DVT) provides safety and efficacy equivalent to that of traditional inpatient therapy with unfractionated heparin. Whether favorable results reported in controlled clinical trials are achievable in clinical practice is an important consideration.

METHODS: Appropriate patients with objectively diagnosed DVT were treated as outpatients with low-molecular-weight heparin and warfarin sodium according to an approved guideline. The primary end point for analysis consisted of objectively diagnosed symptomatic recurrent thromboembolism or major bleeding within a 90-day evaluation period. The incremental cost incurred by the organization while using the outpatient DVT treatment guideline was determined. Incremental cost savings of the outpatient DVT treatment program were determined based on the cost that would have accrued had the patient been admitted to the hospital for treatment with unfractionated heparin.

RESULTS: We enrolled 391 patients (91.4%) in the outpatient DVT treatment program. Of these, 373 (95.4%) completed 90 days of therapy without reaching the primary end point. The percentage of patients reaching the primary outcome measure (4.6%) fell within the range of patients enrolled in controlled clinical trials (3.5%-9.4%). During the two-year program evaluation, total cost savings of $1,108,587 were realized.

CONCLUSIONS: Outpatient treatment of acute DVT can be managed safely and effectively in clinical practice. The potential savings associated with outpatient DVT treatment are substantial.

Early discharge of infected patients through appropriate antibiotic use

BACKGROUND: Patients with infections are usually discharged from the hospital with antibiotics when afebrile and clinically improved.

OBJECTIVES: To compare outcomes of early vs conventionally discharged patients and to examine the role of antibiotic use in the discharge process.

METHODS: One hundred eleven patients hospitalized with cellulitis, community-acquired pneumonia, or pyelonephritis (urinary tract infection) discharged from the hospital early in their clinical course before defervescence by an infectious diseases hospitalist (IJF) were compared in a case-controlled study with 112 patients discharged from the hospital according to conventional standards of care by internal medicine (IM) hospitalists. Patients were matched for age, sex, diagnosis, and comorbidities. Outcomes were determined for average lengths of stay, readmission to the hospital within 30 days with the same diagnosis, satisfaction with their discharge program, and time to return to their normal activities of daily living.

RESULTS: Patients cared for by the infectious diseases hospitalist had a shorter average length of stay (mean difference, 1.7 days), no readmissions, higher satisfaction scores, and a shorter time to return to their activities of daily living, compared with those cared for by the IM hospitalists. Analysis of the antibiotics that patients were discharged with revealed that the infectious
Type 2 diabetes: incremental medical care costs during the eight years preceding diagnosis

OBJECTIVES: To describe and analyze medical care costs for the eight years preceding a diagnosis of type 2 diabetes.

RESEARCH DESIGN AND METHODS: From electronic records of a large group model health maintenance organization (HMO), we ascertained the medical care costs preceding diagnosis for all members with type 2 diabetes, who were newly diagnosed between 1988 and 1995. To isolate incremental costs (costs caused by the future diagnosis of diabetes), we subtracted the costs of individually age- and sex-matched HMO members without impending diabetes from the costs of members who were destined to receive this diagnosis. We also compared these prediagnosis costs with the first three years of postdiagnosis costs.

RESULTS: An economic burden from impending diabetes is apparent for at least eight years before diagnosis, beginning with costs for outpatient and pharmacy services. Diabetes-associated incremental costs (costs of type 2 diabetic patients minus matched costs of nondiabetic patients) averaged $1205 per type 2 diabetic patient per year during the first eight prediagnostic years, including $1913 each year for the three years preceding diagnosis. In the year immediately preceding diagnosis, incremental costs were equivalent to those observed in the second and third years after diagnosis.

CONCLUSIONS: Incremental costs of diabetes begin at least eight years before diagnosis and grow at an accelerating rate as diagnosis approaches and immediately after diagnosis. These incremental costs span the full range of medical services. Furthermore, the majority of these costs are for conditions not normally associated with diabetes or its complications.

Screening travelers for hepatitis A antibodies: an observational cost-comparison study of vaccine use

OBJECTIVES: To measure the seroprevalence of antibodies to hepatitis A virus (anti-HAV) in a health plan population of travelers and to determine whether prevaccination screening for anti-HAV can reduce unnecessary vaccination and thus promote the most effective, economic use of hepatitis A vaccine.

DESIGN: Observational, cost-comparison study.

SETTING: Central injection clinic of a health maintenance organization medical center.

SUBJECTS: Five hundred twenty-seven adults who denied having previous hepatitis A or vaccination.

MAIN OUTCOME MEASURES: Subgroups with the greatest prevalence of anti-HAV seen between June 1995 and April 1996 for immunizations before traveling to nonindustrialized countries. Relative costs of their screening and immunization.

RESULTS: The presence of anti-HAV precluded the need for vaccination in 148 subjects (28.1%). The highest prevalence of anti-HAV (82.7%) was found in subjects born in nonindustrialized countries (62/75), in subjects who had previously traveled to areas of endemic hepatitis A (32.1% [135/420]), and in subjects born before 1945 (29.2% [92/315]). Costs of screening and vaccinating travelers were cheapest if prevaccination antibody sera testing was limited to subjects born in nonindustrialized countries and those born before 1945.

CONCLUSIONS: Prevaccination screening of travelers for hepatitis A can be done selectively on the basis of age and country of origin. This strategy could lead to a more economic use of the vaccine and clinic resources.

Prevalence of headaches in football players

BACKGROUND: Football coaches and team physicians rely heavily on players’ reports of symptoms in deciding whether a player may return to the game after sustaining head trauma. The decision is made difficult by the wide variety of associated symptoms, some of which (e.g., headache is among the most common) may or may not be associated with serious head injury. More information is needed about the clinical significance of football-related headache.

METHODS: To assess the frequency of headache associated with playing football, we analyzed responses to our questionnaire asking about incidence, frequency, and outcome of football-related headache from 443 football players (320 from college, 123 from high school).

RESULTS: Eighty-five percent of respondents reported previous headache related to hitting in football. Asked specifically about their most recent game, 21% of respondents reported having had headache during that game. Of players who had headache, only 19% informed the team physician, trainer, or coach, and only 6% were removed from the game. Twenty-seven percent of respondents reported previous diagnosis of cerebral concussion by medical personnel. Defensive backs (25%), offensive linemen (19%), and offensive linemen (18%) were most likely to have headache, related to hitting.

CONCLUSIONS: Our data confirm that posttraumatic headache is commonly associated with football participation and often goes unreported. Given that the most serious complications of head injuries (e.g., second-impact syndrome) occur infrequently, headache as an isolated symptom lacks specificity in predicting such complications in football.
players. Therefore, unless it persists or is accompanied by additional symptoms, headache alone may not reliably suggest the need to remove players from the game.

**The relative importance of gestational gain and maternal characteristics associated with the risk of becoming overweight after pregnancy**


**OBJECTIVES:** To assess the relationships between gestational gain, race/ethnicity, reproductive history, age, education and the risk of becoming overweight after pregnancy.

**STUDY DESIGN:** Prospective cohort study of adult women from four race/ethnicity groups who had two consecutive births between 1980 and 1990 at the University of California, San Francisco (UCSF).

**MEASUREMENTS:** Height and pregravid weights for each pregnancy were self-reported. Women were classified as overweight or not overweight according to the Institute of Medicine (IOM) criteria for pregnancy. Gestational gain was defined as the difference between the pregravid weight and the last weight before delivery of the first study pregnancy.

**SUBJECTS:** 1300 healthy women aged 18-41 years who had a singleton, full-term, live birth (index or first study pregnancy) followed by a second birth. Self-reported pregravid weights and heights were used to calculate body mass index (BMI). Women with a pregravid BMI below 26.0 kg/m2 before the index pregnancy were classified as not overweight (n = 1128). Overweight status following the index pregnancy was based on pregravid BMI for the second pregnancy.

**RESULTS:** Seventy-two women (6.4%) became overweight following the index pregnancy. Statistically significant independent predictors of the risk of becoming overweight included: maternal age 24-30 vs above 30 years, high gestational gain, short interval from menarche to first ever birth (< 8 years), and young age at menarche (< 12 years). The risk of becoming overweight was increased 2.5-3 times for each of these risk factors. Whites were 4.5 times more likely to become overweight than Asians, but blacks and Hispanics did not appear to differ from whites. Parity, time interval, smoking habit, education, marital status and other factors were not associated with the risk of becoming overweight.

**CONCLUSIONS:** These findings suggest that young age at menarche, maternal age and short time from menarche to first ever birth may be as important as high gestational weight gain in determining the risk of becoming overweight after pregnancy.

**SNAP-II and SNAPPE-II:** Simplified newborn illness severity and mortality risk scores


**OBJECTIVES:** Illness severity scores for newborns are complex and restricted by birth weight and have dated validations and calibrations. We developed and validated simplified neonatal illness severity and mortality risk scores. The primary outcome was in-hospital mortality.

**STUDY DESIGN:** Thirty neonatal intensive care units in Canada, California, and New England collected data on all admissions during the mid 1990s; patients moribund at birth or discharged to normal newborn care in <24 hours were excluded. Starting with the 34 data elements of the Score for Neonatal Acute Physiology (SNAP), we derived the most parsimonious logistic model for in-hospital mortality using 10,819 randomly selected Canadian cases. SNAP-II includes six physiologic items; to this are added points for birth weight, low Apgar score, and small for gestational age to create a nine-item SNAP-Perinatal Extension-II (SNAPPE-II). We validated SNAPPE-II on the remaining 14,610 cases and optimized the calibration.

**RESULTS:** In all birth weights, SNAPPE-II had excellent discrimination and goodness of fit. Area under the receiver operator characteristic curve was .91 ± 0.01. Goodness of fit (Hosmer-Lemeshow) was 0.90.

**CONCLUSIONS:** SNAP-II and SNAPPE-II are empirically validated illness severity and mortality risk scores for newborn intensive care. They are simple, accurate, and robust across populations.

**Vaccines and otitis media**


**CONTEXT:** Otitis media is one of the most common infectious diseases in children and causes approximately 24.5 million doctor visits each year, according to a 1990 survey of office practices in the United States by the Center for Disease Control (CDC). Otitis media was the most frequent cause of an office visit for children under 15 years old and particularly affects one and two year olds. In a sample of 2807 children, 38% of the positive bacterial cultures of middle ear fluids contained Streptococcus pneumoniae.

In recent years, treating otitis media has become more difficult because of antibiotic resistant strains of the bacteria. Pneumococcal polysaccharide vaccines have been available for decades, but they had not been used to prevent otitis media because they do not induce immune responses for most serotypes in children under two years old.

**OBJECTIVES:** This study examined conjugate vaccines against the pneumococcus, which used the same technology as Haemophilus influenzae type b (Hib) conjugate vaccines that successfully induced immune responses and protected young children. Multiple serotypes of pneumococci are responsible for invasive disease and otitis media, therefore the vaccines contain conjugates for multiple serotypes to protect against the majority of disease. This study evaluated on a large scale the safety and efficacy of the first such conjugate vaccine, which has just been licensed in the United States.

**RESULTS:** In a sample of 2807 children, 38% of the positive bacterial cultures of middle ear fluids contained Streptococcus pneumoniae.

**CONCLUSIONS:** The study population of children had a total of 47,392 visits for otitis media and 33,529 episodes of otitis from October 1995 to April 1998. A total of 5160 children had frequent otitis.
RESULTS: In more than 37,000 children in Northern California Kaiser Permanente, the vaccine was 97.4% effective in preventing invasive disease. The number of otitis media episodes decreased by 7.0%. The effectiveness of the vaccine against frequent otitis media increased from 9.5 to 22.8% as the frequency of episodes increased. During the study, 355 children needed ventilatory tube placement, while vaccinated children were 20.3% less likely than controls to require such tube placement.

CONCLUSION: With licensure of this heptavalent conjugate vaccine for routine use in the United States, we anticipate for the annual US birth cohort of 3.8 million children, that otitis media doctor visits will decrease by more than 1,000,000 visits and that up to 500,000 fewer children each year will undergo ventilatory tube placement. However, the impact on the average child’s otitis media experience will be relatively modest.

Effect of physician and patient gender concordance on patient satisfaction and preventive care practices


OBJECTIVE: To explore the role of the gender of the patient and the gender of the physician in explaining differences in patient satisfaction and patient-reported primary care practice.

DESIGN: Cross-sectional mailed survey [response rate of 71%].

SETTING: A large group-model Health Maintenance Organization (HMO) in northern California.

PATIENTS/PARTICIPANTS: Random sample of HMO members aged 35 to 85 years with a primary care physician. The respondents (n = 10,205) were divided into four dyads: female patients of female doctors; male patients of female doctors; female patients of male doctors; and male patients of male doctors. Patients were also stratified on the basis of whether they had chosen their physician or had been assigned.

MEASUREMENTS AND MAIN RESULTS: Among patients who chose their physician, females who chose female doctors were the least satisfied of the four groups of patients for four of five measures of satisfaction. Male patients of female physicians were the most satisfied. Preventive care and health promotion practices were comparable for male and female physicians. Female patients were more likely to have chosen their physician than males, and were much more likely to have chosen female physicians. These differences were not seen among patients who had been assigned to their physicians and were not due to differences in any of the measured aspects of health values or beliefs.

CONCLUSIONS: Our study revealed differences in patient satisfaction related to the gender of the patient and of the physician. While our study cannot determine the reasons for these differences, the results suggest that patients who choose their physician may have different expectations, and the difficulty of fulfilling these expectations may present particular challenges for female physicians.

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Health and loyalty promotion visits for new enrollees: results of a randomized controlled trial


Managed care needs effective and efficient ways to orient new members, enhance trust and loyalty, and offer prevention and self-care education and services. Recent adult enrollees of Kaiser Permanente (Northern California) were randomly assigned to one of three intervention conditions (n = 286) (individual visit with a physician, physician visit plus a visit with a health educator, a group visit of eight new members led by a physician and health educator) or a random control group (n = 278). Outcomes were gauged via pre- and post-visit questionnaires and a 20-minute telephone survey at baseline and at a six-month follow-up. Compared to controls, attendees of the three interventions had higher satisfaction, self-rated prevention knowledge, acceptance of health plan guidelines, and were more likely to plan to remain in the health plan.

Group visit attendees stood out as experiencing the greatest benefits and were especially likely to report saving a telephone call or visit to their doctor by using a self-care handbook.

The James A Vohs Award for Quality
The third annual Permanente Journal special issue

Introduction
Our commitment to improving the health of our members remains a driving force in the Kaiser Permanente (KP) dedication to quality improvement. With our integrated health system and defined population of members, we are in a unique position to continually explore opportunities to refine the care we provide. By continuing to focus on new or improved ways to deploy the right care at the right time, we enhance the health of our members, build upon our existing reputation as a provider of quality health care, and improve service and cost-effectiveness of care for our members and group customers.

History
During his 17 years as President, CEO, and Chairman of the Boards of Kaiser Foundation Health Plan, Inc, and of Kaiser Foundation Hospitals, James A Vohs continually emphasized the moral and strategic importance of quality and quality improvement. On the event of his retirement as Chairman of the Board, the James A Vohs Award for Quality was established by the Boards to recognize and honor projects that advance the quality of care, showcase innovative techniques and knowledge that can be transferred throughout the Program, and underscore the value of multidisciplinary teamwork.

Criteria
The Vohs Award recognizes exceptional KP efforts to address quality-of-care issues and acknowledges multidisciplinary team efforts representing Kaiser Foundation Health Plan, Inc, Kaiser Foundation Hospitals, and the Medical Groups. As before, the criteria for selecting a winner assure that the project measurably improves patient care and has the potential for transfer as a “successful practice,” thereby benefiting many members across the Program. The Vohs Award is designed to encourage projects that demonstrate leadership within KP and the health care industry and that develop and apply new approaches to improve quality of care.

Annually, each KP Division or Region is invited to nominate one or two projects for consideration for the James A Vohs Award for Quality. The award is presented for the project that best represents a well-established effort to significantly improve quality through substantial, objectively documented, and institutionalized changes in direct patient care, through either new programs or significant improvements in existing ones.

2001 Projects
We present here the 2001 winners of the Vohs Award: the first place winner: “Kaiser Permanente West Los Angeles Sickle Cell Medical Care Program,” from KPSCR of the California Division; and the program that received honorable mention: “The Kaiser Permanente Therapy Management Strategy (KPTMS),” from the Denver Local Market of the KP Colorado Region.

In addition to presenting the basic elements of each program, we hope to remind the reader of the Vohs Award application process to stimulate similar project development on diverse topics throughout our organization. Multidisciplinary involvement and strong team leadership is critical to the success of these projects. Just as the quality planning process and methods for making programs operational served as the framework for several other successful program rollouts within the local markets, all programs described should serve as a model for quality improvement programs throughout KP nationally.

Recognition
Incentive is provided to all TPMG/KP professional staff to apply for the James A Vohs Award for Quality. There is no monetary gift with this award. The winning KP Division or Region receives an engraved award, and project team members receive awards. The “real” award is recognition for good work. Winners and runners-up are invited to present their projects at a reception hosted by the Boards of Directors, Division Presidents, and other Program Officers. The awardees also receive publicity through the Quality Notes newsletter and through local, state, and national press releases.

The local level process for nomination varies. Each KP Division has contact liaisons, who can be located through the Quality Notes newsletter, and through their quality representative. Each KP Division also has screening and review process for potential nominees. Nominations are signed off by the Division President and Medical Director. Nominations and applications are due September 1st each year.

Selection Committee
A Vohs Award Selection Committee consists of two to three Boards of Directors members, a Vohs family member, Chairman Bob Crane, two to three Program Office quality representatives, one Permanente Federation representative, and two nonvoting Program Office quality representatives, who serve as staff to the Committee. This Committee announces its selection at the Board of Directors meeting in December. Notification is made to the Division President and Medical Director by phone after that meeting. Team members are contacted by phone within the next day or two. The recognition ceremony takes place at the March Board of Directors meeting.

We thus hope that the following entries for this year’s James A Vohs Award will serve as models to motivate all KP staff to present projects for consideration and motivate us to continually improve the process of providing direct patient care and access to health information for our members.

❖
The Kaiser Permanente (KP) West Los Angeles (West LA) Medical Center serves a diverse population of approximately 195,000 Kaiser Foundation Health Plan members, more than half of whom (53%) are African American. A major health concern of this population is sickle cell disease: in 1999, 307 members under 18 years of age and about 225 patients at least age 18 years had sickle cell disease. At its worst, sickle cell disease is both severely debilitating and potentially lethal; at its best, the disease compromises lifestyle and longevity.

Until recently, management of sickle cell disease was mainly the province of pediatricians; better medical care, parent education, and penicillin prophylaxis now allow most patients with sickle cell disease to survive long into adulthood. However, because this increase in longevity is a recent phenomenon, few published studies have described care of adults with sickle cell disease. These patients face a lifetime of complications and crises: The hallmark of the disease is severe debilitating pain and multiorgan failure, ie, of lung, kidney, brain, eye, and liver.

The Sickle Cell Medical Care Program at KP West LA is an award-winning program that serves as a model for sickle cell treatment by providing comprehensive and culturally sensitive care to all sickle cell patients. At the KP West LA Center for Culturally Competent Care—the clinical facilities of the Sickle Cell Medical Care Program—children and adults affected with sickle cell disease receive continuous, appropriate, individualized culturally sensitive care along with counseling and support for their family members.

Origin of the Pediatric Program

In the late 1980s, with the support of Oliver Goldsmith, MD, then Area Medical Director of West LA and presently Medical Director of the SCPMG, two KP West LA physicians—Dr Elaine Smith and Nancy Shinno—began a program of prenatal screening for all African American female Health Plan members to identify those with sickle hemoglobin. From its inception, the program provided prenatal counseling along with family screening. The program was later expanded to the screening of all women prenatally, and newborn infants for all known hemoglobinopathies (including thalassemia). This program was made available to Health Plan members at all Kaiser Permanente Southern California Region (KPSCR) medical centers. The program currently has four goals:

- to provide medical care to infants with sickle cell disease
- to educate parents of infants with either sickle cell or hemoglobin trait
- to obtain and provide additional consultation at the request of the physician or parent
- to offer genetic counseling to families of affected infants.

The premise of the Pediatric Program is that children with sickle cell disease need more than episodic care to survive into adulthood and maximize their quality of life. Thus, the Pediatric Program has included medical management and health maintenance as well as involvement in the patient’s education process, social development, and community services. The most current and cutting edge medical interventions are provided to our patients when available. These interventions include transcranial Doppler monitoring of all children ages two through 16 years, the use of bone marrow transplant (BMT) and hydroxyurea if indicated, and appropriate, carefully planned, individualized home pain management.

With the support of the Southern California Permanente Medical Group (SCPMG), this comprehensive Pediatric Program now operates in the Department of Pediatrics at West LA under the direction of the following team leaders: Elaine Smith, MD, Director and Pediatric Hematologist; Nancy Shinno, MD, Co-Director and Medical Geneticist; Charlotte Hoof-Dixon, RN, Sickle Cell Nurse Educator; Mary Boyd, LCSW, Social Medicine; and Stephen Keiles, MS, Genetic Counselor.

Origin of the Adult Program

KP West LA observed that the success of the Pediatric Program translated into an increased number of adult patients whose care must be part of a con-
tinuum to ensure appropriate utilization of medical resources.

Indeed, pediatricians were among the first to recognize a gap in continuity of care as sickle cell patients transitioned from pediatric to adult care. No structured process existed to transition former pediatric patients to physicians who had expertise treating adults with sickle cell disease. This absence of an adult program resulted in frequent hospital admissions, long hospital stays, and dissatisfaction among patients and their health care providers.

Then, in 1996, the KP West LA Quality Improvement Team identified three clinically significant adult sickle cell cases which prompted concern about the quality of care received and about adverse outcomes that might have been avoided. Aware of the limited support available to adult patients with sickle cell disease, Dr Frederic Alexander, SCPMG West LA Area Medical Director, commissioned a task force of physicians, nurses, and department administrators to formally evaluate the treatment of adult sickle cell patients and to recommend ways to improve their care and health outcomes.

As a result of its assessment, the task force recommended the development of a Sickle Cell Medical Care Team (Table 1) to

| Table 1. Members of Sickle Cell Medical Care Program Project Team at KP West LA |
|---------------------------------|-----------------------------------------------|
| **PEDIATRIC CARE CORE TEAM**    |                                               |
| **Physicians**                  |                                               |
| Elaine M Smith, MD             | Director of Regional Pediatric Hemoglobinopathy Center and Pediatric Hematologist |
| Steven B Keiles, MS, CGC       | Genetic Counselor                             |
| Nancy A Shinno, MD, MPH        | Co-Director of Regional Pediatric Hemoglobinopathy Center and Medical Geneticist |
| **Nursing**                    |                                               |
| Diane Batham, RN, MSN          | Specially Nurse, Hematology/Oncology          |
| Charlotte Hoof-Dixon, RN       | Sickle Cell Nurse Educator/Coordinator Regional Pediatric Hemoglobinopathy Center |
| **Social Services**            |                                               |
| Mary Boyd, LCSW, BCD           | Clinical Social Worker                        |
| Linda Perry, MSN, FNP          | CDRP Nurse Practitioner, Culver Marina MOB    |
| **ADULT CARE CORE TEAM**       |                                               |
| **Physicians**                 |                                               |
| Osbourne A Blake, MD           | Physician, Inglewood MOB, Internal Medicine   |
| Manuel L Myers, MD             | Physician in Charge, Inglewood MOB, Internal Medicine |
| Kimberly C Reece, MD           | Physician in Charge, Playa Vista MOB, Family Practice |
| **Nursing**                    |                                               |
| Shirley Brown, RN, MN          | Sickle Cell Case Manager                      |
| **ADMINISTRATION**             |                                               |
| Judy M Aguilar                 | Administrative Specialist                     |
| Frederic Alexander, MD         | Area Associate Medical Director               |
| Mary Ann Barnes, RN            | Medical Group Administrator, KP LA            |
| Gloria Blackburn, RN, BSN, MHA | Chief Nurse Executive, Director of Hospital Operations |
| Amy J Brotzman, MHA, RD        | Manager, Special Projects, Medical Group Administration |
| Tracy Fietz, RNP               | Medical Group Administrator                   |
| Florine Henderson, RN          | Department Administrator, ING, CVM, PLV Medical Office Buildings |
| Helen J Jones, RN              | Assistant Department Administrator, Playa Vista Medical Office Building |
| Carole J Lebert, RN, BS        | Department Administrator, Pediatrics, Allergy, Dermatology, ENT |
| Arti G Panjwani, JD            | Administrative Fellow                         |
| Patricia A Roach, RN, BS       | Department Administrator, Family Practice      |
| Shereen J Small, RN            | Assistant Department Administrator, Inglewood Medical Office Building |
| **ANALYTICAL SERVICES**        |                                               |
| Joel L Whittaker Jr, MPH       | Analyst, Metropolitan Los Angeles MSA         |
| **OTHER ASSISTANCE**           |                                               |
| Lynnette M Broussard-Walker, RPh | Pharmacist, Inglewood Medical Office Building |
| Pauline Vickers, RN, MAOM      | Clinical Supervisor, Home Health Bellflower Medical Center |
| **PROJECT CONTACT PERSON**     |                                               |
| Amy J Brotzman, MHA, RD        | Project Manager                               |

**NANCY A SHINNO, MD, MPH** (top) is a Clinical Professor of Pediatrics and attending physician in the Genetics Division at the USC School of Medicine. With KP for over 20 years, she is medical director of the Southern California KP Cleft Palate Craniofacial Team, and co-director of the Sickle Cell Hemoglobinopathy Center.

**ELAINE M SMITH, MD, FAAP**, (bottom, left) is an Assistant Clinical Professor of Pediatrics at the USC School of Medicine. She has been a Pediatric Hematologist/Oncologist with SCPMG for 25 years. Dr Smith has been the Director of the Sickle Cell Hemoglobinopathy Center for Southern California Kaiser Permanente since its inception in 1990.

**JOSEPH L WHITTAKER JR, MPH**, (bottom, right) has been working with the Adult Sickle Cell Program since 1999. He currently provides research design and analytical support to various Disease Management programs throughout the Los Angeles Metro Service Area.
The success of the Pediatric Program was thus a critical element in the development of the Adult Program and was the foundation on which the Adult Program was built.

Form a comprehensive Adult Program that would incorporate the principles of the Pediatric Program to provide consistency and stability in the care of sickle cell patients throughout their adulthood. The success of the Pediatric Program was thus a critical element in the development of the Adult Program and was the foundation on which the Adult Program was built. Together, the two programs—adult and pediatric—provide a seamless medical care throughout the life of the sickle cell patient by delivering health maintenance services and managing complications of the disease while being involved in the patient’s education process, social development, and community.

Team members incorporate patients’ cultural values and beliefs into the design of individual treatment plans.

Structure and Methods of Pediatric and Adult Programs

Pediatric Program

The program at KP West LA provides care to 307 pediatric patients. Each year since its inception, the Pediatric Program has added to its patient roster 15 to 20 newborn infants affected with a major hemoglobinopathy; 75% of these infants have sickle cell disease. The program has also provided family screening and genetic counseling to more than 80% of the 600 to 700 member families whose infants were born with a hemoglobin trait.

In providing a continuum of care from pediatric to adult care, team members incorporate patients’ cultural values and beliefs into the design of individual treatment plans using an age-specific approach. As pediatric patients mature into adults, efforts are directed more toward the individual patient. For a sickle cell patient in infancy, the program’s primary objective is to educate the patient’s family. As the child grows older, the clinical focus evolves to incorporate the child into the education process. As the child matures and becomes an adolescent, the program’s focus shifts to the adolescent, whose family members are then given a supporting role in the patient’s care. This process allows sickle cell patients and their families to move easily and comfortably along the transition process from pediatrics to adult care.

Adult Program

The four clinical members of the Adult Sickle Cell Medical Care Team include three physicians—Manuel Myers, MD, Kimberly Reece, MD, and Osborne Blake, MD—and a sickle cell clinical case manager, Shirley Brown, RN, MN. These clinicians are the cornerstone of the KP West LA Adult Sickle Cell Medical Care Program. Together with the other team members, they created and implemented an aggressive system for identifying and monitoring adult members with the disease. The system’s ultimate goals are to foster self-care among patients with sickle cell disease, to allow these patients to retake control of their lives, and to standardize the level of sickle cell care.

Each individualized plan contains preprinted orders that are used when the patient is seen in the emergency department.

The Adult Sickle Cell Medical Care Team manages patient care by serving as consultants for the adult sickle cell population hospitalized at KP West LA. In a partnership of physician and patient, the team formulates individualized care plans and has created a system to closely monitor the health status of each outpatient as well as each inpatient. Each individualized plan contains preprinted orders that are used when the patient is seen in the emergency department (ED); both the ED physician and the patient thus know exactly what course of action to take.

The team places great emphasis on the educational aspect of the program, which is geared not only to the patients but also to their families and health care practitioners. Patients are given a Sickle Cell Medical Care Program Source Book, which contains information about the Adult Program and the disease. Patients are also invited to attend a series of five group sessions that explain the disease and its potential complications and address the psychosocial issues that patients may face. Group appointments are used to help determine patients’ level of understanding of the disease and to explore aspects of their cultural beliefs, values, and lifestyles that may affect the medical care of these patients.

In the Adult Program, best practices include daily hospital rounding by the Adult Sickle Cell Care Management Team, group appointments for patients, consultation with ED and other clinicians, care in the ED by Primary Care physicians, coordination of needed psychosocial and cultural services, and formulation of individualized care plans. Day clinic treatment is available for acute problems, including vaso-occlusive crisis. As part of the Adult Program, comprehensive annual health evaluations are performed and include ophthalmologic screening, genetic counseling, and health maintenance. As of 1999, 165 pediatric patients had graduated from the Pediatric Program and transitioned to the Adult Program. At the end of 2000, medical care for 226 adult sickle cell patients was being managed.

At the end of 2000, medical care for 226 adult sickle cell patients was being managed.

Evaluation Process for Adult Program

The Adult Program was evaluated by comparing key process and outcome indicators for adult sickle cell patients before and after program implementation.
For process and outcome indicators that required chart review, the before-and-after comparison was based on sickle cell cases managed by KP West LA for two years: 1998 (ie, before program implementation) and 1999 (ie, after program implementation). For indicators that used only computer-stored data, trends in process and outcome indicators were compared for adult sickle cell patients seen at KP West LA and other Southern California Region facilities during the period 1994 through 1999. In 1999, 226 adult sickle cell patients were identified at KP West LA, and 200 adult sickle cell patients were identified at other KPSCR facilities. Patients were included in the evaluation if they were at least age 18 years in 1999 and met one or more of the following criteria:

- tested positive for sickle cell disease at a KPSCR facility from January 1994 through December 1999;
- were discharged from a KPSCR hospital from January 1994 through December 1999 after being diagnosed with sickle cell disease and assigned the ICD-9 code for sickle cell disease;
- were included on the sickle cell patient lists provided by the Pediatric Program’s database and Shirley Brown, RN, MN.

These patients were further categorized according to the KP facility visited (West LA or other KPSCR facilities), residential zip code of patient, primary care physician’s “home” facility, and whether the patient had been discharged from West LA after 1994. Outcome indicators studied included number of hospital days per patient as well as the amount and type of drug therapy (ie, hydroxyurea or demerol) appropriately prescribed for patients at West LA and at other KPSCR facilities. Prescription of hydroxyurea, a drug used to decrease acute crisis and chronic symptoms and to improve general well-being, was considered inappropriate (contraindicated) in women who were or planned to become pregnant. Because demerol—an analgesic drug—is addictive and has adverse side effects for sickle cell patients, the West LA medical center established a policy of severely limiting its use. The Adult Program analyzed the rate of use to determine its progress toward a program goal: eliminating demerol therapy as treatment for pain in sickle cell patients. The Pediatric Program has not used demerol for over a decade.

### Results of Adult Program Evaluation
The Adult Program has been highly successful, as evidenced by a decrease in number of visits to the ED (Figures 1,2) as well as an increase in appropriate use of medication (Table 2). Provision of these services has led to improved patient care and quality of life and to lower rates of morbidity and mortality—better health outcomes overall.

#### Medical Utilization
Before 1998, hospital day and ED utilization patterns were varied and were not closely moni-

<table>
<thead>
<tr>
<th>Measure</th>
<th>1998</th>
<th>1999</th>
<th>Difference</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of patients appropriately prescribed hydroxyurea</td>
<td>75%</td>
<td>92%</td>
<td>17%</td>
<td>0.317</td>
</tr>
<tr>
<td>% of inpatients not given demerol</td>
<td>86%</td>
<td>93%</td>
<td>7%</td>
<td>0.498</td>
</tr>
<tr>
<td>% of patients seen in ED and not given demerol</td>
<td>87%</td>
<td>89%</td>
<td>2%</td>
<td>0.440</td>
</tr>
</tbody>
</table>


### Table 3. Medical utilization and treatment costs for adult sickle cell patients seen at KP West LA and at other KPSCR facilities, 1998-1999

<table>
<thead>
<tr>
<th>Mean</th>
<th>1998</th>
<th>1999</th>
<th>Difference</th>
<th>% change</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of ED visits*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per patient at KP West LA</td>
<td>2.98</td>
<td>2.34</td>
<td>(0.64)</td>
<td>(22)</td>
<td>0.395</td>
</tr>
<tr>
<td>Per patient at other KPSCR facilities</td>
<td>3.85</td>
<td>3.81</td>
<td>(0.04)</td>
<td>(1)</td>
<td>0.247</td>
</tr>
<tr>
<td>No. of hospital days*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per patient at KP West LA</td>
<td>5.51</td>
<td>4.09</td>
<td>(1.42)</td>
<td>(26)</td>
<td>0.357</td>
</tr>
<tr>
<td>Per patient at other KPSCR facilities</td>
<td>4.42</td>
<td>6.06</td>
<td>1.64</td>
<td>37</td>
<td>0.955</td>
</tr>
<tr>
<td>Treatment costb</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per patient at KP West LA</td>
<td>$5,902.35</td>
<td>$4,308.90</td>
<td>($1,593.45)</td>
<td>(27)</td>
<td>0.118</td>
</tr>
<tr>
<td>Per patient at other KPSCR facilities</td>
<td>$6,944.77</td>
<td>$7,550.58</td>
<td>$605.81</td>
<td>9</td>
<td>0.751</td>
</tr>
</tbody>
</table>

tored. Tables 2 and 3 compare process and outcome indicators for 1998 and 1999 among adult sickle cell patients seen at KP West LA. Using 1998 as the baseline, the data showed improvement (ie, reduction) in number of ED visits and in number of hospital days per patient.

Table 3 shows that after implementation of the program, adult sickle cell patients at KP West LA had 22% fewer ED visits, whereas sickle cell patients at other KPSCR facilities had 1% fewer ED visits. Table 3 shows similar results for inpatient medical utilization (ie, hospital days per patient) by the two KP member populations: After implementation of the program, adult sickle cell patients at KP West LA had 26% fewer hospital days, whereas adult sickle cell patients at other KPSCR facilities had 37% more hospital days than before implementation.

With continued monitoring and longevity of the Adult Program, we can expect both these trends to continue.

Use of Hydroxyurea
In 1998, hydroxyurea was appropriately prescribed for 75% of the adult sickle cell patients seen at the West LA facilities; in 1999, this percentage increased to 92%—a 17% improvement in appropriate prescription of hydroxyurea for patients with sickle cell disease.

Use of Demerol
The number of inpatients who did not receive prescriptions for demerol increased 7% from 1998 to 1999 and increased 2% for adult sickle cell patients who visited the ED. In the next few years, we expect to reach our goal of not prescribing demerol to sickle cell patients to control pain.

Figure 1. Mean number of Emergency Department (ED) visits per patient in KP West LA sickle cell group.

Figure 2. Mean number of KP Emergency Department (ED) visits per patient per year among adults with sickle cell disease who were seen at KP West LA and at other KPSCR facilities, 1998-1999.
Treatment Cost

During the study period, the mean treatment cost per patient decreased by 27% for the KP West LA population of adult sickle cell patients but increased by 9% for other adult sickle cell patients seen at other KPSCR facilities. These data do not include surgical or operating suite costs.

Statistical and Clinical Significance of Results

Tests of the differences in these measures of quality and utilization did not meet conventional criteria for significance when p values of .05 and two-sided statistical tests were used (Tables 2, 3). However, results for some measures approached statistical significance. Most important, the adult sickle cell patients showed improvement in all four measures. Thus, in only one year, results showed improvement in each process and outcome indicator measured. Moreover, the Adult Program established a strong foundation on which to continue these improvements. In coming years, we expect to maintain and improve on each of these positive gains.

Discussion

An estimated one in every 600 African Americans has sickle cell disease.\(^{5,135,147}\) However, an even higher proportion of the African American population is affected: Many persons are linked to the condition by being a genetic carrier or through family members who have the disease. Early identification, effective treatment, and disease-specific social support for these patients are critically important objectives that require development of systems for delivering comprehensive care. The KP West LA Sickle Cell Medical Care Team is achieving these objectives through a multidisciplinary approach.

The Sickle Cell Medical Care Program at KP West LA is the only sickle cell care program in the country outside an academic health center.

Because of the complexity of the condition, many sickle cell patients are managed at university-run, academic centers. The Sickle Cell Medical Care Program at KP West LA is the only sickle cell care program in the country outside an academic health center, providing comprehensive services throughout the patient’s life. This fact indicates that ours is among the earliest programs that has combined pediatric and adult services with the prime goal of transitioning adolescents to adulthood. Another distinctive feature of the program is its high level of sensitivity to patients’ cultural values and beliefs.

The KP West LA Sickle Cell Medical Care Team started the program during a time of widespread practice variation in treatment of adults affected with sickle cell disease. Physicians had only the limited knowledge and skills taught in medical school and in medical residency programs. In addition, over the course of approximately five years, a sickle cell patient might see as many as 18 different physicians and receive as many different methods of treatment. This variation was confusing to patients. The KP West LA Sickle Cell Medical Care Team assembled all the best and most current research to develop consistent standards and best practices. The team’s efforts have led to improvements in care.
to better treatment and continuity of care for Health Plan members with sickle cell disease, reduced their need for hospitalization, improved their clinical outcomes and quality of life, and increased patient and physician satisfaction. Within the Adult Program, patients with the disease are now living well into their 50s and 60s.

This comprehensive program can be a model for all other sickle cell programs in the United States.

A search of the biomedical literature in English shows few programs at health maintenance organizations (HMOs) designed to care for sickle cell patients; this fact indicates that ours is among the earliest programs to have comprehensive pediatric and adult services with the prime goal of providing good continuity of care that provides transition for children with the disease from pediatric to adult care. Our organization’s work is thus at the forefront of treatment for this population. Our patients with the disease are living longer with the newer therapies, improved treatment, and care they receive. All aspects of our patients’ needs are being addressed by our program. This comprehensive approach is leading to enhanced clinical outcomes and to overall improvement in patients’ quality of life. This comprehensive program can be a model for all other sickle cell programs in the United States, especially those conducted within HMOs.

The work of the KP West LA Sickle Cell Medical Care Program can be replicated. The Sickle Cell Medical Care Program Source Book has been produced and distributed to the KP Board of Directors for the newly formed National Institute for Culturally Competent Care and to other KPSCR medical centers as well as other KP Regions; the book is also being made available to other medical institutions that wish to start a comprehensive program of sickle cell care.

Despite the variability inherent among patients with sickle cell disease, we believe that our work may be applicable to larger sickle cell patient populations. 

References

Being Human

We lead by being human. We do not lead by being corporate, professional or institutional.

Paul G. Hawken, founder, Smith and Hawken, quoted in Nelson, B. “1,001 Ways to Reward Employees”
The Body Fable

A girl comes to our sterile cell bearing
nameless snakes on the muscle of an arm,
the rise of her ankle. A jewel blooms
in her navel. When we see the red flush
of her tattooed heart we all want to
touch it. Want to ruffle the plume of
purple that flowers above one breast.

She needs us, surgery, a plucking
of her torment. The surgeon toils
in a small wound avoiding a crown
of blackberry thorns. What light did she
lie beneath for a pen to green this vine
across her hip? We are lured, lost
in the feathered uncurlings of her leaves.

I remember when ‘Desire me’
was a weedy plague I hid within me.
Unfurled, invisible. I looked for
my reflection in every face on the
street. What could they see?

My fingers flutter above gold rings
piercing this girl’s eyebrows. I look
into pinpoint pupils. She ticks in darkness
in the garden of her body.

By Kelly Sievers, CRNA

More poems by Kelly Sievers, CRNA can
be found on pages 30, 48, and 60.

Kelly Sievers, CRNA, has been a staff CRNA with KP for 20 years. Her poems and short stories can be found in literary journals and in five anthologies including BETWEEN THE HEARTBEATS, AN ANTHOLOGY OF POETRY, FICTION, AND MEMOIR by Registered Nurses. In 1998 and 2000, Kelly participated in LITERATURE AND THE ART OF MEDICINE, a Group Health sponsored Continuing Education series presenting poetry and literature about illness for practitioners.
Introduction

The Kaiser Permanente (KP) Colorado Region serves 338,000 members, 125,000 of whom are enrolled in a Medicare+Choice Program. Postacute care for the Region’s members is provided through contracts with five skilled nursing facilities, a transitional care unit, multiple acute care specialty hospitals, home health agencies, and Medicare Part B service providers in more than 90 long-term care facilities. A nursing facility rounding service consisting of seven physicians and three nurse practitioners provides direct services for members in skilled nursing facilities and long-term care nursing facilities and participates in physician-directed interdisciplinary teams. Ambulatory Rehabilitation services for KP members are provided internally by Kaiser Permanente.

In 1998, therapy in the Continuing Care Program was challenged by inconsistency, haphazard direction, and unnecessary expense. Patients who could not benefit from uncomfortable, intrusive, and costly therapy remained in the nursing facility for extended stays despite uncertain benefit. Because of a lack of comparable functional outcome measures across the continuum of care, case management was inconsistent. Sometimes, when we denied therapy we knew would not be beneficial, we appeared to be denying “needed” care; some other therapy was terminated before exhausting its potential to benefit the patient.

Often, decisions to continue therapy relied heavily on practitioners who had a financial interest in continuing therapy and therefore had a possible motive for making clinical decisions that did not adequately consider the patient’s comfort, clinical outcome, or desire to return home. The KP Colorado Region was spending substantial resources on therapy despite uncertainty about outcome.

The solution to these problems—and the key to assuring quality of care throughout the postacute care continuum—is to develop and implement a strong, patient-centered partnership among facilities, clinical practitioners, patients, and patients’ families so that the level of care could be managed using appropriate databases, skilled nursing facility services, and home health services to give patients the right care in the right place at the right time. Case managers and health care practitioners must receive decision support, and quality outcomes must be measured across the continuum of care using a common language in all settings. This objective, outcome-based case management system should benchmark Regional performance against a national database and should unify clinical and financial objectives toward excellence by guarding patients against two costly inefficiencies: underutilization of needed services and imposition of futile therapies. In addition, clinical and financial outcomes must be aligned to better control...
the cost of postacute services while maintaining clinical outcomes that positively affect total expenses. To achieve these goals, the Kaiser Permanente Therapy Management Strategy (KPTMS) project was implemented in May 1998 and is ongoing (Table 1). The project was conceived and developed under the leadership of Beth Martin, RN, MBA, Director of Continuing Care, and was strongly supported by the executive administration of the KP Colorado Region: Glenn Gade, MD, Chief of Geriatrics; Linda Smith, Director of Operations; and Robin Gunning, MD, Medical Director of the Nursing Facility Rounding Service. The KP Colorado Region partnered with SeniorMetrix, Inc, which contributed much to the success of the project by providing the information systems, training, data analysis, and a full-time, on-site project manager to implement and develop the project. The KPTMS project has achieved ongoing, excellent results, recognition for which belong to the KP Colorado physicians, nurse practitioners, care coordinators, and case managers—as well as the many practitioners in the contract network—who were responsible for day-to-day patient care and operations.

This retrospective study describes outcomes of using the KPTMS at selected skilled nursing facilities, acute care rehabilitation hospitals, home health departments, and long-term care facilities. The study also compares pre- and postintervention results and benchmarks them against national data.

Methods
Subjects
The project was extended across the postacute care continuum to include Home Health services, long-term care, and acute care rehabilitation. The data in this report thus were collected from three groups of patients: patients who received rehabilitation services in SNF’s or long-term care from May 1998 through March 2000, patients who received Home Health rehabilitation services from July 1998 through March 2000, and patients who received Acute Rehabilitation services from July 1999 through March 2000.

We measured quality by using a well-known, relevant, accepted measure—the Functional Independence Measure (FIM), which quantifies decrease in patient disability.

Figure 1. Example of Care Corridor plotted for hip fracture patients. Squares indicate cases managed. The Care Corridor is considered Sector 5. Patient cases outside of Sector 5 each need individual case management strategies.

Subjects were selected from among all consecutively admitted patients aged 18 years or older who received postacute care rehabilitation (true for 90-95% of all admitted patients) and for whom a complete KPTMS record was available (true for more than 95% of all admitted patients). Patients were excluded from the study if their age was <19 years or >120 years at admission, if length of inpatient stay was <1 day or >100 days, if the patient was admitted >365 days after onset of the condition requiring rehabilitation, or if the patient received >1000 hours of treatment. These criteria thus excluded approximately 6% of patients receiving services under Medicare Part A, 6% of patients receiving services under Medicare Part B, and 5% of patients receiving Home Health care. The study thus included 10,241 patients, of whom 44% received care in a skilled nursing facility, 41% received Home Health care, 13% received long-term care, and 2% received rehabilitative acute care.

Measures and variables
We measured quality by using a well-known, relevant, accepted measure—the Functional Independence Measure (FIM), which quantifies decrease in patient disability—as the key dependent variable for quality. The FIM measures functional ability in 18 areas of motor and cognitive activities of daily living and produces scores ranging from 18 to 126. The FIM was selected from among other functional measures available in the postacute care setting because it has been used extensively, gives excellent interrater reliability when used in clinical settings, and has effectively predicted discharge status in acute care settings. In addition, change in FIM rating has been shown to correlate with change in burden of care. Each unit of improvement on the FIM scale reflects approximately three minutes less care.
needed per day. FIM score was also an important factor in the discharge planning process: patients discharged home alone averaged a FIM score of 108; patients discharged home with help averaged a FIM score of 97; patients discharged to assisted living averaged a score of 85; and patients with a FIM score under 80 required 24-hour care.

In addition to the FIM, three other measures were used: a Medical Complexity Scale, a Quality Index, and a Satisfaction Measure. The Medical Complexity Scale was developed by SeniorMetrix, Inc, and assesses the amount and relevance of comorbidities as they relate to functional disability. Scores on the Medical Complexity Scale ranged from zero (“no systemic disease other than primary diagnosis”) to five (“moribund/terminal”); intermediate scores on the Medical Complexity Scale represented conditions described as “premorbid, inactive, and/or irrelevant systemic disease” (score of one), “active, relevant systemic disease not limiting function” (score of two), “active, systemic disease limiting function” (score of three), and “active, systemic disease severely limiting function” (score of four). The Quality Index is an index of quality performance (ie, quality and effectiveness of care received) adjusted for severity of a patient’s disability at admission.

**The Quality Index provides a severity-adjusted comparison with historical quality-of-care performance.**

Jointly developed by Kaiser Permanente and SeniorMetrix, Inc, the Quality Index provides a severity-adjusted comparison with historical quality-of-care performance (baseline score = 100) and represents the combined, adjusted influences of FIM Gain and rates of patient discharge to the community. We considered Quality Index score to have changed substantially if, at the end of the study period, the score had changed ±5 index points from the historical baseline score.

Independent variables included length of inpatient stay per episode (ie, discharge date minus admission date to postacute care setting), length of inpatient stay per treatment cycle (ie, end date of therapy minus start date of therapy), duration of treatment (ie, total number of hours of physical, occupational, and speech therapy received), and number of visits (ie, total number of physical encounters in the Home Health setting).

Risk adjustment variables (confounding variables) included age, number of days between onset and admission (ie, admission date minus date of event etiologically related to need for rehabilitation), FIM score at admission (ie, total FIM score representing functional skill of patient within 72 hours of admission), Medical Complexity score (ie, on a scale of 0-5, an ordinal scaling of disability severity and relevance of comorbidities to degree of function during activities of daily living), and patient’s identified Impairment Group (ie, a standard grouping method for rehabilitation populations.).

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### Table 2. Medicare Part A Care Corridors categorized by impairment group

<table>
<thead>
<tr>
<th>Impairment group</th>
<th>No. of outcomes</th>
<th>Mean age (yr)</th>
<th>Mean no. of days after onset</th>
<th>Mean FIM score at admission</th>
<th>Mean length of stay (days)</th>
<th>Mean FIM score gain</th>
<th>Percentage of patients discharged to community</th>
<th>Mean Medical Complexity score</th>
<th>Mean duration of therapy per case (hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stroke</td>
<td>136</td>
<td>77</td>
<td>10</td>
<td>65</td>
<td>17</td>
<td>24</td>
<td>60</td>
<td>2.54</td>
<td>107</td>
</tr>
<tr>
<td>Brain dysfunction</td>
<td>25</td>
<td>77</td>
<td>18</td>
<td>66</td>
<td>12</td>
<td>18</td>
<td>48</td>
<td>2.72</td>
<td>78</td>
</tr>
<tr>
<td>Neurologic</td>
<td>29</td>
<td>71</td>
<td>151</td>
<td>65</td>
<td>10</td>
<td>21</td>
<td>69</td>
<td>2.76</td>
<td>77</td>
</tr>
<tr>
<td>Spinal cord</td>
<td>7</td>
<td>69</td>
<td>6</td>
<td>73</td>
<td>10</td>
<td>15</td>
<td>57</td>
<td>1.71</td>
<td>53</td>
</tr>
<tr>
<td>Amputation of limb</td>
<td>18</td>
<td>76</td>
<td>14</td>
<td>79</td>
<td>10</td>
<td>16</td>
<td>61</td>
<td>2.72</td>
<td>166</td>
</tr>
<tr>
<td>Arthritis</td>
<td>23</td>
<td>71</td>
<td>65</td>
<td>85</td>
<td>7</td>
<td>18</td>
<td>87</td>
<td>2.30</td>
<td>44</td>
</tr>
<tr>
<td>Pain syndromes</td>
<td>56</td>
<td>79</td>
<td>4</td>
<td>79</td>
<td>9</td>
<td>18</td>
<td>80</td>
<td>2.45</td>
<td>54</td>
</tr>
<tr>
<td>Orthopedic</td>
<td>376</td>
<td>80</td>
<td>10</td>
<td>72</td>
<td>13</td>
<td>21</td>
<td>68</td>
<td>2.46</td>
<td>102</td>
</tr>
<tr>
<td>Cardiac</td>
<td>75</td>
<td>82</td>
<td>9</td>
<td>80</td>
<td>10</td>
<td>20</td>
<td>78</td>
<td>2.74</td>
<td>60</td>
</tr>
<tr>
<td>Pulmonary</td>
<td>87</td>
<td>79</td>
<td>7</td>
<td>75</td>
<td>8</td>
<td>13</td>
<td>61</td>
<td>3.07</td>
<td>55</td>
</tr>
<tr>
<td>Other</td>
<td>249</td>
<td>76</td>
<td>13</td>
<td>75</td>
<td>10</td>
<td>18</td>
<td>66</td>
<td>2.75</td>
<td>57</td>
</tr>
<tr>
<td>Developmental Disability</td>
<td>29</td>
<td>82</td>
<td>3</td>
<td>67</td>
<td>12</td>
<td>16</td>
<td>79</td>
<td>2.90</td>
<td>67</td>
</tr>
<tr>
<td>Debility</td>
<td>28</td>
<td>77</td>
<td>5</td>
<td>68</td>
<td>11</td>
<td>17</td>
<td>61</td>
<td>2.86</td>
<td>106</td>
</tr>
</tbody>
</table>
Care corridors (Figure 1) classified by impairment group (Table 2) were developed as an innovative standard for measuring utilization or best practices. Using these Care Corridors, practice variation was analyzed to identify “outlier groups” within specific diagnostic categories. For example, a dense concentration of hip fracture cases in a given sector (ie, indicated by high FIM gain and short length of inpatient stay, as in sector 1 of Figure 1) would suggest a need to review admission criteria. Conversely, a dense concentration of cases in a given sector (eg, sector 9 in Figure 1) would suggest a need for the KPTMS Project Team to monitor patient progress more closely. In addition, the KPTMS project provided comparative analysis of facilities in KP’s contract network to ensure consistent delivery of high-quality care.

The KPTMS project provided comparative analysis of facilities in KP’s contract network to ensure consistent delivery of high-quality care.

A graph (Figure 2) was generated for each patient in KPTMS documenting progress made by the patient during the rehabilitation stay. The graph became part of the patient’s medical record at the facility and was entered into KP’s CIS system, where the patient’s Primary Care Provider can access information about the patient’s functional profile.

Data integrity
All clinicians using the measurement tools (more than 350 clinicians, including physical therapists, occupational therapists, speech therapists, physicians, nurses, and social workers) participated in a training process and were certified by examination. Clinicians participating in the KPTMS project were required to show consistency in using the FIM and Medical Complexity Scale; overall agreement level of 83% was achieved as of March 2000 and was considered sufficient. To be considered in our data analysis, results had to show interrater reliability of 80% or greater among at least 80% of treating clinicians at participating facilities and agencies.

Table 3. Comparison of historical and recent quality outcomes as measured for the KPTMS project

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>FIM score at admission</td>
<td>81</td>
<td>69</td>
<td>-12</td>
<td>p .000</td>
<td>one-sample t test</td>
</tr>
<tr>
<td>FIM score at discharge</td>
<td>104</td>
<td>90</td>
<td>-14</td>
<td>p .000</td>
<td>one-sample t test</td>
</tr>
<tr>
<td>Unadjusted FIM Gain</td>
<td>23</td>
<td>21</td>
<td>-2</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Percentage of patients discharged to community</td>
<td>70</td>
<td>74</td>
<td>+4</td>
<td>p .001</td>
<td>one-sample t test</td>
</tr>
<tr>
<td>Length of inpatient stay per episode</td>
<td>15.8</td>
<td>13.8</td>
<td>-2</td>
<td>p .000</td>
<td>Independent, two-tailed t test</td>
</tr>
<tr>
<td>Length of inpatient stay per treatment cycle</td>
<td>13.9</td>
<td>11.0</td>
<td>-2.9</td>
<td>p .000</td>
<td>one-sample t test</td>
</tr>
</tbody>
</table>

NA = not applicable
Data were audited by medical record review, by weekly review of Outcomes Tracking Logs by the Outcomes Manager, and by outlier analysis in the SeniorMetrix software system database management process.

**Statistical analysis**

Variables compared in the trend analysis were tested using the one-sample, two-tailed t test (p < .05) or using an independent, two-tailed t test (p < .05). This procedure was used to compare cumulative sample averages to historical averages. For the Quality Index, percentile change of ±5 was considered clinically significant.

For analysis of variance, the SPSS software application was used to generate scatterplots of length of inpatient stay vs FIM gain for matched samples and line of best fit. The resulting “lowess” curve was a locally weighted regression curve.

To adjust for severity of disability, matched samples from the KPTMS population were obtained by determining score ranges of ±1 standard deviation for three variables (age, number of days from onset of condition requiring rehabilitation to date of admission, and FIM score at admission) and by identifying records in the SeniorMetrix database that fell within the score ranges for all three variables. If statistically significant differences between the two samples were found for any variable, the score range was reduced from ±1 SD to ±.75 or ±.50 or ±.25 until the difference was eliminated (independent, two-tailed t test, p < .05). For comparisons involving multiple diagnoses, distribution profiles were created.

Financial effectiveness goals were established considering Milliman & Robertson standards.

**Implementation**

We tailored implementation of the KPTMS project to be minimally disruptive to the facility. We also provided decision support to clinical teams along with benchmarks from their own practice. Individual patient reports were used to engage patients and their fami-
lies and to focus on patient satisfaction. We partnered with an outside agency, SeniorMetrix, Inc, which provided information systems, consultation, analysis, and outcome expertise in the area of rehabilitation.

**Results**

During the initial 21 months of the project, integration of FIM scoring into daily therapeutic decision making and case management improved outcome quality in postacute care settings while reducing medical utilization in those settings. As depicted in Figure 3a, length of stay per episode at a skilled nursing facility has decreased significantly from a historical baseline of 15.8 days to 13.8 days (Table 3). A "natural decline" of .2 days was eliminated from the episode decrease to account for a two-year declining trend in utilization before the baseline period. Meanwhile, number of days of therapy per cycle decreased significantly from 13.9 days to 11 days (Table 3).

Clinical results for functional independence are shown in Figure 3b. Statistically, patients had significantly less disability historically (FIM score of 81 at

<table>
<thead>
<tr>
<th>Facility</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean length of inpatient stay (days)</td>
<td>11.7</td>
<td>10.3</td>
<td>10.9</td>
<td>13.3</td>
<td>9.8</td>
<td>11.2</td>
</tr>
<tr>
<td>Mean duration of treatment (hr)</td>
<td>18</td>
<td>18</td>
<td>20</td>
<td>17</td>
<td>8</td>
<td>18</td>
</tr>
<tr>
<td>Mean FIM score gain (index points)</td>
<td>19</td>
<td>24</td>
<td>21</td>
<td>22</td>
<td>16</td>
<td>21</td>
</tr>
<tr>
<td>Mean rate of patient discharge to community (%)</td>
<td>81</td>
<td>79</td>
<td>73</td>
<td>76</td>
<td>81</td>
<td>66</td>
</tr>
<tr>
<td>Increase in Quality Index score (index points)</td>
<td>6.75</td>
<td>15.75</td>
<td>4.25</td>
<td>13.75</td>
<td>3.50</td>
<td>6.75</td>
</tr>
</tbody>
</table>

Figure 5. Graphs show Patient Satisfaction scores for patients receiving Medicare Part A services, Medicare Part B services, and Home Health services: mean scaled scores (1 = “poor”, 2 = “fair,” 3 = “good,” 4 = “excellent”) assigned by patients in each group when asked to give an overall rating for their therapy experience.

Figure 6. Graph shows KPTMS project outcomes for functional independence of patients who received Home Health services and care in skilled nursing facilities.
admission) than at the end of the study period (FIM score of 69 at admission); and as expected, FIM scores at discharge fell significantly, from 104 to 90 (Table 3). Thus, the resulting FIM gain fell two points, from 23 at baseline to 21 at the end of the study period. However, this difference is unadjusted. Despite lower FIM scores at discharge, significantly more patients were discharged to the community (Table 3), probably because of the integration of Home Health services during the second year of the KPTMS project.

The KPTMS project resulted in a Quality Index score of 107.56 (Figure 4), which represents a substantial improvement in quality outcome. Results for quality measures at the six facilities in the KPTMS contract network are shown in Table 4.

Relevant comorbidity—an aspect of the Medical Complexity score—increased statistically significantly during the reporting period: For the first half of the project (ie, June 1998 through May 1999), the mean Medical Complexity score was 2.60, whereas the score was 2.70 for the second half of the study period (ie, June 1999 through March 2000) (p < .003).

Figure 5 shows Patient Satisfaction results. Throughout the project, patients variably evaluated their preparedness to be discharged from the skilled nursing facility setting. At the end of the study period, the most recent scores for Patient Satisfaction were almost identical to those recorded during the earliest quarter of the KPTMS project, when mean length of inpatient stay was two days longer. Nonetheless, overall patient satisfaction remained at or above the levels recorded early in the KPTMS project, and the combination of reduced length of in-

<table>
<thead>
<tr>
<th>KPTMS Project Achievements</th>
<th>Regional Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Strong partnerships were formed with ≥300 people in ≥10 different organizations and with ≥30 Health Plan and medical group employees in ≥26 departments</td>
<td>• Improve quality by coordinating and enhancing partnerships</td>
</tr>
<tr>
<td>• Care was integrated across the entire continuum of postacute care</td>
<td>• Achieve impressive integration with affiliates</td>
</tr>
<tr>
<td>• Case management decisions now made on objective data and reflect care patterns within facility</td>
<td>• Design and implement integrated systems for delivering care</td>
</tr>
<tr>
<td>• “Care Corridors” developed for 15 impairment groups (Figure 4)</td>
<td>• Ensure that medical decisions are evidence-based</td>
</tr>
<tr>
<td>• Despite more disabled patient population, patients’ functional improvement maintained, and patients’ discharge rates to community have improved</td>
<td>•Obtain excellent clinical outcomes</td>
</tr>
<tr>
<td>• Patient levels of satisfaction good to excellent and remain stable</td>
<td>• Achieve high levels of customer satisfaction</td>
</tr>
<tr>
<td>• KPTMS project avoided $1,800,000 in gross costs</td>
<td>• Achieve favorable financial return</td>
</tr>
</tbody>
</table>

Table 6. Quality measure benchmark values obtained in KPTMS project compared with benchmark values recorded in SeniorMetrix database

<table>
<thead>
<tr>
<th>Quality measure</th>
<th>Receiving Medicare Part A services at KPTMS skilled nursing facility or tertiary care unit (n = 983)</th>
<th>Receiving Medicare Part A services as recorded in SeniorMetrix database (n = 4069)</th>
<th>Receiving Managed care services as recorded in SeniorMetrix database (n = 1350)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean age of patient (yr)</td>
<td>78</td>
<td>81</td>
<td>76</td>
</tr>
<tr>
<td>Mean no. of days from onset of condition to admission</td>
<td>9</td>
<td>26</td>
<td>33</td>
</tr>
<tr>
<td>FIM score at admission</td>
<td>70</td>
<td>72</td>
<td>72</td>
</tr>
<tr>
<td>Mean length of inpatient stay (days)</td>
<td>11.5</td>
<td>19</td>
<td>14</td>
</tr>
<tr>
<td>FIM score gain</td>
<td>22</td>
<td>19</td>
<td>20</td>
</tr>
<tr>
<td>Rate of patient discharge to community (%)</td>
<td>75</td>
<td>67</td>
<td>76</td>
</tr>
<tr>
<td>Mean duration of treatment (hr)</td>
<td>18.75</td>
<td>40.75</td>
<td>23.0</td>
</tr>
<tr>
<td>Mean Medical Complexity score</td>
<td>2.68</td>
<td>2.37</td>
<td>2.52</td>
</tr>
</tbody>
</table>
patient stay and improved quality outcomes resulted in avoidance of $1.8 million in gross costs for Medicare Part A services alone.

Table 5 shows how KPTMS project achievements successfully met goals of the project.

When compared with large samples of Medicare Part A records and records of patients receiving care in managed care skilled nursing facilities—records collected from the SeniorMetrix, Inc, Postacute Database, which contains more than 125,000 patient records—participants in the KPTMS project showed equal or better FIM gain and rates of patient discharge to the community as well as fewer required days in skilled nursing facilities and fewer required hours of therapy (Table 6). Changes in cost for different care settings are shown in Table 7.

Figure 6 depicts total patient improvement measured across care settings. The cost efficiency of using this approach is shown in Figure 7: overall cost per case decreased, whereas the cost efficiency of obtaining a unit of functional gain increased. Figure 8 shows that overall variation in utilization was reduced while outcome was maintained.

The primary effect of the KPTMS project was to reduce variation in utilization patterns as well as overall amount of medical utilization while maintaining functional outcomes.

### Discussion

The relation between functional outcome and cost of postacute care has been studied previously; however, those investigations had limited applicability, either because of small sample size or because their conclusions were based on extensive data sets that focused primarily on differences between hospital-based rehabilitation and rehabilitation received in skilled nursing facilities. In addition, although a growing body of literature identifies processes that can be used to evaluate quality of postacute care, scant evidence shows this system assessment to be operational. The KPTMS project was therefore designed to find for the skilled nursing facility setting the “optimal utilization threshold,” wherein functional outcomes were maintained when compared with a historical baseline and with other comparable populations of patients in skilled nursing facilities.

The primary effect of the KPTMS project was to reduce variation in utilization patterns as well as overall amount of medical utilization while maintaining functional outcomes, but this result does not always follow reduction in care. For example, preliminary analysis of the recent impact of PPS on rehabilitation outcomes in skilled nursing facilities showed that a 40% reduction in

### Table 7. Financial outcomes across the continuum of care in skilled nursing facilities, Home Health departments, Acute Care Rehabilitation facilities, and facilities delivering services under Medicare Part B

<table>
<thead>
<tr>
<th></th>
<th>Skilled nursing facility</th>
<th>Home Health</th>
<th>Medicare Part B</th>
<th>Acute care rehabilitation facility</th>
</tr>
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<tbody>
<tr>
<td>Mean length of inpatient (days)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>1997-1998</td>
<td>15.8</td>
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<td>1998-1999</td>
<td>14.1</td>
<td>NA</td>
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<td>1999-2000</td>
<td>13.6a</td>
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<td>No. of visits per case</td>
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<tr>
<td>1997-1998</td>
<td>NA</td>
<td>9.8</td>
<td>6.5</td>
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</tr>
<tr>
<td>No. of admissions</td>
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<td></td>
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<td>NA</td>
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<td>1999-2000</td>
<td>NA</td>
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<tr>
<td>Mean cost per day</td>
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<td>1997-1998</td>
<td>$300</td>
<td></td>
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<td>$300</td>
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<tr>
<td>1999-2000</td>
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<tr>
<td>1997-1998</td>
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<td>Mean savings per case</td>
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<td>$510</td>
<td>$67</td>
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<td></td>
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<td>1999-2000</td>
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<td>$141</td>
<td>$598</td>
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<tr>
<td>Total savings</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>1998-1999</td>
<td>$1.1M</td>
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<td>$1.3M</td>
<td>$324,300</td>
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</tr>
</tbody>
</table>


*Although Home Health costs rose, overall savings to system increased from less care required at skilled nursing facilities while quality maintained.

*For six months.

*Agreed-upon maximum savings.
Figure 7. Graphs show results for five KPTMS project efficiency measures. FIM score gain = difference between mean FIM score for Home Health patients and mean FIM score for patients at admission to skilled nursing facility. Cost analyses were based on an estimated $64 per Home Health visit and $300 per day in skilled nursing facility.

Figure 8. Plots show FIM gain vs length of inpatient stay for two matched patient populations: a) patients in KPTMS project facilities (n = 2091) and b) patients in non-KPTMS project facilities (n = 805). Patient sample in (b) was derived using the severity adjustment process described in the text. Curved line is a locally weighted regression curve or “lowess” curve. Squares represent intersection of length of inpatient stay and FIM score gain for each patient. For the patients in (a), shift in data distribution to lower utilization (ie, shift of data to left) with comparable outcome (ie, similar height of lowess curve) represents influence of decision support provided to the clinical teams at every weekly patient care conference.
therapy utilization caused a 21% loss of functional outcome. In the KPTMS project, 13% reduction in medical utilization (ie, from 15.8 days to 13.8 days) did not negatively affect patient outcomes. All initial goals of the KPTMS project were met or exceeded: clinical quality measures improved, medical utilization and costs were reduced, and levels of satisfaction expressed by patients and by participants in the KP contract network satisfaction remain good to excellent. KPTMS has also remained patient-centered: care decisions are made not on the basis of arbitrary caps or human resource-intensive procedures but are instead made on the basis of data applied on a case-by-case basis. Using the patient’s own outcomes in this way has enabled patients to receive the right care in the right place at the right time, has provided on-site decision support to practitioners and to case managers, has improved the KPTMS Project Team’s ability to predict both the course of care and the likely disposition for the patient, and has resulted in development of best practices (Care Corridors) across the postacute care continuum.

The KPTMS project was a true multidisciplinary team effort involving multiple departments within KP Colorado, ten different care provider corporations, and hundreds of clinicians—including physicians, nurses, therapists, discharge planners, and case managers. These project participants integrated the data-based outcomes and systems of care delivery of KPTMS into their professional practice to improve care outcomes and the care experience for the patient. These objectives were achieved as a result of several major innovations in health care delivery that were introduced by KPTMS. These innovations included formation of strong partnerships between KP and its contract network as a way to manage the continuum of care instead of managing care in only one care setting. In addition, clinical outcomes were linked with financial outcomes, an action demonstrating that application of a consistent standard to continuing therapy reduced cost and improved quality. Moreover, KPTMS linked clinical decisions to real-time data about care outcomes; outcome data did not “sit on a shelf” but instead were applied on a day-to-day basis to ensure a high standard of care for KP members.

More than 10,000 episodes of postacute care have been positively affected.

More than 10,000 episodes of postacute care have been positively affected by KPTMS, and most of these episodes involve patients who are enrolled in the Medicare+Choice Program. As another result of the KPTMS project, KP can now compare contract network providers and facilities in several areas of quality and utilization, use Care Corridors with our evidence-based case management system to predict course of care, and know what mean lengths of inpatient stay to expect for various impairment groups.

Transferring KPTMS to other KP Regions

The KP San Diego Medical Service Area initiated the KPTMS project on July 1, 2000. The KP Mid-Atlantic Region visited Denver on two occasions to observe KPTMS in action and is looking closely at our results. The KP Northern California Region has initiated a statewide rollout of the program, commencing with their East Bay Service Area January 1, 2001. Other clinical departments in the KP Colorado Region plan to adapt the KPTMS program of data-based outcomes to guide further therapy decisions.

Next steps for KPTMS

The KPTMS project is evolving in several directions. During the next year, best practice standards (categorized by diagnosis) will be developed with severity-adjusted groupings, “stretch standards” will be instituted (adjusting Quality Index scores from historical baseline values to current baseline values), and care algorithms will be developed to help predict required care. Sufficient data have been collected to allow the investigators to go forward with identifying optimal utilization, not only within a post acute setting but across various combinations of postacute settings. In addition, the KPTMS project will incorporate postdischarge follow-up of patients, identify patterns of medical underutilization, and become integrated into other departments in the KP Colorado Region.

**References**

BIOPSY

She wants to know what time it is.
Did she sleep? She has no
time to lose in sleep since probing
fingers circling felt it nestled

jewel-like, beneath her nipple.
A steamy mirror, one arm lifted,
stillness before words rose.
How much time? She needs to know.

Buttoning blouses, moving boxes,
turning toward her lover in
and out of bed, she feared it spoke
to all her cells in secret code
each hour, every stolen minute.

By Kelly Sievers, CRNA

More poems by Kelly Sievers, CRNA
can be found on pages 19, 48, and 60.
Sleep-eating—eating while in a somnambulistic state—has infrequently been described in the medical literature. This article reports five cases of sleep-eating (one in detail and four summarized) in which a psychodynamic explanation for the condition is suggested by patients themselves. These patients are of interest also because their underlying psychodynamics plausibly explain their near-lifelong morbid obesity and dramatic episodes of weight cycling (“yo-yo syndrome”). The patients were treated in the Kaiser Permanente Weight Control Program in San Diego, which uses a psychodynamic approach coupled with exercise, prolonged absolute fasting, and the nutritional supplement Optifast® (Novartis Nutrition, Minneapolis, MN).

Case 1
A 25-year-old nurse’s aide weighed 410 lb (184.5 kg) when she applied to our Very Low Calorie Diet (VLCD) Program for assistance with losing weight. Fifty-one weeks later, she weighed 132 lb, having lost 278 lb without incident. She then started incrementally adding food to her diet and within a few weeks was eating normally. After a month of this normal diet, she was briefly hospitalized twice because of weakness, dizziness, and hypotension. Coincidentally, she had a flareup of psoriasis after several years of methotrexate therapy, which had stabilized the psoriasis.

Sudden appearance of dental caries on the anteromedial surface of the patient’s incisors led to the discovery that she had been inducing herself to vomit so that she could maintain her weight loss. Her sister and mother acknowledged her advanced negotiating skills. At 15 years of age, she weighed 250 lb (112.5 kg). She tells anyone because I was afraid he’d beat me. Who would believe me? He was good, a regular churchgoer. They were grownups; they had friends.” Her sister and brother were now both morbidly obese; her sister acknowledged molestation by her maternal uncle. Her brother no longer had contact with either of his sisters. At 14 years of age, she started to refuse her step-grandfather’s advances. At 15 years of age, weighing 350 lb

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She now speaks clearly of the threat created “by my wall being removed” (ie, the weight loss).

During a period when, the patient said, she felt “dangerously thin” — her weight was 238 lb (107.1 kg) — her daughter found her sleep-eating.

(157.5 kg), she ran away from home to escape a situation she no longer could tolerate.

The patient then lived with an alcoholic man for the next four years. During this time, she was frequently beaten, but her weight remained steady at 350 lb. At the age of 19 years, she again ran away and thereafter lived alone. At the age of 26 years, weighing 410 lb (184.5 kg), she decided to enter our VLCD Program. Her ability to maintain the required prolonged fast was superior, as can readily be seen in Figure 1. She stated that she did not have any sense of sexual threat while losing the weight, and she denied that the incest was relevant to her obesity or to any of her other problems. As she began to acknowledge the importance of her history, she began to overeat in a fully conscious state; her sleep-eating ceased, and she returned to weighing 400 lb (180 kg) more rapidly than she lost the weight. She insisted that she did not want to think about her life’s events anymore and refused further contact with the VLCD Program. Ten years later, she returned weighing more than 400 lb (180 kg) and on permanent disability. She sought and obtained bariatric surgery. After losing 90 lb (40.5 kg), she became uncontrollably suicidal, was admitted to a psychiatric hospital five times in eight months, and received 12 electroshock treatments. She now speaks clearly of the threat created “by my wall being removed” (ie, the weight loss), first by Optifast and then by bariatric surgery.

**Case 2**

A 47-year-old female probation officer was largely amnesic about her life before she was eight years of age. When the patient was in the fourth grade, her mother had a nervous breakdown. When the patient was in fifth grade, her father began sexually molesting her. When the patient was in sixth grade, chronic depression set in and persisted into the patient’s adulthood. At age 20, she was raped. At age 27 years, weighing 140 lb (63 kg), she married the first of four increasingly ill-chosen husbands. With each marriage, she gained a substantial amount of weight; with each divorce, she spontaneously lost most of the weight gained. In discussing her life, she remarks, “I fear I’ll kill someone, maybe my father.” Several major weight losses were successful initially but then converted into regain while the patient was still enrolled in the Program: “When I feel safe, the weight will come off.” On several occasions during a period when, the patient said, she felt “dangerously thin” — her weight was 238 lb (107.1 kg) — her daughter found her sleep-eating. The incidents of sleep-eating ceased after the patient regained a substantial amount of the weight previously lost.

**Case 3**

A 55-year-old housewife was molested as a child by multiple relatives and neighbors. She first became obese during a traumatic marriage, spontaneously lost 100 lb (45 kg) — thus achieving normal weight — after divorce, and regained a massive amount of weight immediately after her second marriage. She was first seen when, after losing 150 lb (67.5 kg) in our weight-loss program, she became manifestly terrified instead of being pleased. She readily recognized the sexually threatening nature of being normal weight and rapidly regained the 150 pounds she had lost. On several occasions in the course of regaining the weight, she was found eating in the middle of the night while in a somnambulistic state; she was awakened from these by her family, who discovered that she was unaware of how she had reached the kitchen. The episodes
of sleep-eating ceased after the patient regained a substantial amount of the weight she previously lost.

Case 4
A 57-year-old, morbidly obese woman had been slender as a child. Throughout her childhood, the patient was repeatedly told by her mother that she was not wanted and that her birth was a mistake. At ten years of age, she said, she was continually molested: first, by a priest; and in her teens, by two uncles. She had chronic depression that extended back to these times, was still angry about the events, and suspected that they had something to do with her eating patterns. She married while at a normal weight and felt anxious about engaging in her first voluntary sexual activity. In the early years of her marriage, she was recurrently found eating in a somnambulistic state. She ultimately gained 150 lb (67.5 kg), and the episodes of sleep-eating ceased.

Case 5
A 31-year-old woman who grew up in a troubled family described her mother as cruel and her father as alcoholic. She was depressed from childhood onward and was obese in kindergarten; in high school, she was morbidly obese. She did not acknowledge any history of sexual abuse. She married the first person who was nice to her and became promiscuous thereafter; she explained this behavior as seeking male approval. She became a heavy methamphetamine user, as did her morbidly obese sister. While still married, the patient was celibate for a prolonged period, lost almost 200 lb (90 kg), and again became promiscuous. At that point, she began sleepwalking and sleep-eating. She interpreted this behavior as the result of “guilt over what I’m doing.” After she regained 100 lb (45 kg), the episodes of sleep-eating ceased. She reported that she had been able to withstand occasional dreams in which she was told she had to eat.

Discussion
A search of the medical literature shows few reports of sleep-eating, even including cases that are drug induced.1-9 Sleep-eating should not be confused with nighttime eating (nocturnal hyperphagia), a term which refers to overeating at night while fully awake. No reported case of sleep-eating has been explained, but most authors indicated that their subjects evidently had psychologic turmoil. Schenck et al10 noted that some of their patients were anorexic. In a later study,11 Schenck et al noted that almost half of a series of 38 sleep-eating patients were overweight and that unspecified acute stress was often the event precipitating their episodes of sleep-eating.

The five patients described here are unusual because their sleep-eating has a plausible psychodynamic explanation. A notable feature of these patients is that their episodes of sleep-eating coincided with periods of potential sexual activity (a major stressor, given their common background of being abused, mostly sexually), and their episodes of sleep-eating ceased after the patients regained a substantial amount of the weight they previously lost. The relation between sleep-eating and childhood sexual abuse can be understood by interpreting weight regain as an unconscious protective device and major de-stressor, given the sexually protective aspects (real or imagined) of obesity. Indeed, eating is commonly recognized as an activity that reduces anxiety, and obesity is commonly recognized as reducing sexual attractiveness. Thus, all five patients were able to provide an extraordinary glimpse into the origins of their sleep-eating and its ultimate relation, through obesity, to childhood abuse, often incest. In this light, that all cases were women is less surprising.

Although other causes of sleep-eating are yet to be identified, the common background of abuse among these patients indicates that a history of childhood abuse and its consequent dissociated states should be sought in any known case of sleep-eating. Of note is that attaining sufficient levels of obesity seemed to cure the sleep-eating. I have previously shown that a high prevalence of children subjected to incest, sexual molestation, or rape commonly become morbidly obese as adults.12 A recent report from the Mayo Clinic13 confirmed this relation between childhood sexual abuse and obesity in the population studied. The observations reported in the current report appear to be a variation on the theme that obesity commonly reduces sexual threat. In some patients, when the threat is sufficiently great, sleep-eating is an unconscious device for rapidly attaining safety through weight gain.

In Case 1, the unconscious nature of the link between sexual threat, protection, and obesity is underscored by the patient’s eating while in a dissociated state and denying the relevance of her incest history to subsequent life events. She is a prime example of rapid regain after major weight loss—but with the reasons and mechanisms understood. Her history is important because it illustrates the underlying dynamics of a case that otherwise would...
be misunderstood or viewed under the superficial rubric of “weight cycling”\(^{14}\) or “yo-yo” dieting. This terminology sometimes implies a changed metabolic rate for its explanation of weight regain. Those metabolic changes are real, but they are minor and transient\(^ {15}\)—and have not been shown to cause weight regain. A metabolic explanation is not even conceivable for the patient in Case 1, given the marked abruptness and rapidity of her weight regain. She herself now speaks\(^ {16}\) clearly of the relation between her obesity and events in her life.

Obesity was a prime protective device in these five women patients. For them, obesity was not the problem—it was their solution. Efficient treatment of their morbid obesity exposed the complexity and hidden nature of the true problem to which obesity was a solution. In these patients, effectively treating their morbid obesity without understanding its dynamics set the stage for rapid regain of the weight previously lost. In other words, weight loss did not solve these patients’ problem: Instead, it took away their solution.

**Conclusion**

This report gives a plausible explanation for the highly uncommon condition of sleep-eating. Knowing the psychodynamics of the five patients described here will enable clinicians to determine the overall prevalence of this particular mechanism as well as the causes of sleep-eating in other patients. The psychodynamics discussed here should prompt physicians to look for a history of childhood abuse—particularly sexual abuse—when they see patients who eat while asleep or who became morbidly obese from suddenly regaining a major amount of weight previously lost. Having such knowledge in advance of treatment may improve the outlook for successfully treating patients with this condition.\(^ *\)

**References**

Patients Prefer Simple, Visual Asthma Self-Management Plan Forms

Abstract

Introduction: Written asthma self-management plans are recommended by most published asthma guidelines. This study explored patient preferences about asthma self-management plan forms.

Methods: Four asthma self-management plan forms were shown to pediatric asthma patients, to their parents, or to patients and parents when they were seen for ongoing evaluation and management of asthma. Patients, their parents, or both were asked to state their choice of an asthma self-management plan form to use in providing written instructions about managing their (or their child’s) asthma, why they preferred the form, and why that form was easier to follow.

Results: The interview was completed by 21 subjects, including six asthma patients and 15 mothers of asthma patients. Eighteen (86%) of the 21 respondents preferred Form 3, which used pictures from a visual analog scale of asthma severity along with green, yellow, and red colors to describe asthma severity zones. Of the 18 respondents who preferred Form 3, ten said it was easier to read, ten said it was colorful, four said they liked the cartoons, and three mothers said that their child would be able to follow it.

Conclusion: In a small convenience sample of interviewees—pediatric asthma patients and their parents—most respondents preferred the asthma action plan form that used color and cartoons to describe asthma severity zones. Use of pictures, color, simplicity, and ease of reading were described as important factors in this preference.

Introduction

Asthma is the most common chronic illness of children. The annual cost of asthma care in the United States has been estimated at $11.3 billion, nearly half of which is used to pay for hospitalization and ED visits. Good preventive care for asthma can decrease the need for hospitalization and ED visits. Implementing the behavior changes necessary to achieve good asthma control can be difficult. After patients leave their physician’s office, verbal recommendations frequently are not remembered. Written instructions may improve adherence to medical recommendations.

Providing written management plans to patients with asthma is recommended in the National Asthma Education and Prevention Program Expert Panel Report and in most other asthma care guidelines. Having a written asthma self-management plan is associated with decreased need for hospitalization and ED visits.

Asthma is the most common chronic illness of children.

Many different types of forms have been used as templates for asthma management plans. Most instruction forms for asthma care indicate levels of asthma control by using a three-color format in which the green zone represents good asthma control, the yellow zone represents the early signs of an asthma flare, and the red zone means that an asthma flare-up is in progress and that prompt action is needed. Asthma severity zones have been described using either peak expiratory flow rate or symptom criteria. Some instruction forms for asthma care provide extensive detail about asthma management strategies. Few asthma self-management plan forms use pictures to convey levels of asthma severity.

Asthma self-management plans that use pictures to communicate about asthma severity may be better received than text-based self-management plans.

Many patients, particularly those who live in low-income and inner-city areas, may have low literacy skills, and school-age children lack the literacy skills of adults. For these patients, asthma self-management plans that use pictures to communicate about asthma severity may be better received than text-based self-management plans. Fritz et al described a visual analog scale of asthma severity that used pictorial anchors—four cartoons, each showing a child with a particular degree of asthma: “none at all,” “a little,” “quite a bit,” and “very much/terrible.” These cartoons can be used to visually describe green, yellow, and red asthma severity zones.

We developed an asthma self-management plan template (Form 3 in Figure 1a,b) using the cartoons of the pictorial visual analog scale of asthma severity to describe green, yellow, and red zones. We compared patient acceptance of this form with patient acceptance of other text-based asthma self-management plan forms used at our medical center or recommended in the guidelines of the National Asthma Education and Prevention Program Expert Panel Report.

Methods

A convenience sample of asthmatic children and their parents were interviewed by

By Harold J Farber, MD
Karen Smith-Wong, RN, NP
Lynn Nichols, RRT
Barbara Langham, RN
their health care practitioners as part of a visit for either asthma care management or pediatric pulmonary consultation. Parents—and children who were old enough to comprehend—were given four asthma self-management plan templates and were asked to state which self-management form they preferred, why they preferred the form, and what makes that particular form easier to follow. The template for Form 1 appeared as Asthma Action Plan Example 6 in guidelines published by the National Institutes of Health. The template for Form 2 was Kaiser Permanente Form 99551, a three-zone (one color each), two-sided, text-based form. The template for Form 3 (Figure 1) was a newly developed form (subsequently adapted as Kaiser Permanente Form 98860 (2-99)) that uses a visual analog scale, color, and text to describe levels of asthma severity. The template for Form 4 was Kaiser Permanente Form 06273, which uses text to describe a four-zone asthma self-management plan. All four forms can be viewed electronically at The Permanente Journal’s Web site.

Subjects were advised that the reason for these questions was to help us determine which form to use in clinical practice. Responses were then recorded on an interview record, either directly by the patient (or parent) or by the health care provider on the basis of verbal comments of the patient (or parent).

Results

The interview was completed by 21 subjects, 15 of whom were mothers of asthma patients and six of whom were patients themselves. Age of patients whose parents completed the interview ranged from 6 months to 14 years (mean, 9.5 years).

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Figure 1. Asthma Action Plan Form 3: A newly developed form that uses a visual analog scale, color, and text to describe asthma severity zones (adapted as Kaiser Permanente Form 98860 (2-99)). Child with asthma illustration adapted and reproduced by permission of the publisher and author from Fritz G, Spirito A, Yeung A, Klein R, Freedman E. A pictorial visual analog scale for rating severity of childhood asthma episodes. J Asthma 1994;31(6):473-8.
Patients who completed the interview ranged in age from 9 to 14 years.

Form 3 was preferred by 18 (86%) of 21 subjects. A parent who preferred Form 2 explained, “It is working well, no need to change it.” A teenager and a mother who preferred Form 4 stated, “I like having more information.” No subjects preferred Form 1.

Among the 18 subjects who preferred Form 3, ten subjects said it was easier to read, ten subjects said it was colorful, four subjects said they liked the cartoons, and three subjects said they believed that their child would be able to follow it. Illustrative comments from patients explaining their preference for Form 3 included, “You don’t have to sit and read the whole thing—it is right there”; “It has details written in the way I can interpret them”; “Information seems simple and to the point”; “If I have to leave this with my daycare provider, this [the form] is easy [for the daycare provider] to look at”; “[The form is] eye catching”; “[The instructions are] all on same page”; “[The form is good] because some people can’t read that well”; and “He (the child) can look at it too and see [the instructions].”

**Adherence was not measured, a reasonable speculation is that adherence to asthma care instructions might improve if they are given in a way that is better accepted by the patient.**

**Discussion**

The results of this study suggest that color and pictures used to describe levels of asthma severity are better accepted than text-based written instruction sheets. Although the effect of different plan forms on patient adherence was not measured, a reasonable speculation is that adherence to asthma care instructions might improve if they are given in a way that is better accepted by the patient—in this case, as illustrated instruction sheets.

**Limited literacy characterizes large segments of the population and restricts the effectiveness of text-based asthma self-management plans.**

This study is limited by the small number of subjects interviewed and by the patient population from which they were selected: Our medical center serves a large number of lower-income, working-class, and Medicaid-insured patients, and our results may not be generalizable to highly literate, upper-income patients. Ethnicity and income of subjects were not recorded.

Limited literacy characterizes large segments of the population and restricts the effectiveness of text-based asthma self-management plans, which rely on written words to communicate with patients. In addition to levels of asthma severity, printed instruction sheets should use pictures to describe medications to be taken, because many parents know their child’s inhalers by color and not by name. Further research is needed to develop and validate a written asthma instruction sheet that uses pictures to describe severity zones as well as medications to be taken.

**Conclusion**

In a small convenience sample of asthmatic children and their mothers, most respondents preferred the simplified asthma management form that used both a cartoon-like visual analog scale and color to describe asthma severity zones. Pictures, color, simplicity, and ease of reading were described as important factors in these respondents’ preference for one form over others. We speculate that use of an asthma self-management plan that is both easier to understand and well accepted may facilitate adherence to that plan.

**References**

For any severe illness, I’ve always dreamed of the ideal therapy: curative in a single dose, this concoction could be mixed with a spoonful of chocolate syrup, and—of course—not cause any side effects. But the harsh reality of many effective medical therapies today is far from that dream.

While the topic of health care economics is grabbing all the headlines, an important change has taken place in the patient-doctor relationship, at least in my practice. Regardless of who pays for what, cultural and technical factors at the beginning of this century also profoundly affect a patient’s decisions.

Developments in patient sovereignty, media exposure, new expectations, information technology, new drugs, medical technology, medical ethics, standards of scientific evidence, and choices of alternative practices now intersect to affect the process of making treatment decisions.

The result of all these developments is that patients with serious illness are faced with a more confusing array of choices than ever before. To simplify, I sort the choices into five basic categories of options. (Cancer therapy is the paradigm here, but the principles could be applied to any other serious illness.) My experience has shown two things: 1) Even when attempting a cure is futile, interested patients still want to thoroughly explore possibilities; and 2) presenting the possibilities as five options provides a framework for discussion with the patient.

Option 1: “Standard” Medical Care

The first option—“standard” medical care—is elusive and evolving. Therapy plans in this category can be culled from published medical and scientific research or from consensus statements of professional groups; these therapy plans usually have established efficacy or may be in widespread use before efficacy is conclusive. The therapy might include medication, surgery, or radiation therapy—either alone or in combination.

Nutritional, psychosocial, and physical effects of the illness are all considered in standard care. Standard therapy has a proven track record, predictable rates of success and failure, and known side effects. In considering whether to use standard therapy, the physician and patient may discuss evolution of the therapy, equivalent approaches, and failed therapies. Patient expectations rise after a particular type of therapy has received media or marketing exposure. To put these expectations in a realistic context, patients must learn that the use of some new drugs and technologies becomes widespread through effective marketing or through extensive media exposure instead of through rigorous science. Patients should know also that American medicine can be as subject to fads as the rest of the culture.

Option 2: Clinical Trial Therapy

The most convincing scientific way to prove efficacy of a given therapy plan—and ultimately to improve clinical outcomes—is to compare therapy plans (eg, standard vs experimental therapy) directly. When available, therefore, the second option for patients is clinical trial therapy. Patients who choose this option are assigned to treatment groups in a statistically random way. These “Phase III” trials usually use well-tested therapies in new combinations. Formerly the exclusive province of academic medical centers, Phase III clinical trial therapy can now be offered through the private sector.

For many patients, statistical randomization is a difficult concept to accept. It means that neither patients nor their doctors will choose the therapy and that a mathematical model (or computer program) instead will assign the therapy. This procedure is both ethically acceptable and scientifically imperative and is an important way to provide unbiased evidence to advance medicine.

Clinical trials must be approved by local ethics boards or human subject protection committees because patients on a new therapy may have wonderful outcomes, terrible side effects, or both. Patient participation is voluntary, and protections—including the right to withdraw from the program—are integral to the required informed consent.

Option 3: Experimental Therapy

The third option is “Phase I” or “Phase II” experimental therapy, available for drugs whose efficacy has not been proved. These trials, too, are ethical trials offered on a voluntary basis, but eligibility for these forms of therapy is usually extremely restricted: Most are offered only to patients who have relapsed or for whom other therapy has failed. In these trials, the investigator hopes for treatment effectiveness but emphasizes to patients that side effects may be the only results.

More so than in other trials, Phase I clinical trials
are positioned at the frontier of the unknown. These trials are used to establish a human track record for a given therapy; therefore, Phase I therapy may be used for the first time in humans. The trial may also maximize doses with the explicit goal of monitoring unforeseen toxic effects. Phase I clinical trials lay the foundation for Phase II studies, which establish whether the given therapeutic agent has any effectiveness in human disease.

**Option 4: Nonmedical (Alternative) Therapy**

The fourth category of therapy options is nonmedical therapy. This category may include naturopathy, homeopathy, or other alternative therapy. Respect for a patient’s autonomy is at the core of this option. Patients may use various criteria when evaluating this option in comparison with evidence-based medical treatment options, because relevant data for conventional analysis may not exist.

Many patients use nonmedical therapy to “complement” medical therapy. Because an alternative therapy (eg, use of antioxidant substances) may inhibit standard therapy,1 open discussion between doctor and patient is important to achieve therapeutic goals.

**Option 5: Palliative Therapy**

The fifth therapy option is to choose active palliative and to withhold therapy that has a curative intent. Given that patients have a sovereign right to make determinations about their own care, this option can be valid. Moreover, even when this option is not the main recommendation, mentioning the option facilitates discussion of the natural history of untreated disease and can lead to frank, important discussions of advanced directives for the end of life or palliative and hospice care. This discussion may be associated with even more ethical and legal considerations for younger patients.

In the “old days,” doctors would choose therapy without much patient input; that practice was the norm. Some academic institutions even trained their physicians to offer clinical trial therapy only, because assigning patients to clinical trials was standard practice at those institutions. Some patients still prefer that mode of making treatment decisions.

**Treatment Options Empower Our Patients**

Nowadays, however, clinicians must understand their patients’ values, cultural mores, and therapeutic goals. When faced with serious illness, a patient may feel that her or his own choices vanish. Providing information about options doesn’t obviate the physician’s role in making a recommendation but does provide an opportunity to empower patients to assert their right to choose.

Sharing the options with patients and entering into conversations about values—whatever the ultimate choice—usually leads to a more thoroughly informed consent to treatment. In turn, this result can lead to a better therapeutic alliance and partnership between doctor and patient. Even with all the raw medical information available on the Internet and in other media, patients who come to an office visit equipped with voluminous printouts still want a physician to “walk them through” the available options.

No patient or doctor can ignore the monetary implications of these choices. These implications are part of the real-world equation as are some doctors’ research motives, institutional motives, or health plan restrictions.

In the future, perhaps therapy will emerge to suit each patient’s individual needs. In the meantime, the tasks for both doctor and patient have expanded: Both must consider five categories of possible choices while we all wait for that magical spoonful of chocolate syrup.

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**Reference**


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How do I present these five treatment options? After the diagnosis of cancer is confirmed, I hold a family conference which may last at least 90 minutes. At these conferences, one can expect shock, questions, and tears—then a discussion about feelings, particularly those of fear, blame, and guilt. When I begin teaching about the disease itself, I introduce the idea of treatment options.

I find it useful to distribute an Internet printout about the disease. The National Cancer Institute provides an objective source via its Web site (http://rex.nci.nih.gov). With this printout in hand, I begin talking about the “five ways, or options, we can use to treat this disease.” Then I deliver my favorite phrase: “I’m a doctor, not an insurance man, so let’s talk about these options first and talk about coverage later.”

Later, if a patient relapses, I reiterate to that patient the availability of the five options. If possible, I also give the patient a relevant printout from the National Cancer Institute’s clinical trials Web site (http://cnetdb.nci.nih.gov/trialsrch.shtml). Regardless of the patient’s choice or treatment outcome, a key value of our clinical program is to continue monitoring the patient. To that end, we help families navigate referrals for experimental or alternative care and for hospice care when necessary.
“10 degrees south”
Photo was taken at Nusa Lembongan, a tiny island off Bali, Indonesia.
by Nandini Bakshi, MD

Nandini Bakshi is a TPMG physician with the
Department of Neurology at Kaiser Oakland.
More of Dr Bakshi’s artwork can be seen on page 57.
Abstract
Kaiser Foundation Research Institute (KFRI) has developed and implemented in the Kaiser Permanente (KP) Northern California Region a comprehensive system for assessing and budgeting costs of clinical trials and for negotiating study budgets with research sponsors. KFRI has shared its methodology and results with research leaders throughout KP. This article communicates the background and current status of this effort to the KP research community at large and specifically to all KP physicians interested in clinical trials research. KFRI hopes to benefit KP as an organization by giving its current and future researchers a deeper understanding of the economic and financial factors underlying clinical trials and the importance of using a systematic approach to developing and negotiating research budgets.

As a research organization, KP has unique strengths as well as unique financial concerns. This article presents basic economic and financial concepts as the basis for understanding cost assessment and the logic of budget development. Some key elements of successful negotiation strategies are also presented.

Prospective KP principal investigators are urged to take a systematic approach to assessing and budgeting the costs of clinical trials. KFRI is prepared to assist KP physicians with this task and to negotiate industry-sponsored clinical trials budgets with sponsors.

Introduction
Economists are fond of reminding us that “there is no such thing as a free lunch”—someone ultimately pays. Similarly, there are no free clinical trials: Demonstrating that a promising molecule is a safe and effective therapeutic agent is enormously costly. In addition to incurring direct laboratory and clinical costs, clinical trials must meet ever-increasing requirements of regulatory compliance as well as bear public scrutiny of the clinical trials process. In practice, the cost of developing new drugs and investigational devices will have been paid jointly by the sponsoring pharmaceutical company, the clinical research site, and the patient’s third-party insurer.

In the past year, the Kaiser Foundation Research Institute (KFRI) has been grappling with an important health care issue: how to fairly and accurately assess and charge to research sponsors the costs of resources used in conducting clinical trials at Kaiser Permanente (KP) facilities. As a not-for-profit organization, our goal has been to avoid subsidizing the product development expenses of the US pharmaceutical industry, an industry which includes manufacturers of medical and surgical devices as well as manufacturers of drugs. The US pharmaceutical industry earns a 20% profit margin on sales—a figure three times the average for US industry as a whole—and a consistent 30% return on equity (a figure four to five times the US average).

Participating in Clinical Trials: KP’s Unique Position
KP is in a unique position in the US clinical trials “industry” in as much as KP differs from academic medical centers (which have clinical trials research at the core of their activities) and freestanding research sites (which may range in size from small, single-specialty medical practices to large, multipractice associations and networks). Academic and freestanding research sites typically construct their budgets to encompass the stipulated research and administrative “protocol-induced” activities.

Compared with KP, academic medical centers and freestanding research sites have in common a greater capacity to pass through to third-party payers the cost of routine clinical care mandated by clinical trials. Routine clinical care (as broadly defined) is billed to the research subject’s insurer, whereas nonroutine clinical care (as narrowly defined) frequently is reimbursed by study sponsors at premium rates and serves as an additional source of profit for these institutions. However, for patients with a given medical condition, care defined as “routine” or “standard” may vary substantially by geographic region and by type of provider institution; no bright line
distinguishes routine care from protocol-induced care. The research site stands at arm’s length from the patient’s insur er, but clinical costs may be accepted by the payor as representing either routine care or care needed for treating the patient’s condition. Historically, this transfer of costs to the payor has often occurred without the patient’s insurer having explicit knowledge that the insured person has received treatment in the context of a clinical trial.

Because KP is its own third-party payor, we frequently find ourselves having to absorb internally the broader definition of routine care services as well as the costs of these services. This financial practice would make unattractive to us a budget which an academic institution would find attractive—and would thus place us at a comparative disadvantage in competing for promising studies.

However, on the positive side of the equation, KP stands in the unique position of having a heterogeneous, ethnically diverse patient population which is nonetheless homogeneous in representing the US Census block population at large. Patients are selected for participation in clinical trials across a broad range of specialties in our not-for-profit HMO, which has a well-deserved reputation for delivering high-quality medical care to its members. Compared with its research competitors—academic medical centers and freestanding research sites—KP may face a cost disadvantage, but this disadvantage is more than outweighed by KP’s qualities as a research site superbly attractive to pharmaceutical company sponsors.

Indeed, KP differentiates itself from academic medical centers involved in the clinical trials industry in an important respect: KP has direct access to its patient population as well as outstanding data systems and quality of patient care. Historically, academic medical centers have sometimes obtained first access to promising trials partly because of an implicit promise that KP patients would be referred to enroll in the trial. In these instances, KP has suffered financially through its role as a “secondary supplier” of research subjects.

KP distinguishes itself from academic medical centers also through KP’s ability to enroll large numbers of patients in phase III randomized trials of a new drug where the control arm of the trial is standard therapy. Academic medical center research sites that collect subjects via referrals from community physicians are comparatively disadvantaged: When potential study subjects cannot be assured of receiving the investigational therapy, these patients’ regular physicians have no pressing clinical or financial incentives for referring the patients to an academic medical center. Because KP provides substantial economy of scale in data collection at a single site and can assure the quality of data obtained, KP stands in a uniquely strong position for attracting this type of clinical trial.

**Identifying the Full Costs of Clinical Trials**

The first step in being able to charge research sponsors fairly for the cost of clinical trials is to identify the costs within KP. This is a challenging undertaking in an organization the size of KP, where the health insurance function is integrated with delivery of medical care to Health Plan members and where the mix of institutional and administrative costs is complex. Paradoxically, the more integrated the functions of the institution (integration arguably creates real economic efficiencies for a “health care delivery system” such as KP), the more difficulty in identifying precisely the microcost of each service delivered. Difficulty arises from inconsistent data capture across a large organization such as KP and from questions concerning systematic allocation of institutional overhead costs.

**Direct vs Indirect Costs**

For financial analysis of clinical trials, costs are broken down into direct and indirect components. Direct costs include costs of specific clinical procedures and costs of the research and administrative activities required by the study protocol. These activities are often referred to as “protocol-induced” activity, although the term properly includes also those clinical procedures mandated by the protocol and extending beyond standard care. Indirect costs are the costs of supporting KP’s research infrastructure, which includes such diverse elements as ensuring compliance with FDA regulations, obtaining all necessary approvals from the Institutional Review Board (IRB), and developing information systems for accurately tracking clinical activity, billing sponsors, and making sure that funds received are properly allocated within the KP organization.

Indirect cost charges designed to underwrite—and thus support—the organization’s research infrastructure are a typical feature of all research budgets whether for pharmaceutical company-sponsored clinical trials requiring human subjects or for epidemiologic studies involving retrospective database analyses. Research sponsors
accept indirect costs with the knowledge that these costs are inherent in necessary administrative activities of research: ongoing regulatory oversight and compliance, legal and contractual functions, accounting, management of funds, and long-term investment in data systems and in the personnel education crucial to maintaining a viable institutional research program. Indirect cost charges are generally allocated as a percentage of either direct personnel costs or, alternatively, as a lower percentage of total costs. The controlling factor in applying indirect cost charges is the set of Federal regulations mandating uniform application of indirect cost methodology across the institution’s research portfolio. The Federal regulations covering indirect cost charges are contained in Office of Management and Budget (OMB) Circulars A-21, A-122, A-87, and A-133 (Revised). Direct costs are further broken down into variable and fixed components. Fixed costs are commonly referred to as “overhead”; in the present analysis, however, fixed costs are distinguished from the indirect costs of maintaining KP’s research infrastructure. An example illustrates categories of costs: The physician time and medical supplies required for initially obtaining a medical history and conducting the physical examination.

More specifically, if the full cost of an initial 60-minute history-taking and physical examination is estimated at $255 on the basis of a standard fee schedule, the cost of physician time would be approximately $140; the facility resource, $90; and KP administrative overhead, $25. Cost of physician time is variable. Cost of facility resources includes variable costs (eg, medical supplies used directly in the provision of the service) and fixed costs (eg, electricity, water, housekeeping) allocated to the service. KP administrative overhead is another fixed cost, a portion of which is allocated to the service.

The per-patient direct costs plus indirect costs equal the total per-patient rate for the study. To this rate must be added specific per-study charges such as IRB submission and annual maintenance fees; fees for pharmacy setup to accommodate both the physical handling of an investigational drug and the FDA-mandated data recording; recruitment of study subjects; advertising; any special supplies and equipment required; travel; personnel time spent at investigator, study initiation, and other training meetings and with study monitors; and costs of the publication process. This list is not exhaustive. In addition, each study may necessitate unique “one-time” tasks, which must be recognized and accounted for accurately. At KFRI, identifying these costs is an ongoing effort.

### Cost Accounting at KP

Moving from the theory to the practice of cost accounting is a giant step and is often easier in small organizations than in large ones. For example, a three-physician research site may have an excellent grasp of its personnel cost, cost of supplies, and overhead costs while accurately allocating shares of overhead to specific clinical and research activities. In contrast, the task of accurately determining unit costs can be daunting for a “system” like KP, which has historically integrated three diverse activities: provision of health insurance to members; delivery of medical care through a “group-model” medical practice; and physical investment in hospitals, outpatient facilities, and laboratories.

To determine costs accurately, KFRI has examined several sources of cost data, including the CMIS database—KP’s internal cost accounting system in the Northern California Region. The CMIS database has provided valuable input for cross-validation, but we have resisted relying on it exclusively out of concern for whether all KP administrative overhead has been allocated to unit costs as well as over concern about the systematic capture of data across all KP facilities. Progress toward more systematically reliable internal cost accounting data would assist the budgeting process, but broader questions of whether “economic cost” is being captured will always remain; an example is whether accounting measures of fully allocated cost (because they are historically derived) include an adequate component for future capital investment requirements.

In a straightforward approach to costing, KFRI developed an application of the CPT-4 (Common Procedural Terminology) coding system to describe the activities of clinical trials. Developed by the American Medical Association in the late 1960s as an identification system for reporting medical services and procedures, the CPT
methodology was designed “to provide a uniform language that will accurately describe medical, surgical, and diagnostic services and ... provide ... communication among physicians, patients, and third parties.” To recapture the costs of providing specific services to non-KP members on a “fee-for-service” basis, we attach to the relevant CPT codes the KP Fee Schedule charges developed by the Health Plan’s Northern California Patient Business Services Department. We reference these charges to market reality by looking at a database of “customary and reasonable” (C&R) charges ranked by percentiles for three-digit-zip code geographic regions in which KP operates medical facilities.

For example, the KP Fee Schedule charge for CPT code 99205 (the 60-minute medical history-taking and physical examination for a new patient) is set at $255, representing a weighted average of charges of the geographic regions in which the KP Northern California Region’s facilities are located. For comparison, for three-digit zip code 941___ (San Francisco), customary and reasonable charges for this procedure range from $195 (50th percentile) to $311 (95th percentile), and the 90th percentile is set at $265. Examples of CPT codes, Relative Value Units (RVUs), and fees charged at KP are given in Table 1.

The CPT-4 code/KP Fee Schedule methodology was designed with the expectation that a charge for a specific procedure captures the fully allocated costs of the entire KP Medical Care Program, including all administrative costs accrued by the Kaiser Foundation Health Plan. The intermediate link in this process is assignment of RVUs to each CPT code, thereby identifying separately the contribution of personnel time, physical resources, and administrative overhead to each procedure. This methodology (first developed at the Harvard School of Public Health) was designed to provide a uniform language that will accurately describe medical, surgical, and diagnostic services and ... communication among physicians, patients, and third parties.”

Table 1. Clinical trials procedures, CPT codes, RVU values, and KP fee schedule charges

<table>
<thead>
<tr>
<th>CPT-4 code</th>
<th>RVUs (Total Nonfacility)</th>
<th>KP Fee Schedule 2000 equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common clinical procedure codes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obtain medical history, conduct physical examination</td>
<td>99205</td>
<td>4.36</td>
</tr>
<tr>
<td>Conduct physical examination</td>
<td>99215</td>
<td>2.97</td>
</tr>
<tr>
<td>Monitor vital signs</td>
<td>99212</td>
<td>0.94</td>
</tr>
<tr>
<td>Placing 12-lead electrocardiogram</td>
<td>93000</td>
<td>0.79</td>
</tr>
<tr>
<td>Obtain chest x-ray film</td>
<td>71015</td>
<td>0.86</td>
</tr>
<tr>
<td>Obtain CT scan of abdomen with contrast medium</td>
<td>74160</td>
<td>9.09</td>
</tr>
<tr>
<td>Chemotherapy infusion (1st hour)</td>
<td>96410</td>
<td>1.65</td>
</tr>
<tr>
<td>Chemotherapy infusion (1+ hours)</td>
<td>96412</td>
<td>1.24</td>
</tr>
<tr>
<td>Procedure codes adapted to specialized research and administrative activities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obtain written informed consent</td>
<td>99499</td>
<td>N/A</td>
</tr>
<tr>
<td>Obtain inclusion/exclusion review</td>
<td>99080-22/99090-22</td>
<td>N/A</td>
</tr>
<tr>
<td>Adverse event monitoring, concomitant medication monitoring</td>
<td>99214</td>
<td>1.99</td>
</tr>
<tr>
<td>Phlebotomy/blood sample processing/conveyance to central laboratory</td>
<td>36415/99000</td>
<td>N/A</td>
</tr>
<tr>
<td>Investigational drug administration</td>
<td>90862</td>
<td>1.38</td>
</tr>
<tr>
<td>Data collection/management/reporting/archiving</td>
<td>99080/99090</td>
<td>N/A</td>
</tr>
</tbody>
</table>


CPT = Common Procedural Terminology; RVU = Relative Value Unit; N/A = not applicable.
Health in the late 1980s) has been adopted by the Health Care Financing Administration (HCFA) and forms the theoretical basis of the Medicare payment system. The charge attached to a given procedure described by a CPT-4 code is designed to capture the full costs of the resources used in delivering the procedure. The language of CPT codes and RVU valuations is the lingua franca of health care finance outside the KP organization. Fully comprehensible to research sponsors, this language provides the basis for rationally discussing study budgets.

Outside the KP organization, variants of this budgeting approach are used by a wide range of research sites across the United States. Straightforward, generic logic is used both to describe relevant CPT-coded, protocol-mandated activities and to price those activities in a way that covers the full costs of their "production." By referring to a standard fee schedule applicable to all external purchasers of clinical services in the KP Northern California Region, we at KFRI have tried to make the entire process as transparent as possible to sponsors of research. Our goal is to support the negotiation process by using defensible logic and standard charges. By adhering to a systematic approach for developing and negotiating all budgets for clinical trials, KFRI has introduced innovation to the area of budget strategy.

**Accounting for KP Research and Administrative Costs**

Although protocol-induced clinical procedures used in a clinical trial may be particularly expensive (eg, extra CT scans and multipled acquisition cardiac blood pool imaging (MUGA) procedures), we have clearly defined the methodology for characterizing these procedures and for accounting for their costs. A more complex task for administrators of clinical trials is to identify and allocate costs for the range of resources used in research and administrative activities. These costs cover diverse activities—eg, monitoring patients, assessing drug compliance and adverse events, data collection (sometimes an elaborate process), management-related functions, reporting, and archiving. All these activities use personnel and material resources and must be accurately accounted for if KP wishes to sustain a viable research program over the long term.

Sometimes a possible approach is to translate research and administrative activities into relevant CPT codes by using the same logic applied to the clinical procedures themselves. For example, obtaining informed consent from prospective patients and reviewing inclusion vs exclusion criteria are activities common to all studies that involve human subjects. Both activities require personnel time (typically, time spent by the principal investigator and by the research coordinator) as well as material resources and administrative overhead at the local facility. Each activity may be mapped to a relevant CPT code—a procedure that reasonably captures the resources required by the research and prices these resources accordingly.

Negotiating Study Budgets: A Practical Approach for KP Researchers

Final study budgets are the result of negotiation between researchers and study sponsors. The first rule of successful budget negotiation is never to accept a sponsor's offer (ie, never "sign on the dotted line") without first preparing and documenting fully your own budget and submitting both your budget and your terms to the sponsor. Be prepared to show the sponsor the logic and detail supporting the budget. KFRI has a library of budgets developed over the past year that can assist researchers with this task.

Another information source useful in preparing research budgets—and used widely by the pharmaceutical industry—is the PICAS (Pharmaceutical Information Cost Assessment Service), a collaborative database that contains detailed cost information for all research sites in the United States. To assist Principal Investigators in the sometimes complex process of preparing their own budgets, clients of PICAS are
original research

encouraged to prepare budgets proactively for their research sites and to submit them to research sites for signing. (For information on PICAS, see http://www.dataedge.com/) PICAS is a tool sponsors use in an attempt to standardize their budgets to “industry average” costs. This practice works to KP’s disadvantage because KP’s costs are generally higher than the PICAS averages, principally because of KP facilities’ high-cost geographic locations. Moreover, because many KP budgets were estimated and negotiated on the basis of personnel time only, inaccurate KP cost data have historically been entered into the PICAS database. This factor has the effect of biasing the PICAS industry averages downward, an error we have been trying to rectify through ongoing communication with study sponsors.

You may discover that your carefully developed budget is a multiple of the sponsor’s offer. If this does not occur, you have probably omitted some relevant costs and should repeat the exercise of cost discovery described above. Clinical trials are inherently expensive when every detail is accurately accounted for; and often the research site finds itself in the position of having to run very fast to stay in place. At KFRI, our experience has shown that most research sponsors are prepared to negotiate budgets, but some are not. We try to negotiate openly with sponsors by presenting them full details of the costs underlying our budgets. We explain to sponsors that Northern California is a high-cost region of the country, and we point out KP’s substantial comparative advantages as a research site.

An important point to remember is that most sponsors (or their contract research organization agents) need a sufficient number of patients, sufficient geographic and institutional diversity, and data of sufficient quality to make the clinical trials successful. Here is where KP’s advantages as a large organization come into play: We have a large and diverse yet representative patient population, outstanding clinical data systems, a reputation for excellent patient care, highly trained and dedicated staff, and a history of completing numerous clinical trials in multiple specialties. All these elements are valuable to the research sponsor. Above all, the critical importance of high-quality data should never be forgotten: The output of the clinical trial is data, and sponsors must therefore receive reliable data. Having to repeat a trial because data are questionable is not cost-effective!

The Endgame of Negotiation: Mutually Beneficial Compromises

Whatever short-term advantages sponsors might gain from an underpriced budget, they know that the research site must be economically viable if research is to be done over the long term. At KFRI, we try to reinforce this understanding as partners in ongoing clinical research.

Thus, for research sponsors, the clinical trial is ultimately a business decision. This fact should not be surprising—given that any rational business enterprise (here, the study sponsor) necessarily wishes to minimize its costs of conducting clinical trials research, without which the potentially promising new drug does not move on toward FDA approval. In addition, because the trial is so necessary, the rational sponsor is prepared to compromise on a final budget—as is KP.

Indeed, having determined the global parameters of cost recovery, we still have room for compromise, the extent of which should depend on carefully weighing pertinent nonfinancial factors: How will a particular trial change models of patient care at KP and benefit KP members and the community? Is the study at the forefront of research in a particular field and likely to enhance KP’s reputation as a research institution after results are publicized? Is the study a Phase-III study of an investigational drug, a phase-IV postmarketing study of an approved drug, a jointly (ie, Federally and privately) funded consortium, or a compassionate use study of an existing drug? Depending on the answers to these questions, different discounts from the economic budget may then be applied on a case-by-case basis. Participants in budget negotiations must also take into consideration certain limitations on bargaining power. For KP, drug costs provide an important example of such limitations: Although KP can certainly use its position as a massive purchaser of drugs to negotiate discounts from pharmaceutical manufacturers, this pricing is derived from market power—and pharmaceutical manufacturers do not on their own initiative develop favorable pricing for managed care organizations like KP.

Communication: An Essential Tool for Re-educating our Research Sponsors

With regard to clinical trials, the large pharmaceutical companies that operate as research sponsors have traditionally viewed KP as
something close to a free service. This view resulted primarily from two phenomena: lack of systematic communication between KP and sponsors (ie, to explain the unique elements in KP’s structure) and an unsystematic approach for identifying costs and developing budgets. KFRI is trying strenuously to redress this situation through an ongoing communication and re-education effort with sponsors.

Part of this effort has involved submitting detailed “shadow” budgets to sponsors for every study that we evaluate—whatever the phase and however it is funded. In this way, we are trying to communicate KP’s real cost position to sponsors and to encourage them to have these numbers entered into the PICAS database to more accurately represent the cost of conducting research at KP. This effort is bearing results: In the year 2000, the level of negotiated budget achieved across all medical specialties has been raised by a mean of 50% above the sponsor’s initial offer. We are cognizant of the factors underlying KP’s strong negotiating position and will continue to defend KP’s interests with regard to our research sponsors.

**How KFRI Can Help Principal Investigators at KP**

Throughout our organization and elsewhere in the research community, budgets must be developed that attempt to cover the full expenses of carrying out research at KP. At the same time, KP leadership has recognized that it is not equitable for a not-for-profit organization such as KP to use its member dues to subsidize the product development activities of the for-profit pharmaceutical industry.

With these factors in mind, KFRI is available to help at any stage of evaluating a study’s financial feasibility. We can develop the total budget for the study according to the process outlined above. For industry-sponsored clinical trials, we will also act as the negotiating agent. For both these functions, we can supply a dimension of objectivity that even a financially trained Principal Investigator might lack in contemplating a clinical trial relating to his or her own specialty. KFRI will work with KP’s legal staff to ensure that the clinical trial agreement contains appropriate budgetary contract language covering payment schedules, invoicing provisions, payment for optional procedures, and upfront payments to cover KP’s risk of default or early termination by a sponsor.

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**Acknowledgments**

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**References**

LATE AUGUST

Sycamores are first to curl
and drop their leaves and “I sense”
dry, late August with relief:
the spot on my mother’s lung
is not cancer, just an idle
shadow slumbering. I welcome
dormancy, but set sprinklers
in my yard, watering burnt
hydrangea, crisp clematis.

Everywhere I look the world
is withering on spindly legs.
At work a patient recoils
when I touch her arm, “I will
take care of you,” I tell her.
“Take care. Take care,”
she repeats. I give her
oxygen, parcelled doses
of anesthesia, unfurl her
twisted legs. Another patient
fingers a St. Teresa medal
pinned to her gown. When I ask
about daughters, she searches
trees outside the window
for ages, names.

In the market
a man cradles his
arthritic hand around a
peach. “Do they feel ripe?”
he asks. I find him
three perfect peaches.

By Kelly Sievers, CRNA

Previously published in FIREWEED,
Vol 11, No. 3, Spring 2000

More poems by Kelly Sievers, CRNA
can be found on pages 19, 30, and 60.
“Beau”
Sculpture made of terracotta, measures 16 inches high.
by Harry Shragg, MD

Dr Shragg’s artwork can also be seen on the cover.
A Word From the Medical Directors

What Business Are We In?

For six months of last year, I had a unique opportunity: I worked in another Kaiser Permanente (KP) Region as the Federation sponsor for the KP Partnership Group (KPPG) in the Mid-Atlantic turnaround effort. It was remarkable to get inside a Permanente Medical Group and Region whose history and operations were quite different from those of my home KP Region, KP Northwest.

Part of my role was to learn the root causes of the problems in Mid-Atlantic and then suggest ways to assist the turnaround. After a number of interviews and after studying events during the past five years, I concluded that this KP Region’s problems did have a root cause: ‘The local Kaiser Foundation Health Plan and the local Permanente Medical Group had not agreed on what business they were in!"

A Question of Growth

This disagreement locally was a manifestation of the same confusion that the Program experienced nationally for several years and that is just being resolved now. About five years ago, when Jay Crosson, MD, Irwin Goldstein, MD, and I were involved in negotiating the National Partnership Agreement with senior leaders of Kaiser Foundation Health Plan, negotiations were pervaded by the sentiment that the business of KP needed to grow rapidly to survive the consolidation occurring in the health insurance marketplace: Cigna, Aetna, US Health, and WellPoint were gobbling up competitors and were threatening to marginalize Kaiser Permanente as a national participant. We began looking for acquisitions, and we ultimately acquired two large network insurance plans: Community Health Plan (in Albany, NY) and Humana Health Plan (in Washington, DC). Our own health plan created a divisional structure to manage existing KP Regions and to serve as the infrastructure for expansion.

At least in the Mid-Atlantic Region, our senior health plan leadership believed that they had a mandate to grow the Kaiser Foundation Health Plan but that the local Permanente Medical Group was not structured to support rapid growth over a larger geographic area. The Humana network—which consisted of more than 5000 physicians (including 4500 specialists) spread out over 27 hospitals—could provide enough capacity and enough geographic access to sustain our rapid growth. Meanwhile, the Mid-Atlantic Permanente Medical Group continued to work as if the business of KP was to provide health care only within our core delivery system medical centers and four hospitals.

Which Business Are We In?

The impact of working on fundamentally different businesses was dramatic. KP in the Mid-Atlantic Region could not create an overall strategic or business plan supported by both the Health Plan and the Permanente Medical Group and could not agree on where investments should be made. The KP Mid-Atlantic Region stopped the joint budgeting process because we couldn’t agree on goals and targets. The agreement defining payment from the health plan to the Permanente Medical Group wasn’t signed. Information useful for planning and problem-solving wasn’t shared. Regional financial performance suffered—and this situation took an enormous toll on the Region’s staff.

Benefits of Unifying Our Vision

My conclusion from this experience is that nothing is more important for the health of our organization’s future than for the Kaiser Foundation Health Plans and the Permanente Medical Groups to have a shared vision—locally as well as nationally—of the business we are in.

AL WEILAND, MD, joined Northwest Permanente, PC in 1977 as an obstetrics-gynecology physician prior to becoming President and Regional Medical Director in 1993. In addition to being the current chairman of the Permanente Federation Executive Committee, he is also the President of The Foundation for Medical Excellence Board of Directors, and a member of Community Choice 2010 in Clark County, Washington.
the health care delivery function but should instead believe in a core set of principles and in a robust partnership that can solve problems and do planning.

Our primary role as leaders is therefore to make the partnership work and its decision making effective. That way, we can focus our attention on the turmoil in the US health care industry and can present a united front striving to be a role model for US health care.

A Healthy Outcome to the Growth Debate

I’m delighted to report that the KP Mid-Atlantic Region has reached agreement on the fundamental business of that Region and has formed a strong partnership that will complete a successful turn-around during the next several years. I believe that a similar agreement has been reached at the national level and that the KPPG—our organization’s joint, senior management group—can lead the enterprise from the shared sense of vision and purpose embodied in the KP Promise.

The last five years have been quite a journey—our Program had a “near-death” experience financially and had to divest itself of several KP Regions just to survive. As we work together to complete our turn-around amid the problems and opportunities of the future, we’ll have to remember what we have learned—including what business we are in.

Managing Clients And Contractors, Not Care

Because the way the industry delivers care is changing, the term “managed care” also must change. That term just doesn’t have much meaning anymore. Who is it? Is it a company like Empire, who focuses on the insurance side? Is it Well-Point, which focuses on the commercial side and offers multiple products? Is it those of us contrarians who have chosen to be involved in financing and integrated health care delivery?

‘Managed care’ is an umbrella term that’s about as descriptive as saying ‘cancer.’ It’s not a single product, and we’re not all trying to put together the same puzzle.

There are only so many ways you can slice and dice the risk pool. I have no problem with what the insurers and other companies are doing, but they’re managing clients and contractors, not care. And that is a short-term game we don’t play.

David Lawrence, MD

"Managed Healthcare Executive," March 2001
“Succulent Supremacy”
by Wendy Ray, MPH

Wendy Ray is the Manager of the Mental Health and Addiction Medicine Departments for Kaiser Permanente Northwest. Photography is her spare-time passion.
Addressing the Challenge of New Medical Technologies: One Permanente Clinician’s View—Part II

Introduction

In Part 1 of this essay, published in the Winter 2001 issue of The Permanente Journal, the challenge of objectively assessing technologies in a credible and durable manner was confronted. A role for evidence-based medicine in developing assessments was proposed and was supported as a robust, reliable foundation of care.

The present (final) portion of this essay considers two additional aspects of incorporating new technology into clinical practice:

- the evolving need and process for creating a decision shared by both member and clinician; and
- some real and practical constraints imposed by the insurance contract between member and health plan.

This commentary is intended to help guide clinicians as they confront use of new technology for managing patient care within their practice. The content represents this Permanente physician’s personal opinions and perspective and is not a policy statement of the Interregional New Technologies Committee, the Care Management Institute, the Permanente Federation, any other body within Kaiser Permanente (KP), or the Technology Evaluation Center of the Blue Cross and Blue Shield Association.

Integrating Evidence into Shared Decisions

A comprehensive consideration of the process and nuances of supporting members and clinicians in achieving fully informed, shared decisions about use of an intervention (ie, new technology) is beyond the scope of this essay—especially given the rapidly changing roles, responsibilities, and expectations of clinicians and members when confronted with evidence about clinical interventions. Nonetheless, several key observations apply.

In their role as diagnosticians, clinicians confront and solve clinical problems and identify potential interventions (including new technologies). This diagnostic role has been a critical one ever since the emergence of the profession—and will continue to be so. Patients will continue to look to their clinicians to diagnose and identify options for treatment. Clinicians and patients increasingly share in arriving at clinical decisions—a situation that contrasts with the historical paternal clinician role in selecting and implementing treatment decisions. Patients now—and increasingly—value, seek, and share a role with their clinicians in deciding among potential clinical interventions. Decisions made by patients will be influenced by explicit inclusion of evidence about clinical effectiveness as well as risks of possible interventions. Further, how evidence is presented (ie, in relative terms and in absolute terms) can also be predicted to influence patient decisions. This observation has important implications for how decisions are framed by the treating clinician and understood by the patient.

Extended use of lipid-lowering therapy illustrates how inclusion of evidence influences the process of making medical decisions. In men with known coronary artery disease, lipid-lowering therapy has helped avoid future cardiovascular events as shown by three findings:

- 34% relative reduction in risk of future events;
- 1.4% absolute reduction in risk of future events;
- 71 persons must be treated for one person to benefit from avoiding an event.

All are honest and true statements about the therapy in question, yet when information is shared with members in these differing contexts, members vary in their decisions to undertake therapy with a lipid-lowering drug. Lipid-lowering therapy is chosen by 88% of patients when information is stated to them in terms of relative risk reduction; by 42% when information is described to them in terms of absolute risk reduction; and by 31% of patients when information is presented as the number of persons who must be treated so that one person will benefit. Clinicians therefore have a responsibility to be aware that how they present recommendations will substantially influence patient actions, even when decisions are both accurately informed and shared. Organizations that actively support and advocate for a given therapy will tend to obtain patient acceptance for this therapy by presenting information in terms of relative risk reduction; patients will tend to accept the same therapy differently (and usually less) when information is presented in terms of absolute risk reduction or the number of patients that must be treated for one patient to derive benefit.

By Paul Wallace, MD

PAUL WALLACE, MD, joined Northwest Permanente in 1989 as an Oncologist and subsequently served as Director of the KPNW Guidelines Program. He has worked in technology assessment with local and National KP groups and with the Blue Cross and Blue Shield of Technology Evaluation Center. Since the summer of 2000, he has been the Executive Director of the KP Care Management Institute. E-mail: paul.wallace@kp.org

The Permanente Journal, Spring 2001, Volume 5 No. 2
Further, I believe, members will become increasingly more adept at recognizing the context in which information is presented to them. That said, I also believe that as consumers of health care, patients currently have an incomplete understanding of the nuances of how health information is presented to them. This gap in consumer awareness arguably contributes to the success of pharmaceutical direct-to-consumer advertising, a medium that heavily leverages data presented as relative risk reduction—even when absolute benefit may be minimal or when many persons would need to be treated before one person would benefit. Clinicians should also recognize that they too are influenced by the way information is presented to them, even in their customary reference sources such as the peer-reviewed literature.

Roles of Clinicians and Health Plan Members

In making shared decisions, clinicians and health plan members contribute complementary expertise. Clinicians’ expertise includes fulfilling the role of scientist and observer by critically and rigorously identifying and assigning importance to clinical observations. Clinicians also identify the diagnosis and treatment options; obtain valid information regarding benefits, harms, and uncertainties of treatment; integrate research information with clinical circumstances; and communicate with patients. Patients’ expertise includes judgment relevant to their own particular circumstances; awareness of how they value various outcomes when information is presented to them; and knowing how they feel about various interventions.

For the clinicians and members, mutual understanding and trust of clinical observations are the keys to making shared medical decisions. We address and satisfy clinicians’ and members’ expectations of clarity, consistency, and full disclosure than less systematic, more empirical approaches.

The Relation Between Medical Decisions and Health Coverage

The scope of benefits that a health plan such as Kaiser Foundation Health Plan includes in a member’s health care coverage is articulated in the contractual agreement between that member and the health plan. The scope of coverage in an individual member’s contract is often the direct result of choices made by an employer (ideally, on the member’s behalf) in negotiating the contract. State and other regulations can also define certain aspects of coverage, as can legislat ed mandates. Services may be explicitly included or excluded in the contract. For example, purchase of pharmaceutical products may be explicitly excluded, covered within limits (with or without restrictions to formularies, co-pays, or both), or entirely included. Similarly, specific services (such as durable medical equipment) may be excluded from the benefit package. Specific exclusions may apply to clinical services (eg, organ transplantation in some circumstances; or other specialized interventions, such as plastic or bariatric surgical procedures) if that decision is reached in the contract negotiation process.

The relation between the clinician-member decision about an intervention and the actual insurance coverage for the intervention in question hinges on two factors: 1) whether, in the opinion of the member and the member’s treating clinician, the intervention can improve the health of that member and is appropriate for the specific member’s clinical problem, and 2) whether the intervention is included as a benefit for the member under the contractual relationship with the health plan. For the intervention to be delivered as a covered service, both conditions must be met.

Consequently, a service that the treating clinician judges as medically appropriate and that is not excluded by the terms of the insurance contract will be covered by the Health Plan, whereas a service the treating clinician does not believe to be medically appropriate for the specific member will generally not be covered. In addition, a service may be judged medically appropriate but may not be included in the contracted coverage. In this circumstance, members may choose to purchase the service at their own expense. The most common examples of this circumstance consist in medications not eligible for the pharmacy benefit and in durable medical equipment. Another example is when a service such as transplantation of a specific organ has been specifically excluded by the member’s negotiated contract.
The Relation Between Medical Decisions and the “Investigational and Experimental” Designation

Much public strife about insurance coverage for new technologies has arisen as a result of variation in the way health plans interpret and apply the definition of “investigational and experimental” therapy. In addition, understanding and use of this definition as an exclusionary criterion for insurance coverage has also varied among clinicians and health plans. Not surprisingly, this variation has resulted in perceived and real questions of equity and fairness.

Requiring a minimum standard of evidence for establishing an intervention as no longer “investigational and experimental,” and thus covered as a benefit, has been challenged because much of the core medical care routinely delivered fails to meet the evidence standard proposed for investigational and experimental therapy. Moreover, emerging interventions that have not yet established clear effectiveness to justify general acceptance as being established for any and all members may still be considered by some clinicians to be reasonable options for selected members, especially those who face life-threatening and disabling conditions.

“Investigational and experimental” criteria have therefore not been either delineated or applied consistently—nor, in my opinion, have these criteria by themselves, in the absence of a clinician’s judgment of appropriateness for the care of an individual patient, had sufficient credibility to exclusively and consistently guide decisions made by practicing clinicians, by health plan members, by courts of law, or by society at large.

A Credible and Durable Approach to Making Medical Decisions

Although no single approach will address all situations—especially in this era of medical-legal wrangling and maneuvering and of government mandates—a general approach to potential use of new medical technology should include six elements:

- The clinician’s explicit, comprehensive review of the evidence, often supported by available technology assessments as well as by consultation with peers, clinical experts, and technology experts.
- A clinician’s decision about both the evidence supporting use of an intervention and its applicability for the member in question. In certain circumstances (e.g., organ transplantation), consultation among the clinician’s peers may be prudent before appropriateness of the option can be fully determined.
- For interventions that may be appropriate options, clinicians and members must understand and discuss both what is known and what is not known about the intervention’s risks and benefits. How evidence is presented to members ultimately influences their decisions.
- If the intervention remains an appropriate option for the member, member and clinician may share the decision about undertaking the option. Exclusions or restrictions to benefit coverage should be investigated to fully inform the member’s participation in the decision making process.
- For any health plan member who wishes to pursue an intervention not supported by the clinician, the insurance contract (and, in some circumstances, legislative statutes) articulates a process by which members may voice concerns and formally appeal any decisions made.
- If the intervention is medically appropriate for a member but is excluded contractually (i.e., the intervention is not a covered benefit), the member retains the option of directly purchasing the service. When a benefit is in dispute or is otherwise questioned, the health plan contract (and in some circumstances, legislative statutes) may articulate the process by which members may express any concerns and formally appeal any decisions. (Questions about health plan coverage for Kaiser Foundation Health Plan members should be referred to the local Kaiser Foundation Health Plan Member Services Department.)

Summary

In considering use of a new medical technology, four factors must be addressed and recognized:

- evidence to support use of the intervention;
- a given intervention’s applicability and appropriateness for improving a person’s health outcome;
- evolving need and process for creating a decision shared by members and clinicians; and
- the insurance contract between the health plan and its members.
A rigorous, consistent approach involving the clinician, the member, and the Health Plan as key stakeholders for assessing and using new medical technology can form a credible and durable foundation for improving the relationships between clinicians and members and for selecting medically appropriate interventions that secure desired health outcomes.

References

The Spirit Of Dialogue

… dialogue is the essential human capacity for our times.
Thought creates the world and then denies it.
Changing our world means changing our thinking,
and to do this we must change the way we think.
Dialogue is a way of thinking together that allows us to participate in the unfolding of meaning.

Daniel Martin, Director of International Communities for the Renewal of the Earth
“Clay Pots”

Photo was taken on a street in Jakarta, Indonesia.

by Nandini Bakshi, MD

More of Dr Bakshi’s artwork can be seen on page 40.
Positive Results from Clinician-Patient Communication Programs at Kaiser Permanente: A Physician’s View

When I joined Kaiser Permanente (KP) after 18 years in a solo, private internal medicine practice, I discovered that patients at KP tended to bring many more complaints to a single visit than I’d been accustomed to in private practice. Along with these complaints, patients also carried into the examination room a series of frustrations that had to be addressed—all in less than 20 minutes! I therefore had to make an adjustment at office visits: I had to learn to effectively treat patients who arrived with a long list of complaints and requests. I have participated in most of the communication programs offered by the Northwest Permanente Department of Continuing Medical Education (NWP CME & PD) and Professional Development, and these programs have helped me improve my ability to work with patients within our system’s time constraints. In this article, I describe how these courses (especially “Clinician-Patient Communication to Enhance Health Outcomes,” “Difficult Clinician-Patient Relationships,” and “Communication Frustrations”) have proved useful in building my own skills.

Courses and Coaching: Implementing New Skills

In addition to offering courses, which alone provide valuable information on communication skills, NWP CME & PD provides one-on-one coaching—a process vital for assessing how well a clinician applies these communication skills. My coach observed my office visits and gave me valuable feedback about how I handled patient communication in the examination room. After I had begun to use the feedback and practice the techniques I learned in the courses, my coach returned for

Clinician-Patient Communication to Enhance Health Outcomes

This workshop is designed to help clinicians identify and enhance critical communication skills that they currently use or need. During the workshop, state-of-the-art techniques are presented with supporting research. Clinicians also are given opportunities to practice these techniques and to receive feedback.

At the conclusion of this workshop, clinicians should be able to:
• Describe the four communication tasks of the medical interview;
• Identify state-of-the-art communication skills and supporting research;
• Identify frustrations that make clinician-patient encounters difficult;
• Demonstrate and practice new communication skills;
• Develop a simple plan to apply new communication skills in practice.

Reflective Listening

This workshop defines and demonstrates the importance of “reflective listening” during the medical interview. Skills and strategies for implementation also are presented. Clinicians are given the opportunity to practice thinking reflectively, to form reflections, and to use reflective listening in a mock patient encounter.

At the conclusion of this workshop, clinicians should be able to:
• Understand and recognize reflective listening;
• Describe how reflective listening can be used in clinical practice;
• Practice thinking reflectively, forming reflections, and using reflective listening in encounters with patients.

Difficult Clinician-Patient Relationships

This workshop challenges clinicians to examine the types of interactions which cause clinicians the greatest difficulty. Learning new approaches for working with these situations is facilitated by exploring 15 videotaped case scenarios drawn from a variety of specialties. Each case presents a type of difficulty faced by most clinicians at some point during their careers.

Two conceptual models are introduced to frame both the problems and the possibilities of “difficult” relationships. The first model examines some of the factors that lead clinicians to apply the label “difficult” to a situation. The second model describes strategies a clinician can use in response to these situations.

At the conclusion of this workshop, clinicians should be able to:
• Identify characteristics that make patient encounters “difficult” and factors that cause clinicians to apply this label to patients.

By Steven M Levine, MD

STEVEN M LEVINE, MD, joined Northwest Permanente, PC (NWP) three years ago as a board certified internist. Prior to joining NWP, he was in private practice in Hawaii. Steve is married and has two children. He enjoys rock climbing and mountaineering. E-Mail: steven.mark.levine@kp.org.
another observation session to assess my progress. I found this one-on-one coaching extremely valuable for enhancing my communication skills.

Some of the most valuable skills that I have incorporated into my patient interactions include “reflective listening” (the most valuable skill for giving patients the assurance that the concerns they express are truly being heard), setting an agenda for the office visit (ie, after the patient finishes the “opening statement” and lists concerns, clinician and patient mutually agree on topics to be addressed during this visit), and “forecasting” (ie, explaining to the patient what to expect next during the visit). I have refined the techniques into a set of skills that I have become comfortable using, and I practice these skills every day during each patient encounter.

**Conclusion**

I have had positive results from participating in these communications programs: In particular, I am now able to finish most patient visits in the allotted time, and I've finally gained a sense of organization and control during office visits. I am able to end each office visit and leave the examination room without that uncomfortable “How do I get out of here?” feeling—a feeling which I think is familiar to many of us. My patients feel they are being heard, my Art of Medicine scores have improved, and I have gone from being 1 1/2 hours behind on most days to being nearly on time.

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**Time Wise: Skills for Wisely Using Your Time with Patients**

This workshop provides clinicians with a model of the medical interview involving both biomedical and interpersonal roles. Clinicians gain an understanding of how time can be efficiently allocated in a medical interview. The medical interview model enables clinicians to view communication skills as critical techniques for wisely managing the time spent with patients.

Clinicians in this program should learn and practice three main skills:

- Negotiating an agenda with a patient (ie, how time will be used, topics to be addressed);
- Responding to emotional expressions and psychosocial concerns in a warm and timely way;
- Closing the visit on time after maintaining focus on the agreed-upon agenda.

**Choices & Changes**

Choices and Changes gives clinicians an opportunity to explore their own beliefs about the change process and to test these beliefs against the empirical literature that has been developed during the past two decades. The program also provides the clinician with specific strategies to use within the time constraints of a typical office visit.

At the conclusion of this workshop, clinicians should be able to:

- Demonstrate and practice effective strategies for coping with difficult patient encounters;
- Identify communication strategies that increase satisfaction for patients as well as for clinicians.

**Communication: A Risk Management Tool**

This program was developed in response to the need expressed by many malpractice insurance carriers for a brief program that would identify and inform clinicians of the communication practices that attract—or prevent—malpractice litigation.

At the conclusion of this workshop, clinicians should be able to:

- Examine their own attitudes, beliefs, and values about promoting patient behavior change;
- Learn key aspects of three major models (Stages of Change, Motivational Interviewing, and Self-Efficacy) as applied to promoting patient behavior change;
- Practice using these models to rapidly identify key interventions that promote patient behavior change. For this purpose, examples of clinical scenarios are presented on videotape and enacted in small groups.
MATERNITY WARD

When the sister reads Morning Prayer over the loud speaker – a Psalm about seeking light in darkness – I bow my head and wonder if such prayer is ample for what we do here.

I am the one who palpates bones in women’s backs, listens as they pray to break open, end the pain. Don’t move,
I tell them as they sway with fear. Don’t move, as I slide thick blunt needles into their backs.

In rooms crowded with fetal monitors, IV poles, rocking chairs, husbands, mothers, aunts, and sisters, I say, Breathe slow now, my thumb tapping the plunger, sweat gathering between my breasts, in the creases behind my knees.

When, in early morning darkness, I hear them count for ten fingers, ten toes, I celebrate this strength to come together and split apart, this fusion of fear to joy.

By Kelly Sievers, CRNA

More poems by Kelly Sievers, CRNA can be found on pages 19, 30, and 48.
Hospitalist Practice:
An Increasingly Popular Model for Inpatient Care

Hospitalist practice is an increasingly popular model for providing inpatient care, and Kaiser Permanente (KP) has been at the forefront of this movement. The Second Annual Kaiser Permanente Hospitalist Conference was held in May 2000 and was attended by representatives from all the Permanente Medical Groups (PMG). The conference focused on key clinical topics for practicing hospitalists and provided an opportunity for physicians practicing in this emerging specialty to share their experience and expertise with others from across the country.

The Second Annual Kaiser Permanente Hospitalist Conference was held on May 12-13, 2000 at the Claremont Hotel in Berkeley, California. More than 120 physicians, representing all KP Regions, came to hear updates in clinical topics related to the field of Hospital Medicine.

National perspective

Robert Wachter, MD, gave our keynote address. President of the National Association of Inpatient Physicians (NAIP) and Associate Chair of the Department of Medicine at the University of California San Francisco (UCSF), Dr Wachter is a leader in the hospitalist movement. Together with Dr Lee Goldman, Dr Wachter coined the term “hospitalist” in a 1996 article published in The New England Journal of Medicine; since then, he has been a key proponent of this emerging field by championing research, administrative recognition, and growth for this newest medical specialty candidate. NAIP (the professional organization for hospitalists) is an affiliate of the American College of Physicians. Having grown from 23 members to more than 1500 members in the past three years, NAIP is undoubtedly the fastest-growing professional medical society. An estimated 4000 hospitalists currently practice in the United States, and a need for 19,000 is likely to develop if hospitalists become the predominant providers of adult inpatient care.

NAIP recently adopted the following as its definition of a hospitalist:

Hospitalists are physicians whose primary professional focus is the general medical care of hospitalized patients. Their activities include patient care, teaching research, and leadership related to hospital care.

Dr Wachter shared his belief that many forces are driving the hospitalist movement. Chief among these forces are 1) pressure to manage rising inpatient costs, 2) increases in the proportion of sicker patients and complexity of treatment options, 3) the rate of medical errors as a public issue, and 4) demand for the specialty by primary care physicians in their efforts to enhance access to care in their outpatient practices.

Research on the hospitalist model has shown that use of hospitalists can reduce hospital costs, either improve or leave unchanged the quality of care, preserve inpatient satisfaction, and possibly increase outpatient satisfaction. Ongoing industry pressures and the positive outcomes from hospitalist practices in varied settings are fueling the growth of hospitalist programs across the country (Robert Wachter, MD, personal communication, May 2000).

Hospitalists and ICU care

A controversial issue regarding hospitalist practice is the role of hospitalists in the Intensive Care Unit (ICU) setting. An informal poll of our audience indicated that almost all The Permanente Medical Group (TPMG) hospitalists who attended our meeting care for ICU patients routinely. We heard from two intensivists: William Kinnard, MD, ICU Co-Director for the PMG of Colorado, and Nazir Habib, MD, ICU Medical Director for TPMG of Northern California at Vallejo. Both physicians shared with the audience their informative clinical “pearls,” which included remarks about work done by Dr Kinnard in Colorado on multidisciplinary care facilitated by data-driven protocols. These protocols include the “liberation” from ventilation protocol and automatic potassium replacement with built-in calculation of creatinine clearance (William Kinnard, MD, personal communication, May 2000).

Dr Habib outlined Systemic Inflammatory Response Syndrome (SIRS) management principles recently published in the TPMG Clinical Practice Statement (for which he was the clinical leader) and illustrated these principles by presenting pertinent clinical scenarios that prompted audience participation (Nazir Habib, MD, personal communication, May 2000). To round out the ICU portion of our conference, Dr Wachter engaged the audience in a challeng-
Encouraging patient autonomy is a paramount value in our society. Patient autonomy should be a key consideration in our decision-making process and should be encouraged to include patients in our decision-making process and to remember that patient autonomy is an important upcoming family or community event. Dr. Wachter encouraged us to include patients in our decision-making process and to remember that patient autonomy is a paramount value in our society (Robert Wachter, MD, personal communication, May 2000).

Evaluating chest pain

One of our most common activities as hospitalists is to evaluate patients with chest pain. Chris Lang, MD, interventional cardiologist with the PMG in Colorado reviewed with us the latest literature on managing acute coronary syndrome and discussed the wide array of practical treatment modalities now available for this syndrome. He emphasized the need for hospitalists to know not only the appropriate interventions to use for patients with this syndrome but also how to manage bleeding complications that can be caused by a multidrug attack on cardiac thrombosis (Chris Lang, MD, personal communication, May 2000).

Quantifying preoperative risk

A challenge for all physicians is to perform a “pre-op clearance” on patients who need a surgical procedure. Darryl Potyk, MD, Clinical Associate Professor at the University of Washington, shared a strategy to identify high-risk patients and recommended selective use of dipyridamole-thallium imaging in these patients. He also emphasized the importance of β-blocker therapy in high-risk patients undergoing surgical procedures. Dr. Potyk finished by noting that he never “clears a patient for surgery”; instead, he attempts to quantify and to minimize perioperative risk as much as possible by using available therapies. It is up to the surgeon in conjunction with the patient and primary care physician (or hospitalist) to weigh the risks and benefits and to decide whether or not to proceed (Darryl Potyk, MD, personal communication, May 2000).

Information technology interface

The marketplace is brimming with gadgets and gizmos to put information technology at our fingertips, but what really works for practicing hospitalists? Tom Schaaf, MD, Director of the Hospitalist Program at Group Health Permanente, Spokane, Washington, shared a palmtop computer-based patient management program that he developed. Dr. Schaaf demonstrated some of the features of this program and distributed a helpful reference guide for others to explore strategies that might work for their own practice. The challenge for us all is to interface with the information systems that exist at our hospitals so that we can avoid excessive data entry by physicians. Seeing a system that works—and not just the advertisements on the Internet—was very useful (Tom Schaaf, MD, personal communication, May 2000).

Antibiotic update

To cover key clinical topics in our conference, we asked Greg Moran, MD, Associate Professor of Medicine at the University of California at Los Angeles (UCLA), to give us an antibiotic update. He provided a comprehensive and stimulating presentation of the antibiotics currently at our disposal and suggested empirical regimens for many of the common clinical scenarios we face daily in the hospital (Greg Moran, MD, personal communication, May 2000).

CT imaging

We also included a discussion on use of computed tomography (CT) imaging for acutely ill patients. John Muhm, MD, Professor of Radiology at the Mayo Medical School, Scottsdale, Arizona, shared several case examples of spiral CT used to diagnose various clinical conditions. He specifically discussed use of spiral CT in evaluating suspected pulmonary embolism, acute appendicitis, ureteral calculi, cholecystitis, and diverticulitis. These diagnoses characterize the spectrum of patients we see every day, sometimes in conjunction with our surgical colleagues. Dr. Muhm’s presentation highlighted the increasing role radiology is playing in both diagnosis and management of many clinical issues (John Muhm, MD, personal communication, May 2000).

Blame-free environment

We enjoyed a series of talks on errors in health care. First we heard from Michael Leonard, MD, Director of Surgical Services for...
the Colorado PMG. Dr Leonard has been studying lessons learned from aviation to impart that knowledge to the medical field. He discussed how a delay in administering direct-current (DC) countershock to a patient in ventricular fibrillation cardiac arrest led physicians in Denver to study implementation of automatic defibrillators in an inpatient setting. Dr Leonard emphasized the complexity of the hospital setting and how our strong emphasis on personal accountability has formed an environment in which people are often fearful to report errors. Dr Leonard encouraged us to move forward toward a “blame-free environment,” in which we can learn from—and thus correct—the system problems that plague us every day and that threaten our patients’ safety (Michael Leonard, MD, personal communication, May 2000).

**Patient safety**

We also heard from Bernard Lo, MD, Professor of Medicine and Director of the Program in Medical Ethics at UCSF. Dr Lo served on the Institute of Medicine’s committee that reviewed a recent publication on ethical criteria, not on expediency (Bernard Lo, MD, personal communication, May 2000)." 

**Disclosing mistakes**

We also heard another perspective on why it is important to disclose mistakes. Stephen Pakula, MD, a consultant in health care risk management and recent TPMG retiree from KP Santa Clara (where he was Chief of Medical-Legal and Risk Management for several years), shared many “pearls” from his experience. Dr Pakula emphasized the importance of rapport and open communication between physicians and patients; clarity and objectivity in recordkeeping; and respect for patients—shown by maintaining confidentiality and discretion, especially when working in a busy, inpatient setting. Dr Pakula encouraged use of the “incident” or “unusual occurrence” reporting mechanisms to alert the hospital’s Risk Management and Quality Assurance Departments about potential system problems while keeping these matters separate from the patient’s medical record and beyond the scope of discovery by the patient’s attorney (Stephen Pakula, MD, personal communication, May 2000).

**Communication skills**

To complete the conference, we focused on tools needed to “connect from the start” with the patients we care for in the hospital. We were led through a series of informative exercises by Cynthia Fenton, MD, Associate Chair of Education, UCSF Department of Medicine. Dr Fenton used videotapes produced at UCSF expressly to teach communication skills to hospitalists. By portraying well the difficult situation we find ourselves in when we meet a patient for the first time, the videotapes showed us how to develop better initial connection with the patient by listening to their concerns and by using that information to build a relationship. Dr Fenton emphasized the useful role of the personal physician in this process. The personal physician may provide “common ground” between the hospitalist and the patient by acting as a key “consultant” assisting the patient to make difficult decisions that arise during the hospital stay (Cynthia Fenton, MD, personal communication, May 2000).

**KP leadership perspective**

Robert Pearl, MD, Executive Director and CEO of TPMG, gave our organizational keynote address. He shared with the group his assessment of where the Permanente Medical Groups stand in this time of fast-paced change. He noted that, in TPMG, he has been emphasizing access and service because this is often how members judge quality. However, he is equally committed to quality and, for this reason, Dr Pearl is very supportive of the hospitalist programs developed in KP Northern California and across the country. He believes that increasing the number of patients with a complex problem a physician treats each year makes it easier to ensure high-quality inpatient care. Moreover, he is committed to improving both quality care and service by implementing new technology (Robert Pearl, MD, personal communication, May 2000).

**Conclusion**

Hospitalist practice is growing across the nation, both within KP and in the community at large. As this emerging field of practice moves forward, several areas will require attention. Communicating well with primary care physicians...
and patients, defining our scope of practice, and enhancing how we interface with other specialties are all issues that hospitalists will need to address as our program matures.

We are now planning the Third Annual Kaiser Permanente Hospital Medicine Conference, which will be held October 8-9, 2001 in San Francisco. If you have any input to give for this year’s conference, contact Diane Craig, MD, at diane.craig@kp.org.

References

Clinical Picture
What is spoken of as a “clinical picture” is not just a photograph of a man sick in bed; it is an impressionistic painting of the patient surrounded by his home, his work, his relations, his friends, his joys, sorrows, hopes and fears.

Francis Weld Peabody, 1881-1927
The Humerus Zone

Now Mr. Adams, what seems to be the problem?

Cartoon submitted by Don Wissusik, MA, MS, a Clinical Supervisor in the Department of Addiction Medicine at Cascade Park Medical Center, Vancouver WA.
A New Front in the Battle to Preserve Our Reputation

On my first day at Kaiser Permanente (KP) in 1979, my boss put me in a windowless room at the old KP Southern California Regional Offices on Sunset Boulevard with a stack of news clippings. “Read these,” she said through puffs of smoke from her ubiquitous cigarette. “You’ll get an idea of what we’re all about.”

The clippings proved to be quite a collection! By far the greatest number were about this wonderful new idea—the health maintenance organization, or HMO—exemplified by KP. Health care would be revolutionized by giving doctors the incentive to provide only medically necessary care—thus eliminating dangerous and costly overtreatment.

What Has Changed—And Why

A lot has changed since the day I first read those articles. For one thing, bosses can’t blow smoke in your office. More critically, however, the landscape for HMOs has changed dramatically. Incentives that once were hailed as the savior of health care are now derided as being the devil incarnate—an invitation to deny necessary care in the interest of a better bottom line.

What happened, of course, was that the favorable press HMOs were receiving brought into the market a substantial number of profiteers who may have seen big bucks in the health care business. By pressuring doctors and hospitals (whose gluttony, they might have reasoned, was the cause of the problem in the first place), such for-profit HMOs could provide health care to beleaguered corporations, some of whom were spending more on health insurance for their employees than on raw materials for their products.

But the for-profit HMOs underestimated the strategic intelligence of organized medicine. Doctors—who had been considered the villains—successfully recast themselves as the victims. Doctors convinced their patients that they (ie, doctors) were being dangerously constrained in their ability to give patients the health care they needed. That technique attracted the attention of the press, and responses from the press attracted the attention of politicians who were on the lookout for a crowd-pleasing, vote-getting issue.

Despite the fact that most people are generally satisfied with their own health plans, the credibility of HMOs dropped to the bottom of the list of favorite vendors.

Despite the fact that most people are generally satisfied with their own health plans, the credibility of HMOs dropped to the bottom of the list of favorite vendors. Humphrey Taylor, chairman of the recent Harris Poll—which showed that nearly seven of ten Americans give their health plans an “A” or “B” grade—said that “deteriorating public perceptions of managed care are media-driven, or physician-driven, not experience-driven.”

In the meantime, KP continued at its slow and steady pace. Most certainly, we thought, people knew us and trusted us and would never accuse us of the kind of perfidy for which they held our for-profit competition accountable. We were, after all, different: We were Kaiser Permanente.

But we had no such luck; we ended up tarred with the same brush as the rest of the health care industry. Nonetheless, we had endured criticism before and had survived. Why would this newest episode be any different?

The Criticism

The difference, I think, has been the nature of the criticism. Looking back over the more than two decades I’ve been doing public relations for Kaiser Permanente, I’ve seen the type of criticism change dramatically. When I started, critics questioned our capability:

• Would we provide the same quality of medicine as the “private practice” doctors and high-profile hospitals?
• Could we create systems that would provide easy and convenient access without frustratingly long waits?
• Could we really provide quality care at lower cost?

Some critics thought we had difficulty delivering on our promises—but they felt we were sincere, if sometimes a bit clumsy. In recent years, the tone of the questions has changed. Although our capability is still sometimes challenged, even our most persistent critics have acknowledged that the care we provide is above reproach. However, the backlash of criticism for managed care has led those same critics to raise questions about our integrity—our willingness to offer to members the care we are capable of providing. Questions now changed from “could” to “would”:

• Would we continue to provide quality care even if it were more expensive?
• Would we improve our systems to improve the hassle of getting to see the doctor?
• Would we be there for the member whose life-threatening illness required costly treatment?

This is the greatest challenge of all. Given the choice, I’d rather be thought a fool than a scoundrel: Fools can learn, but scoundrels rarely repeat.

Our challenge, then, is to protect our reputation for integrity as well as capability.

Our Current Task: Promote Integrity

Our challenge, then, is to protect our reputation for integrity as well as capability. We’ve long

ALLAN MANN is Vice President, Public Affairs and Communications for Kaiser Permanente, responsible for media and issues management, internal communications and community relations at the national level. Before assuming this role in September 1997, he spent 18 years in the Southern California Public Affairs Department, the last 10 years as its director. E-mail: allan.mann@kp.org
worked the capability side of the street by publicizing our research, our clinical excellence, our many awards and honors. And, of course, we have defended ourselves when critics assailed the quality of care we delivered.

The need now is to do what we never thought we’d have to do: defend and promote our integrity.

On the public relations front, we do this by promoting KP’s patient-friendly policies and practices as well as our many community service activities. We take every opportunity to explain that group capitation takes physician incentives out of the examination room and puts them into the committee room, where groups of doctors look for ways to improve the effectiveness and efficiency of the care they deliver, thereby eliminating the high cost of delivering poor-quality care. We recently received a substantial public relations boost from the PBS program “Critical Condition,” which accurately portrayed us as being an organization driven primarily by the core values of clinical quality and member benefit.

It’s an ongoing battle, however. When controversies erupt—as they did over the practice of “pill-splitting”—our critics tend to immediately assume that we’re sacrificing quality on the altar of profit. They assume that our motivation is solely monetary. Our critics never stop to consider that we never act unless we are first convinced that a practice is safe and that keeping health care affordable is in the best interests of our members and the public whom the critics profess to serve.

Permanente physicians also have a key role as guardians of our reputation.

Community Service Activities
We will continue to reinforce the underlying messages about our core values and to promote our clinical quality whenever we talk with external and internal audiences. Supporting community service activities and advocating for sound public health care policy are other avenues for demonstrating our commitment to the public good.

Permanente physicians also have a key role as guardians of our reputation. You can help in the following ways:

Help us tell our story: We bolster our reputation most effectively by showcasing the work of our doctors—whether in clinical practice, in research, or in community work. Let your Public Affairs Department know when you are involved in something noteworthy, and be willing to work with them if they ask you to participate in a press interview.

Talk to your patients: Our own members are our most important ambassadors, and their opinions are shaped to a great extent by their contact with you. Time and appropriateness permitting, answer their questions about the way in which health care decisions are made at KP. Let members know that, unlike independent physicians who contract with multiple HMOs, your incentives come from the way your whole group functions. Particularly when you are in the position of recommending against a particular treatment, help them understand that your medical decisions are based on their health care needs—not our financial needs.

Join local medical associations: The personal and professional relationships you can develop by joining your local medical association help to leverage the influence of the medical community in our favor. There is no greater testament to our trustworthiness than to have the medical community acknowledge that we operate in a manner that puts patients first.

Volunteer: Studies have shown that an organization’s reputation is most positively affected by encounters with individuals in that organization, whether on the job or off. Haven’t you occasionally based your view of an organization on your personal knowledge of one of its members? Meeting someone who is volunteering for a cause important to you is doubly impressive. Your local Public Affairs Department can connect you with an appropriate community activity.

Write Letters to the Editor: Whenever you see HMOs being maligned in the press, pick up a pen (or sit down at your computer) and let people know that your experience at KP is different. The most important point we have to make—over and over—is that KP physicians have complete authority to make independent decisions about medical care for their patients. This independence is a core issue for many people. Their trust in us is enhanced when they know that, at KP, health care is “in the hands of doctors.” (If you’d like to be part of a network of physicians who are kept apprised of media activity, contact Beverly Hayon at 510-271-6437.)

We’re not perfect. Speak out when you feel uncomfortable with a decision or with a change in practice that you think compromises quality.

Fight to maintain integrity: We’re not perfect. Speak out when you feel uncomfortable with a decision or with a change in practice that you think compromises quality. Make sure that we have a good story to tell.

References
Announcements

10th Annual Interregional Internal Medicine Conference
The 10th Annual Interregional Internal Medicine Conference will be held July 22-27, 2001 (please note corrected date), at the Sheraton Orchid, Kona, Hawaii. The five-day program is designed for internists, family practitioners, nurse practitioners, nurses, and other primary care providers. The program has been accredited by the Kaiser Permanente National CME Program for 24 Category I CME credit hours.

The subject areas to be discussed include: Neurology, Endocrinology, Hypertension, Male Health, Patient Principles, Radiological Diagnoses, and Cardiology. For more information, contact either Eric Tepper, the course coordinator, 415-482-6869; or Connee Safis, the meeting planner, 510-987-2412.

Watch for information about upcoming National CME conferences:
- July 20-22 - Asthma Conference, Big Island, Hawaii. Contact Jo-Ann Han, 808-432-7932.

5th Annual Interregional Educational Symposium for NPs, PAs, CNMs, and CRNAs
The 5th Annual Interregional Educational Symposium for NPs, PAs, CNMs, and CRNAs will be held August 16-18, 2001, at the Hyatt Newport in Newport Beach, CA. Over 50 topics will be presented, including adult, pediatric, OB/GYN, anesthesia, and long-term care specialties. Brochures will be mailed in May. For more information, please contact Wendy Friedman, tieline: 8-338-3075, or 626-564-3075.

CME Mindfulness in Medicine Videotape Training for Busy Doctors and Health Care Professionals


Jon Kabat-Zinn, PhD, featured in this user-friendly practical video, instructs beginners and advanced practitioners in mindfulness meditation. Dr Kabat-Zinn and physician faculty discuss and demonstrate tools for integrating mindfulness in treating patients, staff, and oneself with greater moment-to-moment awareness. Dr Kabat-Zinn is the founder and former director of the UMMHC Stress Reduction Clinic and is a Professor of Medicine in the Division of Preventive and Behavioral Medicine at the University of Massachusetts Medical School. He is the author of two best-selling books: Full Catastrophe Living: Using the Wisdom of Your Body and Mind to Face Stress; and, Wherever You Go There You Are: Mindfulness Meditation in Everyday Life.

A maximum of one hour in Category 1 CME credit is available through the National CME Program. For further information, contact: claire.cohn@ncal.kaiperm.org or TPG Physician Health Department, 1800 Harrison Street, 7th Floor, Oakland, CA 94612; 510-267-4105. Tapes will be available at a cost of $10 for KP employees; $20 for non-KP. To order, contact Gus Gaona 323-259-4776, Gus.X.Gaona@kp.org.

Testicular Torsion video available:

Testicular Torsion, a relatively unknown and unrecognized surgical emergency, is a strangulation of the spermatic cord that affects 1 in 160 males by the age of 25. For the past two years, Michael Strub, MD, and Melody Kulsic, RN, two clinicians from the Department of Urology at KP Fontana, CA, have been working on a public awareness campaign. To this end, they have developed a seven-minute video and bilingual flier that informs young men about this rarely discussed condition and what to do about it. Early detection can save the testicle. These informative materials are designed to be shown on a regular basis to appropriately aged school children to create awareness of this problem.

What is Testicular Torsion? This seven-minute video, professionally produced and directed by the KP Annandale Video Production Center, is available for $3.50 by contacting Gus Gaona: 323-259-4776, Gus.X.Gaona@kp.org. The target audience for this video is young men between the ages of 12-25 and their parents, and coaches, to share with their teams.
An ancient dictum states, “If you write from the heart, it will go to the heart.” Author Jacqueline Marcell gives credence to this proverb with her new book, *Elder Rage*.

In a series of vignettes from her own life, the author paints a poignant portrait of her attempts to care for her aging and ill parents in the twilight of their lives. Her struggles with the legal system as well as with the medical system, caregivers, and nursing home institutions give the reader penetrating insight into Ms Marcell’s valiant attempts to help her parents.

Early in the story, we learn that her domineering father had not only suffered a traumatic childhood but demonstrated some dysfunctional behavior even as a younger man. Outbursts of temper and alcoholism were frequent accompaniments to his personality disorder. Nonetheless, he provided for his family with consistent employment and professed real expressions of true love for his wife and for his daughter, Jacqueline. As he aged, however, his personality became further fragmented from the ravages of dementia and disease. By the time the author arrives on the caregiver scene through default (the only other sibling was estranged from the family years earlier), her father’s behavior vacillates between that of a raging maniac and that of a manipulative psychopath. At the same time, her beautiful mother—who suffered years of abuse—is rendered an invalid by cerebrovascular disease. Realizing that her parents can’t function by themselves, Jacqueline attempts to “pay back the parental debt.” The payback becomes a wild, tortuous rollercoaster ride with existential dimensions.

In one particular heart-pounding episode, father and daughter square off in a howling feud. Insults are traded, screaming ensues, and the writer finds her once-loving dad attacking her with a vengeance. Torn between the kindness her dad once showed and the reality of his attempts to choke her to death, the author is forced to fight for her life. The reader obtains a diabolic glimpse of the irony incurred by one woman’s attempts to help her aging parents.

Aside from being a riveting story, the book is punctuated by wit, humor, and an easy-to-read writing style. With an extensive background as a former Hollywood television executive, Ms Marcell constantly entertains with funny references to pertinent films, songs, and television shows. As the action unfolds, her stream-of-consciousness asides are interspersed in the serious drama. We see the skillful use of laughter as the final defense against insanity.

In addition to telling a passionate story, the book assumes a dual role as the character action ends: It becomes a valuable text, not only for the lay public but for general physicians, psychologists, neurologists, and psychiatrists. Not simply content to just tell her story, Jacqueline wants us to profit by her agony and wants to give us real solutions. She partners with a prominent dementia physician, Rodman Shankle, MD, who writes the final segment of the book from a clinical viewpoint. Drugs for treating dementia and aggression in the elderly are discussed along with psychologic techniques for evaluating these disorders. Although designed as a resource manual for physicians, this section contains much salient information to help the general public and is particularly pertinent to those “baby boomers” who currently find themselves assuming a “parental” role in relation to their aging parents.

With the graying of America, *Elder Rage* has ubiquitous appeal as an abbreviated textbook and reference guide for caretakers of the elderly. Even more, the book seems a good candidate for translation to the stage or to film. In addition to being an engrossing tale of split personality, aberrant behavior, and the failures of our institutions, it is a human, compassionate story of a heroine’s attempt to do the right thing.

Dr Elliot Eisenberg is an ophthalmologist at the Vallejo Medical Center in Northern California.
Field Guide to the Difficult Patient Interview
by Frederic W Platt, Geoffrey H Gordon
Book review by Vincent J Felitti, MD

Believing deeply that the medical interview is a core clinical skill, George Engel, late Professor Emeritus at the University of Rochester, imprinted that belief onto the many physicians who knew him. Medical interviewing remains one of the most difficult skills clinicians must master. Indeed, most failure in clinical practice is not a failure of intellectual processing but instead reflects inadequacy of the interpersonal skills needed to obtain the information we need for intellectual processing.

Field Guide to the Difficult Patient Interview is a fine little book that is remarkably well thought out. Drs Platt and Gordon have held seminars on patient interviewing at many medical meetings over the years and, in the course of that work, have learned from innumerable physicians the problems of patient interviewing. More important for clinicians who read this book, the authors have categorized these problems into a helpful format that makes the book successful.

Principles, Procedures, Examples
For each category of problem, the book assigns a chapter that starts with a clinical vignette, states the associated principles, and outlines the procedures most helpful for addressing the problem. In the book’s vernacular, the Principles presented are helpful clinical insights. For example, one Principle asserts that “any symptom or condition that goes on more than six months has outcomes more dependent on psychosocial and behavioral characteristics than on biological characteristics,” and another Principle states that “treating a chronic condition demands different strategies than treating acute conditions” (p 123). To guide the reader toward using these Principles in everyday practice, each chapter provides brief examples of successful and unsuccessful conversational approaches. After listing pitfalls to avoid, the authors lavish upon us a number of clinical “pearls.”

Skillfully executed drawings throughout the book identify a range of emotional states common to us as well as to our patients. In addition, the authors repeatedly emphasize and illustrate for us the need to explore with our patients the meaning of particular activities and events before prescribing or proscribing them. In Chapter 16, particularly excellent examples show the importance of exploring with patients what they perceive to be the benefits of smoking as well as patients’ views on diabetes control.

Common Problems in Interviewing Patients
The types of problems selected for inclusion in the chapters are just the ones clinicians find most difficult: interacting constructively with an angry patient, dispensing bad news, talking with a patient’s family in crisis circumstances, addressing disagreement about treatment, and managing mistrust of us as physicians. A frequently avoided subject, seduction, is discussed admirably in a four-page chapter. Discussion about the end of life—a topic also commonly avoided—is helpfully presented too. Indeed, if you have ever thought, “WHEN are they going to send someone to me who doesn’t have 12 problems on his list and expect me to handle them all in ten minutes?” or “WHEN are they going to send someone to me who can answer a simple question with a simple answer instead of a saga” (p 64), this book is for you.

Later chapters of the book address disease prevention and the ambivalence commonly felt by physicians when discussing with patients their high-risk behaviors. The book also discusses the ambivalence felt by patients about reducing these behaviors. With this and other topics in mind, a highly appropriate closing chapter is titled, “The New HMO Patient.”

Field Guide to the Difficult Patient Interview is an excellent little book that is both practical and helpful. In fact, reading it made me wish it had been available when I first entered medical practice; I found myself repeatedly seeing ways to speak more effectively with patients. The book is easy to use, and the chapter headings realistically enable readers to check their approach just before seeing the next difficult patient. Chiefs of primary care departments might do well to buy a copy of this field guide for each practitioner. ❖

Dr Vincent Felitti has been with the Southern California Permanente Medical Group since its opening in San Diego in the late 1960s.
Infectious Disease Pearls
by Burke A Cunha, editor

Book review by Vincent J Felitti, MD

Of the myriad medical books available on the market, only some are truly worth reading—and fewer still are enjoyable. *Infectious Disease Pearls* falls into the latter small category. This book presents cases by depicting problems the way clinicians see them—a style of presentation that shows us the author understands the problems clinicians face. We implicitly expect this approach to be helpful, and it is. The cases presented—85 in all—range from common conditions (e.g., gonorrhea, pneumonia) to more difficult diagnoses, such as miliary tuberculosis. AIDS and its unusual complications are adequately represented in this collection.

The typical case included in the book is described in a two-page unit: each first page contains information about the clinical presentation and poses a few basic questions; each second page discusses diagnosis and treatment. The presentations are consistently engaging, the discussions are straightforward and practical, and the bibliographic references are helpful. *Infectious Disease Pearls* is as well written as Louis Weinstein’s wonderful old book, *Practice of Infectious Disease*¹ (a text that is still relevant for learning diagnosis and pathophysiology, although its therapeutic suggestions are dated). The case presentation format of *Pearls* makes learning easy: Reading one case at a time is an interesting, meaningful way to spend a few minutes preparing to see a patient who might appear in the clinic the next day. This book is a good choice for bedside reading.

Reference


Dr Vincent Felitti has been with the Southern California Permanente Medical Group since its opening in San Diego in the late 1960s.

Man’s Best Friend

Outside of a dog, a book is probably man’s best friend, and inside of a dog, it’s too dark to read.

_Groucho Marx, American comedian_
Instructions to Authors

Send all manuscripts to:
Merry Parker, Managing Editor
The Permanente Journal
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Portland, OR 97232
503-813-2659

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Types of Papers

There is no required length, although concise, readable, and practical articles within the ranges listed are preferred. Emphasize information that clinicians can use in their practice, that gives them tools for leadership, education, and development of clinicians.

Notes About Specific Sections

- **Clinical Contributions** (word count range is 725-2500)
  Clinical articles on the practice of medicine within the Permanente Medical Groups and their affiliates. Article topics may include reviews of “successful” practices, programs and policies, and analyses of new technologies.

- **Original Research** (word count range is 725-2500)
  Articles on Kaiser Permanente’s research contributions through original, empirically-based research in areas of great clinical importance. This includes outcome research, studies that use Kaiser Permanente databases, and rigorous evaluations of best practices and innovations in clinical care.

- **Health Systems** (word count range is 725-2500)
  Articles from a “systems” perspective, recognizing that medicine is practiced in the larger context of health care, including ambulatory care delivery, hospital strategy, program expansion, and network development and is supported by information technology and the Internet. Growth in this system occurs through the leadership, education, and development of clinicians.

- **External Affairs** (word count range is 725-2500)
  Nonclinical articles on external issues related to the practice and perception of Permanente Medicine. These may include articles by customers and consumer groups, as well as internally generated articles on health policy, the media, the marketplace, and our social mission.

- **Medical Legal Update** (word count range is 725-1400)
  Articles educating clinicians about medical-legal issues, including risk management, claims review, loss prevention, and ethical issues. Improved clinician communication with patients, families, and the health care team is the goal.

- **Soul of the Healer** (word count range is 725-1400)
  Poetry, stories, musings, and nonfiction articles written by Permanente clinicians as an expression of the soul of the healer. This is a forum to appreciate each other personally through creativity in the humanities.

- **A Moment in Time** (word count range is 700-740)
  A look back at milestones in the history of the Permanente Medical Groups.

- **Abstracts**
  Abstracts from articles published in other journals, preferentially featuring the work of Permanente physicians.

- **Announcements**
  Significant achievements related to the practice or management of medicine by Permanente physicians or Permanente Medical Groups. Also posted will be upcoming courses, meetings, and conferences sponsored by the Permanente Medical Groups or Kaiser Permanente.

- **The Lighter Side of Permanente Medicine**
  Jokes, stories, and humorous encounters tied to the practice of Permanente medicine, managed care, or health care in general.

Cover Letter

In a cover letter, please give a concise statement of the authors’ view of the importance and uniqueness of the article. Also provide several names and addresses of non-Kaiser Permanente experts who could provide informed, objective reviews of the work. The names of any persons considered unlikely by the authors to supply unbiased reviews may also be submitted; this request will be honored. It is important that the cover letter also include the names, addresses, phone numbers, and fax numbers of all coauthors.

Manuscript Preparation and Processing

A 3-1/2” disk containing the article and one complete paper copy of the manuscript must be submitted, along with a photograph of the author(s) labeled with name and a 2-3 sentence author profile. (Please, no photos smaller than 2”×3” or larger than 5”×7.”) If more than four authors, submit the authors’ profiles only—no photographs.

Manuscripts must be typewritten in a word-processing program (preferably WordPerfect, Word, or WordPerfect 6.0), double-spaced, with margins of at least 1 inch. All parts of the manuscript, including tables, must be included in a single file on the disk, and the disk file must match the printout. Illustrations must be included on a disk or e-mailed. The 3-1/2” disk must be labeled with the first author’s name, an abbreviated article title, the file name(s), the disk format (eg, Mac), and the software used (eg, Microsoft Word 6.0, Microsoft PowerPoint, Microsoft Excel).
The first page of the manuscript should contain the following information: 1) title of paper; 2) authors' names; 3) name(s) of Kaiser Permanente Division and medical office in which work was done; 4) name and address of author to whom communications regarding the manuscript should be directed; 5) telephone and fax number of the communicating author; 6) word count.

The second page of an Article (Clinical or Nonclinical) should contain an Abstract (limit: 250 words). The abstract for Nonclinical Articles should use these headings: Context, Objective, Design, Main Outcome Measure(s), Results, and Conclusion(s). Also list key words and terms, in alphabetical order, under which you believe the article should be indexed.

Begin the text on a new page. Define all abbreviations except those that have been approved by the International System of Units for length, mass, time, electric current, temperature, luminous intensity, and amount of substance. Provide a footnote or box at the beginning of the article to define abbreviations when great numbers of abbreviations are used. Do not create abbreviations for drugs, procedures, or substrates. Use generic drug names. If a brand name is used, insert it in parentheses after the generic name.

**Institutional Review Board (IRB) Review**

Documentation of IRB approval or exemption must be appended to the manuscript being submitted for publication in *The Permanente Journal*. If there has been no IRB review of the project, please so indicate. In this case, the article will be reviewed by Kaiser Foundation Research Institute to determine if IRB review should have been conducted. The result of this review may determine whether or not the article will be considered for publication.

**Preparing Illustrations and Tables**

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**Examples**

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- Author photo (no smaller than 2"x3", no larger than 5"x7")
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CME Evaluation Form

All PMG physicians and those clinicians eligible to do so may earn up to two hours of Category 1 credit for reading and analyzing the four designated CME articles, by selecting the most appropriate answer to the questions below, and by successfully completing the evaluation form. This form must be returned (fax or mail to the address listed on the back of this form) to *The Permanente Journal* by June 29, 2001 in order to receive credit. You will receive an acknowledgment by July 31, 2001. **You must complete all sections to receive credit.**

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**Section A.**

**Article 1. Vohs Award Winner: Southern California West Los Angeles Sickle Cell Medical Care Program (page 12)**

In the past, demerol has been a drug used to treat pain in sickle cell patients. Currently, it is recommended that this drug not be prescribed because of the following:

- The drug is addictive
- The drug has adverse side effects
- The drug can cause seizure
- All of the above

What are the current treatment options for Sickle Cell Anemia?

- Bone Marrow Transplant
- Hydroxyurea
- Transfusions
- A and B
- All of the above


The Functional Independence Measure (FIM) has been shown to have the following characteristics:

- FIM scores have poor interrater reliability
- Each unit of improvement of the FIM scale equates to a one-minute reduction in the burden of care needed per day by the patient
- FIM scores predict discharge status in acute care settings
- FIM scores measure 15 areas of motor and cognitive activities of daily living

The primary effect of Kaiser Permanente Therapy Management Strategy (KPTMS) was to:

- Reduce variation in utilization patterns as well as overall amount of medical utilization while maintaining functional outcomes
- Make utilization decisions that are patient-centered and not based on arbitrary caps or human-resource-intensive procedures
- Improve the multidisciplinary teams’ ability to predict the course of care and the likely disposition of the patient
- Use the patient’s own outcomes so that they receive the right care in the right place at the right time
- All of the above

**Article 3. Addressing the Challenge of New Medical Technologies: One Permanente Clinician’s View—Part II (page 53)**

Which of the following are true statements:

- A service that is deemed by the treating clinician(s) to be medically appropriate and is not excluded by the terms of the insurance contract will be covered by the Health Plan
- A service that is not felt to be medically appropriate for the specific member by their treating clinician(s) will not be covered by the Health Plan
- A service may be deemed medically appropriate but not be included in the contracted coverage
- All of the above
Shared decision making between clinician and patient is dependent on:

- Acceptance by the patient that the doctor knows all
- Mutual understanding and trust of clinical observations
- Member values and preference independent of the physician
- Direct-to-consumer advice gleaned from newspapers and television

**Article 4. Hospitalist Practice: An Increasingly Popular Model for Inpatient Care. (page 61)**

Forces that have NOT driven the Hospitalist movement in the US include:

- Pressure to manage rising inpatient costs
- Increase in the proportion of sicker patients and complexity of treatment options
- Legislation mandating hospitalists in many states
- Demand by primary care physicians to increase outpatient accessibility

Medical errors have been found to be primarily linked to:

- Lack of personal accountability
- Poor systems
- Lack of training
- Too much discussion of errors in public

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**Section B. Referring to the CME articles and the stated objectives, please check the box next to each statement as appropriate**

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**Section C.**

What change(s) (if any) do you plan to make in your practice as a result of reading these articles? ______________________

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**Section D. (Please print)**

Name: ___________________________________________ E-mail Address: _______________________________________

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