



The Permanente Journal

a peer-reviewed journal of medical science and social science in medicine

Summer 2006 Volume 10 No. 2

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Mission: *The Permanente Journal* is written and published by the clinicians of the Permanente Medical Groups and KFHP to promote the delivery of superior health care through the principles and benefits of Permanente Medicine.



On the cover: Archival photograph of Sidney R Garfield, MD, performing surgery. Photograph supplied by the Garfield family.

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SPECIAL FEATURE

Garfield Centennial

On the centennial of his birth, *The Permanente Journal* honors Sidney R Garfield, MD, with a special section devoted to his life and legacy. To present the vision of this remarkable man, we reprint his landmark 1970 *Scientific American* article on the Delivery of Health Care, some personal recollections, photographs, and more.

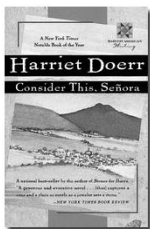
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Gerard Livaudais, MD, MPH;
Robert Unitan, MD; Jay Post

Responding to challenges of the existing system, the Northwest and Hawaii Regions embarked on a transformation of the Care Delivery System that empowers and supports the team. This system, its implementation and successes are described in this comprehensive article.



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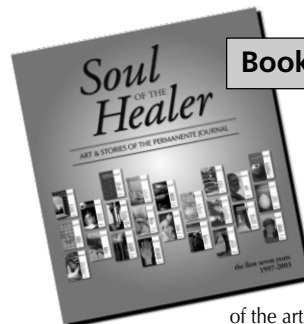
This second in a series on health policy describes the influence public opinion has on health care issues.

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Barbara Caruso

A compilation of news, significant awards, and accomplishments about Permanente physicians and the Permanente Medical Groups.



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Submitting Artwork: Send us a high-quality color photograph of your art no smaller than 4”x5” and no larger than 8”x10”. Please include a cover letter explaining Kaiser Permanente association, art background, medium, size, and a brief statement about the artwork (description, inspiration, etc). Electronic and e-mail submissions are accepted; 600 dpi resolution is required.

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Honoring a Giant of 20th Century Health Care



Jon Stewart
Communications
Practice Leader,
Government Relations
and Health Policy,
Kaiser Foundation
Health Plan

After almost ten years of being regaled by Kaiser Permanente (KP) historian Steve Gilford's wonderful stories about Sidney Garfield, MD's four-year sojourn in the Mojave Desert (1933-38), where the young surgeon literally laid the foundation of what would become KP, I was well primed for the long-delayed pilgrimage. Finally, last November, I at last had a legitimate excuse to fly down to Anaheim and drive more than 100 miles east, past the rich oases of Palm Desert and Palm Springs and into the empty, awesome wastes of the Mojave, in search of KP's birthplace.

The excuse was the forthcoming centennial year of Garfield's birth in April 1906, which we celebrate in a special section in this issue of *The Permanente Journal (TPJ)*. In preparation for this issue, as well as a series of other centennial-year events and memorials, a small group of hard-core KP history buffs finally arranged with the Bureau of Land Management (BLM) and the Ragsdale family, owners of the site of Dr Garfield's old Contractors General Hospital, to make a carefully escorted pilgrimage to a spot almost completely lost to 70 years of desert winds and sand. We included Jeff Selevan, MD; Linda Tolbert, MD; and Paul Bernstein, MD, from Southern California Permanente Medical Group; Suzanne Ragsdale, The Permanente Medical Group nurse practitioner whose family owns much of the site (as well as the nearby "town" of Desert Center); KP history consultant Steve Gilford; Tom Debley, KP Director of Heritage Management; an archeologist from the BLM, and myself.

As it turned out, even Mr Gilford and the BLM guide, who had visited the site on several occasions, had to wander the rugged landscape a bit before re-locating what's left of Dr Garfield's 12-bed hospital—

a vague, crumbling outline of the perimeter walls surrounded, at a short distance, (see page 58) by waste pits full of broken crockery and shards of bottles of IV fluid, medicines, and Coca-Cola® (the archeologist showed us how to date the Coke® bottles to the 1930s).

For all of us, the humble nature of the ruins in no way detracted from the excitement we felt at being there in this almost-legendary place we had so long heard, read, written, and talked about. The place where it all began. Even the BLM official expressed hopes that the ruins may eventually be officially surveyed, catalogued, and protected as a point of historical significance.

Of course, Dr Garfield's significance to KP and to American health care does not depend on protecting a pile of fascinating rubble in the desert. But it does depend on the ability of those who know his story and understand the great importance of it to document and communicate it—to bring him out of the desert legends and into the legitimate annals of medical history, where he should be widely recognized as one of the truly great physicians and health care innovators of the 20th century.

The special Garfield Centennial section in this issue of *TPJ*, which I have been honored to guest edit (with the able help of Arthur Klatsky, MD), is a small gesture in an ongoing campaign to win for Dr Garfield the enduring recognition that he is due. We hope the commentaries, reminiscences, photos—and especially the reprint of Dr Garfield's own seminal 1970 *Scientific American* article on the "Total Health Care" system he envisioned and pursued—will provide at least a hint of the inspiration and gratitude that we felt out there in the humble birthplace of KP. ♦

... the humble nature of the ruins in no way detracted from the excitement we felt at being there in this almost-legendary place we had so long heard, read, written, and talked about. The place where it all began.

High Satisfaction: Thank You Survey Respondents!

Survey Ratings

In 2005, in its ninth year of publication, *The Permanente Journal* (*TPJ*) conducted its fourth reader survey and found continued high satisfaction. Of the 2166 respondents—60% physicians, 13% affiliated clinicians, and 27% nurses—48% rated *TPJ* “good” and 35% rated it “excellent,” giving an overall good-to-excellent satisfaction of 83%. Additionally, 14% rated *TPJ* “average” or “fair,” and 3% rated it “poor.” The response rate from each Region was equivalent with slightly more specialists than primary care responding to the survey; 27% responding online. Sixty-six percent prefer *TPJ* in print, and 17% prefer both print copies and online access, where you can search the full contents of all *TPJ* issues to date and print selected articles.

Perceived Value

The areas of greatest perceived value of *TPJ* were: supporting the principles of Permanente Medicine, building organizational pride and image, and showcasing practices and programs from other Regions.

Success and Challenge

Our learnings from this survey indicate that our highest satisfied readership prefers the humanities and social science articles, as well as finding value in the clinical articles. Our least satisfied readers, a small percentage, prefer clinical content. Others stressed the importance of being indexed in the National Library of Medicine. To address this, we are embarking on an effort to improve the quality and

number of clinical studies, review articles, and commentary. After nine years of focusing inward, we will also include more authors and experts external to KP to share their new knowledge and practices.

RNs

Two years ago, Health Plan contracted to distribute *TPJ* to nursing leadership and key clinical nurses to enhance clinical team collaboration through shared knowledge and to meet nurses’ expressed need for Permanente evidence-based medicine. For nurse survey respondents, two areas stand out in high satisfaction levels: “Learning about KP clinical best practices and EBM” (86%) and “The journal supporting collaboration and teamwork between nurses and clinicians” (79%). This demonstrates *TPJ*’s role in supporting KP’s new partnership with Donald Berwick, MD’s National Institute for Healthcare Improvement (IHI) where there is a focus on building 21st Century Healthcare Teams. This is social science in medicine at work to improve the delivery of clinical care for patients.

A New Venture

With the publication of *Soul of the Healer: The Art & Stories of The Permanente Journal: The First Seven Years*, we have developed a book publishing capability—“The Permanente Press”—to offer this book for sale as a cost-neutral venture.

Due to brisk sales, *Soul of the Healer* has broken even and is now generating revenue to fund future books under consideration includ-

ing: clinician-patient communication, Permanente history, clinical stories, and leadership.

In addition to many individual sales, bulk purchases of *Soul of the Healer* have been made by different Regions for: orientation of new physicians, for recruiting medical residents and physician applicants, for physician medical educators, for team leaders, and as gifts to honor distinguished physicians and “Art of Medicine” top contributors. ♦



Tom Janisse, MD
Editor-In-Chief

Reader Comments

Sometimes comments say more than graphs; here’s a representative sample from over 1000 comments (which *TPJ* editors and staff are closely reviewing for valuable advice):

What Do You Like?

- Physician reports on best practices
- “Homegrown” authorship; relevant clinical content; multidisciplinary testimony about implementing programs in various parts of the country
- Art, book reviews, stories, clinical research
- I like it in that it’s not hard science—it’s about the people I work with and the workflow issues that affect my practice
- Articles on physician-patient relations
- It’s OURS! That we can publish a journal demonstrates our strength as an organization that does first-class research

What to Improve?

- More clinical science articles
- More sociopolitical commentary; more ethics commentary
- I don’t have time to read it!
- Needs to be indexed in The National Library of Medicine and MEDLINE
- Open the doors for non-Kaiser contributors

Abstracts of Articles Authored or Coauthored by Permanente Physicians

Selected by Daphne Plaut, MLS, Librarian, Center for Health Research

From Northern California

Use of a dummy (pacifier) during sleep and risk of sudden infant death syndrome (SIDS): population-based case-control study.

Li DK, Willinger M, Petitti DB, Odouli R, Liu L, Hoffman HJ. *BMJ* 2006 Jan 7;332(7532):18-22.

OBJECTIVES: To examine the association between use of a dummy (pacifier) during sleep and the risk of sudden infant death syndrome (SIDS) in relation to other risk factors.

DESIGN: Population-based case-control study.

SETTING: Eleven counties in California.

PARTICIPANTS: Mothers or carers of 185 infants whose deaths were attributed to SIDS and 312 randomly selected controls matched for race or ethnicity and age.

MAIN OUTCOME MEASURE: Use of a dummy during sleep determined through interviews.

RESULTS: The adjusted odds ratio for SIDS associated with using a dummy during the last sleep was 0.08 (95% confidence interval 0.03 to 0.21). Use was associated with a reduction in risk in every category of sociodemographic characteristics and risk factors examined. The reduced risk associated with use seemed to be greater with adverse sleep conditions (such as sleeping prone or on side and sleeping with a mother who smoked), although the observed interactions were not significant. For example, infants who did not use a dummy and slept prone or on their sides (v on their back) had an increased risk of SIDS (2.61, 1.56 to 4.38). In infants who used dummies, there was no increased risk associated with sleeping position (0.66, 0.12 to 3.59). While cosleeping with a mother who smoked was also associated with increased risk of SIDS among infants who did not use a dummy (4.5, 1.3 to 15.1), there was no such association among those who did (1.1, 0.1 to 13.4).

CONCLUSIONS: Use of a dummy seems to re-

duce the risk of SIDS and possibly reduces the influence of known risk factors in the sleep environment.

British Medical Journal, 2006, Jan 7;332(7532):18-22. Reproduced with permission from the BMJ Publishing Group.

CLINICAL IMPLICATION: This was a population-based case-control study conducted in 11 counties in California. The study found that use of a pacifier during sleep reduced the risk of SIDS by 90% compared to nonusers. In addition, use of a pacifier mitigates the other risk factors for SIDS, especially those related to adverse sleep environment including prone sleep position, sleep on soft bedding, and cosleep with a mother who smoked. -DL

From the Northwest

Trivalent inactivated influenza vaccine safety in children: Assessing the contribution of telephone encounters.

Mullooly JP, Crane B, Chun C. *Vaccine* 2006 Mar 20;24(13):2256-63.

We assessed the contribution of telephone medical care encounters to surveillance of adverse events (AE) following trivalent influenza vaccination in children age six months to 17 years. We used retrospective, self-controlled, case-series analysis to estimate adverse event incidence rate ratios for post-vaccination risk intervals relative to 15-28 days prior to vaccination. We confirmed possible vaccination reactions by medical record abstraction. Detection of 10 of 20 elevated incidence rate ratios required telephone data. We conclude that telephone encounters substantially contribute to the detection of possible influenza vaccination reactions, primarily local injection site and systemic reactions.

Reprinted from *Vaccine* 2006, Mar 20;24(13). Mullooly JP, Crane B, Chun C. Trivalent inactivated influenza vaccine safety in children: Assessing the contribution of telephone encounters, 2256-63. Copyright 2006, with permission from Elsevier.

From Northern California

Team assignment system: expediting emergency department care.

Patel PB, Vinson DR. *Ann Emerg Med* 2005 Dec;46(6):499-506.

STUDY OBJECTIVE: We designed and implemented an emergency department (ED) team assignment system, each team consisting of one emergency physician, two nurses, and usually one technician. Patients were assigned in rotation upon arrival to a specific team that was responsible for their care. We monitored the time from arrival to physician assessment, percentage of patients who left without being seen by a physician, and patient satisfaction before and after team assignment system implementation.

METHODS: This study was done in a suburban community hospital with an annual ED census of approximately 39,000. Time to physician assessment was defined from the completion of the medical screening evaluation by an ED nurse at triage to initiation of emergency physician evaluation. Times were documented on the ED paper record and manually entered into a computerized registration by the clerical staff. Patients who left without being seen was reported as percentage of total ED visits. Patient satisfaction scores using a five-point Likert scale to assess satisfaction with the emergency physician, ED staff courtesy, and coordination of care were gathered every three months from random mailings to a subset of patients.

RESULTS: The 12-month ED census was 38,716 before team assignment system implementation and 39,301 afterwards. Complete time data were recorded for 34,152 (88.2%)

and 32,537 (82.8%) of the patients, respectively. The mean time to physician assessment was 71.3 ±7.0 minutes before and 61.8 ±6.4 minutes after team assignment system implementation (absolute difference -9.5 minutes; 95% confidence interval [CI] -5.8 to -13.5 minutes). The percentage of patients seen by a physician within one hour was 56.3% before and 64.0% after team assignment system implementation (absolute difference 7.7%; 95% CI 5.1% to 10.3%). The percentage of patients who waited more than three hours for physician assessment was 17.8% before and 11.8% after team assignment system implementation (absolute difference -6.0%, 95% CI -4.0% to -8.1%). Before team assignment system, the left-without-being-seen rate was 2.3% compared to 1.6% after team assignment system (absolute difference -0.8%; 95% CI -0.4% to -1.1%). Patient satisfaction reported as very good or excellent showed improvement in satisfaction with the physician (absolute increase 3.1%; 95% CI 1.0% to 5.3%), staff courtesy (absolute increase 4.5%; 95% CI 2.3% to 6.7%), and coordination of care (absolute increase 3.6%; 95% CI 0.8% to 6.4%).

CONCLUSION: The implementation of a team assignment system in our ED was associated with reduced time to physician assessment, a reduced percentage of patients who left without being seen, and improved patient satisfaction.

Reprinted from Annals of Emergency Medicine, 46(6), Patel PB, Vinson DR, Team assignment system: expediting emergency department care, 499-506, Copyright 2005, with permission from The American College of Emergency Physicians.

CLINICAL IMPLICATION: The implementation of a team assignment system at our Sacramento Emergency Departments (ED) improved patient flow and promoted fairness in the distribution of patients among the scheduled ED physicians. This system led to accountability to individual physician-led teams that helped expedite patient care and reduce waiting times for ED patients to be seen by their assigned physician. It also provided a direct incentive to physicians to complete the evaluation of their assigned patients so that physicians could complete their work. -PP

From Southern California
Response profiles to fluticasone and montelukast in mild-to-moderate persistent childhood asthma.

Zeiger RS, Szeffler SJ, Phillips BR, et al; Childhood Asthma Research and Education Network of the National Heart, Lung, and Blood Institute. J Allergy Clin Immunol 2006 Jan;117(1):45-52.

BACKGROUND: Outcome data are needed to base recommendations for controller asthma medication use in school-aged children.

OBJECTIVE: We sought to determine intraindividual and interindividual response profiles and predictors of response to an inhaled corticosteroid (ICS) and a leukotriene receptor antagonist (LTRA).

METHODS: An ICS, fluticasone propionate (100 mug twice daily), and an LTRA, montelukast (5-10 mg nightly, age dependent), were administered to children ages 6 to 17 years with mild-to-moderate persistent asthma using only as-needed bronchodilators in a multicenter, double-masked, two-sequence, 16-week crossover trial. Clinical, pulmonary, and inflammatory responses to these controllers were evaluated.

RESULTS: Improvements in most clinical asthma control measures occurred with both controllers. However, clinical outcomes (asthma control days [ACDs], the validated Asthma Control Questionnaire, and albuterol use), pulmonary responses (FEV(1)/forced vital capacity, peak expiratory flow variability, morning peak expiratory flow, and measures of impedance), and inflammatory biomarkers (exhaled nitric oxide [eNO]) improved significantly more with fluticasone than with montelukast treatment. eNO was both a predictor of ACDs (p = .011) and a response indicator (p = .003) in discriminating the difference in ACD response between fluticasone and montelukast.

CONCLUSIONS: The more favorable clinical, pulmonary, and inflammatory responses to an ICS than to an LTRA provide pediatric-based group evidence to support ICSs as the preferred first-line therapy for mild-to-moderate persistent asthma in children. eNO, as a predictor of response, might help to identify indi-

vidual children not receiving controller medication who achieve a greater improvement in ACDs with an ICS compared with an LTRA. *Reprinted from Journal of Allergy and Clinical Immunology, 117(1), Zeiger RS, Szeffler SJ, Phillips BR, Schatz M, Martinez FD, Chinchilli VM, Lemanske RF Jr, Strunk RC, Larsen G, Spahn JD, Bacharier LB, Bloomberg GR, Guilbert TW, Heldt G, Morgan WJ, Moss MH, Sorkness CA, Taussig LM; Childhood Asthma Research and Education Network of the National Heart, Lung, and Blood Institute, Response profiles to fluticasone and montelukast in mild-to-moderate persistent childhood asthma, 45-52, Copyright 2006, with permission from American Academy of Allergy Asthma and Immunology.*

From Northern California
COPD and incident cardiovascular disease hospitalizations and mortality: Kaiser Permanente Medical Care Program.

Sidney S, Sorel M, Quesenberry CP Jr, DeLuise C, Lanes S, Eisner MD. Chest 2005 Oct;128(4):2068-75.

STUDY OBJECTIVES: To determine the relationship between diagnosed and treated COPD and the incidence of cardiovascular disease (CVD) hospitalization and mortality.

DESIGN: Retrospective matched cohort study.

SETTING: Northern California Kaiser Permanente Medical Care Program (KPNC), a comprehensive prepaid integrated health care system.

PATIENTS OR PARTICIPANTS: Case patients (n = 45,966) were all KPNC members with COPD who were identified during a four-year period from January 1996 through December 1999. An equal number of control subjects without COPD were selected from KPNC membership and were matched for gender, year of birth, and length of KPNC membership.

MEASUREMENTS AND RESULTS: Follow-up conducted for hospitalization and mortality from CVD end points through December 31, 2000. CVD study end points included cardiac arrhythmias, angina pectoris, acute myocardial infarction, congestive heart failure (CHF), stroke, pulmonary embolism, all of the aforementioned study end points combined, other CVD, and all CVD end points. The mean follow-up time was 2.75 years for case patients and 2.99 years for control subjects. The risk of

hospitalization was higher in COPD case patients than in control subjects for all CVD hospitalization and mortality end points. The relative risk (RR) for hospitalization for the composite measure of all study end points was 2.09 (95% confidence interval [CI], 1.99 to 2.20) after adjustment for gender, preexisting CVD study end points, hypertension, hyperlipidemia, and diabetes, and ranged from 1.33 (stroke) to 3.75 (CHF). The adjusted RR for mortality for the composite measure of all study end points was 1.68 (95% CI, 1.50 to 1.88), ranging from 1.25 (stroke) to 3.53 (CHF). Younger patients (ie, age <65 years) and female patients had higher risks than older and male participants.

CONCLUSIONS: COPD was a predictor of CVD hospitalization and mortality over an average follow-up time of nearly three years. The finding of a stronger relationship of COPD to CVD outcomes in patients <65 years of age suggests that CVD risk should be monitored and treated with particular care in younger adults with COPD.

From Colorado

Late-stage breast cancer among women with recent negative screening mammography: do clinical encounters offer opportunity for earlier detection?

Mouchawar J, Taplin S, Ichikawa L, et al. J Natl Cancer Inst Monogr 2005;(35):39-46.

BACKGROUND: Opportunities to prevent late-stage breast cancer within the course of usual care are needed. We evaluate whether clinical encounters offer such opportunities.

METHODS: Within seven health care plans, we identified 1298 women aged more than 50 years with early (<3 cm), late-stage (≥3 cm), or metastatic invasive breast cancer diagnosed during 1995-1999, whose first screening mammogram 13-36 months prior to the diagnosis (index) was negative. We audited all care occurring in the health plans up to 36 months prior to the cancer diagnoses. Ordinal logistic regression compared the frequency of events by disease category. We hypothesized that during the 13-36 months prior to diagnosis, women with late-stage or metastatic breast cancer would have more

symptoms and be more likely to have breast-related clinical visits but have less breast screening (clinical breast examination [CBE] or mammography) than women with early-stage disease, thereby indicating clinical opportunities for earlier detection.

RESULTS: We found no differences in demographic characteristics across breast cancer stage among the 1298 women. Both before and after the negative index mammogram but during the 13-36 months prior to diagnosis, few women had breast symptoms (5% before index, 8% after), but many sought breast care (86% before index, 90% after) and screening CBE (62% before index, 43% after). Only the occurrence of screening CBE (odds ratio [OR] = 0.73, 95% confidence interval [CI] = 0.56 to 0.95) or screening mammograms (OR = 0.74, 95% CI = 0.57 to 0.97) after the negative index mammogram reduced odds of more severe disease at diagnosis.

CONCLUSION: Although the mortality benefit of CBE, or one compared to two year mammography has not been established, we found that women with late-stage breast cancers undetected by screening mammography did not experience opportunities for earlier detection except through CBE or additional screening mammography.

www.oxfordjournals.org/

CLINICAL IMPLICATION: Although screening mammography detects cancers at earlier stages for the majority of the general population, there remain a group of women destined to develop late-stage breast cancer that will have their cancer missed. Our results indicate that better screening technology is needed for these women because clinical encounters are not likely to lead to earlier detection. -JM

From Southern California

Improved asthma outcomes from allergy specialist care: a population-based cross-sectional analysis.

Schatz M, Zeiger RS, Mosen D, et al. J Allergy Clin Immunol 2005 Dec;116(6):1307-13. Epub 2005 Nov 8.

BACKGROUND: Prior studies suggest that allergist care improves asthma outcomes, but

many of these studies have methodological shortcomings.

OBJECTIVE: We sought to compare patient-based and medical utilization outcomes in randomly selected asthmatic patients cared for by allergists versus primary care providers.

METHODS: A random sample of 3568 patients enrolled in a staff model health maintenance organization who were given diagnoses of persistent asthma completed surveys. Of these participants, 1679 (47.1%) identified a primary care provider as their regular source of asthma care, 884 (24.8%) identified an allergist, 693 (19.4%) reported no regular source of asthma care, and 195 (5.5%) identified a pulmonologist. Validated quality of life, control, severity, patient satisfaction, and self-management knowledge tools and linked administrative data that captured medication use were compared between groups, adjusting for demographics and baseline hospital and corticosteroid use.

RESULTS: Compared with those followed by primary care providers, patients of allergists reported significantly higher (p < .001) generic physical and asthma-specific quality of life, less asthma control problems, less severe symptoms, higher satisfaction with care, and greater self-management knowledge. Patients of allergists were less likely than patients of primary care providers to require an asthma hospitalization (odds ratio, 0.45) or unscheduled visit (odds ratio, 0.71) and to overuse beta-agonists (odds ratio, 0.47) and were more likely to receive inhaled steroids (odds ratio, 1.81) during their past year.

CONCLUSIONS: Allergist care is associated with a wide range of improved outcomes in asthmatic patients compared with care provided by primary care providers.

Reprinted from Journal of Allergy and Clinical Immunology, 116(6), Schatz M, Zeiger RS, Mosen D, Apter AJ, Vollmer WM, Stibolt TB, Leong A, Johnson MS, Mendoza G, Cook EF, Improved asthma outcomes from allergy specialist care: a population-based cross-sectional analysis, 1307-13, Copyright 2005, with permission from American Academy of Allergy Asthma and Immunology.

From the Northwest

The near absence of osteoporosis treatment in older men with fractures.

Feldstein AC, Nichols G, Orwoll E, et al. Osteoporos Int 2005; 16(8):953-62.

The burden of osteoporotic fractures in older men is significant. The objectives of our study were to: 1) characterize older men with fractures associated with osteoporosis, 2) determine if medication treatment rates for osteoporosis are improving, and 3) identify patient, health care benefit and utilization, and clinician characteristics that are significantly associated with treatment. This retrospective cohort study assessed 1171 men aged 65 or older with any new fracture associated with osteoporosis between 1 January 1998 and 30 June 2001 in a nonprofit health maintenance organization in the United States. Multiple logistic regression was used to evaluate prefracture factors for their association with osteoporosis treatment in the six-month postfracture period. The main outcome measure was pharmacologic treatment for osteoporosis in the six months after the index fracture. Subjects' average age was 76.7 years; 3.3% had a diagnosis of osteoporosis and 15.2% a diagnosis or medication associated with secondary osteoporosis. Only 7.1% of the study population and 16.0% of those with a hip or vertebral fracture received a medication for osteoporosis following the index fracture, and treatment rates did not improve over time. In the multivariate model, factors significantly associated with drug treatment were a higher value on the Charlson Comorbidity Index (odds

ratio 1.26, 95% confidence interval 1.05-1.51), having an osteoporosis diagnosis (odds ratio 8.11, 95% confidence interval 3.08-21.3), chronic glucocorticoid use (odds ratio 5.37, 95% confidence interval 2.37-12.2) and a vertebral fracture (odds ratio 16.6, 95% confidence interval 7.8-31.4). Bone mineral density measurement was rare (n = 13, 1.1%). Our findings suggest that there is underascertainment and undertreatment of osteoporosis and modifiable secondary causes in older men with fractures. Information systems merging diagnostic and treatment information can help delineate gaps in patient management. Interventions showing promise in other conditions should be evaluated to improve care for osteoporosis. Available online at: www.osteofound.org/publications/osteoporosis_international.html.

From the Northwest

Natural language processing in the electronic medical record assessing clinician adherence to tobacco treatment guidelines.

Hazlehurst B, Sittig DF, Stevens VJ, et al. Am J Prev Med 2005 Dec;29(5):434-9.

BACKGROUND: Comprehensively assessing care quality with electronic medical records (EMRs) is not currently possible because much data reside in clinicians' free-text notes.

METHODS: We evaluated the accuracy of MediClass, an automated, rule-based classifier of the EMR that incorporates natural language processing, in assessing whether clinicians: 1) asked if the patient smoked; 2) advised them to stop; 3) assessed their readiness to quit; 4) assisted them in quitting by

providing information or medications; and 5) arranged for appropriate follow-up care (ie, the 5As of smoking-cessation care).

DESIGN: We analyzed 125 medical records of known smokers at each of four HMOs in 2003 and 2004. One trained abstractor at each HMO manually coded all 500 records according to whether or not each of the 5As of smoking cessation care was addressed during routine outpatient visits.

MEASUREMENTS: For each patient's record, we compared the presence or absence of each of the 5As as assessed by each human coder and by MediClass. We measured the chance-corrected agreement between the human raters and MediClass using the kappa statistic.

RESULTS: For "ask" and "assist," agreement among human coders was indistinguishable from agreement between humans and MediClass (p > 0.05). For "assess" and "advise," the human coders agreed more with each other than they did with MediClass (p < 0.01); however, MediClass performance was sufficient to assess quality in these areas. The frequency of "arrange" was too low to be analyzed.

CONCLUSIONS: MediClass performance appears adequate to replace human coders of the 5As of smoking-cessation care, allowing for automated assessment of clinician adherence to one of the most important, evidence-based guidelines in preventive health care.

Reprinted from American Journal of Preventive Medicine, V29(5), Hazlehurst B, Sittig DF, Stevens VJ, Smith KS, Hollis JF, Vogt TM, Winickoff JP, Glasgow R, Palen TE, Rigotti NA, Natural language processing in the electronic medical record assessing clinician adherence to tobacco treatment guidelines, p 434-9, Copyright 2005, with permission from American Journal of Preventive Medicine. ♦

The Goal

Our goal is to provide the best quality care our members can afford, and to support quality care by conducting medical research and teaching.

— Sidney R Garfield, MD, 1906-84, founder of the Kaiser Permanente Health Plan
This "Moment in History" quote collected by Steve Gilford, KP Historian

11th Annual HMO Research Network Conference

Abstracts from the HMO Research Network

With this issue we include abstracts from the 2005 11th Annual HMO Research Network Conference, held in Santa Fe, New Mexico, that focused on "Translating Research into Practice."

April 4-6, 2005 Santa Fe, NM
"Translating Research Into Practice—Scaling New Heights"

From HealthPartners Research Foundation

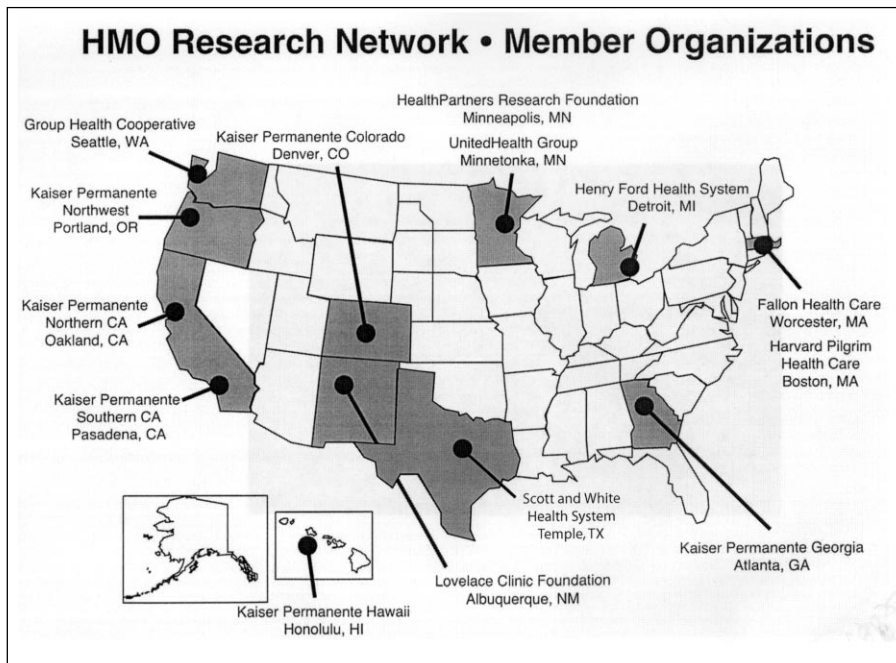
Colon cancer surveillance in survivors.

Rolnick S, Kucera GP, Alford SH, et al.

BACKGROUND: The purpose of this analysis is to describe, among a multiethnic HMO population, the compliance of colorectal cancer survivors with postdiagnosis surveillance recommendations.

METHODS: Subjects were identified as part of the Cancer Research Network's study of colorectal cancer survivors. To be eligible for the main study, patients had to be part of the staff model components of health maintenance organizations in southeastern Michigan and Minnesota. Using computerized databases, individuals were identified who were 40 years or older with incident local or regionally invasive colorectal cancer diagnosed between January 1, 1990 and December 31, 2000. Using data current through 2002, we analyzed the cohort using actuarial tables and Cox proportional hazard models to understand variations in postdiagnostic surveillance practices. We defined compliance to be the receipt of a complete colonic surveillance exam within 24 months after diagnosis and compared the characteristics of those who were and were not compliant. We also included an analysis comparing those who received an exam and those who didn't regardless of exam timing.

RESULTS: A total of 995 patients were eli-



gible for the main study. Of these, 964 (97%) were included in this analysis. Twenty-five percent of subjects were African-American, 42% were female, and 62% were 65 years or older. The proportion who received an exam within 24 months was 68%. The Cox proportional hazards model for compliant exams and overall examinations both showed that African Americans and those ≥ 65 at the time of diagnosis were statistically less likely to receive an exam. However, among those who received an exam there is not a clinically meaningful difference in the month until exam by race (14 vs 16).

CONCLUSION: Our data indicate that colorectal cancer survivors who are ≥ 65 at the time of diagnosis or who are African American are less likely to be compliant with postdiagnostic surveillance recommendations. Whether these differences are due to system- or patient-level barriers needs further study.

From Henry Ford Cord blood stimulated t-cell interferon—production varies by race in an HMO-based birth cohort.

Johnson CC, Malarik MM, McCabe M, et al.

BACKGROUND: The prevalence of allergic disorders has risen worldwide. One facet of the Hygiene Hypothesis proposed to account for this increase is that infants destined to be atopic are more likely to have a Th2 rather than Th1 helper cell predilection. African-American children have higher total IgE at birth and a heightened risk of asthma, which could be explained by a muted Th1cytokine response. Using the recently established Detroit area WHEALS birth cohort, we analyzed, by race, the level of CD4+ and total cell production of interferon-gamma (IFN-gamma) in cord blood as an early marker for Th1 propensity.

METHODS: Pregnant women residing in a geographically circumscribed urban and

suburban area attending four medical group clinics and due to deliver after 8/31/03 were recruited and interviewed. Cord blood samples were obtained and IFN-gamma production by stimulated lymphocytes was measured using a whole blood assay. Intracellular cytokine production by CD4+ and CD4- lymphocytes was detected by antibody staining and flow cytometry. Two sample Mann Whitney tests were used to compare mean IFN-gamma levels.

RESULTS: Cord blood IFN-gamma was measured in 54 white and 62 African-American newborns. Babies of European descent had a statistically significantly different mean IFN-gamma level produced by CD4+ cells, 1.28%, compared to African Americans, 0.67% ($p < 0.041$), a pattern also found for total IFN-gamma production.

CONCLUSIONS: IFN-gamma, a Th1 marker potentially indicating lower risk for atopic disorders, was found to be higher in newborns of European compared to African descent in this population-based birth cohort.

From HealthPartners Research Foundation

Identifying depression cases from clinician notes using natural language processing.

Fischer LR, Rush WA, Kluznik JC, et al.

BACKGROUND: In research studies in health care systems, depression cases can be identified through diagnosis (ICD-9) codes. However, because most encounters have only one or two ICD-9 codes, it is likely that depression often is under-coded. Clinician notes offer an alternative source for identifying depression. While traditional chart audits are time-consuming and costly, natural language processing (NLP) tools can be used to enhance case identification where clinician notes are available in electronic form.

METHODS: An ACCESS-based computer tool was developed to elicit key terms in open-ended text data. The tool has the capability to track key terms (words, parts of words or phrases), link these terms with identifiable clinician notes, and create a list of phrases with the key term embedded. A qualitative analysis was used to identify key

terms and exclusion terms. To test the viability of this approach, a random sample of 1000 adult HMO patients with no ICD-9 code for depression was selected in 2001, along with 100 patients with a depression ICD-9 code. Using a list of phrases that included the embedded term “depression,” a researcher coded all cases with an appropriate indication of depression, excluding inappropriate uses of the terms (“denies depression,” “depression fracture,” “no history of depression” ...).

RESULTS: Of 1000 patients with no depression code, 133 (13%) had no encounter. Among the 867 remaining cases, depression was noted for 51 patients—that is, 5% of this sample had at least one depression-related encounter but would have been missed by ICD-9 codes alone. The term “depression” was used in 91 of 100 cases with an ICD-9 code for depression.

CONCLUSIONS: ICD-9 codes for depression miss substantial numbers of cases. The NLP tool provides an efficient way to enhance the identification of cases. This tool could also be used for other diagnoses. Further, as more and more medical providers establish paperless offices, NLP will be increasingly useful in both research studies and clinical practice.

From Kaiser Permanente Northwest Continuity of care, relationships with mental health providers, and recovery from severe mental illness.

Green CA, Polen MR, Wisdom JP, Vuckovic N, Perrin NA, Paulson RI.

BACKGROUND: A substantial majority of individuals with serious mental illness make either a full recovery or function well and contribute to society, yet little is known about factors that foster or impede the recovery process. Good relationships with mental health care providers and continuity of care have been identified as potential facilitators of better outcomes, but continuity of care findings have been inconsistent.

METHODS: Study participants are 178 Kaiser Permanente Northwest Members (93 women, 85 men) with serious mental illness (prima-

rily schizophrenia, shizoffective disorder, or bipolar disorder) in a longitudinal study of recovery. At baseline, participants completed two in-depth interviews detailing personal and mental health care history and current life circumstances, and a paper- and pencil questionnaire that included measures of satisfaction with mental health care providers, quality of life, symptom levels, and recovery status. Questionnaire data are linked to health plan records of services used and identifiers for providers of those services.

RESULTS: Preliminary analyses of qualitative data indicate that continuity of care and having a good relationship with one’s provider have important independent positive impacts on recovery. Consumers fortunate enough to experience both components appear to have the best outcomes. Mental health providers who collaborate with consumers to develop and test plans of care acceptable to both clinician and consumer, particularly regarding medications, are seen as more helpful and more competent. Clinicians who are kind, caring, understanding, supportive, and interested in their patients as “persons” facilitate development of strong and trusting relationships that increase consultation and requests for help during periods of increased symptoms. Quantitative analyses show that good relationships with mental health care providers, and patient-directed recovery-oriented care lead to better quality of life and improved recovery, in part because of greater satisfaction with medications and lower levels of symptoms.

CONCLUSIONS: Continuity of care, patient-directed recovery-oriented care, and positive relationships with mental health providers, facilitate recovery. Trusting relationships with providers may take significant time to develop, particularly when individuals have had bad experiences with care or have been treated involuntarily. Previous research examining continuity of care may not have followed people for periods long enough to observe these outcomes; lack of attention to the relationship between consumer and provider in the context of continuity of care may also have obscured findings.

From Meyers Primary Care Institute
Utility of referral and consultation letters between primary and specialty pediatricians.

Stille CJ, Mazor KA, Nagberg N, Grimes J, Wasserman RC.

BACKGROUND: Primary care (PCP)-to-specialist (SP) communication is essential in care coordination for children with special health care needs (CSHCN). To maximize the efficiency of communication, its optimal content must be determined. We investigated the relationship between content elements (CE) and value of letters sent between PCPs and SPs in specialties serving mainly CSHCN.

METHODS: PCP-to-SP and SP-to-PCP communication was abstracted from records of 82 patients newly referred to pediatric SPs in five specialties in an HMO and an academic medical center. Communication was independently

reviewed by two pediatric nurse practitioners. Reviewers assigned a value for each PCP-to-SP and SP-to-PCP communication on a five-point scale from "not useful" to "very valuable." Values were averaged between reviewers. The presence of essential CE identified previously was most important for pediatricians also was noted, with disagreements decided by the principal investigator. Relationships between each CE and value were assessed using t-tests, and relationships between the number of CE in each communication and value using Pearson's R Significance was determined at $p < .01$.

RESULTS: Communication from PCP-to-SP was found in 21 (26%) visits, and from SP-to-PCP in 58 (71%). There were a mean of 3.6 ± 1.4 out of six CE for each PCP-to-SP communication (mean value 3.2 ± 1.0) and 8.1 ± 2.0 out of 12 CE (mean value 4.0 ± 0.7) for each SP-

to-PCP communication. The number of CE correlated significantly with value for PCP-to-SP ($r = .831$) and SP-to-PCP ($r = .725$) communication. Most common PCP-to-SP CE were history (81%), lab results (81%) and reason for referral (76%). Ninety-one percent of SP-to-PCP letters had a diagnosis, while only 31% covered comanagement and 30% had education for the PCP, PCP-to-SP CEs associated with increased value were also the three most common CE above. Most SP-to-PCP CE were associated with increased value, with the strongest being education ($p < .001$, mean difference 1.04 points), diagnosis ($p < .001$, mean difference 0.93) and reasoning behind diagnosis ($p < .001$, mean difference 0.84).

CONCLUSIONS: PCP-to-SP communication is uncommon but its content is appropriate. SP-to-PCP communication is more common but could be improved by more educational content. ❖

Paradox

It has always seemed a paradox that in the universities we learn medicine under the highest form of group practice, but when we go out to practice, we revert to the old type of individual private practice.

—Sidney R Garfield, MD, 1906-84, founder of the Kaiser Permanente Health Plan
 This "Moment in History" quote collected by Steve Gilford, KP Historian



"Castle in Brugge, Belgium"

photograph

by Ira J Levy, MD

Ira Levy, MD, is a retired physician in Southern California. Dr Levy took this photograph on a recent trip to Europe with his Nikon Coolpix 8800.

The James A Vohs Award for Quality— The Eighth Annual *Permanente Journal* Special Issue



Arthur L Klatsky, MD
Associate Editor
Clinical Contributions

This year's Vohs award winners represent attempts to reduce adverse medical events by early diagnosis through more effective screening. We are proud to present both projects in this issue.

"Controlling High Blood Pressure" (Mid-Atlantic States)

Identification of individuals with elevated blood pressure (BP) and control of hypertension (HTN) becomes an ever-higher public health priority. The prevalence of sequelae of increased BP, which include heart attack, stroke, heart failure, and renal failure, is progressively higher with increasing pressure levels. Thus, definitions of "HTN" are arbitrary and have fallen over the decades. The leaders of the Kaiser Permanente (KP) Mid-Atlantic States Region set a goal of raising the proportion of HTN patients with good control from 41% in 2001 to 63% in 2004. This goal was met among 9119 members with documented HTN.

The components of the program start with training and implementing a BP measurement competency validation program for clinical assistants, nurses, and other providers. No new expensive equipment needed to be purchased. Along with assuring accurate and standard BP measurement, automated BP tracking capability and practitioner awareness of HTN as a health risk factor were developed. Operational changes included mandatory BP checks in primary and specialty care, and creation of a user-friendly electronic database.

Teams were able to focus on a "comprehensive conceptualization of HTN" and that a "holistic approach" has driven actions for individual members and member populations not previously taken.

Operation Innovation: Moving Breast Cancer Screening, Detection, and Treatment to an Entirely New Care and Service Level (Southern California)

On the basis of the evidence that "early and prompt breast cancer screening, detection, diagnosis, and treatment can save lives," *Operation Innovation* was conceived and implemented by a multidisciplinary group of physicians, health care professionals, bargaining unit staff, and administrators. The two major compo-

nents of the program were *Mammography Outreach* and *Timely Diagnosis of Breast Cancer*.

Outreach efforts were directed at KP member women aged 50-69, enrolled continuously for two years, with no mammogram in the last 18 months. The new program involved: 1) targeted motivational telephonic messages and personalized communications, 2) identification of nonresponders/nonacceptors for focused outreach efforts, and 3) outlying KP facility screening access through a mobile mammography service. These interventions increased the screening mammography rates from 79.1% to 89.8%, the latter being the highest in the Southern California Region.

In July 2003, in the Riverside Service Area, time from initial suspicion of breast cancer to diagnosis had a median number of days of 19, with 32% diagnosed within the recommended target of 14 days from the initial suspicious findings. New processes were designed to reduce the wait time, unnecessary anxiety, and number of "sleepless nights" patients experienced. The 2004 year-end results showed 79% of patients diagnosed within 14 days, with a median of nine days.

Multidisciplinary collaboration was a key feature. Results include more timely and effective care and service, improved patient outcomes, and enhanced member satisfaction.

The Vohs Award

The James A Vohs Award for Quality was established when Mr Vohs retired from 17 years as President, CEO, and Chairman of the Boards of Kaiser Foundation Health Plan, Inc, and Kaiser Foundation Hospitals. The award is presented for the project(s) that best represents an effort to improve quality through documented institutionalized changes in direct patient care, with potential for transfer to other locations.

Nominations need approval by the Division President and Medical Director and applications are due September 1st each year. Selections are announced at the December Board of Directors meeting. Awardees receive no money. 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. ♦

... a "holistic approach" has driven actions for individual members and member populations not previously taken.

Controlling High Blood Pressure

Presented as a poster at the Kaiser Permanente Care Management Institute Conference, October 18, 2004, San Francisco, California; as a poster at the Kaiser Permanente National Quality Conference, June 27-July 1, 2005, Monterey, California; and at the Kaiser Permanente National Hypertension Implementation Committee teleconference, September 13, 2005.

Hypertension (HTN) or high blood pressure, is defined as consistently elevated systolic BP above 140 mmHg or diastolic above 90 mmHg. For certain groups of people, ideal blood pressure is even lower than this. Uncontrolled hypertension can lead to end organ damage, including heart failure, heart attacks, nephropathy, peripheral vascular disease, aortic dissection, blindness, or stroke. Because there are no symptoms of hypertension until organ damage occurs, hypertension is known as the "silent killer."

Problem

Kaiser Permanente of the Mid-Atlantic States (KPMAS) serves approximately 500,000 people in Maryland, Virginia and Washington, DC. KPMAS is composed of Kaiser Foundation Health Plan of the Mid-Atlantic States, Inc, and the Mid-Atlantic Permanente Medical Group, PC, an independent medical group with more than 900

physicians providing care for members and the community throughout the area.

In 2001, KPMAS scored 49% in the "Controlling High Blood Pressure" measure for the Health Plan Employer Data and Information Set (HEDIS) and below the 25th percentile of performance for health plans nationwide. More importantly, these 2001 results meant fewer than half of KPMAS' members with documented hypertension had their blood pressure controlled (defined as <140/90). Approximately 50,000 members were at increased risk for complications of hypertension, damage that is entirely preventable with appropriate care.

Assessment

KPMAS leadership recognized the need for a quality improvement program to improve control of high blood pressure. A well-attended, multidisciplinary barrier analysis meeting was held in October 2001 to identify and discuss the barriers to providing the highest quality of care for patients with hypertension. Participants at the meeting included physicians from internal medicine, family practice, cardiology, neurology, nephrology, and urgent care. In addition, nursing, pharmacy, nutrition, behavioral health, case management, nurse advice, quality, measurement, health education, risk management, health information management services (HIMS), and information technology (IT) representatives fully participated. The group identified the obstacles preventing KPMAS from providing the best possible care for members with hypertension, including:

- Poor ability to accurately measure, collect, and administratively record blood pressure values
- Inconsistent messages and education to members and to staff related to evidence-based clinical practice guidelines
- Inconsistent provider practice
- Inadequate systems for follow-up

Systematically addressing these barriers formed the basis of whole system change to improve care.

By Patricia E Casey, RN, MSN
Amy Compton-Phillips, MD
Stacey Shapiro, MPH, RD
Phong Nguyen, MD

The group identified the obstacles preventing KPMAS from providing the best possible care for members with hypertension ...

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... our internal metric was consistent with the clinical practice guidelines, and more stringent than HEDIS control specifics.

Goal

From its inception, the HTN program was designed to serve not only patients with known hypertension, but also patients at risk (people with diabetes, chronic kidney disease [CKD], heart failure, and coronary artery disease). Using the HEDIS 2001 national 90th percentile for blood pressure control as a benchmark (62.3%), leadership decided that the program goal was 63% of adult members with a diagnosis of hypertension would have BP <140/90. Because the program also included patients with a chronic disease, our internal metric was consistent with the clinical practice guidelines, and more stringent than HEDIS control specifics. We defined BP control in members with diabetes and CKD as a BP <130/80. While a 14% improvement was a stretch as a goal, it was believed that once KPMAS could accurately identify and track blood pressures administratively, the Region would be able to lower blood pressure for the 14,000 additional patients' blood pressure that it would take to reach target.

Interventions

While many interventions were implemented over the following years (Figure 1), the most significant interventions included:

- Implementation of a blood pressure measurement competency validation program for staff and clini-

cians, using a mannequin arm that simulated Korotkoff sounds. The competency draft was based on the information in *Human Blood Pressure Determination by Sphygmomanometer* (American Heart Association, 2001)¹ and a BP competency program developed by the Virginia Department of Health. The BP measurement competency validation program was modeled after the American Heart Association training for cardiopulmonary resuscitation. The competency program was disseminated throughout the entire Region by the significant support of nursing practice consultants and the medical centers' nursing managers. The competency program not only reinforced the technical skills of measuring blood pressure, but reinforced with front-line staff (who convey important messages to patients) the critical importance of blood pressure being at goal, not "just a little high."

- Dissemination of an education program targeting providers, health care teams and patients, to ensure consistent messages on blood pressure goals and treatment. This included:
 - Providing regional and medical center educational programs for providers, pharmacists, nurses, clinical assistants, IT, HIMS, and medical coders.
 - Developing and disseminating the *Clinical Prac-*

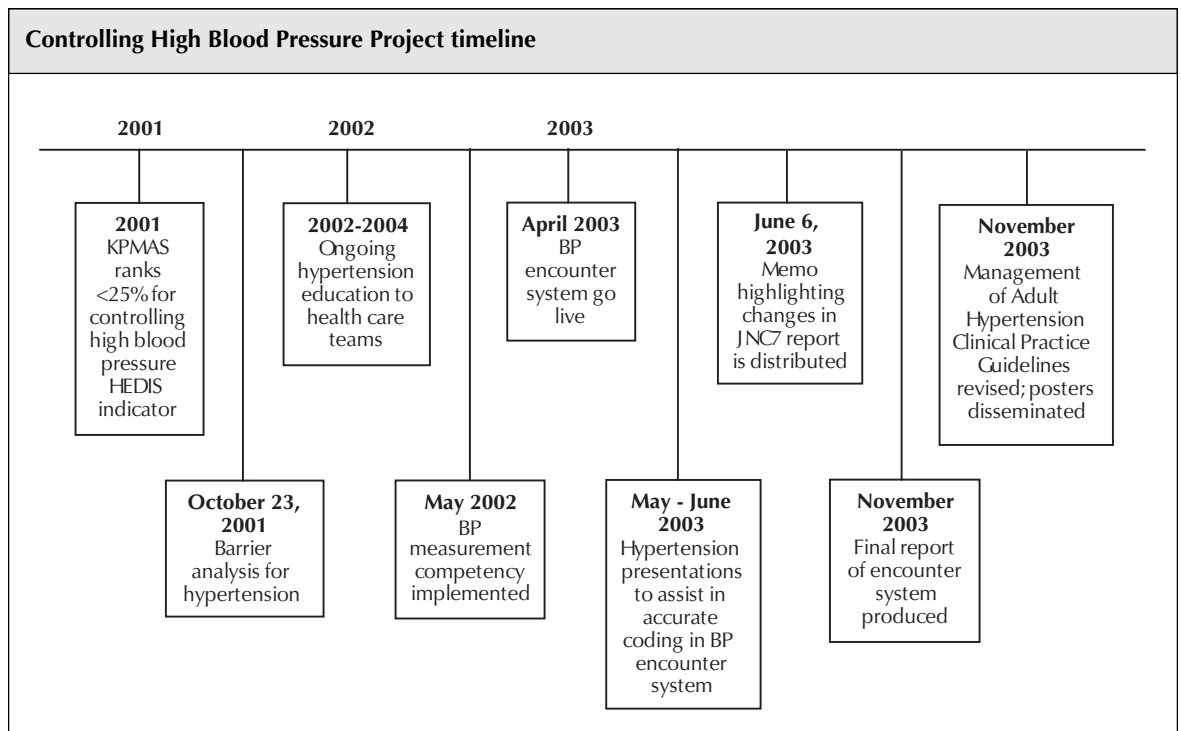


Figure 1. Chart shows timeline for project on controlling high blood pressure.

Guidelines² along with Continuing Medical Education programs, pocket cards, memos, newsletter items, and Intranet articles to all providers.

- Placing “Know what your blood pressure numbers mean” and “BP Tips” posters in all exam rooms, continually reinforcing goals and targets not only with patients, but staff and clinicians as well.
- Adoption of mandatory blood pressure measurement at all primary care and specialty encounters.
- Placement of the BP on a preprinted member visit encounter form (VEF) and into an administrative database. This intervention served as a “band-aid” until the Region had a designated vital sign section in the electronic medical record. The VEF was particular to a member and the clinician associated with the visit and contained the patient’s demographics. Completing the VEF was already established in the workflow of every outpatient visit. The IT and HIMS teams created an alert on the VEF for patients with HTN or a chronic disease: blank

spaces for BP values preprinted on the form, which would be completed during the visit. At day’s end, a clerical person entered the completed form, and the handwritten blood pressure measurement, into the mainframe system. The administrative database had two main benefits:

1. Subsequent VEF forms for a patient would preprint the last two historical blood pressure measurements. This allowed the treating clinician to trend the BP measurements and to tell if an elevated blood pressure at that visit was an isolated event, or a consistent finding, even if the member’s chart was unavailable.
2. The BP values in this database enabled the development of feedback reports with individual patient, treating physician, medical center, and regional data. Of note, most of KPMAS’s improvements came in 2003 but the initial reports were not released until November of that year. Therefore, these reports were not the key drivers of improvement.

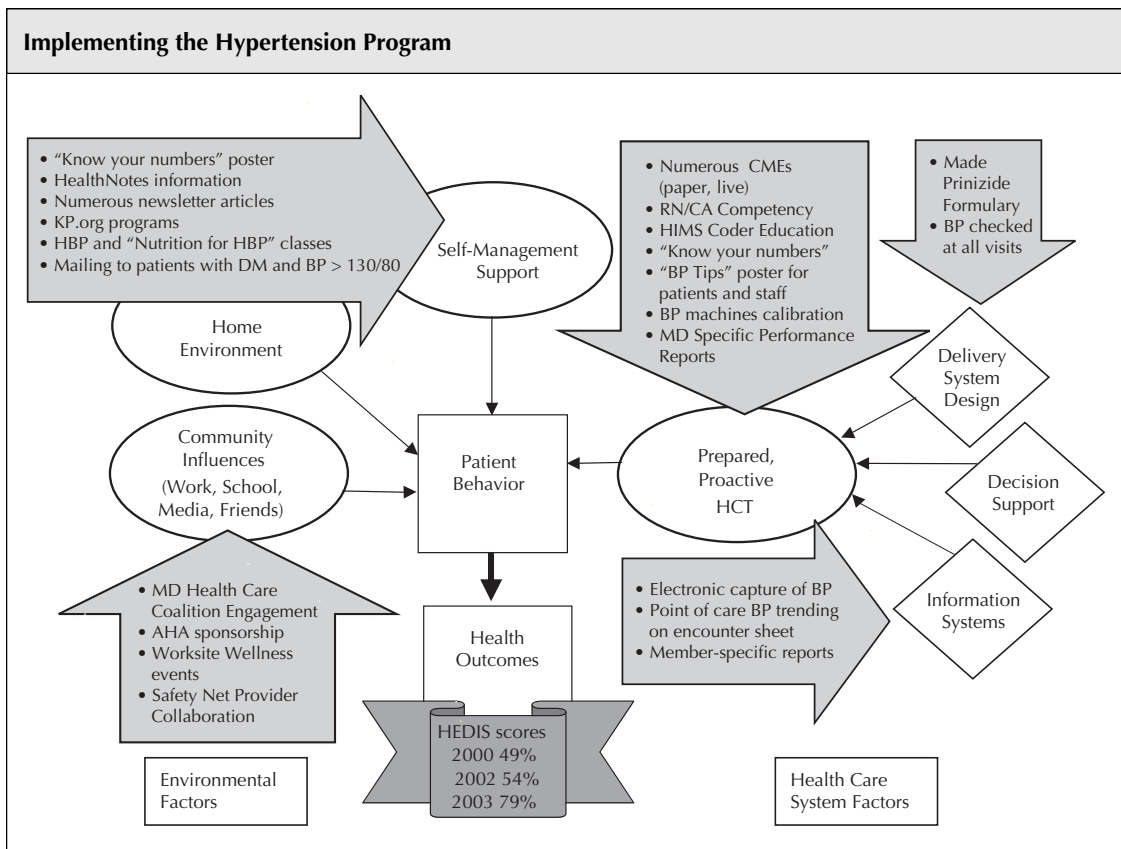


Figure 2. Implementation of the KPMAS Hypertension Program, based on the Chronic Care Model. AHA, American Heart Association; BP, blood pressure; CA, clinical assistant, CME, continuing medical education; DM, diabetes; HEDIS, Health Plan Employer Data and Information Set; HIMS, Health Information Management Services; HBP, high blood pressure; MD, physician; RN, registered nurse.

In addition to addressing the barriers above, other systematic interventions, in keeping with the theory of the chronic care model that numerous influences (not just physician one-on-one time in the office) contribute to a patient's long-term outcome managing their chronic condition. These interventions are summarized in Figure 2.

Results

With these multifaceted interventions, along with the high-level sponsorship of the importance of HTN control, KPMAS saw its HEDIS score for controlling high blood pressure jump to 78.8% in 2004 (Figure 3). Although the HEDIS score dipped to 73% in 2005, the variation is not statistically significant and KPMAS remains the leader in HTN control among all the KP Regions.

Discussion

The significant results of the project validate the published literature³ on process redesign employing quality improvement concepts: an involvement of the entire organization and information sharing are critical to controlling hypertension. It is important to note that this project was completed without added personnel or administrative or financial incentives. It used the existing electronic legacy medical record systems.

Involvement of KPMAS leadership, primary care and specialty physicians, nurses, nutritionists, pharmacists, clinical assistants, data entry personnel, medical coders, data analysts, health education specialists, quality experts, information technology specialists, health information personnel and members, all made this project successful. Each discipline brought an action-oriented passion for controlling hypertension that allowed for organizational agility in implementation perseverance and sustained clinical improvements. ❖

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Each discipline brought an action-oriented passion for controlling hypertension that allowed for organizational agility ...

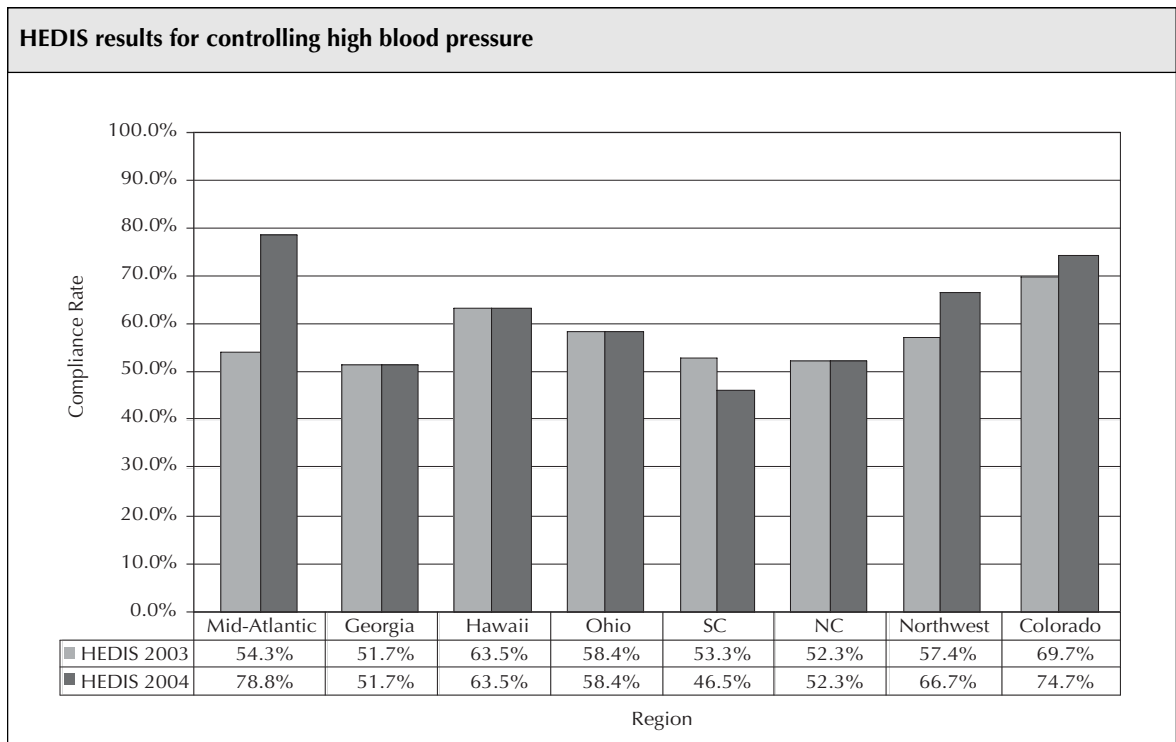


Figure 3. Graph shows HEDIS results for controlling high blood pressure in hypertensive patients across KP Regions.

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

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Vita Willett, Director of Hospital Operations

Introduction

Nationally, a woman's lifetime risk of being diagnosed with breast cancer is 13.2%. Breast cancer is the second leading cause of cancer death in women.¹ Research has shown that early and prompt breast cancer screening, detection, diagnosis, and treatment can save lives.²⁻⁴ Operation Innovation was conceived and implemented at Kaiser Permanente (KP) by a multidisciplinary group of physicians, health care professionals, bargaining unit staff, and administrators from the KP Riverside Service Area to improve breast cancer screening, detection, and treatment services for members and patients.

Operation Innovation includes two distinct-yet-related components: mammography outreach and timely diagnosis of breast cancer. Interventions to promote mammography screening focused on reaching internal performance goals as well as external benchmarks, including the clinical strategic goals set by the KP Southern California Region (KPSC) as well as the Health Plan Employer Data and Information Set (HEDIS) measurements set by the National Committee for Quality Assurance (NCQA). To support and complement activities encouraging mam-

... early and prompt breast cancer screening, detection, diagnosis, and treatment can save lives.²⁻⁴

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mography screening, additional steps were taken to reduce the number of days from “time of suspicion” to “time of diagnosis.” Targeted “days wait” performance goals are set annually by the Southern California Permanente Medical Group (SCPMG) Regional Chiefs of Radiology/Diagnostic Imaging and General Surgery. A distinguishing aspect of the project is its comprehensive and collaborative approach to delivering breast cancer care and services for our members and patients.

In November-December 2003, the KP Riverside Service Area’s baseline screening mammography rate for the target group was 79.1% while the leading medical center in the

KPSC had a rate of 84.4%. In response, Riverside assembled a multidisciplinary team of KP health care professionals to develop an outreach intervention plan. The team reviewed literature and best practices, assessing their potential to increase initial and ongoing mammography use, before selecting three specific outreach methods: “Mammography Call Outreach,” “Focused Mammography Outreach,” and “Mobile Mammography Outreach.” As of April 2005, Riverside’s breast cancer screening rate had reached 89.8%, the highest in the KPSC, outpacing the other service areas in the Region by a mean of about 8%. Riverside’s

performance also exceeds national and external benchmarks, such as HEDIS measurements.

A KPSC report distributed in July 2003 provided preliminary baseline data on the time elapsed from initial suspicion of breast cancer to diagnosis. KP Riverside Service Area statistics showed that only 32% of the cases examined were diagnosed within the recommended target of 14 days from the initial suspicious findings. The median number of days from suspicion to diagnosis was 19 (range 2-52 days). A multidisciplinary team designed new processes to reduce the wait time along with the unnecessary anxiety and number of “sleepless nights” that patients experienced. The team’s efforts focused on improving access, service, and patient satisfaction. Compared with baseline, the 2004 yearend results were impressive: 79% of patients were diagnosed within 14 days, with a median of 9 days. As with mammography outreach, the Riverside Service Area has become a KPSC Regional leader in shortening the time-to-service period that follows screening mammography. This accomplishment is particularly noteworthy because the number of procedures performed increased from 23,217 (in 2003) to 27,410 (in 2004).

Program Objectives, Scope, and Significance

The objectives of the first component of the program, the Mammography Outreach Project, was to increase the number of screening mammography procedures among the target group of female patients aged 50-69 from a baseline of 79.1% to 90% by the end of 2004. The objective of the second component of the program, the Timely Diagnosis of Breast Cancer Project, was to reduce the number of days from sus-

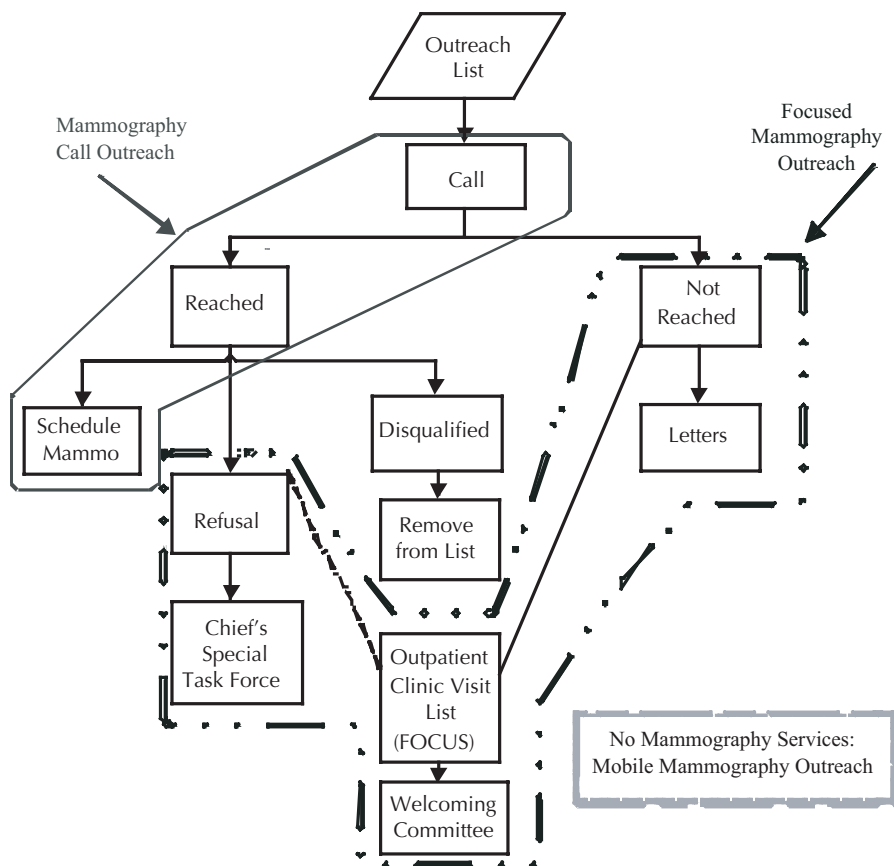


Figure 1. Mammography Outreach Program flowchart.

picion of abnormality to diagnosis of breast cancer from a baseline of 32% diagnosed within 14 days to a target of 80% diagnosed within 14 days by the end of 2004.

Scope of Quality Issues and Member Impact

Mammography outreach was initiated in January 2004 to aggressively meet and exceed the KPSC Clinical Strategic Goal performance targets for breast cancer screening. Outreach efforts were directed toward patients who met the HEDIS criteria: women aged 50-69 years who had been enrolled in the Health Plan continuously for two years and had not received a mammogram within the past 18 months. The target population was estimated at 17,000 eligible women. Before initiation of the project, eligible women were encouraged to obtain a mammogram through a variety of mechanisms, including automated reminder letters generated by a local mammography database (PENRAD) and an "M" prompt on an electronic system that flagged the patient's Clinic Processing Record at the point of service, thus reminding clinicians and staff that a mammogram was needed for that patient. Other ongoing educational and awareness interventions included posters, flyers, and pamphlets; Breast Cancer Awareness Month activities; incentives for staff to identify at-risk women at the point of service, to refer these women for mammography, and to schedule the mammogram; and employee "Get Your Mammogram" campaigns.

Because existing methods were no longer having a sufficient impact, the Mammography Outreach Project designed new structures and processes to:

- identify at-risk women and en-

courage them to be screened through targeted/motivational telephonic messages and personalized communications at the point-of-service

- identify nonresponders and nonacceptors for focused outreach efforts using stage-matched, tailored communications and materials; and
- provide access to screening mammography services in an outlying KP facility through a mobile mammography service.

Figure 1 shows sequence of procedures in the Mammography Outreach Project. The target of 90% was reached in May-June 2005. These interventions increased rates of screening mammography almost 12% within the target group at a reasonable cost.

After the screening mammography

is performed, any suspicious findings must be quickly diagnosed and reported to the patient. Regional Breast Cancer Patient Satisfaction surveys have repeatedly shown that prompt biopsy of suspicious breast lesions significantly improves satisfaction with breast cancer care.⁵ To shorten the time to diagnosis, the project team focused on improving and streamlining existing processes and designing new modes of operations. These changes included the following events:

- The Departments of Radiology/Diagnostic Imaging, Pathology, and General Surgery agreed on the importance of reducing wait times and agreed to methodology
- Radiologists committed themselves to reading mammograms in a timely manner and to re-

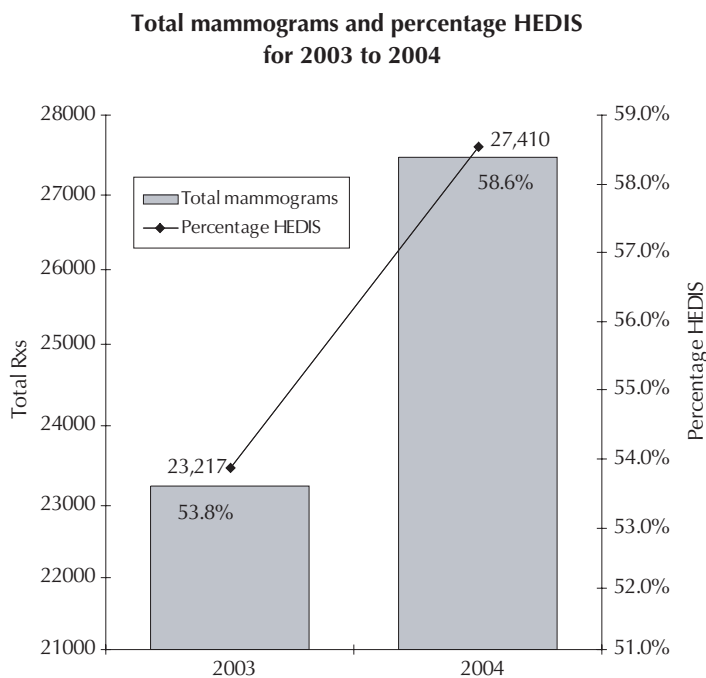


Figure 2. Numbers and percentages of mammograms performed in KP Riverside Service Area and percentage of these patients meeting HEDIS criteria for mammography, 2003-2004.

A few months after these services were first deployed, we observed a substantial reduction in wait time.

- turning patients within one-two days for a stereotactic breast biopsy (SBB)
- Dedicated surgical consultation appointments were created for postbiopsy patients with direct booking capabilities by Radiology/Diagnostic Imaging. Appointments are currently scheduled within three days after SBB, with a goal of providing same-day surgical appointment access for patients with suspect lesions
- Pathologists committed themselves to providing pathology reports within 48 hours after receiving the specimen; and
- Surgeons were matched with midwives and registered nurse practitioners to provide breast assessment training and to improve recognition of benign breast problems that did not require surgical consultation. This step resulted in more appropriate

referrals and reduced demand for unnecessary surgical consultations.

Multidisciplinary collaboration as well as implementation of new, improved operational designs have resulted in much more timely and effective care and service, improved patient outcomes, and enhanced member satisfaction. A few months after these services were first deployed, we observed a substantial reduction in wait time. At the end of 2004, 152 (79%) of 192 women had a wait time of 14 days or less. Productivity gains also enabled the project team to accommodate a 20% surge in screening mammography procedures resulting from the increased mammography outreach activities.

Program Measures of Quality and Impact

Regular, repeated screening mammography can identify breast can-

cer at earlier stages than might otherwise be diagnosed. Breast cancer that is found early can be treated more effectively and less expensively than breast cancer found at later stages. In 2003, a total of 23,217 screening mammograms were performed, whereas 27,410 procedures were performed in 2004. In addition, the population of patients who were program-eligible according to HEDIS criteria made up a greater percentage of overall screenings, rising from 53.8% in 2003 to 58.6% in 2004 (Figure 2). Within 12 months, the efforts of the Mammography Outreach Project contributed to a rate of increase from 79.1% at baseline (November-December 2003) to 87.4% of the target population (November-December 2004). By April 2005, the rate had risen to 89.8% of the target population (Figure 3). This outcome supports internal performance goals and exceeds the ex-

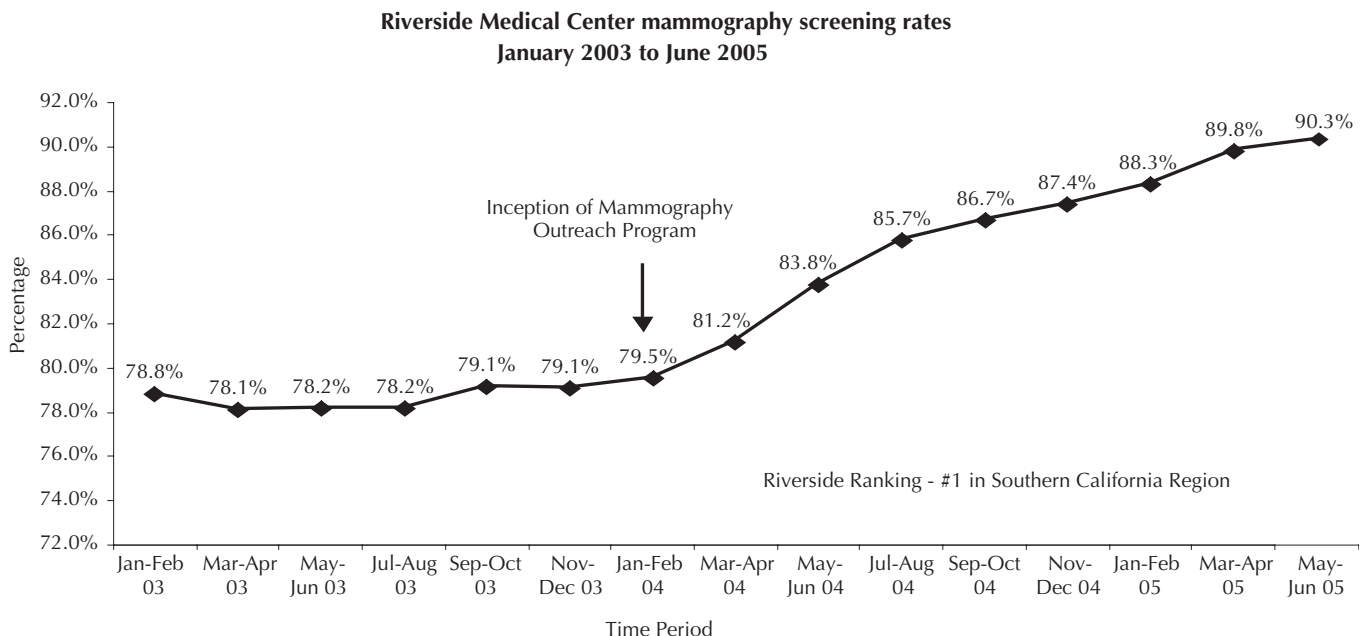


Figure 3. Rates of mammography in KP Riverside Service Area, 2003-2005.

ternal HEDIS 90th-percentile benchmark for screening mammography.

Costs for the mammography outreach project covered materials (including incentives, such as staff celebrations, recognition luncheons, bracelets, movie tickets, pins, drink vouchers, and Breast Care Packets) and administrative personnel (including a full-time senior project manager and a full-time physician lead, one or two receptionists to total 1 FTE, and a full-time administrative specialist). Services of clinical staff from the Departments of General Surgery, Radiology/Diagnostic Imaging, and Pathology were cost-neutral. An estimated budget was prepared for outreach activities, mobile mammography screening services, and data collection and analysis. Overall costs were kept to a minimum, but no cost-benefit analysis was done.

A timely diagnosis from first suspicion of breast cancer to receipt of pathology findings also is imperative for achieving the best possible clinical outcome. (Early, prompt breast cancer diagnosis is a key patient satisfier.) Diagnosing breast cancer in its earliest stages also contributes to reduced rates of morbidity and mortality as well as reduction of the physical, emotional, and financial costs associated with treating more advanced cancers. The KP Riverside Service Area was the KPSC Region's 2004 year-end leader for timely diagnosis from first suspicion to receipt of pathology findings: Of the target population, 79% received the diagnosis within 14 days or less from first suspicion (Figures 4,5). This achievement was obtained at no additional cost.

Program Design and Methodology

The Mammography Outreach Project evaluated and documented

barriers to promoting and accessing mammography services, conducted a literature search, and assessed best practices of the KP Baldwin Park Service area in Southern California. Three specific Mammography Outreach components and performance targets were developed to address barriers of product, price, place, and promotion, using a variety of systems and types of support to obtain and analyze data measuring outcomes for each project component.

For the Mammography Call Outreach segment of the program, the KP Inland Empire Planning and Analysis Department provides a monthly list of eligible patients drawn from several data sources: foundations, PENRAD, the KP Encounter Coding System (ECS), and the KP Radiology/Diagnostic Imaging Information System (RIS). The list is entered into a spreadsheet and is stored on a shared drive. Specially trained receptionists in the Appointment Call Center contact each eligible patient on the list by telephone. Data are logged, analyzed, and compiled into a Call Outreach Report Card and include the total number of patients called as well as the total number and percentage of patients scheduling or refusing to schedule an appointment and the percentage of patients called and not reached and the percentage of patients disqualified from the program.

The list of patients who have either not responded or refused to schedule an appointment are forwarded for Focused Mammography Outreach. Follow-up outreach data are logged and analyzed, and a similar report card is generated, documenting the total number of patients with second and third contact number who scheduled an appointment, the number of patients who continue to refuse an appointment, and the

		Riverside	Region
Qtr 1	Denom	49	549
	Numer	41	182
	Rate	84%	33%
	Median	9.0	23.0
Qtr 2	Denom	52	504
	Numer	38	165
	Rate	73%	33%
	Median	8.0	22.0
Qtr 3	Denom	50	675
	Numer	43	271
	Rate	86%	40%
	Median	8.0	18.0
Qtr 4	Denom	41	467
	Numer	30	196
	Rate	73%	42%
	Median	9.0	17.0
2004	Denom	182	2195
	Numer	152	814
	Rate	79%	37%
	Median	9.0	20.0

Figure 4. Percentage of patients with ≤14-day wait time from first suspicion of breast cancer to date of final pathology dictation.

number of patients disqualified from the program. In addition, the RIS is used to track the following data daily:

- total number of mammograms scheduled at all sites, including the Mobile Mammography Outreach Unit
- total daily number of mammograms performed at all sites
- total number of scheduled vs walk-in appointments
- mean wait time for mammography at the KP Riverside medical center
- the “did not keep” (DNK) appointment rate; and
- demand and capacity at all sites.

The data are compiled and trended every two weeks and also include the total number (percentage) of mammograms performed biweekly and the total number (percentage) of mammograms received by the HEDIS group biweekly. The data are presented at a biweekly team meet-

ing for analysis. Systems support, modifications, or both are made according to outcomes achieved.

For the Timely Diagnosis of Breast Cancer component of the program, the Riverside team assessed existing processes and best practices of the KP Orange County Service Area, then developed performance targets for improving care, service, access, and member satisfaction related to diagnosis wait times. Key stakeholders on the team included representatives from General Sur-

gery, Radiology/Diagnostic Imaging, Pathology, Family Medicine, and Obstetrics and Gynecology. The team systematically analyzes retrospective data extracted from review of patient medical records. Internal retrospective audits of timeframe data on patient medical records and KP Patient Data System (KPDS) and Outpatient Appointment System (OPAS) also are conducted to determine dates of first suspicion, final mammogram interpretation by mammo-radiologist, sterotactic or image-

guided biopsy, definitive diagnosis by pathologist, and first surgical consultation.

Continuous assessment of the data identifies barriers and ensures that gains are both maintained and improved. Quality assurance data are recorded, maintained, and reviewed annually with the mammo-radiologists. These data include the total number of mammograms interpreted each year, the call-back rate within national guidelines, the biopsy rate within national guidelines, and the total number of cancers detected within national guidelines. An Improvement Action Plan is submitted by any radiologist who substantially deviates from established standards of care.

Program Improvement Activities

For the Mammography Outreach Project, improvement was data-driven and focused on several tasks:

- proactively identifying eligible patients and making personalized outreach contacts;
- proactively identifying nonresponders and those refusing a mammogram for more focused outreach communications; and
- improving access to mammography services through increased capacity of existing equipment and providing mobile mammography services in an underserved community.

As part of the Mammography Call Outreach component, approximately 300 telephonic attempts are made each week, with approximately 30–40% of those contacted scheduling a mammography appointment at the first call. Each month, the Focused Mammography Outreach project makes 80 phone calls and sends 500 letters to members who were not reached previ-

QTR 4	Median days for:	Riverside	Region
GOAL	First suspicion date to path 'dictation' date	9.0	17.0
RAD	Abn mam done date to final dictation date	2.5	9.0
BX	Final mam dictation date to path 'dictation' date	8.0	8.0

QTR 3	Median days for:	Riverside	Region
GOAL	First suspicion date to path 'dictation' date	8.0	18.0
RAD	Abn mam done date to final dictation date	3.0	9.0
BX	Final mam dictation date to path 'dictation' date	7.0	8.0

QTR 2	Median days for:	Riverside	Region
GOAL	First suspicion date to path 'dictation' date	8.0	22.0
RAD	Abn mam done date to final dictation date	3.0	8.0
BX	Final mam dictation date to path 'dictation' date	6.0	9.0

QTR 1	Median days for:	Riverside	Region
GOAL	First suspicion date to path 'dictation' date	9.0	23.0
RAD	Abn mam done date to final dictation date	4.0	11.0
BX	Final mam dictation date to path 'dictation' date	7.0	10.0

2004	Median days for:	Riverside	Region
GOAL	First suspicion date to path 'dictation' date	9.0	20.0
RAD	Abn mam done date to final dictation date	3.0	9.0
BX	Final mam dictation date to path 'dictation' date	11.0	9.0

Figure 5. Median number of days for 2004 KPSC breast cancer clinical strategic goals.

ously by telephone. As a result, the Mammography Outreach Project contributed to raising the screening mammography rate by approximately 1% per month. Improvement in overall rates has been statistically correlated to the Mammography Outreach Project initiatives.

Project innovations include focused and personalized communication strategies, a “Welcoming Committee,” and a mobile mammography screening unit. Published results of mammography outreach efforts have shown that tailored interventions are successful at encouraging mammographic screenings.^{6,7} For women who declined to schedule a screening after being contacted by phone, reasons for this refusal were recorded. As part of the Radiology Chief’s Special Task Force, the Mammography/Diagnostic Imaging Unit Supervisor makes follow-up, motivational phone calls to each of these women to personally address their fears, concerns, and other barriers and to encourage them to schedule an appointment (Figure 6). As part of the Welcoming Committee operations, a FOCUS list is generated weekly that cross-references patients eligible for a screening mammogram who also have a medical office visit scheduled. Each patient is called, and an attempt is made by an Appointment Call Center receptionist to schedule the patient for mammography at a time near the already-scheduled visit. Nonresponding patients are greeted on the day of their visit by a member of the Welcoming Committee and are offered a priority mammogram appointment and a special Breast Cancer Awareness gift. Members of the Welcoming Committee—specially trained employees of the Radiology/Diagnostic Imaging/Mammography Unit—greet approximately 30 to 50 women each week.

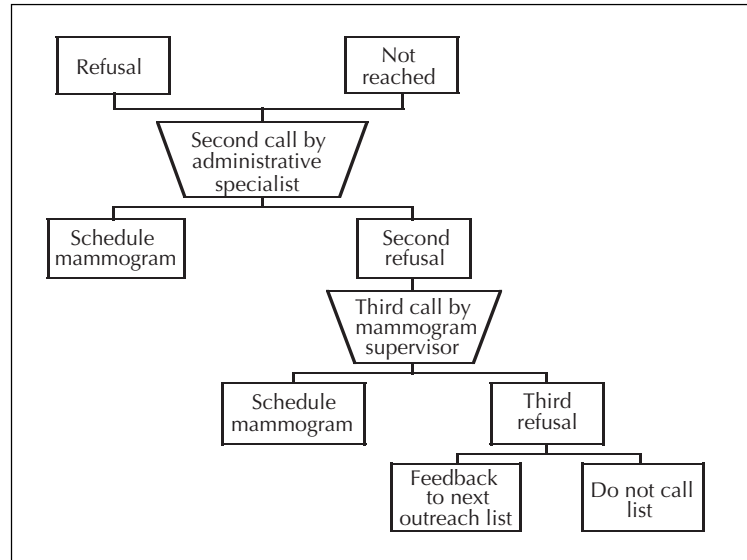


Figure 6. Mammography outreach procedures for Chief’s Special Task Force.

The Mobile Mammography Outreach component was instrumental in providing mammographic screening services in an underserved community where approximately 862 women of the HEDIS-eligible population would otherwise not have had access to this service. This mobile unit is the first of its type used in the KPSC Region. A licensed technologist performs six mammographic examinations per hour during an eight-hour shift. Films are developed at an accredited site and are delivered to the medical center for interpretation within 48 hours. Quality Assurance measures are guaranteed. The price per exam is \$42.50.

Radiology/Diagnostic Imaging provided the impetus and facilitated all aspects of the Mammography Outreach Project. Medical Group Administration provided leadership and direction to the project as well as financial support; Appointment Call Center called members, scheduled appointments, and tracked outreach outcomes; Planning and Analysis prepared a variety of queries to extract pertinent data on the target

group; and Preventive Medicine organized and reported the project outcomes. Staff from Radiology/Diagnostic Imaging and the Appointment Call Center received education on the goals and objectives of the Mammography Outreach Project, as well as standardized methods for scripting, consistent messaging, and documentation of members’ telephonic responses. A tour of the Mammography Unit was conducted for the Appointment Call Center staff.

In support of the regional goal for timely diagnosis of breast cancer, a cross-functional team from multiple departments and disciplines focused on creating new, improved methods to diagnose breast lesions in a time-efficient, cost-neutral manner. Through careful analysis of KPSC Regional and KP Service Area timeframe data, access data, and existing systems and processes, the team focused on methods to improve Radiology/Diagnostic Imaging capacity for interpreting mammogram results; processes/timeframe for obtaining stereotactic breast biopsy, timeframe for receiving final pathol-

The Mobile Mammography Outreach component was instrumental in providing mammographic screening services in an underserved community ...

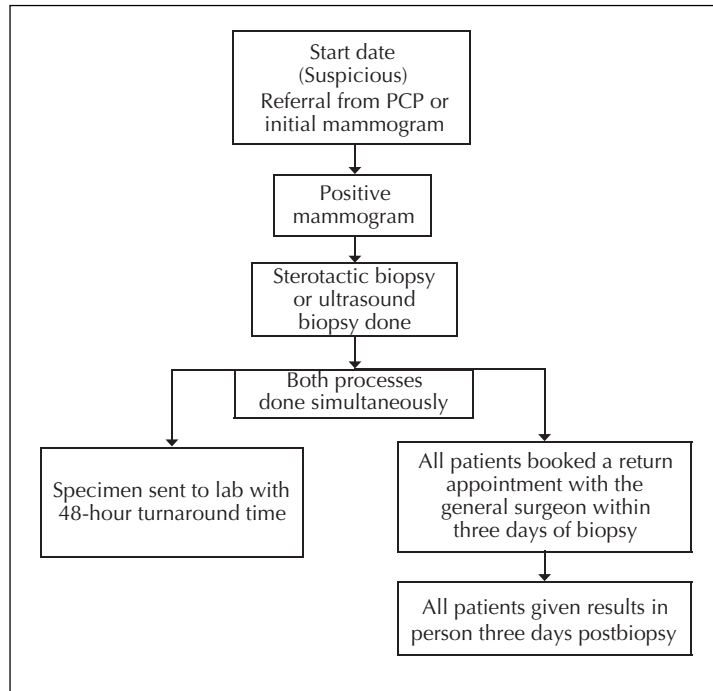


Figure 7. Procedure for timely diagnosis of breast cancer.

efficient and timelier processes to diagnose suspect lesions. Accomplishments of the team included improving the capacity of the Department of Radiology/Diagnostic Imaging to diagnose breast lesions and interpret examination results; ensuring that pathology reports are available within 48 hours after receipt of biopsy specimen; the Department of Radiology/Diagnostic Imaging directly booking postbiopsy patients to the Department of General Surgery schedule; and ensuring that the Department of General Surgery sees patients within three days after biopsy, with a goal of same-day access for patients with suspect lesions (Figure 7).

Program Results and Transferability

The Mammography Outreach Project made a clear impact on rates of screening mammography among the target population of patients in the KP Riverside Service Area. In November-December of 2003, the KPSC Regional average attained by other KP Service Areas was 79.4% of the target group while the rate in the KP Riverside Service Area was 79.1%; as of April 2005, the overall KPSC regional rate averaged 82%, whereas the rate in the KP Riverside Service Area was 89.8% for the same period—a substantial increase. According to the HEDIS breast cancer screening findings from the NCQA (published in *The State of Health Care Quality: 2004*), a rate of 75.3% was achieved by commercial plans, 74% by Medicare, and 55.9% by Medicaid.⁸ With regard to the Timely Diagnosis of Breast Cancer Project, The KP Riverside Service Area was the KPSC Region's 2004 year-end leader: Of the target population, 79% received a diagnosis within the performance target timeframe of ≤ 14 days from first

The overall impact was comprehensive: In striving for a common purpose, team members enhanced their working relationships and showed leadership ...

ogy report; access to surgical consult for postbiopsy patients; and appropriateness of breast assessment referrals for surgical consults. During the period December 2003 through 2004, these collaborative efforts successfully reduced the median number of days waiting (patients' "sleepless nights") from 19 days to 9 days and increased from 32% to 79% the percentage of patients who received the diagnosis of breast cancer within 14 days after initial suspicion of breast cancer.

An innovative aspect of the Timely Diagnosis of Breast Cancer Team was its use of mammo-radiologists for quick, accurate interpretation of mammography examinations. These individuals are a special core group of dedicated radiologists who are the very best among their peers at mammogram interpretation, as measured by objective Service Area and national quality assurance standards and data. The team was also inno-

valative in its multifaceted approach and in its involvement with a wide variety of departments and disciplines. The team was focused in its efforts to collaborate and to assess and challenge existing practices that created unnecessary delay. The team also rapidly introduced improved processes to substantially reduce the time from first suspicion of breast cancer to diagnosis. The overall impact was comprehensive: In striving for a common purpose, team members enhanced their working relationships and showed leadership in raising the bar of excellence in the KPSC Region for timely diagnosis of breast cancer. Most important, their efforts substantially improved the care and service provided to our members and patients.

In a manner similar to that of the Mammography Outreach Project Team, the Timely Diagnosis of Breast Cancer Project Team assessed existing systems and designed more

suspicion of breast cancer.

Implementation of the Mammography Outreach Project was relatively barrier free. The two major problems encountered included accessing current and accurate data to conduct outreach efforts and, once these data were obtained, making telephonic contact with the target group on the initial attempt. Similarly, a major obstacle faced by the Timely Diagnosis of Breast Cancer Project team was access to up-to-date, accurate data for tracking and measuring results. This obstacle

was compounded by the need for manual review of medical records and electronic systems to extract the data. In addition, initial apprehension was expressed by the Department of General Surgery about allowing the Department of Radiology/Diagnostic Imaging to have direct booking capability into the Department of General Surgery daily schedule. After this process was established, no major problems occurred.

The ease of implementation and improved clinical outcomes were due in great measure to three elements:

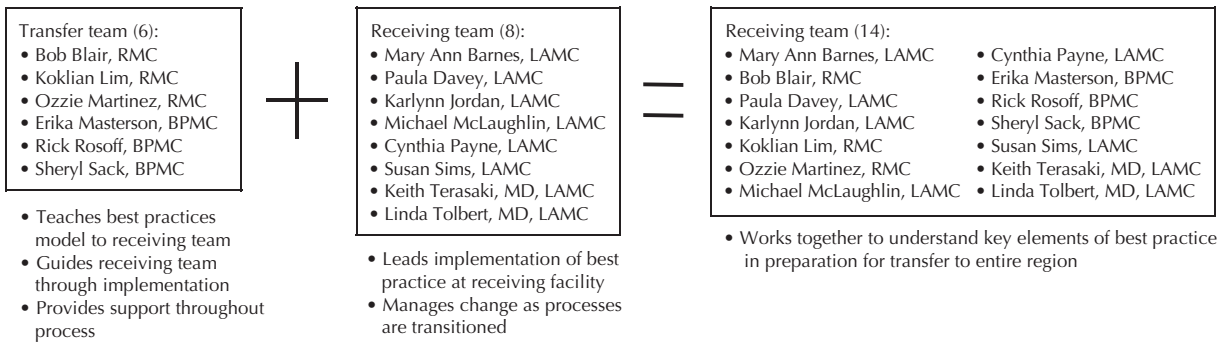
team collaboration; data-driven and evidence-based decision making; and the support of senior KP leadership. With the success of Operation Innovation, we have made a concerted effort to share our practices with other KP Service Areas in Southern California and nationwide. The Timely Diagnosis of Breast Cancer team presented our project to the Regional Breast Cancer Committee on April 12, 2005; and on April 29, 2005, the two leading medical centers in screening mammography rates (Riverside and

SCPMG best practice transfer SWAT structure

Breast cancer screening rate improvement

Area of focus MGA leads Chris Crisafulli, Koklian Lim, Greg Posner, Rick Rosoff	<ul style="list-style-type: none"> • Executive sponsorship • Monitor achievement of milestones 	Area of focus support Ruth Goldberg, Mitch Rutledge
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Transfer #1



Transfer #2

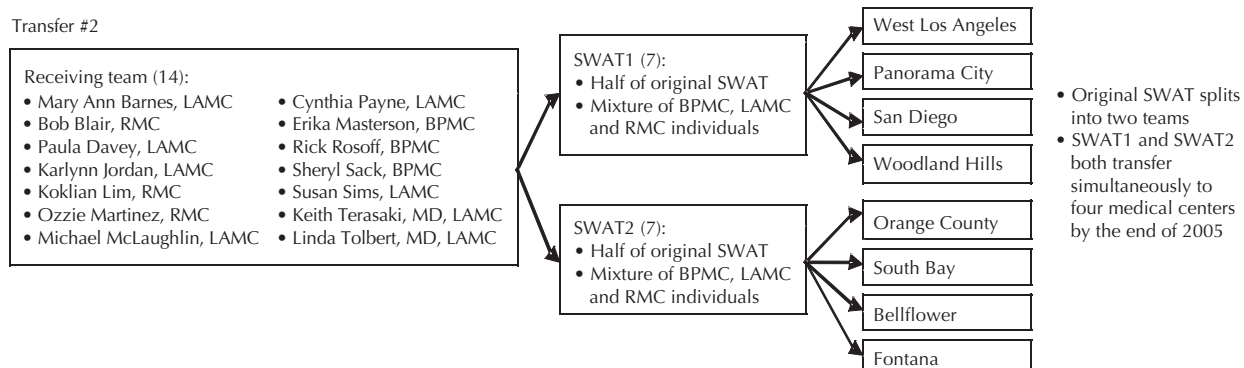


Figure 8. SCPMG best practices transfer SWAT structure for improving breast cancer screening rate.

The team accomplished this goal by developing and delivering creative, responsive breast cancer screening, detection, and treatment products and services ...

Baldwin Park) shared their best practices with members of the KP Los Angeles Medical Center (Figure 8). Post-training feedback from staff at the KP Los Angeles Medical Center indicates that they have substantially changed their practices to raise rates of screening mammography. (Results are expected to become manifest within two to three reporting periods.) In addition to the Los Angeles facility, the KP Riverside Medical Center also has shared the project with the KP medical centers in San Diego and West Los Angeles. The project will also be shared with KP medical centers in Woodland Hills, Fontana, South Bay, and Bellflower.

On behalf of the SCPMG leadership, the Mammography Outreach Project was presented to the Board of Directors on May 26, 2005. At the request of The Permanente Federation, our best practice was shared nationally via an interregional videoconference held on June 8, 2005. Information was presented on both the Mammography Outreach Project and the Timely Diagnosis of Breast Cancer Project. In addition, our comprehensive breast cancer screening, detection, and treatment

program was covered in an article published by the local (Riverside area) *Press Enterprise* newspaper.⁹

Conclusion

Operation Innovation owes its success to the commitment expressed by project team members to move our organization to an entirely new level of care and service. The team accomplished this goal by developing and delivering creative, responsive breast cancer screening, detection, and treatment products and services designed to protect the health of our members and patients and that met or exceeded internal performance indicators and external benchmarks for care. ❖

Acknowledgment

Figure 4 (Appendix D) adapted from 2004 Breast Cancer Clinical Strategic Goal—Quarter 3 Results prepared by Freda Melnick, Clinical Analyst, KP Southern California Region, 01-06-2005.

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An Unparalleled Level

Matching the superb technology of present-day medicine with an effective delivery system can raise US medical care to a level unparalleled in the world.

— Sidney R Garfield, MD, *Scientific American*, April 1970

This "Moment in History" quote collected by Steve Gilford, KP Historian



"The Circus Left Town"

photograph

by John E Fortune, MD

John E Fortune, MD, is Assistant Chief of Orthopaedic Surgery at Santa Teresa Medical Center, San Jose, CA. More of Dr Fortune's art can be seen at: www.pbase.com/johnebones/johnebones.

The Third David M Lawrence, MD, Chairman's Patient Safety Award

By Arthur L Klatsky, MD
Associate Editor
Clinical Contributions
(pictured on page 12)

In 2005, the Southern California Region had the honor of winning both the New and Transfer Projects Lawrence Patient Safety Awards: "Patient Safety Executive Walkarounds" won in the new project category; "Perinatal Patient Safety Project" won in the transfer category. These winning projects were honored at the annual Lawrence Patient Safety Award Recognition dinner on December 6, 2005. We are pleased to publish the Executive Walkarounds project and a brief overview of the previously published Perinatal Safety Project.

Patient Safety Executive Walkarounds (San Diego Area)

The Patient Safety Executive Walkarounds project demonstrate the value and importance of establishing direct communication between senior leaders and front-line health care workers. In 2000, the San Diego Medical Center volunteered as a pilot site for the Executive Walkarounds project. Leaders make announced visits to a department or unit to discuss issues that have or could have harmed patients. The Walkarounds create a climate of honesty and provide leaders with tools to show the importance of patient safety. Two-way communication develops through direct interaction between physicians and other involved health care workers; follow through resolves many issues that could affect patient safety. Currently, all Southern California Medical Centers conduct Walkarounds. The program is readily transferable to other Regions.

Walkarounds are a gloriously low-tech and relatively informal intervention encouraging staff to discuss safety concerns that might not otherwise get reported, and have these issues tracked.

Perinatal Patient Safety Project

The Transfer Award is given to a Region that best replicates a prior year's winner. Last year, Northern California won the Patient Safety Award for the Perinatal Patient Safety Project (PPSP) (see *TPJ* Winter and Spring 2005). By early 2006, The PPSP reached more than 2200 staff and physicians with human factors training and 1300 with Critical Events Team Training in all Southern California Kaiser Permanente Medical Centers. One of the purposes of the PPSP is to reduce birth injuries caused by human error and systemic problems by use of human

factors skills. In 2003, Southern California OB chiefs attended a PPSP conference in Northern California, became fired with enthusiasm, and implemented a regionwide program. A briefer summary with anecdotal challenges and successes of transfer is printed in this issue.

The Lawrence Award

During 11 years as Chairman and CEO of Kaiser Foundation Health Plan and Kaiser Foundation Hospitals, David M Lawrence, MD, challenged the entire health care industry to pursue patient safety as an integral component of high-quality care. When he retired, the Board of Directors established the Chairman's Patient Safety Awards to recognize and to honor projects that advance the quality of care by improving the safety of care. The goals are: 1) to create a culture of safety, 2) to develop and standardize successful patient safety measures in Kaiser Permanente facilities, and 3) to define and implement an innovative and transferable regional intervention in patient safety.

Eligibility specifications include this statement: "Projects nominated for the Chairman's Patient Safety Award should be evidence based or experience based, and address significant patient safety issues through substantial, measurable, and transferable changes that positively impact the provision of safe care. Processes or interventions developed through the project may represent innovations related to the patient as a partner in safe care, clinical practices, support systems, safety culture, health care team performance or the environment of care." Criteria further specify a bias toward projects that demonstrate a change in outcomes, preference for projects involving members from various disciplines (Health Plan/Hospitals, Medical Group, and Labor), capability of replication interregionally, and bias toward practical, relevant and cost-effective solutions.

There is a call for abstracts in September of each year and Regions selected to submit full papers are announced during the December awards ceremony. Winners are selected by the Award Committee during a September meeting. Representatives from all Regions are invited to attend the annual Award dinner during the December meeting. Winners receive substantial recognition and publicity.

We applaud the many persons involved in these projects in Southern California. ❖

Walkarounds
are a
gloriously
low-tech and
relatively
informal
intervention
encouraging
staff to
discuss safety
concerns that
might not
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reported ...

Patient Safety Executive Walkarounds

By Steven P Feitelberg, MD

Abstract

The KP Patient Safety Executive Walkarounds Program in the KP San Diego Service Area was developed to provide routine opportunities for senior KP leaders, staff, and clinicians to discuss patient safety concerns proactively, working closely with our labor partners to foster a culture of safety that supports our staff and physicians. Throughout the KP San Diego Service Area, the Walkarounds program plays a major part in promoting responsible identification and reporting of patient safety issues. Because each staff member has an equal voice in discussing patient safety concerns, the program enables all employees—union and nonunion alike—to engage directly in discussions about improving patient safety. The KPSC leadership has recognized this program as a major demonstration that the leadership supports patient safety and promotes reporting of safety issues in a “just culture.”

Introduction

Since publication of the Institute of Medicine Report, *To Err Is Human: Building a Safer Health System*,¹ increased attention has been focused on patient safety in health care settings. The challenge for health care organizations is to foster a culture of safety and to continually identify opportunities to improve and assure the safety of patients being treated at health care facilities. At Kaiser Permanente (KP), this ongoing process is driven fundamentally by the organization's leaders. As stated by Kenneth Kizer, MD, MPH, President and Chief Executive Officer of the National Quality Forum (NQF) in an NQF consensus statement, “There simply is nothing more important in overseeing a hospital or other health care facility than to ensure that it is as

safe as possible for patients.”² (The NQF—of which KP is a member—is a private, not-for-profit membership organization created to develop and implement a national strategy for measuring and reporting on the quality of health care.) The medical profession has realized that improving patient safety must be among the highest priorities of health care leaders and managers. Nonetheless, only by direct and regular contact with real care delivery can leaders understand the problems of staff and clinicians in delivering safe care. To facilitate this level of involvement, the KP San Diego Service Area launched the Patient Safety Executive Walkarounds Program. This program gives top KP leaders the tools to show KP staff and clinicians that the KP leadership is committed to patient safety and to

developing the infrastructure necessary to ensure responsible reporting of safety-related errors and hazards. By walking through hospital units to conduct face-to-face conversations with any staff member or physician with a safety concern, leaders can learn more about errors or hazards that could or did cause harm; and on the basis of issues identified during the Walkarounds, the leadership can identify opportunities for improving patient safety. These informal discussions are thus an essential catalyst for change because they enable the organization to improve our reporting systems and enhance our knowledge about how to ensure a safe environment.

Program Origin and Components

Recognizing that the Patient Safety Executive Walkarounds program could help the KP San Diego Service Area to become a leader in patient safety (a top-priority strategic goal identified by the Service Area), the KP San Diego Service Area manager encouraged the KP San Diego Medical Center to become the Southern California pilot site for implementing the Walkarounds program. The program subsequently began as a nine-month, day-shift pilot program in San Diego in September 2002. From the beginning, the Medical Service Area Administrative Team (MSAAT) and the KP San Diego Leadership Team

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Table 1. Sample questions asked by the MSAAT representative during Patient Safety Executive Walkarounds at the KP San Diego Medical Center
<ul style="list-style-type: none"> • Can you think of any events in the past day (or few days) that have resulted in harm to a patient? • Can you think of any “near misses” that almost caused a patient harm but did not? • What aspect of the environment is likely to lead to the next patient harm? • What do you think this unit (or area) could do on a regular basis to improve safety? • How are you involved in patient safety on this unit? • When you make an error, do you always report it? • If you prevent or intercept an error, do you always report it? • If you make or report an error, are you concerned about personal consequences? • Do you know what happens with information that you report? • Are you aware that we are actively promoting a “just” (“blame-free”) culture? • Have you discussed patient safety issues with your patients or with their families? • Can you think of a time when your intervention prevented harm to a patient who would otherwise have been harmed by a system flaw? • What specific intervention could leadership direct to make safer the work you do for patients? • What would make Patient Safety Executive Walkarounds more effective?

(SDLT) gave their strong support and sponsorship to the program.

In the Walkarounds program, two senior leaders are scheduled to visit each nursing unit, hospital clinical department, and several medical office buildings at least once per year to speak with frontline staff about patient safety concerns, which must be assigned a priority level according to which the concerns will be resolved. The Walkarounds team must include at least one representative from either the MSAAT or the SDLT (these entities participate on a rotating basis), a representative from either the Quality

Resource or Risk Management/Patient Safety Department (or a representative from each department), and a scribe. The Walkarounds team must conduct rounds for at least one hour each month and interview at least three persons.

All members of the staff—members of labor unions as well as nonrepresented staff—are encouraged to participate fully in these discussions, which must focus exclusively on patient safety issues and may not be combined with any other type of unit rounds. In addition to verbalizing the organization’s commitment to improving patient

safety, the leaders obtain feedback from staff and physicians regarding perceptions of a “just culture.” A culture that does not blame people who make mistakes but looks at the root cause of the errors and promotes system improvements that result in a safer environment for the patients and staff.

During the Walkarounds, the team informally approaches the patient care area to meet with available staff and physicians. The MSAAT Representative may take the lead in the discussions, asking questions to solicit information regarding perceptions of safety as well as safety issues that did or could cause harm to patients. An interview tool was developed to assist leaders in facilitating the discussions (Table 1). As these conversations take place, a representative from Risk Management/Patient Safety noted the issues verbalized by staff and physicians and subsequently entered these issues into a database.

Data Analysis

To assess the effectiveness of the Program, three types of outcomes from the Walkarounds Program were measured:

- *Improvement in patient safety (Vincent Factors):*³ This measure used a quantitative (Vincent Model) approach to “counting” the patient safety issues identified and resolved (Table 2). Components for the Vincent Factors (Table 3) were derived from medical publications on error, adverse outcomes, and risk management.³⁻⁷ This framework incorporated factors which influence clinical practice and which are used to categorize, analyze, and prioritize patient safety issues. During each walkaround, issues were entered into a database

Table 2. Total weighted scores of patient safety issues identified or resolved			
Vincent category	Total score		% of total
	Identified	Resolved	
Organization/Management	150	115	77
Work Environment	1020	895	88
Team	200	165	83
Individual	50	35	70
Task	170	120	71
Patient	15	15	100

and categorized using the Vincent Model.

- *Effects on the organization's culture of safety (a Just Culture):* This outcome measured physicians' and staff's perception of the safety culture in the service area. The People Pulse survey was distributed for recipients to assess how everyone worked together to ensure the safest possible workplace.
- *Perceptions expressed by staff about the power of the Walkarounds (Program Survey responses):* This measure consisted of survey results from Walkarounds participants in various health care delivery and support disciplines, from their immediate supervisors, and from the leadership representatives who conducted the rounds.

The data analysis included type, severity (actual or potential outcome to patient), and frequency (number of participants reporting the safety issue during rounds). When reports were generated, the frequency of each issue identified was multiplied by the severity outcomes to provide a weighted value for each issue. This score was designed to help the organization to prioritize safety concerns according to either the number of individuals concerned about it or the extent of its harmful impact (actual or potential) for patients.

Data collection was identified as critical for determining the success of the program. To record, monitor, and analyze safety issues identified by the Walkarounds program and to identify trends, the program uses a database developed specifically for it by staff at Brigham and Women's Hospital. The database assigns a severity code to each issue after categorizing it as one of the Vincent Model's "contributing

Organizational and management factors	Financial resources and constraints Organizational structure Policy standards and goals Safety culture and priorities
Work environment	Staffing levels and skills mix Workload and shift patterns Design, availability, and maintenance of equipment Administrative and managerial support
Team factors	Verbal communication Written communication Supervision and seeking help Team structure
Individual (staff) factors	Knowledge and skills Motivation physical and mental health
Task factors	Task design and clarity of structure Availability and use of protocols Availability and accuracy of test results
Patient characteristics	Condition (complexity and seriousness) Language and communication Personality and social factors

factors": team factors, work environment factors, organization/management factors, task factors, individual staff factors, and patient factors.³ The database enables systems-based analysis of these contributing factors, prioritization of urgent interventions, and initiation of special projects. Quantitatively, this analysis enabled KP leaders to routinely track the categories, frequency, and severity of safety issues identified and the percentage of issues resolved. This procedure served as a safeguard against prolongation or neglect of safety concerns. Because participants could present any patient safety concern, data collection was not limited by amount or category of data.

A post-Walkarounds survey was sent to each participant six months after the Walkaround, and responses were collected and analyzed. These evaluations provided participants an opportunity to give open responses that could clarify survey results.

Results of the Walkarounds Program

The Walkarounds Program enabled the KP San Diego Service Area to identify and resolve patient safety

vulnerabilities more effectively and to address staff perceptions of the local service area's safety culture. Compared with responses to the 2002 KP People Pulse Survey question, "In my department or work unit, everyone works together to ensure we make this the safest possible place to work and be a patient," responses collected in 2003 showed a 5% increase in the number of staff who agreed with the statement and a 9% increase in the number of physicians responding favorably. This response indicates a substantial strengthening of our safety culture. In addition, more than 85% of the program participants and managers surveyed reported a better understanding of the KP Safety Program, and all noted that new safety initiatives had been implemented in their area as a direct result of the Walkarounds.

The Walkarounds Program proved to be a unique vehicle for facilitating discussion among staff and physicians about personal safety concerns that might otherwise not be reported. As the only such systematic mechanism available to any staff member or physician available on the unit, the Executive Walkarounds

... response indicates a substantial strengthening of our safety culture.

Table 4. Vincent Factor weighted scores of items identified during Patient Safety Executive Walkarounds with weighted scores of items resolved

Vincent category	No. of issues	Total weighted score	% of total
Organization/Management	20	150	9
Work Environment	118	1020	64
Team	19	200	12
Individual	4	50	3
Task	17	170	11
Patient	3	15	1

The Program's improvements in safety culture and patient safety remained consistent even after the pilot program. The Walkarounds continue along with ongoing analysis of the quantitative and qualitative data. Indeed, after analysis of the data, the entire MSAAT and SDLT gave their full support to continuing the Walkarounds program, expanding it to the afternoon shift and eventually to the evening shift. Since the program started, program participation has included all levels of the organization, including executives, department administrators, nurses, patient care assistants, physicians, environmental services staff, technicians, and clerks—all of whom have equal opportunity to discuss safety concerns directly with the top leaders and gain their support to ensure resolution.

Most (56%) of the safety-related issues identified during the Walkarounds were categorized as "Work Environment" (Table 4). The second most common category, "Team Factors," accounted for 17.3% of the issues identified. As can be seen from the following examples, a variety of actions were taken to resolve safety concerns.

- Concerns were voiced by multiple units about intravenous poles being unsteady and tending to fall over. Monies not previously budgeted for this issue were subsequently approved, and intravenous poles throughout the hospital were replaced.
- During the Walkarounds, staff from several clinical departments and medical office buildings discussed concerns about patients who had fallen when leaving the area after receiving tests. A Special Project Team was formed to analyze the issue and implemented a centralized Wheelchair Valet Service.

Program provided an opportunity for face-to-face expression of patient safety concerns and tracking of these issues. For example, nurses might typically never report their concern about the potential for an unstable intravenous pole causing injury to a patient, whereas during the first three months of the Executive Walkarounds Program in San Diego, nine nurses from three different units—Labor and Delivery, DUO, Dialysis, and Orthopedics—individually reported concern about the instability of the intravenous poles holding more than one solution simultaneously. As a direct result of receiving these reports during the Walkarounds, the KP San Diego

Service Area replaced all its intravenous poles with newer, sturdier versions.

By the end of 2005, 181 safety concerns had been identified through the Walkarounds in the KP San Diego Service Area. To date, 84% of these concerns have been resolved. Nearly all the issues identified would never have been identified through other existing reporting mechanisms, such as Unusual Event Reports and hotlines, which staff currently use to report actual occurrences. During the Walkarounds, physicians and staff shared with leaders concerns about near-misses or the potential for an adverse event.

Nearly all the issues identified would never have been identified through other existing reporting mechanisms ...

The following list gives brief highlights of actions taken on issues identified during the Walkarounds:

- *Equipment:* Hospitalwide replacement of intravenous poles; additional oxygen tanks, table straps, portable monitor gait belts, and blood pressure monitors; new wheelchairs; repair of Labor & Delivery Department ultrasound machine; and hospitalwide replacement of brakes on older beds.
- *Process changes:* Abnormal results reporting process (added to Cardiology); SBAR; virtual hallway bed area created in the emergency department; budgeting for bed replacements; improved system for diagnosing proper placement of nasogastric tubes.
- *Services:* Creation of lift teams (and subsequent extension of lift team hours of operations), wheelchair valet service.
- *Environment:* Widening of doorways in the radiology department; no-slip mats purchased for area near ice machines to prevent falls by patients and employees; increased storage area created in Dialysis Unit.

- Malfunctioning brakes on patient beds were mentioned often. The Engineering Department was instructed to conduct a hospitalwide review of the brakes and subsequently determined that all older beds should be replaced. The process of budgeting was then adjusted to include replacement of all older beds.
- Concern with proper after-hours identification of radiological films was verbalized during a Walkarounds tour of the Radiology Department. As a result, an FMEA team was formed to identify these vulnerabilities and subsequently implemented appropriate preventive measures.
- As a direct result of an issue voiced during a Walkaround, architectural review and reconstruction were both approved and completed to expand several doorways in the Radiology department.

Responses to post-Walkaround surveys showed increased attention to, and awareness of, patient safety and an increase in patient safety initiatives implemented after the Walkarounds (Tables 5,6). Whereas responses to the preproject questionnaire administered in 2002 showed that the teamwork climate among nurses in the San Diego Service Area ranked in the bottom 30% of organizations for benchmark measures in 101 clinical areas, responses to a shortened 2004 postproject survey (distributed to a subset of the original cohort) showed that the teamwork climate among respondents ranked within the top 30% of organizations on the same benchmarking scale. And a 2004 survey distributed to KP leaders in the San Diego Service Area showed that 86% of respondents had personally taken actions as a result

of the Walkarounds—an increase of 6% compared with survey results obtained a year earlier. The write-in responses reflected a consensus among all groups that the Walkarounds advanced understanding of patient safety and affected change within their facility or unit. “We are identifying issues that have not come up through any other reporting mechanism,” said one manager.

In response to the People Pulse survey question asking how everyone worked together to ensure the safest possible place, a 6% increase in positive responses was observed among physicians and staff after implementation of the Walkarounds. The high response rate for this survey indicated that the 6% difference was meaningful.

An unexpected positive outcome of the Walkarounds Program occurred during the 2003 Joint Commission on Accreditation of Healthcare Organizations (JCAHO) survey at the KP San Diego Medical Center, where the Walkarounds program was presented as the facility’s performance improvement project. The Consolidated Accreditation and Licensing Survey (CALs) accreditation team gave accolades for a successful and unique process of demonstrating improvements to safety and quality.

Since initiation of the San Diego Walkarounds, the total weighted Vincent score of all the patient safety issues has been identified as 1605. The total Vincent score for resolved issues was 1345 (84%). Survey responses showed overwhelming support for the Walkarounds Program in regard to effective communication of patient safety issues and perception of actions taken to resolve these issues.

Discussion

The Patient Safety Executive Walkarounds Program is KP’s prescribed, systematic process for facilitating regular dialogue between caregivers and senior organizational leaders to improve patient safety and for these leaders to actively show their interest and involvement with patient safety (they must “walk the talk”). The Program thus provides a proactive approach to resolving patient safety issues. As such, the Walkarounds Program has been highly successful in achieving significant sustained improvements in all its core elements. The Walkarounds Program also supports and complements other patient safety initiatives, such as Error Reduction Initiatives, Knowledge Transfer Initiatives, Human Factors Initiatives, and Environment of Care

Table 5. Responses to evaluations distributed to staff, managers, and leaders at 6 months and at 12 months after participation in the Walkarounds

Frontline staff	<ul style="list-style-type: none"> •Most (85%) responded that they had a better understanding of patient safety and the KP patient safety program as a result of the Walkarounds. •Most (76%) indicated that reporting or discussion of errors and “near misses” had increased since the Executive Patient Safety Walkarounds.
Unit managers or DA	<ul style="list-style-type: none"> •Nearly all (91%) said that they have had conversations with staff or physicians regarding the patient safety Walkarounds. •Most (73%) responded that new patient safety initiatives or other changes had been made as a result of the input from staff/physicians related to patient safety issues identified during the Executive Patient Safety Walkarounds.
Executives	<ul style="list-style-type: none"> •All (100%) responded that they gained new learnings from the Walkarounds and considered them valuable. •Most (86%) reported that they had taken actions as a result of feedback received on the Executive Patient Safety Walkarounds.

Initiatives. In the San Diego Service Area, the success of the Program was enhanced by the strong support of the Program sponsors.

A strength of the Program is its broad-based participation by all departments and by staff at all levels. Most departments involved in direct patient care have been visited by the Executive Walkarounds Team, and many support departments have been involved in developing and implementing solutions to address safety concerns.

Another strength of the program is its use of a database to organize information so that systemwide problems can be readily identified. Systems-based solutions are far-reaching: They are used by many departments and therefore improve safety for patients throughout the San Diego Service Area. Nonetheless, implementation of a Walkarounds Program requires only

a minimal financial expenditure, and this financial commitment is directed exclusively to resolving concerns about patient safety.

The Patient Safety Executive Walkarounds Program has the potential to strengthen KP's Labor Management Partnership by providing the opportunity for senior organizational leaders and union-represented employees to come together for focused, face-to-face discussions on a common goal: ensuring patient safety. As employees witness their concerns being addressed and resolved, these employees can feel that they are being heard and understood.

Responding to the positive feedback received and the improved outcomes accomplished by the Walkarounds Program to date, the KP San Diego Leadership Team committed itself to continuing the program, which subsequently became

a required 2004-2005 goal for all KPSC medical centers and has already been transferred to nine KP medical centers in Southern California and to other KP Regions. All of the tools utilized for the Walkarounds are now available online, and a video was developed for use in conjunction with training.⁸ Multiple requests have been received from outside of KP for our Walkarounds toolkit, and we have received reports that many of those requestors have started their own Walkarounds Programs. The project was presented at a 2004 plenary session of the NPSF Congress⁹ and has been selected by the Agency for Healthcare Research and Quality for its compendium on best practices.¹⁰

Table 7 shows voluntary survey results from six other KPSC Service Areas related to their experience with the Walkarounds Program. An interesting finding in some other service areas was the expansion of the Program to include patients.

Successful program replication requires minimal fiscal support, partly because the program design has already been completed. Tools needed to introduce and implement this program have been developed and are easily available on the KP Intranet⁸ and include:

- *Orientation Materials:* Presentation templates introduce the concept and principles behind the Walkarounds, explain the expected results, outline the necessary steps, and list the required resources.
- *Communication Plan:* This plan outlines the tactics, dates, and responsibilities for informing and involving targeted stakeholders (executives, managers, and frontline staff).
- *Talking Points for Executives:* This list of key messages for executives who conduct

Table 6. Selected testimonials collected from surveys	
<i>What is the greatest value that Patient Safety Executive Walkarounds brings to the organization?</i>	
Staff comments	<ul style="list-style-type: none"> •Improved patient care through improved patient safety •Finding out the real problem on the floor that needs to be resolved •Allowing those in leadership positions to be aware of the conditions that hinder workplace safety
Manager comments	<ul style="list-style-type: none"> •Visibility of the Executive Leadership Team who show true concern that they care about our staff and our members •Brings "top" and "frontline" people together, making it clear that everyone is working toward the same goals •It has given my staff an improved sense of "value for what we have to say" •It has stimulated an increased attention to safety in the workplace
Leadership Team comments	<ul style="list-style-type: none"> •Open communication and connection with staff •An opportunity to fix a problem before it escalates to a bad event or outcome •Demonstrating to our staff that we recognize how difficult their jobs are and how much our senior leaders value quality and safe care •An opportunity for MSAAT and the AA to discuss unit-specific issues and concerns together on the frontlines
<p><i>Walkarounds learnings reported by the KP San Diego Leadership Team:</i></p> <ul style="list-style-type: none"> • I learned a great deal about the challenges faced by clinical staff around all the patient safety goals. • If you "fixed" it once several years ago, you may have erosion in the process with turnover; go back and check again. • Nursing Department staffing challenges. • That staff doesn't always express their concerns unless given the opportunity to do so. They need to be invited to provide information and feedback. <p>We need to modify our routine process for capital equipment to better identify requests related to patient safety issues and prioritize them higher in our regular process.</p>	

Walkarounds provides guidelines for initiating conversations, explaining the purpose of the visit, and talking to staff about how the information provided will be used.

- *Questions for Walkarounds:* As a second preparation tool for executives, the questions prompt discussion that focuses on systems-based patient safety concerns.
- *Evaluations:* Three versions of an evaluation—one each for executive, manager, and staff—ask participants to consider whether attitudes, conditions, or actions in their department have changed as a result of the Walkarounds.
- *Database* (a replica of the database customized by the KP San Diego Service Area).

The KP Program Offices Director of Patient Safety has provided the support to continually update all these aforementioned tools on the KP Intranet. The San Diego Director for Risk Management/Patient Safety has already provided an overview training of the database to KPSC Risk Managers. In addition, a videotape was filmed during actual Walkarounds and is available to provide additional support for successfully introducing and implementing the program.⁸

It is advisable, but not required, to maintain a part-time (ten hours per week) project support manager to ensure follow-up with and assistance to departments handling resolution of patient safety issues identified during the Walkarounds. Reminders of the Walkarounds' functions are included in the Risk Management/Patient Safety functions.

Conclusion

Only by direct, regular contact with care delivery can our organi-

Table 7. Responses of six KP Southern California Service Areas^a to KPSC Regional Survey on Patient Safety Executive Walkarounds	
Data element	Data totals
No. of Walkarounds completed - 2004	90
No. of Walkarounds completed - 2005 Q1	15
Leadership members attending Walkarounds	Area Associate Medical Director, Department Administrator, Risk Management, Service Area Manager, Quality Service Leader, Director of Hospital Operations, Director of Quality, Service Line Leaders
No. of staff involved, 2004	268
No. of staff involved, 2005 Q1	166
No. of unit physicians involved, 2004	19
No. of unit physicians involved, 2005 Q1	4
No. of unit patients involved, 2004	63
No. of unit patients involved, 2005 Q1	7
Shifts included	days and evenings (five medical centers); days only (five medical centers); all shifts (one medical center)
No. of issues identified during 2004	342
No. of issues identified during 2005 Q1	42
No. of issues resolved 2005 Q1	15

^a includes Panorama City, West Los Angeles, Bellflower, Baldwin Park, Orange, and Woodland Hills; excludes KP San Diego Service Area.

zational leaders understand the problems of staff and physicians in delivering safe care. Multiple mechanisms currently exist to identify errors and close calls, but many clinicians have historically reported only what they could not conceal out of fear of disciplinary action. The Walkarounds Program is one tool for promoting change in our organizational culture. Implementation of any program is achieved most effectively when aligned with the organization's priorities. To sustain the momentum of the program, its achievements must be communicated and celebrated. These activities are crucial to frontline staff to assure them that their concerns are not "lost in a black hole" and that their participation can bring change.

To support safety in a just culture, the entire leadership of the San Diego Service Area remains committed to continuing and advancing the Patient Safety Executive Walkarounds

Program. By promoting reporting and by improving systems, we can ensure that the right thing to do is also the easiest. ❖

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The Same Price

We don't want to save any money;
we want to give better, more comprehensive services—at the same price.

— *Sidney R Garfield, MD, 1906-84, founder of the Kaiser Permanente Health Plan to Morrie Collen, MD, regarding the costs of Multiphasic examinations.*
This "Moment in History" quote collected by Steve Gilford, KP Historian

■ clinical contributions

2005 Lawrence Transfer Award Winner

The Southern California Perinatal Patient Safety Project

The Northern California Perinatal Patient Safety Project (PPSP) won the Lawrence Patient Safety New Project Award in 2004 (See "The Perinatal Patient Safety Project: New Can Be Great!" in *The Permanente Journal* 2005 Winter;9(1):25-7 and "Perinatal Patient Safety Project" in *The Permanente Journal* 2005 Spring;9(2):28-33). With the purpose to create high-reliability perinatal units through the use of human factors, techniques and systems improvements, the project borrowed from the United States Navy, NASA, and similar organizations that operate highly complex systems with few errors over long periods of time. Using the precepts of the "Four As of Adoption" (see "Practical Steps for Practice Transfer" in *The Permanente Journal* 2005 Fall;9(4):50-1), Southern California began implementation of PPSP in November 2003 at the Riverside Medical Center by administering the Safety Attitude Questionnaire (SAQ) to their Perinatal staff and physicians and initiated their PPSP Steering Committee to begin the planning process. The other nine Medical Centers began cyclical implementation in 2004.

The purpose of the Southern California PPSP was to: decrease human error and identify patient care systems in need of improvement; create a safe culture; develop a high-reliability perinatal unit; and apply a "Just Culture" environment to create a safe environment for team members. The project included training in team briefings/communication, assertion, error detection, and situational awareness to include identification of "red flags." A project tool kit was developed by the Southern California Regional PPSP project managers that described the core elements and was utilized by the medical centers during their start-up and throughout their planning meetings. This tool kit is now available from the National Risk Management Program Office (available at: <http://kpnet.kp.org/qs/nrm/PPSP3/toolkit.htm>) or the Southern California Project

Managers. This project tool kit has been so successful, it is being requested by medical centers outside of Kaiser Permanente (KP).

Following a Leader

In 2003, Southern California Ob/Gyn Chiefs attended the PPSP conference in Northern California and returned enthused and excited to transfer and implement the program in Southern California. Southern California provides funds to each medical center to support innovation replication projects. PPSP used these funds to support staff attendance at the educational components of PPSP and at meetings for one full year. Being able to send champions to visit a medical center that had already successfully implemented the project was of integral value in easing the transfer process.

When Enthusiasm is a Drawback

Although the energy generated by the enthusiasm brought forth for implementing this project was essential and exciting, it also created some difficulties. Planning the transfer while the project was being implemented created some challenges that could have been avoided by fully developing the implementation plan prior to beginning the transfer; however, this might have been at the cost of some of the momentum, in which case transparent and open communication with a shared vision was vital.

By Jean Sandoval, RN, MSN
Janice McDonald, RN, MBA
Suzanne Graham, RN, PhD

... the project borrowed from the United States Navy, NASA, and similar organizations that operate highly complex systems with few errors over long periods of time.

Table 1. Southern California Region PPSP Sponsors

John Brookey, MD, Assistant Medical Director of Quality
Carolyn Days, RNP, Vice President, Quality and Risk Management
Suzanne Graham, RN, PhD, Patient Safety Practice Leader, California Regions
Judy Husted, RN, Executive Director, Patient Care Services
Jean Sandoval, RN, MSN, Senior Consultant, PPSP Project Manager
Janice McDonald, RN, MBA, Senior Consultant, PPSP Project Manager

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Janice McDonald, RN, MBA, is a Senior Consultant for the Patient Safety Department in Southern California. E-mail: janice.v.mcdonald@kp.org.
Suzanne Graham, RN, PhD, is Director of Patient Safety for Northern and Southern California. E-mail: suzanne.graham@kp.org.

... the techniques utilized in PPSP are not exclusive to the perinatal unit.

Educational Components

The four educational components of the transfer included:

- Human Factors Training—to provide new skills to build teams, improve communication, and reduce and capture errors.
- Supplemental **S**ituation, **B**ackground, **A**ssessment, and **R**ecommendation Communication—to establish communication improvements between staff and providers.
- Escalation Policy (“Just Culture”)—to provide for free and open discussions among all PPSP members.
- Critical Events Team Training (CETT) and Debriefing Techniques—to develop a method of practicing for emergencies with a debriefing session to provide emotional support for staff and physicians and to identify system issues. CETT “Train-the Trainer” Programs have also been implemented.

After completing the education components, staff and physicians almost unanimously felt CETT “brings it all together.”

Conclusion

Implementing a regionwide program within the span of one year is a daunting task. Having committed Project Managers, regional support, and departmental enthusiasm makes the goal achievable and the challenge stimulating. Finally, the techniques utilized in PPSP are not exclusive to the perinatal unit. Other departments throughout Southern California are investigating the possibility of using this project as a model, specifically in the ICU and Medical/Surgical areas at Panorama City Medical Center and other departments at Orange County and Riverside Medical Centers. ❖

Opening To Change

Most important of all, I think you ought to build up your competitive position in this medical world by innovating and opening up to change. We have been doing the same thing far too long. Some of you have heard the talk I gave on the new Medical Care Delivery System. That may not be the only answer, but it is a move to improve service. You should be getting into that—improving service. You know institutions tend to become static; they build walls around themselves to protect themselves from change and eventually die. You should fight that by opening up your thinking and your ideas, and work for change. Improvement of service is very important for the competition you face in the future.

— *Sidney R Garfield, MD, 1906-84, founder of the Kaiser Permanente Health Plan to a meeting of Physicians-in-Chiefs and Medical Directors of all six Regions of the Kaiser Medical Care Program in the spring of 1974.*

This “Moment in History” quote collected by Steve Gilford, KP Historian



"Fran's Market"
watercolor
Alan Lash, MD

Alan Lash, MD, is an internist/rheumatologist in Redwood City, CA.
This painting is of the first African American-owned business
in Palo Alto, CA, where Dr Lash grew up.

commentary

Dr Garfield's Enduring Legacy— Challenges and Opportunities



Jay Crosson, MD
Executive Director
of The Permanente
Federation and CEO
and President of The
Permanente Company

It's about time. For too long, Sidney Garfield, MD, has stood in the giant shadow cast by his more celebrated partner and friend, Henry J Kaiser, the great entrepreneur and industrialist. Mr Kaiser's name and fame live on, mainly in association with the only non-profit organization ever incorporated by the builder of more than 100 for-profit companies—Kaiser Permanente (KP). But the physician whose extraordinary vision and daring innovations in health care delivery that gave birth to that same organization remains largely unrecognized beyond the select circle of medical historians and the heritage-minded physicians and staff of KP.

One needn't minimize the vital role of Mr Kaiser in KP's story to assert the seminal role played by Dr Garfield. They were genuine partners, each bringing to the enterprise critical elements lacking in the other: money and organizational genius from Mr Kaiser; a visionary mind and an unrelenting drive for innovation and quality improvement from Dr Garfield; and from both a genuine belief in and commitment to human dignity and progress.

This centennial of Dr Garfield's birth is a timely occasion not only to recall and celebrate his role in creating and evolving the unique model of health care delivery that would become KP, but to examine as well some of his key insights and innovations with regard to the current and future state of American health care. Fortunately, Dr Garfield himself articulated his ideas in a number of influential documents. These included, most importantly, his 1945 address to the Multnomah County Medical Association in Oregon,¹ in which he spelled out the essential elements of what we have come to call Permanente Medicine, and a forward-looking article in the April 1970 issue of *Scientific American*² (see page 46). In that article, he reiterated those founda-

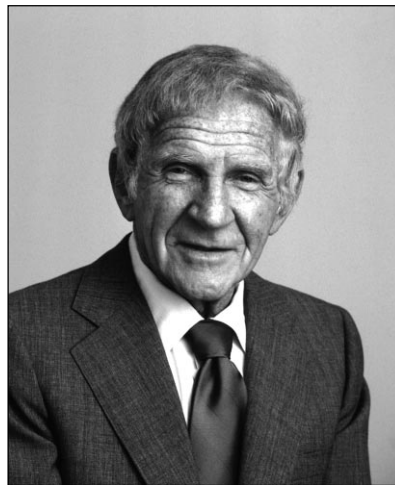
tional qualities and went on to anticipate a radical transformation of the health care system via the incipient power of information technology. In addition, the evolution of his ideas was expertly traced and recorded by his physician colleague John Smillie, MD, in his excellent 1991 history of KP, *Can Physicians Manage the Quality and Cost of Health Care?*³

Anyone who has examined Dr Garfield's long career will appreciate the difficulty of assessing the historical and/or current relevance of his ideas and innovations. As his diminishing number of surviving colleagues will attest, he was a fount of ideas—virtual intellectual fireworks—admittedly igniting a few duds among the brilliant rockets. The ideas ranged across the entire spectrum of health care, from delivery models to financing to hospital design. In the end, it may fairly be said that he achieved his childhood dream of becoming an engineer (he is said to have broken down and cried when his parents insisted he attend medical school) by engineering our unique model of health care.

But among all his many lasting contributions, which ones constitute the essential core of his life's work? And what relevance do they have for today and tomorrow?

I believe Dr Garfield's lasting reputation will rest on four big ideas that, individually and in combination, powered fundamental transformations in health care. They are:

- the change from fee-for-service to prepayment
- the promotion of multispecialty group practice in combination with prepayment
- the emphasis on prevention and early detection to accomplish what he termed "the new economy of medicine," in which providers would be rewarded for keeping people healthy; and,



Sidney R Garfield, MD, 1977

... he spelled out the essential elements of what we have come to call Permanente Medicine ...

- finally—and most presciently—the centrality of information technology in the future of health care.

Significantly, each one of these 20th century innovations, three of which are deeply embedded in KP's own genetic code, is at or near a critical crossroads in this first decade of the 21st century, either still struggling for broad acceptance or under fresh assault as failed assumptions. Let us briefly examine each in turn.

Prepayment

In his 1930s work at his little fee-for-service Contractors General Hospital in the Mojave Desert caring for aqueduct construction workers, Dr Garfield was saved from the looming threat of bankruptcy by the discovery of prepayment for comprehensive services. The idea was borrowed from the Ross-Loos Clinic in Los Angeles County and rooted in the late 19th century traditions of "industrial medicine." Collecting a dime a day from approximately 5000 aqueduct workers, Dr Garfield's desert enterprise prospered under prepayment, and his eyes were opened to the transformation of care made possible when wellness rather than sickness became a revenue source.

Prepayment, he said, "is the old principle of the well paying for the sick; the houses that don't burn down paying for those that do."¹ But even more important, he noted, prepayment "brings the patient to the doctor earlier in his illness and more often, which is one of the most important effects ... because it permits the practice of true preventive medicine. Any plan that sets a barrier between the patient and the doctor by eliminating the first two or three visits, by covering the patient only for hospital or surgical care, or by limiting this coverage in other ways, in our opinion defeats its purpose and is not good."¹

Employer-based prepayment led Dr Garfield inevitably to a focus on prevention and what would come to be known as health maintenance and wellness. It solved for him the critical question of the economics of medicine: "how to keep the people of this country well and healthy and, at the same time, preserve the medical and hospital organization which must do that job, but under our present (fee-for-service) system derives its income out of sickness."¹

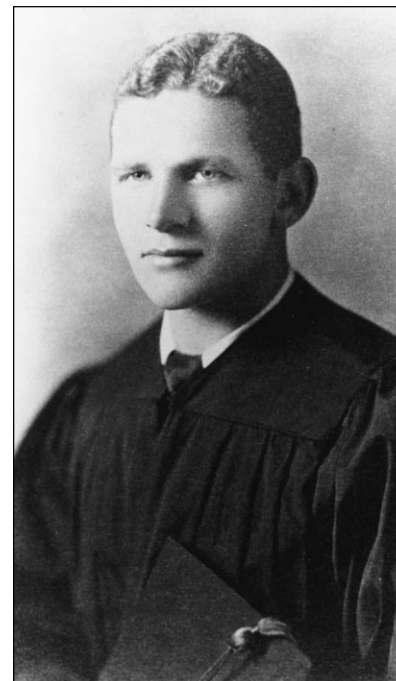
Prepayment for comprehensive services has served as one of the critical strands of KP's DNA since the very beginning of the organization when Dr Garfield first partnered with Mr Kaiser to provide employee health services at Grand Coulee Dam and later in the World War II shipyards. Yet 60 years later, in an era of industry-wide cost-shifting and a proliferation of high-deductible plans, we are confronting a question that Dr Garfield

might have found unthinkable: Would Kaiser Permanente still be Kaiser Permanente without prepayment?

Dr Garfield actually raised a related question in his *Scientific American* article² when he asserted that, without some sort of regulator on access to services, prepayment could open the gates to a virtual flood of the "worried well" into physician's offices, overwhelming the organization's resources. His solution was the periodic multiphasic exam, which would segment the population into various categories of the sick and the well, with the healthy diverted into separate health facilities staffed by what he believed were more appropriate and lower paid health educators and other allied health professionals.

Dr Garfield's faith in the ability of the multiphasic exam to accurately discriminate between the healthy and the sick would be challenged in later years and ultimately abandoned when two decades worth of clinical evidence suggested it generated an excessive number of false positive indicators of disease. Much the same problem has plagued the continuing search for the holy grail of sophisticated, population-wide risk-adjustment models, using prior utilization, demographics, and self-reported health. At their best, such models are capable of explaining only about 20% of future utilization.⁴ Prospective segmentation works well for certain subpopulations, such as the frail elderly and people with certain identified chronic and complex diseases; but as a broader population strategy it has proven to be one of Dr Garfield's less robust ideas.

In any event, Dr Garfield's 1970 concern about the potential of prepayment to open the floodgates of the worried well into doctors' offices has not been borne out by experience. Ever since we implemented same-day urgent care for certain specialties, few members have abused the opportunity. Most essen-



Dr Garfield's medical school graduation photo from University of Iowa Medical School, 1928.

Special Feature

tially healthy people, it seems, have much better ways to occupy their time than sitting in doctors' waiting rooms reading ten-year-old copies of *Time Magazine*.

Nonetheless, there is no question that prepayment is under assault today, primarily from those philosophically opposed to the traditions of social insurance in which the sick and the elderly are subsidized by the young and healthy (who, it may be argued, are in effect "prepaying" their own future health needs). The apparent growing popularity of health savings accounts (HSAs) and other forms of low-premium, high-deductible "consumer-directed health plans" is a direct challenge to the concept of prepaid, comprehensive benefits that have long been a defining feature of KP.

As an organization, we have taken important steps to adapt to the realities of the marketplace by offering new competitive benefit packages designed to offer more people access to the benefits of Permanente Medicine, but with more cost-sharing than Dr Garfield ever envisioned.

Is this progress or retrenchment? What is the right balance between unfettered, out-of-pocket personal liability for health care and open-ended social insurance? In the long run, there is good reason to believe we can and will adapt to the market by developing more intelligent and clinically sound cost-sharing benefit designs without creating significant barriers to needed care. Such work is currently underway.

... prepayment is under assault today, primarily from those philosophically opposed to the traditions of social insurance ...

Multispecialty Group Practice

With the financial security provided by prepayment, Dr Garfield was able to realize his second great contribution to what would become Permanente Medicine—multispecialty group practice. Here again the idea was not unique to Dr Garfield, but borrowed from other pioneers, such as the Mayo brothers in Minnesota and, especially, Dr Garfield's own experience with a form of group practice at LA General Hospital. There he had served as a chief resident with other first generation Permanente physicians, including Wallace Neighbor, MD, (first Medical Director of what would become Northwest Permanente) and Raymond Kay, MD, (founding Medical Director of the Southern California Permanente Medical Group). "We grew up at the county hospital," was how Dr Garfield put it.¹

Dr Kay later recounted how "as interns and residents, we ... appreciated the fact that we were able to develop professionally through sharing patients and learning from the other physicians with whom we practiced We then started thinking, 'Wouldn't it be wonderful if we could really practice as a doctor with a group of doctors where you could share knowledge, and share experience, and share patients, and where you could take care of people with no economic blocks?'"¹

Dr Garfield strongly agreed. "It has always seemed a paradox," he noted, "that in universities, which teach us medicine, we learn medicine under the highest type of group practice, but when we go out into practice, we revert to the old type of individual private practice."¹

Dr Garfield's great contribution to the evolution of group practice was to layer onto it the additional power of two other elements: prepayment and integration of the medical group with what he termed "adequate facilities"—"bringing the doctors' offices, laboratory, x-ray, and hospital ... all together under one roof."¹ Group practice alone could be a powerful engine for continuous learning and coordination of care; integrating it with the full range of medical facilities served to align the otherwise conflicting interests of doctors and hospitals; and then layering on prepayment removed financial barriers to care while opening the door to prevention and health maintenance. With all these elements in synergistic combination—first achieved at Dr Garfield's Mason City Hospital at Grand Coulee, where Mr Kaiser first saw and embraced Dr Garfield's vision—the young surgeon, still in his mid-30s, had engineered the miracle of Permanente Medicine.

Over the past 60 years, the Permanente Medical Groups, which evolved out of the old "Garfield and



Dr Sidney Garfield, (right) and Dr Cecil Cutting, (left) first Executive Medical Director of The Permanente Medical Group, 1950.

Associates,” have been more successful than any group in the country at exploiting and enriching the possibilities of multispecialty group practice—largely because of the grafting on of prepayment and integrated facilities, as well as our sustaining partnership with Kaiser Foundation Health Plan. This unique model has set the standards for both efficiency and clinical quality in most of the communities in which we operate, and it continues to be touted by some of the smartest minds in the country (and not all within Permanente) as the best solution to the multiple crises besetting American health care.

And yet, 74 years after President Hoover's National Committee on the Costs of Medical Care advocated group practice as “essential” to “meet the modern demands of medical science and technology,”¹⁵ it is still playing catch-up to the tradition of solo and small group practice. What's more, it is facing significant challenges on two fronts: from stand-alone disease management ventures and from the growth of so-called “high-performance networks,” an insurance-driven promise of “groups without walls”—and, in most cases, without clinical coordination or any form of economic integration.

The advent of the disease management industry as a carve out from the delivery system could not have occurred had the nation embraced prepaid group practice, in which disease management is taken for granted. Yet given the disaggregated nature of the delivery system in most communities today, insurers have been able to promote the idea that they can achieve all the advantages of an actual group practice by profiling individual doctors and hospitals, selecting the most efficient providers, and then lumping them all together into a pseudo-systemic “high-performing network” with an external stand-alone disease management component. In a world that still clings tenaciously to *Marcus Welby, MD*, it looks to some like a reasonable alternative to genuine group practice.

Prevention

As I have noted, preventive health care and health promotion became an early principle of Permanente Medicine as a direct result of prepayment, which put a premium on keeping workers (and, later, whole communities) healthy. Recalling his early experience with prepayment in the Mojave, Dr Garfield noted that the “financial result (of prepayment) was impressive, but another result impressed us very much—a resulting change in our attitude. Prior to (prepayment), we were anxious to have injured workers come into the hospital, since it meant remuneration Under the new

arrangement, we had the same amount of income whether the workers were injured or not. Obviously, we were better off if they remained unhurt.”¹¹ And thus began Dr Garfield's long and growing interest in safety engineering, preventive health, and health education and wellness programs—the direct antecedents of today's “Thrive” campaign.

The great tradition and growing sophistication of preventive medicine at KP since Dr Garfield's time would, I am certain, impress and gratify him. Motivated by awareness that preventable illness makes up 70% or more of the total burden of illness and its associated costs, KP has long embraced an expanding concept of prevention that includes, in addition to such traditional practices as immunizations and periodic screenings, a broad array of health promotion and patient self-management practices. Through the Care Management Institute and our research units, we have focused on the development and diffusion of evidence-based guidelines for preventive practices and self-care for patients with chronic and complex conditions. And with the implementation of KP HealthConnect, we are now capable of driving the promises of preventive medicine to an entirely new level of practice, with automated physician reminders and an array of patient-oriented health education and self-management tools.

The concept of preventive care has also had great impacts across the entire health care environment. Most of the HEDIS measures by which HMOs are evaluated for clinical quality are actually preventive and early detection practices, as are many of the measures by which health plans and providers will be reimbursed in most of the new pay-for-performance initiatives.

However, as health care costs continue to push against the limits of middle-class affordability, the importance of many preventive practices is losing ground in some significant ways.

As we know from our own research, while some common preventive practices may be cost effective at an employer or social level (by reducing absenteeism, for instance), they may not be for the health care industry in isolation. This fact has led some insurers to underpay primary care physicians for preventive services. In fact, Medicare has only recently introduced coverage for initial health exams by physicians. Further, early evidence from the introduction of high-deductible health plans by competitors suggests lower compliance with needed visits and medications for diabetes and hypertension.

The great tradition and growing sophistication of preventive medicine at KP since Dr Garfield's time would, I am certain, impress and gratify him.



Drs Garfield, (left) and Cutting, (right) in a water fight, 1950.

Information Technology

Were Sidney Garfield to make an appearance today, I suspect he would be aghast that so many other aspects of American life and work have enjoyed the benefits of sophisticated information systems while the health care industry remains largely stuck in the “Paper Age.” Having envisioned and promoted many of the great improvements that computers could bring to medicine back in the 1960s, Dr Garfield—never a patient man—would no doubt wonder why, more than four decades later, it required a presidential initiative with its own Executive Office department to kick start the automated medical record.

As early as 1960, Dr Garfield embraced the idea that computers—those giant punch-card machines of the period—could somehow lead to a fundamental transformation of health care delivery. He assigned the brilliant young physician Morris Collen, MD, an internist who had a degree in electrical engineering, to look into the possibilities. As John Smillie, MD, recounted in his history of TPMG, Collen reported back “to confirm that Dr Garfield was correct: Medical electronics was beginning a period of great innovation and diffusion, and ... we should begin to take advantage of the potential of electronic digital computers.”³ Remember, this was 1960.

The story of KP’s pioneering work with information technology under the sponsorship of Dr Garfield and the direction of Dr Collen is a remarkable tale. Not more than half a dozen places in the world were doing comparable research in health care. As early as 1968, Dr Garfield could confidently write that “The computer cannot replace the physician, but it can keep essential data

moving smoothly from laboratory to nurse’s station, from x-ray department to the patient’s chart, and from all areas of the medical center to the physician himself.”¹ Two years earlier, Dr Collen had declared in a speech to the Minnesota State Medical Association that “The computer will probably have the greatest impact on medical science since the invention of the microscope.”¹

By 1970, when Dr Garfield spelled out his grand vision for the future of medicine in *Scientific American*,² he included a series of diagrams of the evolution of health systems through the decades, beginning in 1900 (see page 48). At the center of each diagram up to 1970 was the hospital—the central axis of the system. In his diagram of the system of the future, the hospital is replaced by the “computer center”—an amazingly prescient vision for its time. He began telling his Permanente colleagues that they had all the elements of a “jet-engined plan” for health care, but without the computer and other innovations, such as health education centers and expanded use of nurse practitioners, they remained hitched to a “buggy” of traditional medical practice.

Despite the many fits and starts, leaps and stumbles along the almost half century-long path to KP HealthConnect, I am certain Dr Garfield would be proud of the organization today for the leadership it has continued to show by implementing the largest and most sophisticated health information technology system in the world at a time when much of American health care is still debating the “business case for IT.” Although Dr Garfield would be on familiar ground with many of the capabilities of KP HealthConnect, he would have to be impressed by at least one major feature: that of rapid, asynchronous two-way communication between doctors and patients and doctors and doctors, and the ability of patients to input data into their medical record and access information from it. In the pre-Internet era, Drs Garfield and Collen could only glimpse the full potential of the technology to virtualize many elements of the physician-patient relationship, moving much of the interaction downstream in the interests of efficiency and improved service.

Were Dr Garfield alive today, he would feel a great sense of satisfaction, and perhaps vindication, to have heard Dr David Brailer, the federal government’s point man on health information technology, last year tell KP’s current generation of IT leaders that they are “among the privileged few ...”¹

“You all are pioneers,” he declared, and “with every click of the mouse, every use of the keyboard, every time you take another step with your use of KP HealthConnect, you are defining the national experience.”

As early as 1960, Dr Garfield embraced the idea that computers ... could somehow lead to a fundamental transformation of health care delivery.

That's the kind of mission Sidney Garfield had in mind for the organization he co-founded.

Conclusion

As I have noted, the four great ideas on which so much of Dr Garfield's enduring and future reputation rests are under varying degrees of challenge today. That fact is of legitimate concern to many of us—and to many outside KP, as well—But perhaps we should also look at these challenges as opportunities—something both Dr Garfield and Mr Kaiser were famous for doing. As Dr Garfield told the TPMG executive committee in his annual report in 1964, "Opposition by organized medicine to our program was good for us. It kept us intellectually honest and stimulated us to do better continually."¹

Just as Dr Garfield and his fellow Permanente physicians were forced by skeptics and outright powerful opponents to prove the value of group practice and prepayment, the current generation of Permanente doctors and KP leaders and employees are being challenged to bring greater proof of the value of our model to the claims and promises we make to employers and members. In meeting these challenges, we should remember that the principles that Dr Garfield laid down almost 60 years ago are not sacred, and in fact they have all evolved in significant ways since they were first articulated. As he warned an interregional meeting of Permanente physician leaders in 1974, "Institutions tend to become static; they build walls around

themselves to protect themselves from change and eventually die. You should fight that [tendency] by opening up your thinking and your ideas, and work for change."¹

Most important, the principles themselves are not the object of Permanente Medicine. If there are better ways to achieve the ends of Permanente Medicine—defined by Dr Garfield himself as "to provide the best quality care our members can afford"¹—we should never be shy about making corrections, adjustments, refinements, or wholesale changes when demanded by our own 21st century environment. Permanente Medicine—Dr Garfield's great gift to American medicine—will endure only so long as it remains a living, growing, adapting way of practicing medicine. ❖

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Advice

"Keep your feet on the ground, keep your hands on your purses,
make sure your operations are as economical as possible,
and build up your wealth for strength.
Keep your arms on each others' shoulders,
and keep your eyes on the stars for innovation and change for the future."

— Sidney R Garfield, MD, 1906-84, presentation to The Permanente Medical Group Executive Committee, August 1974
This "Moment in History" quote collected by Steve Gilford, KP Historian

The Delivery of Medical Care

Medical care in the US is expensive and poorly distributed, and national health insurance will make things worse. What is needed is an innovative system in which the sick are separated from the well.

By Sidney R Garfield, MD

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The US system of high-quality but expensive and poorly distributed medical care is in trouble. Dramatic advances in medical knowledge and new techniques, combined with soaring demands created by growing public awareness, by hospital and medical insurance and by Medicare and Medicaid, are swamping the system by which medical care is delivered. As the disparity between the capabilities of medical care and its availability increases, and as costs rise beyond the ability

of most Americans to pay them, pressures build up for action. High on the list of suggested remedies are national health insurance and a new medical care delivery system.

National health insurance, an attractive idea to many Americans, can only make things worse. Medicare and Medicaid—equivalents of national health insurance for segments of our population—have largely failed because the surge of demand they created only dramatized and exacerbated the inadequacies of the existing delivery system and its painful shortages of manpower and facilities. It is folly to believe that compounding this demand by extending health insurance to the entire population will im-

prove matters. On the contrary, it is certain that further overtaxing of our inadequate medical resources will result in serious deterioration in the quality and availability of service for the sick. If this country has learned anything from experience with Medicare and Medicaid, it is that a rational delivery system should have been prepared for projects of such scope.

The question then becomes: What are the necessary elements of a rational medical care delivery system? Many have proposed that prepaid group practice patterned after the Kaiser Permanente program, a private system centered on the West Coast, may be a solution. We at Kaiser Permanente, who have had more than 30 years' experience working with health care problems, believe that prepaid group practice is a step in the right direction but that it is far from being the entire answer. Lessons we have learned lead us to believe there is a broader solution that is applicable both to the Kaiser Permanente system and to the system of private practice that prevails today.

The heart of the traditional medical care delivery system is the physician. Whether he practices alone or in a group, he is still directly involved in the care of the patient at every important stage, from the initial interview to the final discharge. Any realistic solution to the medi-

cal care problem must therefore begin by facing up to the facts about the supply of physicians.

Of the active doctors in the US a great many are engaged in research, teaching and administration. Those actually giving patient care, in practice and on hospital staffs, number about 275,000 (approximately 135 per 100,000 of population), and they are far from evenly distributed throughout the population. A preponderance are in urban areas, and within those areas they tend to be concentrated where people can best afford their services. Increasing specialization accentuates the shortage of doctors. If we were to augment the output of our medical schools from the present level (fewer than 9000 doctors a year) to twice that number (which is scarcely possible), we would barely affect this supply in 20 years, considering the natural attrition in our existing physician complement. The necessity of living with a limited supply of physicians in the face of increasing demand forces us to focus on the need for a medical care delivery system that utilizes scarce and costly medical manpower properly.

The traditional medical care delivery system has evolved over the years with little deliberate planning. At the end of the 19th century medical care was still relatively primitive: there was the doctor and his black bag and there were hospitals—place to die. People generally stayed away

What are the necessary elements of a rational medical care delivery system?

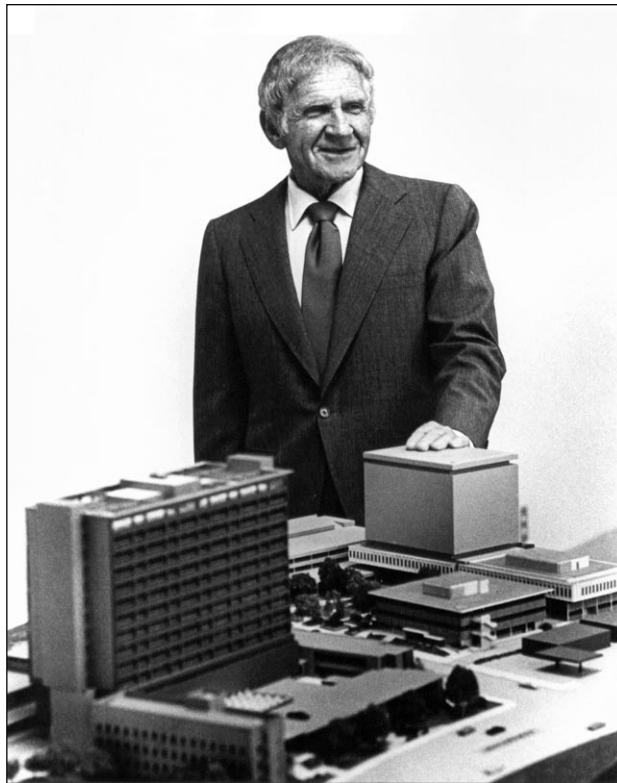
from the doctor unless they were very ill. In this century expanding medical knowledge soon became too much for any one man to master, and specialties began developing. Laboratories, x-ray facilities and hospitals became important adjuncts to the individual physician in his care of sick people. Since World War II a chain reaction of accelerated research, expanding knowledge, important discoveries and new technology has brought medical care to the level of a sophisticated discipline, offering much hope in the treatment of illness, yet requiring the precise and

costly teamwork of specialists operating in expensively equipped and highly organized facilities (see Figures 1a and 1b).

Throughout these years of remarkable medical achievement the delivery system has remained relatively unchanged, as though oblivious to the great need for new forms of organization equal to the task of applying new techniques and knowledge. Physicians have clung to individualism and old traditions. Their individual hospitals have continued on their individual ways, striving to be all things to their doctors and patients, creating their own private domains, largely ignor-

ing the tremendous need to merge their highly specialized services and facilities. It is only in comparatively recent years that group practice by doctors has been considered respectable (and as yet only some 12% of all physicians practice in groups) and that regional facility planning boards have appeared to force some semblance of cooperation on hospital construction.

It is amazing that the traditional delivery system functioned as well as it did for so long, considering the stresses between old methods and new technology. Much of its inefficiency was absorbed by dedicated



Dr Garfield with architectural models of Oakland Medical Center, 1972.

Special Feature

physicians working long hours and donating additional hours; much was absorbed by office and hospital personnel working for extremely low pay. Only recently, under the joint impact of soaring demands for service and demands for competi-

tive wages, has the system begun to break down, but it has been faltering for some time. In 1967, the National Advisory Commission on Health Manpower reported that “medical care in the US is more a collection of bits and pieces (with

overlapping, duplication, great gaps, high costs and wasted effort) than an integrated system in which need and efforts are closely related.”

Let us look at another medical care delivery system: the Kaiser

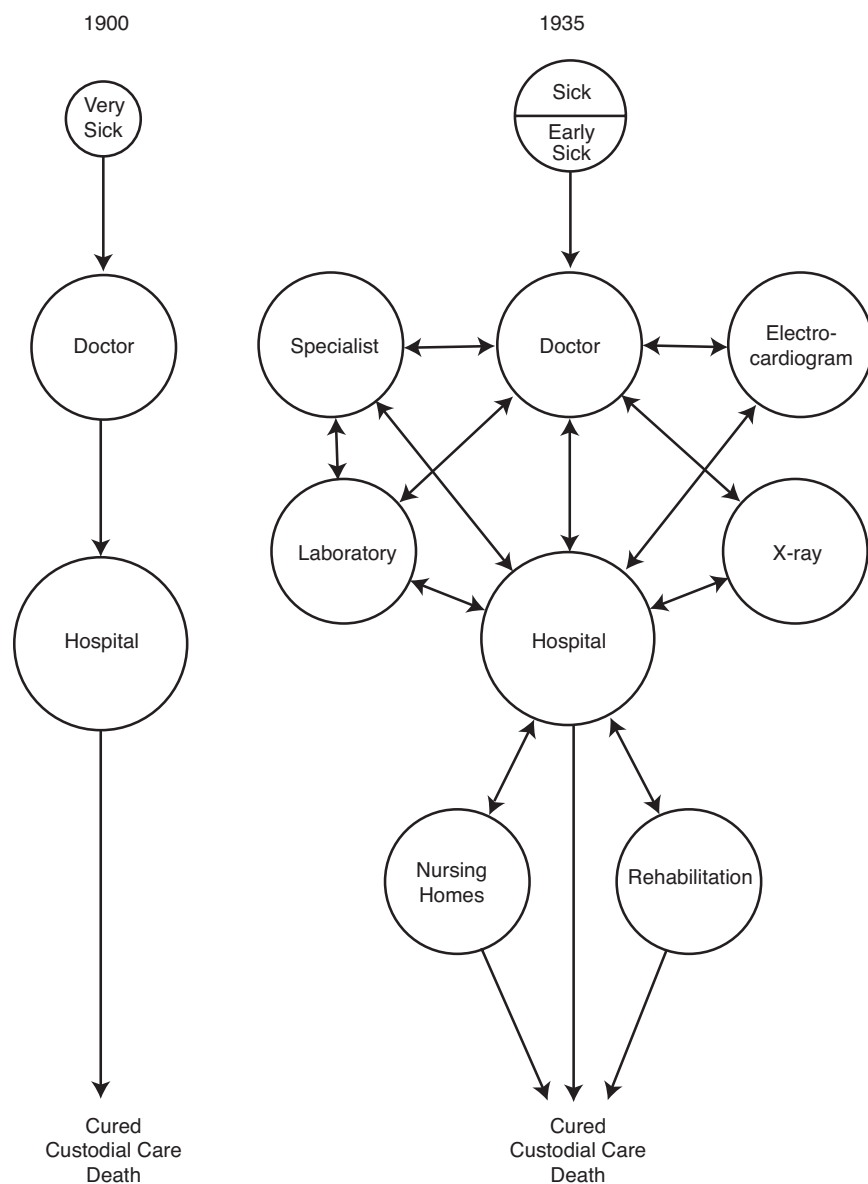


Figure 1a. Medical care has become more complex in this century and as it has become more effective the entry mix of people has changed significantly. Yet the entry point is still the doctor's appointment. Before 1900 medicine had little to offer and only sick people entered medical care. By 1935, as medicine began to have more to offer and as insurance plans appeared, some "early sick" people were entering the system.

Permanente plan. This program had its origin in southern California in the depression years from 1933 to 1938. I was then in private practice, and I became involved in providing medical and hospital services and facilities for several thousand

construction workers. Unable to make ends meet by depending for remuneration on the usual fee for service, I finally tried prepayment and thus happened on our basic concepts of health care. Prepayment to a group of physicians in inte-

grated clinic and hospital facilities proved to be a remarkably effective system for providing comprehensive care to workers on a completely self-sustaining basis. At the Grand Coulee Dam from 1938 to 1942, with the warm interest and counsel of Henry

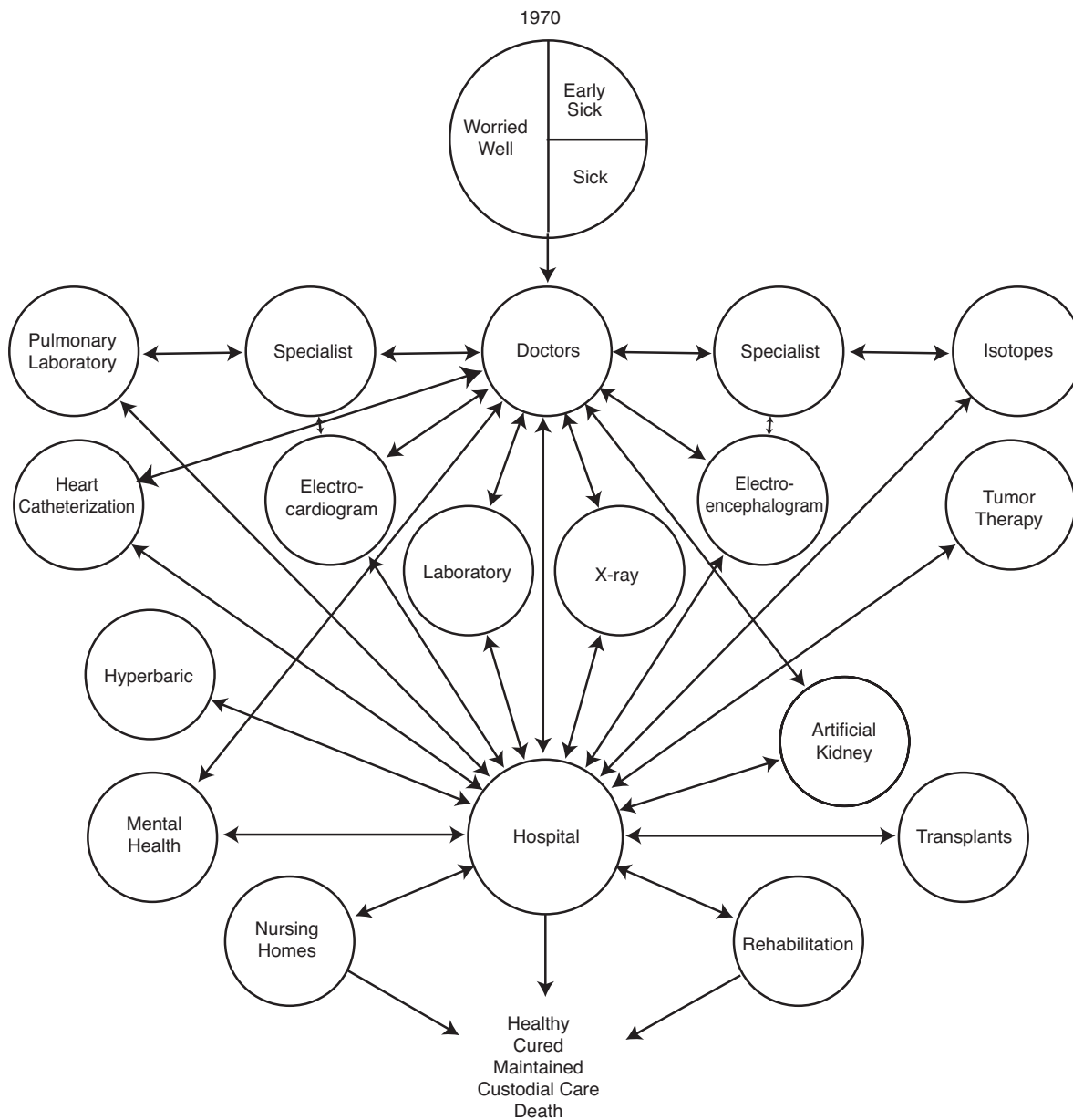


Figure 1b. Since World War II medical technology has proliferated, as indicated by the partial display of treatment components and well people enter, largely because of prepayment, insurance plans, Medicare and Medicaid.

Special Feature

... we consider it a fundamental principle that the physicians must be involved in responsibility for administrative and operational decisions that affect the quality of the care they provide.

J Kaiser and his son Edgar, these basic concepts were further developed, tested and broadened into a complete family plan for the entire temporary community built around that construction job.

World War II expanded our Health Plan concept into care for 90,000 workers of the Kaiser wartime shipyards in the San Francisco Bay area and a similar number of workers in the Portland and Vancouver area. At the end of the war these workers returned to their homes, leaving us with facilities and medical and hospital organizations. We decided to make our services available to the community at large. Since 1945 the plan has grown of its own impetus, without advertising, to its present size: more than two million subscribers served by outpatient centers, 51 clinics and 22 hospitals in California, Oregon, Washington and Hawaii and in Cleveland and Denver. The plan provides comprehensive care at an annual cost of \$100 per capita, which is approximately two-thirds the cost of comparable care in most parts of the country.

The plan is completely self sustaining. Physical facilities and equipment worth \$267 million have been financed by Health Plan income and bank loans (except for gifts and loans to the extent of about 2%). The plan income provides funds for teaching, training and research, and pays competitive incomes to 2000 physicians and 13,000 non-physician employees.

The Health Plan and the hospitals are organized as nonprofit operations and the medical groups in each area are autonomous partnerships. This organization gives our physicians essentially the same incentives as physicians in private practice have; they are motivated,

in addition, by their belief in the rightness of this way of practicing medicine.

In addition to prepayment, group practice and the integration of hospital and clinic facilities, we can identify three other principles that are essential to the plan's success. One is the institution of what is in effect a new medical economics, which flows simply from the fact that the total Health Plan income is turned over to the physicians and hospitals not as a fee for specific services but as a total sum. This reverses the usual economics of medicine: our doctors are better off if our subscribers stay well and our hospitals better off if their beds are empty. Another principle is freedom of choice. We require any group that wants to enroll its members in our group to offer them at least one alternative choice of medical plan, be it Blue Cross or a medical society plan or something else. Finally, we consider it a fundamental principle that the physicians must be involved in responsibility for administrative and operational decisions that affect the quality of the care they provide.

We believe any group of physicians, or a foundation working with physicians, can easily duplicate the Kaiser Permanente success. It only requires a dedicated group of physicians with reasonably well-organized facilities, a membership desiring their services on a prepaid basis and strict adherence to all these principles.

All of this is not to say that US medicine should change over to the Kaiser Permanente pattern. On the contrary, freedom of choice is important; we believe that the choice of alternate systems, including solo practice, is preferable for both the public and physicians. Any change

to prepaid group practice should be evolutionary, not revolutionary. Physicians in general have too much time and effort vested in their practice to discard them overnight. It will probably be the younger men, starting out in practice, who will innovate. Medical school faculties should point out the advantages and disadvantages of all methods of practice to these young men so that they can choose wisely.

Let us examine the functioning of these two systems—the traditional system and the Kaiser Permanente one. In the language of systems analysis, the traditional medical care system has an input (the patient), a processing unit of discrete medical resources (individual doctors and individual hospitals) and an output (one hopes the cured or improved patient). Customarily the patient decides when he needs care. This more or less educated decision by the patient creates a variable entry mix into medical care consisting of 1) the well, 2) the “worried well,” 3) the “early sick” and 4) the sick. This entry mix has markedly increased in quantity and changed in character over the years as medical care resources have grown in complexity and specialization. One constant throughout this evolution has been the point of entry into the system, which is and always has been the appointment with the doctor. Moreover, in traditional practice the patient enters with a fee.

The Kaiser Permanente program alters the traditional medical care delivery system in only two ways. It eliminates the fee for service, substituting prepayment, and it organizes the many units of medical care resources into a coordinated group practice in integrated clinic and hos-

pital facilities. We have come to realize that ironically the elimination of the fee has created a new set of problems. The lessons we have learned in seeking to solve these problems have a direct bearing on the difficulties besetting the country's faltering medical care system.

The obvious purpose of the fee is remuneration of the physician. It has a less obvious but very significant side effect: it is a potent regulator of flow into the delivery system. Since nobody wants to pay for unneeded medical care, one tends to put off seeing the doctor until one is really sick. This limits the number of people seeking entry, particularly the number of well and early-sick people. Conversely, the sicker a person is, the earlier he seeks help—regardless of fee. Thus, the fee-for-service regulator tends to limit overall quantity, to decrease the number of the healthy and early sick and to increase the number of the really sick in the entry mix.

Elimination of the fee has always been a must in our thinking, since it is a barrier to early entry into sick care. Early entry is essential for early treatment and for preventing serious illness and complications. Only after years of costly experience did we discover that the elimination of the fee is practically as much of a barrier to early sick care as the fee itself. The reason is that when we removed the fee, we removed the regulator of flow into the system and put nothing in its place. The result is an uncontrolled flood of well, worried-well, early-sick and sick people into our point of entry—the doctor's appointment—on a first-come, first-served basis that has little relation to priority of need. The impact of this demand overloads the system and, since the well and worried-well people are a considerable

proportion of our entry mix, the usurping of available doctors' time by healthy people actually interferes with the care of the sick.

The same thing has happened at the broad national level. The traditional medical care delivery system, which has evolved rather loosely over the years subject to the checks and balances of the open market, is being overwhelmed because of the elimination of personally paid fees through the spread of health insurance, Medicare and Medicaid. This floods the system not only with increased numbers of people but also with a changed entry mix characterized by an increasing proportion of relatively well people. For this considerable segment of patients the old methods of examining and diagnosing used by the doctor become very inefficient. He spends a large portion of his time trying to find something wrong with healthy people by applying the techniques he was taught for diagnosing illness. This reverse use of sick-care technology for healthy and comparatively symptomless people is wasteful of the doctor's time and boring and frustrating for him.

The obvious solution is to find a new regulator to replace the eliminated fee at the point of entry, one that is more sensitive to real medical need than to ability to pay and that can help to separate the well from the sick and establish entry priorities for the sick. We believe we have developed just such a regulator. Our Medical Methods Research Department, headed by Morris F Collen, who is an electrical engineer as well as a physician, has successfully developed and tested techniques for evaluating the health of our members. The system that has been developed, which is variously called multiphasic screening,

Dr Garfield in His Own Words

"You are participants in a medical experiment that can be of inestimable value to the future of medicine".

— First Annual Report of The Permanente Foundation Hospitals, January 1944.

"When we eliminated fee-for-service, we lost the only thing that made traditional methods of practice even tolerable. We have argued that once fee-for-service is out, the incentive for service must come from the heart. Spirit and stimulation from this, plus leadership."

— "Medicine of the Future" address by Sidney R Garfield, MD, to a staff education conference for physicians at San Mateo, CA, 1965.

"We set up the medical partnership so that the physicians would feel that they were not employed physicians but really owned their own operation."

— From Archival interview, 1978.

"We no longer saw terminal pneumonias, we saw early pneumonias. We didn't see very many ruptured appendices, we would see early appendicitis. And diphtheria totally disappeared when we gave immunizations. The people, with the barrier of cost removed, were coming to us earlier. We were able to treat them earlier, prevent them from getting complications and keep them from dying."

— From Archival interview, 1978. Dr Garfield on the results of opening the Grand Coulee prepaid plan to workers' families. For years, he used this dramatic example to show the power of prepaid medicine.

"It has always been our opinion that a medical care program worthy of perpetuation, in addition to being economically sound, must provide teaching, training, and research, all so necessary for the maintenance of high-quality care."

— Second Annual Report of The Permanente Foundation Hospitals, January 1945.

(Continued on page 52)

(Continued from page 51)

Dr Garfield in His Own Words

Obviously, blind faith has very definite limitations and it should be backed up with a balance of power—at least in business. Blind faith may work in religion, but it has limitations.

— Speech to TPMG partners, August 15th, 1974.

“Health education should not only be available, it should be unavoidable”

— *Scientific American*, 1970.

We are striving to prove 1) that high-quality medical and hospital services can be rendered to the people at a cost they can afford; 2) that this can be done to the benefit of all concerned—the people, the physicians, and the hospitals; last and not least that it can be done by private enterprise without necessity for government intervention. There is nothing sacred or secret in the idea. This cannot help but become more evident in the coming years.”

— A Report on Permanente’s First Ten Years, 1952.

“Our dream was to create by incorporating the principles of group practice, prepayment, and integrated facilities, so stimulating a form of practice that our doctors would be inspired to outperform ‘private’ practice in service and do so without the incentive of fees.”

— Sidney R Garfield, MD, 1977.

You can fight among yourselves, but as far as the outside is concerned have one common face and purpose just as you would in your own family. I think that if you would have a federation with the doctors in Southern California and the other regions, if possible, you would have all the power you need to control your destiny in the future.

— Speech to TPMG partners, August 15th, 1974.

“(Frontline staff) are the ones who first meet the members, and it is upon the manner in which they serve that our entire organization and service will be judged.”

— First Health Plan Manual for Employees, 1942.

(Continued on page 55)

health evaluation or simply health testing, promises to solve the problem of a new regulator to flow into our medical care delivery system.

Originally designed to meet our ever-increasing demand for periodic health checkups, health testing combines a detailed computerized medical history with a comprehensive panel of physiological tests administered by paramedical personnel. Tests record the function of the heart, thyroid, neuromuscular system, respiratory system, vision and hearing. Other tests record height and weight, blood pressure, a urine analysis and a series of 20 blood-chemistry measurements plus hematology. The chest and (in women) the breasts are x-ray’d. By the time the entire process is completed the computerized results generate “advice” rules that recommend further tests when needed or, depending on the urgency of any significant abnormalities, an immediate or routine appointment with a physician. The entire record is stored by the computer as a health profile for future reference.

This health-testing procedure is ideally suited to be a regulator of entry into medical care. Certainly it is more sophisticated than the usual fee for service or our present first-come, first-served method. As a new entry regulator, health testing serves to separate the well from the sick and to establish entry priorities. In addition it detects symptomless and early illness, provides a preliminary survey for the doctors, aids in the diagnostic process, provides a basic health profile for future reference, saves the doctor (and patient) time and visits, saves hospital days for diagnostic work and makes possible the maximum utilization of paramedical personnel. Most important of all, it falls into place as the

heart of a new and rational medical care delivery system (see Figure 2).

As I have indicated, much of the trouble with the existing delivery system derives from the impact of an unstructured entry mix on scarce and valuable doctor time. Health testing can effectively separate this entry mix into its basic components: the healthy, the symptomless early sick and the sick. This clear separation is the key to the rational allocation of needed medical resources to each group. With health testing as the heart of the system, the entry mix is sorted into its components, which fan out to each of three distinct divisions of service: a health care service, a preventive maintenance service and a sick care service. Compare this with the existing process, where the entire heterogeneous entry mix empties into the doctor’s appointment, a sick care service.

Health care service is a new division of medicine that does not exist in this country or in any other country. Medical planners have long dreamed of the day when resources and funds could be channeled into keeping people healthy, in contrast to our present overwhelming preoccupation with curing sickness. Yet health care has been an elusive concept, and understandably so: well people entering medical care have been hopelessly mixed into and submerged in sick care, the primary concern of doctors. Doctors trained and oriented to sick care have been much too busy to be involved in the care of well people. True health care never had a chance to develop in that environment. In fact, not even the highly socialized governments with socialized medicine have created any significant services for the healthy other than sanitation and immunization. These governments swamp the doctor with the entire

entry mix of well and sick and thus are unable to provide adequate care for either.

The clear definition of a health care service, made possible by health testing, is a basic first step toward a positive program for keeping people well. It should be housed in a new type of health facility where in pleasant surroundings lectures, health exhibits, audio-visual tapes and films, counseling and other services would be available. Whether or not one believes in the possibility of actually keeping people well, however, is now beside the point; this new health care service is absolutely essential in order to meet the increasing demand for just this kind of service and to keep people from overloading sick care resources.

Preventive maintenance service, like health care service, has been submerged in sick care. Essentially it is a service for high-incidence chronic illness that requires routine treatment, monitoring and follow-up; its object is to improve the patient's condition or prevent progression of the illness, if possible, and to guard against complications. This type of care, performed by paramedical personnel reporting to the patient's doctor, can save a great deal of the doctor's time and (because it allows more frequent visits) provide closer and better surveillance.

The use of paramedical personnel with limited knowledge and limited but precise skills to relieve the physician of minor routine and repetitive tasks requires that such tasks be clearly defined and well supervised. Procedures are automatically defined and structured in the new system by the clear separation of services. Three of the four divisions of the proposed system—health testing services, health care services

and preventive maintenance service—are primarily areas of paramedical personnel. Supervising physicians will be involved in varying degrees: least in health testing and

most in preventive maintenance. This leaves sick care, with its judgments on diagnosis and treatment, clearly in the physician's realm. Even here, however, he will be

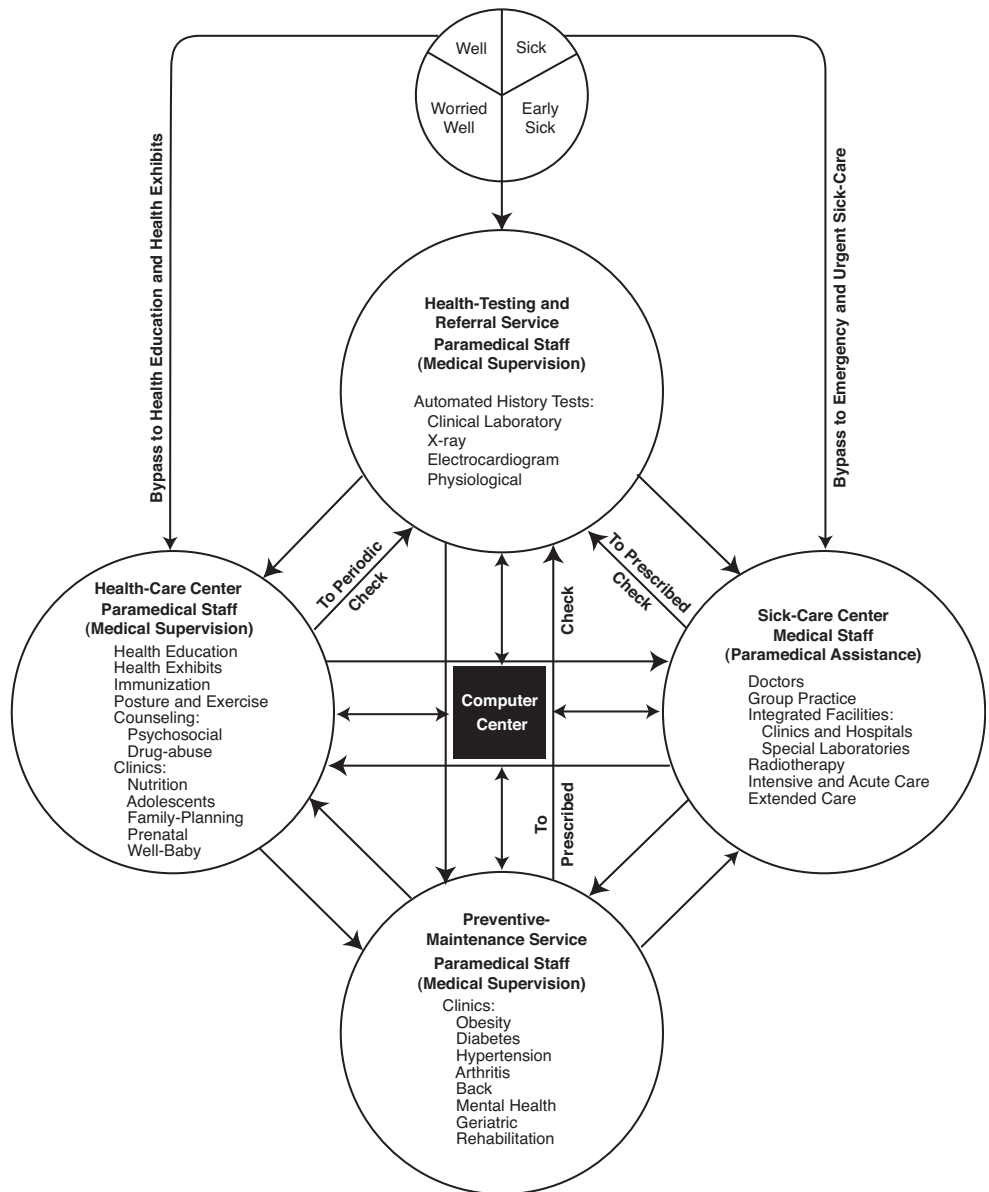


Figure 2. New delivery system proposed by the author would separate the sick from the well. It would do this by establishing a new method of entry, the health-testing service, to perform the regulating function that was performed, more crudely, by the fee for service. After health testing the patient would be referred for sick care, health care or preventive maintenance as required and would be transferred among the services as his condition changed. The computer center would regulate the flow of patients and information among the units, coordinating the entire system, which would depend heavily on paramedical personnel to save doctors' time.

Special Feature

Quality medical care as a right cannot be achieved unless we can establish need, separate the well from the sick and do that without wasting physicians' time.

aided by the three other services: in diagnosis, by health testing; in follow-up care, by preventive maintenance; in repetitive explanations and instructions to patients and relatives, by the audio-visual library of the health care service. We believe, incidentally, that the doctor-patient relationship, which is suffering from the pressure of crowded schedules today, would gain under this system. Giving the doctor more time for care of the sick can help to preserve the relationship at the stage where it counts most.

Implementing the new delivery system should be relatively simple in the Kaiser Permanente program, since there are no basic conflicts: The subscribers will benefit from better and prompter service to both the well and the sick; the doctors will have more time for their sick patients and their work will be more interesting and stimulating. Although the complete system remains to be tested and evaluated at each step, our hypothesis, on the basis of our research to date, is that we can save at least 50% of our general practitioners', internists' and pediatricians' time. This should greatly enhance our service for the sick and improve our services for the well.

Implementing this new medical care delivery system in the world of traditional medical practice will be more difficult, but it still makes sense. Many forward-looking physicians will see in these new methods an opportunity to improve their services to patients. Most doctors these days have more work than they can handle and begrudge the time they must spend on well people. The assistance they could get from health testing and health care services will be welcome to many of them if such services are carefully designed and planned to help them. The sponsor-

ship of health testing and health care services for private practice logically falls to the local medical societies. Some have already moved in the direction of health evaluation. A few local medical societies in northern California have for several years been operating a mobile unit evaluating the health of cannery workers. Some leaders of other medical societies have expressed interest in health testing as an entry into medical care. They realize that improvement of the delivery system is essential for the preservation of the private enterprise of medicine in this country.

The proposed delivery system may offer a solution to the hitherto insoluble problem of poverty medical care in many areas. The need is to make health services accessible to poor people. To this end neighborhood clinics are established, but staffing these clinics with physicians has proved virtually impossible. Physicians in general want to be in a stimulating medical environment; they like to associate with well-trained colleagues in good medical centers and tend to avoid isolated clinics.

In the system being proposed a central medical center, well staffed and equipped, would provide sick care. It could have four or five "outreach" neighborhood clinics, each providing the three primarily paramedical services: health testing, health care and preventive maintenance. Staffing these services with paramedical personnel should be much less difficult than staffing clinics with doctors; many of the workers could be recruited from the neighborhood itself. Such outreach clinics, coordinated with the sick-care center, could provide high-quality, personal service—better service, perhaps, than is available to the affluent today—at a cost probably lower than the cost of the inferior

service poor people now receive.

The concept of medical care as a right is an excellent principle that both the public and the medical world have now accepted. Yet the words mean very little, since we have no system capable of delivering quality medical care as a right. This is hardly surprising. Picture what would happen to, say, transportation service if fares were suddenly eliminated and travel became a right. What would happen to our already overtaxed airports and what chance would anyone have of getting anywhere if he really needed to? National health insurance, if it were legislated today, would have the same effect. It would create turmoil. Even if sick care were superbly organized today, with group practice in well-integrated facilities, the change from "fee" to "free" would stagger the system.

Quality medical care as a right cannot be achieved unless we can establish need, separate the well from the sick and do that without wasting physicians' time. It follows that to make medical care a right, or national health insurance possible, it is mandatory that we first make available health testing and health care services throughout the country. It is our conviction that these services should be provided or arranged for by the physicians themselves in order to be responsive to their needs and not just a commercial operation.

A basic cause-and-effect relationship is directly responsible for much of today's medical care problems. The cause is the elimination of a personally paid fee for medical service. The effect is a changed, unstructured entry mix into the delivery system that wastes scarce medical manpower. The suggested

solution, a new method of entry through health testing, serves as the heart of a new medical care delivery system for the future.

The entry of healthy people into the medical care system should not be considered undesirable. It opens the door to a great opportunity for American medicine: If these well people are guided away from sick care into a new, meaningful health care service, there is hope that we can develop an effective preventive-care program for the future. The concomitant release of misused doctors' time can significantly slow the trend toward the inflation of costs and mal-distribution and un-

availability of service. There should be little shortage of manpower if manpower is utilized properly.

Medical care stands at a critical point. One choice would be to adopt rash legislation that can only depreciate the quality of care for both the sick and the well. The better choice is to create a rational new medical care delivery system that will make it genuinely possible to achieve the principle of quality medical care as a right. Matching the superb technology of present-day medicine with an effective delivery system can raise US medical care to a level unparalleled in the world. ❖

A Poor Salesman

"Sid's a genius at the organization of this pre-paid group medical care, but he's the poorest salesman in the world.

He knows how to do it but when he gets up to tell it, what comes out of Sid's mouth ain't music" said the big builder laughing.

— Henry J Kaiser in *Life Among the Doctors*, Paul de Kruif, author; Harcourt, Brace & Co, 1949

This "Moment in History" quote collected by Steve Gilford, KP Historian

(Continued from page 52)

Dr Garfield in His Own Words

"We consider it a fundamental principle that the physicians must be involved in responsibility for administration and operational decisions that affect the quality of the care they provide."

— *Scientific American*, 1970.

"For the majority of our fellow citizens, medicine is prohibitively expensive. Health on the other hand is something almost anyone can afford. In this statement of economic fact there is contained a solution to the problem that is now uppermost in the minds of physicians, legislators, and public-spirited laymen."

— The Plan That Kaiser Built, *Survey Graphic Magazine*, December 1945.

"Hospital design is sort of a hobby of mine."

— *New York Times Magazine*, April 28, 1974.

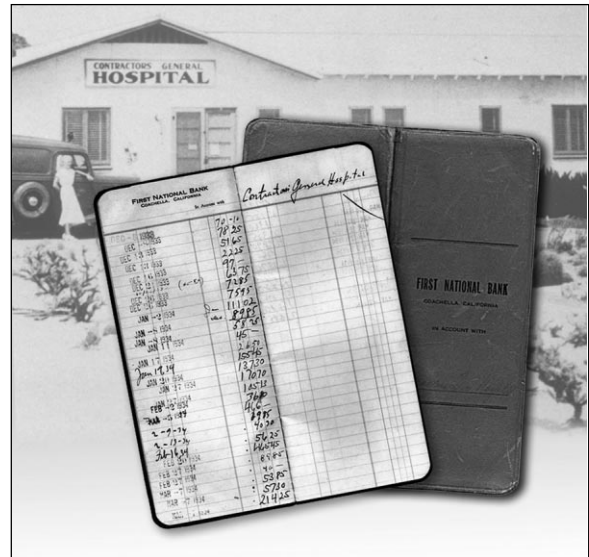
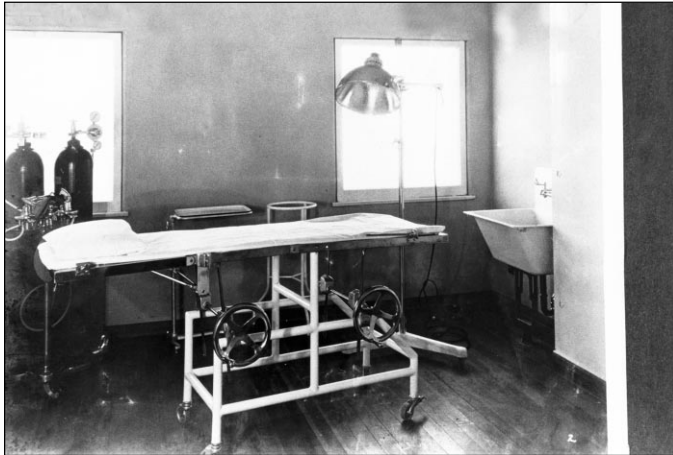
"How shall we achieve a wider and fairer distribution of the blessings of modern medical science? It is clear that no satisfactory answer will be found as long as doctors and hospitals derive their income from ill health, sickness and accident."

— The Plan That Kaiser Built, *Survey Graphic Magazine*, December 1945.

"Instead of an intermittent sickness and accident service, doctors and hospitals should constitute themselves to render a continuous health service."

— The Plan That Kaiser Built, *Survey Graphic Magazine*, December 1945.

Special Feature



(above) Dr Garfield's ledger books from Contractors General Hospital, 1933-38. Ledger courtesy of Ed Blackman.

(left, top) A Ford panel truck outfitted as an ambulance that Dr Garfield leased for Contractors General Hospital, 1933.

(left, bottom) The operating room at Dr Garfield's Contractors General Hospital, 1933-38.

The Rediscovery of Contractors General Hospital —Birthplace of Kaiser Permanente

By Steve Gilford

Stanley Ragsdale remembered Sidney Garfield, MD, from the days when the young doctor from Los Angeles first arrived in the Mojave Desert town of Desert Center in the early 1930s. Dr Garfield had come there to set up a hospital to treat workers building the nearby Colorado River Aqueduct. The 242-mile aqueduct was the largest public works project of its day.

Back then, Stanley was a high school student working in his father's gas station. His father, "Desert Steve" Ragsdale, was the founder and the operator of Desert Center. Today Stanley's five adult children own most of the small desert community and its struggling businesses—a gas station and a cafe. Sitting alongside Interstate 10, the dusty little town is a welcome respite for long-distance travelers who stop in for a meal or a tank of gas.

Over the three years of our acquaintance, Stanley had told me that he was willing, even anxious, to help me locate the exact site of Dr Garfield's original hospital, that tiny 12-bed forerunner of all of today's Kaiser Permanente (KP) medical centers, clinics, and medical offices. On a previous trip, Stanley had been able to take me to the general area, but we hadn't found the exact site, which was not in Desert Center but several miles west of town, close to the aqueduct.

The old hospital building had been torn down more than half a century before I set out to find the site. Because it had been a temporary building, with no foundation, there was no cellar hole to mark the spot. By chance, Stanley had run across the hospital site several years before and he was positive that if we kept at it he could lead me there.

Standing outside the Desert Center café, the sun felt as though it were a fiery weight pressing down on head and shoulders. It wasn't so much that it was hot, it was the physical pressure of the brilliant sunlight that drove us into whatever shade we were able to find.

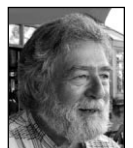
Stanley was asking me if I minded following him in my rental car out to the area we were going to be searching this day. He was concerned about what would happen if his pickup truck broke or if he had multiple flat tires.

Smiling at his own humor, Stanley explained that he never gets stranded in the desert, but he has been "se-



Dr Garfield taking a break in front of his hospital in the Mojave Desert, 1935.

Steve Gilford is the Senior History Consultant to Kaiser Permanente and has been researching and writing about Kaiser Permanente history for more than twenty years. He is also a filmmaker, writer and historian, specializing in the life and times of Henry Kaiser. E-mail: sageprod@aya.yale.edu.



Special Feature



Scattered ruins of Contractors General Hospital as it appears today.
Photo Tom Debley.

Building that tunnel had been one of the major achievements in the creation of the entire aqueduct. It had taken the efforts of hundreds of men and several years to complete. A work camp, almost a company town, with dormitories, dining hall, offices and workshops, had grown up at the eastern end of the tunnel. Because of round-the-clock shifts, the town was active day and night.

A site about a five or ten minute walk south of the work camp down a now lost road was the place Dr Garfield had chosen for his hospital. Here, only a few hundred quieting yards from the work camp, he could get the electricity and the water he needed to operate a hospital.

It was easy enough for Stanley to find the general area of the work camp. Sticking out of the ground were chunks of concrete that had once been bases for heavy equipment and floors of some of the workshops.

Stanley signaled for me to park. I left the car in the middle of the old camp and climbed into the front of the pickup with him. We left the road and made our own way to places where rented cars are clearly not meant to travel.

Now I understood fully why Stanley had wanted two vehicles out here. A puncture from a sharp rock, an ironweed thorn through a tire, and the truck would be disabled. Having a second vehicle available within a mile or two could be the difference between living and dying. Even in the desert heat, I got a little chill when I realized that this was not melodrama, this was fact.

As we picked our jarring way through the rocks and brush following Stanley's best recollections of the location, I tried to imagine what life had been like here for the men who had lived in the work camp back then. The young doctor from Los Angeles must have seen a lot of cases of sunburn, sunstroke, and heat exhaustion as well as cactus punctures, snakebite and, of course, industrial accidents. It would have seemed exotic as well as rugged to an adventuring "city doctor" practicing medicine 200 miles from the well-equipped, well-staffed Los Angeles County Hospital where he had trained.

Periodically, Stanley would stop the truck, reach down for a water bottle and take a long pull at it. "I got you out here and now I'm having trouble gettin' us to it," he said. For more than 70 years he had lived here. He knew the hundreds of square miles of country around here better than I knew the neighborhood ten blocks in any direction from my city home, so I was still figuring that our chances of finding the hospital were pretty good.

It would seem like an easy matter to find a particular

riously detained" out there several times. For safety's sake, he had tried to describe to his assistant at the cafe where we would be, but the nearly featureless landscape of the desert made giving directions impossible. Also, since we were going to be outside of CB radio range, Stanley felt that a second car was a prudent precaution.

I followed Stanley's pickup west from town on what was really the extension of Main Street. It had once been a part of US 60, a section of the old "southern route" across the country. "Desert Steve" Ragsdale had been fond of saying that the town of Desert Center had the longest Main Street in the world. According to him, it extended for more than 100 miles east and west of town, to the two closest cities, Indio on one side and Blythe on the other. The construction of Interstate 10 had led to the abandonment of this old road.

I was very aware that this was the road that Dr Garfield must have traveled to go into town for mail and for the few services that Desert Center offered. Ahead, I could see Stanley's truck turn right, off the pavement, onto a dirt road. I slowed down to let his thick dust plume dissipate behind his car. For the next few miles, Stanley led us along several different roads, a network of unpaved tracks, always moving closer to the base of the Eagle Mountains.

The Eagle Mountains are a range of reddish monoliths, sharp, steep-sided and carved with deep vertical ribs. The mountains extend across the desert here forming a wall that had blocked the proposed route of the aqueduct towards Los Angeles. The solution was a hardrock tunnel to be blasted through the heart of the mountains.

The young doctor from Los Angeles must have seen a lot of cases of sunburn, sunstroke, and heat exhaustion as well as cactus punctures, snakebite and, of course, industrial accidents.

location, even in the desert, if you knew within a mile square where it must be, but this is emphatically not the case. The desert in this region is a low forest of cactus and brushy plants that obscures landmarks and covers up old roads and clearings. We criss-crossed the area in the truck, picking our way between clumps of rabbit brush and Mormon Tea.

Frustrated, Stanley decided that the only way we could be sure of finding the old hospital site was to get out of the truck and walk. I took my notebook, camera and a photograph of the old hospital taken while it was in operation more than 50 years before. Somehow it made sense to be carrying that 8"x10" glossy print back through the shimmering heat to the exact place where it had been taken more than a half century before. Sitting on the front steps of the pictured hospital, dressed in his hospital whites, was Dr Garfield. The photograph must have been taken just a few yards from where we were standing—but in which direction?

Stanley's enthusiasm for the search gave him the vigor of a man half his age. I could watch him striding across the landscape, searching from side to side, expertly avoiding the barbs and thorns that protect the desert plants. Less practiced, I had to stop periodically to pull burrs, thorns and stickers from my pants, boots and, occasionally, my leg.

I was bent over, gingerly removing the barbs of a jumping cholla plant from my leg, when a little lizard ran out from under the shade of a nearby creosote bush. He disappeared into the cool protection of an ocotillo plant. Near where he had run, I saw a piece of a dark brown bottle lying on the sand. I picked it up more in curiosity than with the sense that it was a clue.

I started to grin when I realized that it was probably a medicine bottle. It had the familiar heavy glass, square bottom still used by pharmacies to hold prescription liquids. Before I could even show it to Stanley, I spotted a piece of what looked to have been a butter plate. The blue and white floral pattern reminded me of the dishes my grandmother had used for years. That would make it of the same period as the hospital. I took both pieces in my hands and ran over to Stanley. "What do you think? Do you think they're from the hospital?" Seven decades had given him a bit more perspective than I was showing. He refused to commit himself beyond, "It's possible. Hard to tell."

The possibility that we had found some artifacts from the original Garfield hospital was enough to boost our energy for the search by another notch. We continued crisscrossing the area looking for new clues. We had the distinct feeling we were getting closer.

"This is it!"

There was absolutely no doubt in Stanley's voice as he shouted to me from 50 yards off to my left. I ran over and stood beside him. For a moment, I couldn't see anything different about this particular patch of desert. Then I started to make out the pattern on the ground that Stanley had seen.

There hadn't been a true foundation under the hospital, but there had been a concrete frame, built around the outside of the hospital to hold it a few inches above the ground. Most of that concrete was still visible although much of it had crumbled. Even so, the outline of the building was clearly visible. I could see that the concrete had once been faced with stucco to give it a neater appearance.

I held the photograph with Dr Garfield in front of me and lined it up with the outline on the ground. Already I could see some things that were not visible in the picture.

The shape of the building was not the simple rectangle we had imagined. The overall floor space of the building was reduced by two indentations in the back, most likely the emergency entrance and ambulance dock. This certainly had been a modest beginning for an organization that within a few decades would be building medical centers in which the Building and Grounds Department would have more space allocated to it than this entire hospital, but this was the hospital that Dr Garfield had dreamed of starting.

He had borrowed \$2500 from his father to get it underway. He had convinced Depression-struck medical suppliers that they would be better off advancing him equipment that he could pay off with fees he could then generate rather than letting that equipment linger indefinitely in warehouses until the Depression might end. And then he had convinced a local contractor to build the hospital and to wait for payment until the fees from workers began coming in.

Dr Garfield was unusual among physicians of that time in that he was convinced that patients responded not only to the science of medical care but also to the attractiveness and comfort of their surroundings. A hospital that was cheerful, comfortable and bright was a part of his prescription for his patients.



California registered historical landmark #992 at Desert Center, CA, near the site of Dr Garfield's hospital.

Special Feature

In his efforts to make the hospital comfortable, Dr Garfield didn't hesitate to contact even the largest, most well-established corporations. He went to General Electric (GE) and persuaded them to advance him an air conditioning unit. Air conditioning in hospitals was still quite new and it turned out that GE was interested in getting more experience in the specific needs and problems of cooling in medical settings. They listened to the arguments from the enthusiastic young surgeon who was starting a hospital in some place called Desert Center. Not long after, the tiny hospital became one of the first in California to be fully air conditioned.



Fragments of IV bottles and other medical waste are scattered about the old hospital site. *Photo Tom Debley.*

The result of Dr Garfield's planning and efforts had been a cheery, well-equipped hospital. Although it was small, it was well-designed to meet the specific needs of the practice. It was Dr Garfield's first chance to take what he had learned in his years at the hospitals at the University of Iowa, in Chicago and in Los Angeles and to adapt it in his own design for a brand new hospital. All in all, Contractors General was a remarkable building.

The building was cheerful and comfortable enough that it soon became a kind of social center. People from the construction companies and from companies that did business with the contractors often stopped by the little medical center for some iced tea and, if things were slow, to play bridge with other visitors and with the hospital's nursing staff of one, Betty Runyen.

Ms Runyen was an attractive blonde, fresh from nursing school. She was bright, had excellent training and was undeniably charming—so charming that, 50 years later, Stanley Ragsdale still smiles when he recalls himself as a teenager pumping gas for her at the Ragsdale gas station and admiring her through the car windshield.

The photograph I was carrying showed that someone had made an unpretentious attempt to decorate the entrance to the hospital. The snapshot showed two ollas, large earthen urns, flanking the three steps leading up to the front door of the building.

Stanley was poking through the rubble where the concrete steps had been when he called me over and handed me two chunks of reddish pottery, each about 3/8" thick. It seemed likely that they were the remains of the two ollas in the photograph. After a few minutes more of searching, we found several more.

I made a wide swing around the hospital "grounds," picking my way through the desert brush, looking for evidence of the stone barbecue fireplace that had been an important part of the social life in this remote area. Many people had dropped by for iced tea and conversation and had stayed to grill their dinner in the first cool of evening behind the hospital. I found one likely pile of stones but nothing that identified it for certain.

Behind the stones we found a site where Dr Garfield and his staff had buried their trash. During intervening decades, someone had dug into the pit, probably looking for highly prized old medicine bottles. Whatever they had found, they'd left some interesting items from the hospital that had provided the foundation for what became KP. There was a fragment of an old apothecary jar, a ceramic cannula for linking rubber tubes, and an assortment of broken coffee cups and dinner plates that had once served patients and staff. My favorite finds were the parts of two large bottles that had once held intravenous solutions. Their embossed bottoms read "Property of Don L Baxter—The Travenol Co." After photographing them, I replaced each item carefully where I'd found it. Then after measuring the site, I took a series of photographs documenting the construction, as well as I could.

Although it could never be described as elegant, the simple construction did do the job. Concrete pads had supported the floor joists. What served as the foundation was simply concrete poured into narrow ditches around the perimeter of the building. This not only had stopped blowing dirt from coming up through the floors, it had kept out snakes and other animals trying to escape the desert heat.

The last thing I did was to take panoramic shots of the area to help me locate the spot again and left a small rock cairn pointing at the site at the edge of the nearest dirt road that passed by the area. This way, I knew I'd be able to return to the remains of what became the foundation of The Permanente Medical Groups, the Kaiser Foundation Hospitals and the Kaiser Foundation Health Plan. ❖

Residency Days of Sidney R Garfield, MD

By Vincent J Felitti, MD
Emilio Morfin, MD, FACS

A Suitcase Traveling Through Time

In the mid 1990s, Sidney Garfield's grandnephew, Ed Blackman, contacted one of us (VF, an internist) to ask if he would like to have a suitcase of Dr Garfield's medical records that Ed had just retrieved from his grandmother's, Sally Garfield Blackman's, basement. (Ed and I already knew each other because, years ago, Ed had worked in my department for a few months after Dr Garfield called to ask whether the department might have a temporary summer opening for his sister's grandson.) I was certainly interested in the papers, I told Ed.

A few days later, Ed brought over a battered, black suitcase that clearly was from another era. Inside, in addition to a number of desiccated spider corpses, lay a trove of medical documents dated from 1930 to 1941. These were the carbon copies of all Dr Garfield's operative and autopsy records from his residency days at Los Angeles County-USC Medical Center plus some correspondence from the early war years, when he was in private practice. (Unfortunately, these reports of autopsies performed by Dr Garfield as part of his surgical training had been lost in transit during the process of getting them reviewed.) Preliminary review of the reports revealed what we today would consider unusual causes of death, not only because of disease type,

but also because so many medical conditions were at an advanced stage at presentation. The autopsy findings gave witness to a historical fact: Tuberculosis, endocarditis, syphilis, and visceral perforation were vastly more common than they are today.

The suitcase also contained some personal memorabilia: the results of Dr Garfield's California Medical Board examination for licensure (Figure 1); a handwritten poem; and a notice from the US Treasury Department that a new series of booklets about venereal disease had become available at an annual subscription price of 50 cents. The US Public Health Service was then part of the Treasury Department because of the relation between public health and international commerce. Of course, some things never change: The library was owed 20 cents for an overdue issue of *Surgical Clinics of North America*, and the typing pool had issued several reminders about overdue dictation. But some things do change, and quite a bit: Postage on a first-class envelope was two cents and was one cent on an unsealed second-class envelope that contained an advertisement from a pharmaceutical company.

We all recognize that medicine has changed greatly since the Depression, but Dr Garfield's records bring new depth and reality to that awareness. *Los Angeles County General*

Hospital Bulletin #1356—received from Dr Berman, that institution's Medical Director—listed the 50 compounded prescriptions available to the Outpatient Department, including several different formulations of bromine, a compound prescribed long ago for nervousness. (Today, long after the drug has been forgotten, the term "an old bromide" is used idiomatically to mean a phrase or notion that is so common that it has become a cliché or platitude.) A notice from the laboratory told of a new analytic test for bromism, a then-common problem resulting from chronic use of bromides for sedation or seizure control. Pseudohyperchloremia was a helpful indicator for this condition because bromine would interfere with measurement of chlorine.

The bulletin found in the suitcase also reminded us of other past practices:

- Luminal (phenobarbital) was available for sedation and to treat seizures;
- Stramonium with KNO_3 was compounded to burn so that its fumes could be used to treat asthma;
- Ephedrine and epinephrine were other compounds available to treat asthma;
- Several formulations of cascara were available to treat constipation, as were mineral oil and the proprietary product, Petrolagar;
- "I, Q, and S" was available as

... a
battered,
black
suitcase ...
Inside ... lay
a trove of
medical
documents
dated from
1930 to 1941.

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a general tonic because of the various benefits of its components—iron, quinine, and strychnine;

- Cod liver oil was carried in the outpatient formulary to treat or prevent rickets;
- Aspirin and amidopyrine were listed for fever;
- Blaud's Pills were available for anemia.

For some reason, digitalis was not on the list; perhaps it required specialist consultation. And sulfa drugs did not yet exist. All told, one might have preferred being a surgeon in those days.

Surgery in the 1930s

One of us (EM, a surgeon) reviewed 347 of Dr Garfield's operative notes—a major sample—dated from 1930 through 1932. Of these, 182 were for blood transfusion (a procedure then done in the operating suite) using the then-new Luer technique involving multiple sy-

ringes. (Luer-lock syringes are still with us.) The typical amount of whole blood transfused in adults was 500 mL. Local anesthesia was always used. For 70% of patients receiving transfusion, the indication for transfusion was primary anemia, including pernicious anemia; in the other cases, transfusion was used as treatment for acute leukemia, appendicitis, auricular fibrillation, pellagra, empyema, endocarditis, pneumonia, diabetic coma, peritonitis, "general debility," sepsis, and various types of carcinoma. Blood transfusion was viewed as a tonic to improve the general status of a patient. Banked blood did not exist, nor did the concept of packed red cells. Typically, skin was prepared for surgery by using Tincture of Merthiolate, the new proprietary product introduced by Eli Lilly & Co. in 1929.

We were interested also to observe that American nursing in the 1930s was not a job either for men or for married women: All surgical nurses named in the reports were listed as "Miss." Another professional reality of the times is reflected by a glaring omission: None of the physicians' or surgeons' named in the reports were women.

Of Dr Garfield's operative procedures, the most common was appendectomy. Of the 95 appendectomy cases for which the suitcase held records, nine had questionable diagnoses, and four were diagnosed as pelvic inflammatory disease. In the remaining 86% of appendectomy cases, the appendix was described as acutely inflamed, gangrenous, or perforated. For cases in the latter two categories, Penrose drains were used. The predominant incision was right paramedian; a McBurney incision was used in only 5% of the patients. A clear sign of the times was the large number of

including one that had propagated to form a scrotal abscess. In the years since Dr Garfield's residency, the comprehensive health insurance that he pioneered has made a huge difference in the stage at which a diagnosis of appendicitis leads to surgery in the United States.

The reports showed that 25 hernia repairs were performed: 18 inguinal, 5 femoral, and 1 epigastric. Two hernias were incarcerated, and 3 were strangulated. The Bassini technique was used in 14 of the 18 inguinal repairs. This procedure has now mainly been replaced by the use of mesh.

Considering the pre-antibiotic era in which Dr Garfield practiced as a resident, we were not surprised that his notes described 32 drained abscesses. One of these was a tuberculous abscess of the neck with associated tuberculous lymphadenitis. And unlike Dr Garfield, most of us will never see a case of scrofula in the United States. Of the several cases of intestinal obstruction mentioned, one resulted from tuberculous peritonitis with four liters of fluid removed during the surgical procedure. Dr Garfield's postoperative status note consists of one word: hopeless. He used that word more than once in his reports. Leafing through the notes, we repeatedly found patients coming to surgery very late (Figure 2). In a substantial percentage of patients who received cholecystectomy, the procedure was done as treatment for empyema of the gallbladder with early rupture. As was typical of any large charity hospital, the events leading to surgery also included gunshot wounds, stabbings, and eviscerations.

Spinal anesthesia with Novocain (procaine hydrochloride) was used in most cases, sometimes combined with local anesthesia. A few cases received ether; still fewer received

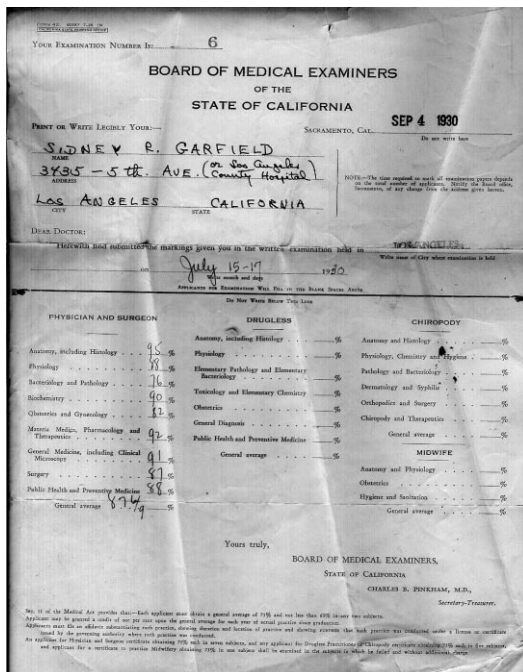


Figure 1. Sidney Garfield passes the State Boards. Reproduced with permission.

nitrous oxide, but we could not determine the basis for this choice except in cases where the operative site was obviously too high to be reached with the anesthetic-filled needle. In one case, a two-liter retro-peritoneal abscess was drained with the patient under local anesthesia. In the 1930s, local anesthesia was often considered the safest choice for patients in poor physical condition; now, because of endotracheal anesthesia and muscle relaxants, we believe the exact opposite. In no instance was endotracheal intubation used.

Two newborns received surgery without anesthesia. At that time, the general belief was that newborns did not feel pain—and that if they did, they would retain no memory of it. Reinforced by new concepts of somatic and emotional memory and by recent advances in neurobiology, our thoughts have changed dramatically on this point.

Reading the operative reports left us wondering what life must have been like on a personal level for a surgical resident practicing 75 years ago, during the Depression. Some hint is provided by a handwritten poem penciled on the back of a reprint describing the current state of knowledge about spasm of the gastroesophageal sphincter:¹

All by myself I've traveled
weary miles, unraveled
along the hiway of love.

Where is Simple hiding?
I'm so in need of guiding
along the hiway of love.

My poor heart is torn
with anguish and woe.
I just find a thorn instead of the roses.

And when my searching is over,
I'll know love and live in clover
along the hiway of love.^a

Dr Garfield's operative notes at LA County-USC Medical Center stop in

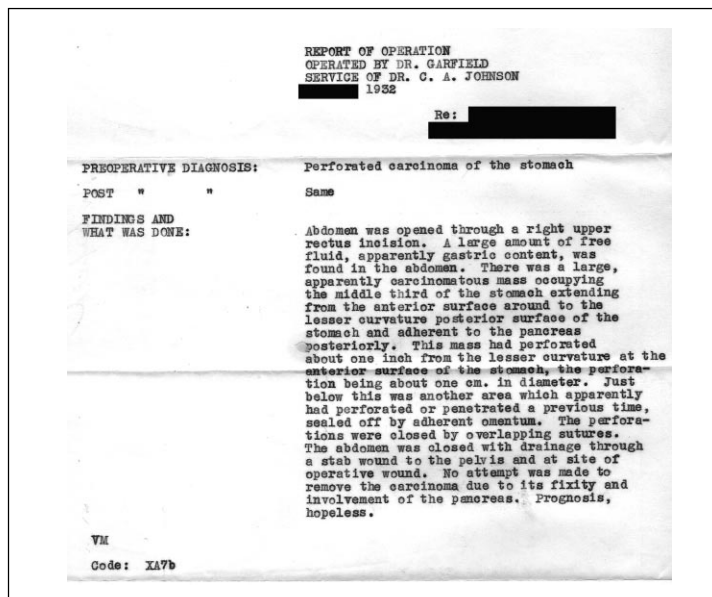


Figure 2. An operative note. *Reproduced with permission.*

June 1933. Later that year, he traveled to Desert Center, California, and took out loans that, along with \$2500 of his personal savings, he used to build his now-famous 12-bed Contractor's General Hospital for the workers constructing the Los Angeles Aqueduct. Here came Dr Garfield's first contact with industrialist Henry J Kaiser—a separate story which begins Paul de Kruif's once-famous book, *Kaiser Wakes the Doctors*.²

Dr Garfield remained in the desert for several years, developing his ideas, and then returned to private practice in Los Angeles. His operative notes, again from LA County-USC Medical Center, resume in 1940, when his office address was 350 North Alta Vista, Los Angeles. He was operating on the same kinds of cases, often late in the disease course. In June 1940, a letter from the President of the University of Southern California shows that Dr Garfield was made an unpaid Instructor in Surgery while he worked as a fee-for-service surgeon until 1941. Soon after, he was drafted into the US Army. But shortly thereafter,

at the request of Henry J Kaiser and by direct order of President Roosevelt, Dr Garfield was released from military service so that he could create a health care system for workers at the shipyard that Mr Kaiser was building in Richmond, California.

Those of us at Kaiser Permanente realize that our system is not perfect; indeed, Dr Garfield remained a critic of his own creation until his death. However, the records contained in his suitcase readily remind us of the enormous progress that has been made in the knowledge base available to us in medical practice. The records remind us also of an equally important set of accomplishments: those of Sidney Garfield and Henry J Kaiser in making current medical knowledge available to more people, far earlier, than ever before. ♦

^a *Reproduced with permission.*

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Sidney Garfield—A Personal Recollection

By Robert Feldman, MD

It is a pleasure for me to write about Sidney R Garfield, MD, the co-founder of Kaiser Permanente (KP). For 15 years from 1969 until his death in 1984, I worked closely with him on studies in health care delivery during which time we developed a deep friendship.

I joined TPMG as an internist in Oakland in 1959. Within a few years I became involved in clinical diabetes research and was in charge of the Multiphasic Health Testing (MHT) programs in Oakland and San Francisco. These programs had been started by Morris Collen, MD, at the suggestion of Dr Garfield. They included a broad variety of medical history information and tests, with the data stored automatically on computers.

When I joined the medical group, I heard of a mythic taskmaster named Sidney Garfield, a surgeon who had started a medical group—Sidney Garfield and Associates—back in the 1930s and 1940s. In the early years he hired physicians and ran the medical group as an entrepreneur. Prepaid medical care was thus furnished for the Kaiser Organization and Health Plan. In 1953, he voluntarily relinquished control to the physicians in the group—without compensation or a continued official position in the medical group. This new physician organization was established first as a partnership and in 1981 as a corporation—The Permanente Medical Group, Inc.

Following his departure from the medical group leadership, Dr Garfield served on the Board of Directors of the Health Plan and the Kaiser Health Plan Foundation. His primary role was in building new clinics and hospitals. He was always very interested in medical building needs. For example, he designed the rather revolutionary Kaiser Hospital floor plan at Walnut Creek in the early 1950s in which visitors' access to patients utilized corridors on the outside

of the wards rather than traversing through the working area for doctors and nurses.

When I met him in 1969, he had been officially retired from these Boards and had the title of Consultant. However, he was anything but retired. He was completely preoccupied with and dedicated to improving the KP Medical Care Program. His goals were to make it more accessible, efficient, and cost effective while providing quality medical care. He always had new ideas—one of them was the creation of the MHT program.

Dr Garfield had developed a plan to use MHT to facilitate access to our medical care system and provide baseline health evaluation data. The ultimate

objective was institution of a rational and cost-effective treatment and preventive program. A new key element was to utilize nurse practitioners to conserve physician time for care of the sick. Dr Garfield was able to get research funds from the Kaiser Family Foundation to support a study and a rigorous evaluation of the proposed new system.¹ He and I worked to develop the MHT program to accomplish these goals.

We needed 12 nurse practitioners. None were trained and available. We,

therefore, developed an intensive six-month training program at Oakland. This was the first use of nurse practitioners in KP. We were also one of the first medical services to use multi-analyzers for blood chemistries and hematology with online, real time computer reporting of results while the patient was still on the MHT unit. This allowed same day completion of the evaluation.

Over the 15 years of our collaboration, I spent a great deal of time with Dr Garfield working on research regarding health care delivery. I saw him almost daily under many different circumstances. He was a remarkable man—patient, tolerant, always con-

He treated construction workers as he would important administrators or physicians. He was generous and unpretentious.



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siderate, soft-spoken, almost shy, but strong—a complete gentleman. He treated construction workers as he would important administrators or physicians. He was generous and unpretentious. I never heard him gossip or criticize his medical colleagues. He said he sought out and tried to employ the strengths of the people he worked with. He readily acknowledged a good job, and if he didn't have anything positive to say he didn't say anything. He was dapper and dressed well in custom-made clothes. He didn't carry a wallet, just a credit card and a few large bills—he had class.

Dr Garfield was always open to new ideas. One day I saw him reading a book on cybernetics looking for information he could apply to medicine. He had a marvelous ability to visualize the future of medical care

delivery and to see clearly the main issues that needed to be approached in solving a problem. His analyses were remarkably and deceptively simple. It frequently seemed that he was too far ahead of the field. He had a deep conviction that medical care was a universal right (a term Dr Garfield coined)—an idea now widely accepted as part of our values.

As a final note, Dr Garfield headed a comprehensive study in health care delivery called the Total Health Care Project. He passed away before the final report was completed. Below is the dedication to him that is included in the report. ❖

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Total Health Care Project Final Report— Dedication to Sidney R Garfield, MD

Dr Sidney R Garfield (1906-1984), founder of the Kaiser Permanente Medical Care Program and a pioneer in the Health Maintenance Organization movement, was one of the world's brilliant and pragmatic students of health services. During his very active career he created programs furnishing medical services for a series of major construction projects, for the workers and their families in wartime shipbuilding and then, as its founder, the Kaiser Permanente Medical Care Program. Dr Garfield was the recipient of numerous awards and recognitions including the Lyndon Baines Johnson Foundation Award for Significant Contributions in the Field of Health Care Delivery.

Through this experience he became convinced and consumed with the belief that the provision of medical care could be better organized than through the prevailing fee-for-service system. He was convinced that the prepayment for services could contribute to economic and viable incentives to provide high quality of care at affordable costs. It offered reasonable amenities for physicians and enhanced their role to be responsible for both the quality and cost effectiveness of medical care.

It was his belief that for the greatest benefit, health care should not be limited to care for the sick, but should include and emphasize the entire spectrum of prevention, health education and health maintenance. He envisioned an appropriately balanced

consortium among physicians, nurse practitioners, mental health counselors and health educators that might bring together, effectively and economically, the entire spectrum of primary health care services.

It was with this concept in mind that Dr Garfield fashioned the Total Health Care Project as a study of what he envisioned as an ideal health service module. Those of us who have had the privilege of working with him on this project find the Total Health Care study a fitting epitaph to his lifelong commitment for better health and medical care for the country. This report is dedicated to his memory.



Dr. Garfield, (right) with a Kaiser Company official viewing the building site of the Permanente Foundation Hospital in Oakland, CA, 1942.

The Garfield Memorial Fund: Helping KP Clinicians and Researchers Come Through the Front Door With Their Ideas

By Barbara Caruso

Sidney R Garfield, MD, physician co-founder of Kaiser Permanente (KP), was a pioneer whose ideas about prepaid health insurance, physicians practicing in groups, preventive health care, and medical services under one roof were seen as radical in the 1930s. Through his dedication and efforts, as well as those of other early KP physician leaders, these ideas became the blueprint for KP. As Paul de Kruif says in his book, *Life Among the Doctors*, Sidney Garfield was “an innovator who has invented a democratic system of medical care.”¹

In an effort to continue Dr Garfield’s legacy, in 1987, the Board of Directors of KP established the Sidney R Garfield Memorial Fund (GMF) to encourage innovation and exploration of new models of care that result in improved health care.

The GMF has operated since then under a very simple mandate—to fund research by KP employees and Permanente physicians that will result in improved health care for both members and the community-at-large. Since its inception, the GMF has launched a variety of initiatives and has provided about \$25 million in funding to support these initiatives.

The GMF is managed under The Permanente Federation and is financed by assessments on each of

the Regions, at two cents per member per month. The Fund also partners with external foundations and agencies to leverage its funding capabilities. A six-member Board of Directors (Table 1) led by Jed Weissberg, MD, Associate Executive Director of The Permanente Federation, and Edward Thomas, RN, Director, oversees the management and distribution of these funds.

In the beginning, the GMF primarily provided funding to clinicians to test and apply their research and develop improvements in quality and service. This in turn, led to the implementation of new models of care, which were shared throughout KP. Some of the projects that were funded in the early years included: Evaluation of Medical Responses to a Major Earthquake; Computer-Assisted Phone Advice in Pediatrics, which led to PediAdvice; and an Evaluation for the Development of the “Secrets” Educational

Theatre Program as an AIDS Prevention/Intervention for Teenagers.

In recent years, the GMF has shifted much of its focus to funding broader initiatives and clinical programs that can be replicated across KP. An early example was the funding in 1998 of the Depression Initiative (DI), which set the standard for subsequent initiatives in terms of building strategic alliances to solicit, select, and support projects from initiation to implementation. Since its inception, the DI has funded over 25 research and demonstration projects, many of which have resulted in new models of care. One example is the Nurse Telecare Program, which has been adopted as the standard for depression care in primary care settings.

Enid Hunkeler, MA, Director of the Depression Initiative, notes that because of funding from the GMF, strategies and programs developed through the DI are used at KP and

In recent years, the GMF has shifted much of its focus to funding broader initiatives and clinical programs that can be replicated across KP.

Table 1. Garfield Memorial Fund Board of Directors
Jed Weissberg, MD; GMF Board Chair, Associate Executive Director, Quality and Performance Improvement, The Permanente Federation
Edward Thomas, RN, MBA; GMF Director, The Permanente Federation
Bob Crane; Senior Vice President, Health Policy Institute, KFHP/H
Phil Madvig, MD; Associate Executive Director, TPMG
Joanne Schottinger, MD; Assistant to the Associate Medical Director Clinical Services, SCPMG
Ray Baxter, PhD; Senior Vice President, Community Benefit, KFHP/H

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in community clinics across the country. “We have touched the lives of countless people with new approaches to care,” she says. “Now, we are widening our focus to include other aspects of mental health care, including suicide prevention, bipolar disorder, and attention-deficit hyperactivity disorder.”

The Care Experience Initiative, launched in 1999, is another example of a broad GMF partnership. It was designed to bring the Health Plan, Medical Groups, and the Labor Management Partnership leaders together to share knowledge and experience from across the program and to facilitate ongoing improvement in members’ care. The initiative is led by the Care Experience Council.

In 2000, the GMF and the Care Management Institute formed the KP Aging Network (KPAN) to identify the unmet needs of our elderly members, to develop a national strategy to address those needs, and to facilitate collaboration between the Health Plan and the Medical

Groups. A year later, KPAN launched the Palliative Care Initiative—Improving Care at the End of Life, with the goal of promoting the comprehensive care of members in advanced stages of life-limiting illnesses. One KPAN-sponsored project was to refine and to evaluate a Palliative Care Model, which received the 2002 James A Vohs Award for Quality.²

KP and Group Health Cooperative provide integrated health care for more than 15,500 people living with HIV/AIDS in the United States. The GMF provided the seed money to establish a national HIV research consortium, called the Committee for HIV/AIDS Interregional Responsibilities (CHAIR), now known as the HIV Initiative (HIVI), to develop a programwide strategy in collaboration with the research divisions, clinicians, and internal groups, such as the Care Management Institute.

Most recently, an ambitious \$2.2 million Weight Management Initiative for eight new weight manage-

ment research projects has been funded, which will complement CMI’s Weight Management Initiative. The CMI Weight Management Initiative has already defined populations and established weight management goals, identified existing regional programs, created clinical tools, and organized community and public policy outreach efforts.

In addition, the Fund has contributed to evidence-based guidelines for mental health in a partnership with CMI; developed an interregional design for a comprehensive HIV/AIDS database; developed interregional models for clinician/patient communication through the Clinician-Patient Communication Research Initiative (CPCRI), and maintains KP Web sites for many of its initiatives, so that clinicians can tap into the learnings and tools. (see Sidebar)

Edward Thomas, RN, Director of GMF, notes that the key to the Fund’s success is that “We leverage initiatives with partners, such as the government, private foundations, and KP’s regions. They know we are committed.”

In fact, Mr Thomas and the Fund’s Board of Directors work closely with KP Regions and will often propose a cost-sharing approach, to create further buy-in. The Board also works closely with various KP research centers, including the Division of Research, the Center for Health Resource, and the Research and Evaluation Programs in Colorado, Southern California, and Georgia.

Many of the Fund’s initiatives have also been recipients of both the James A Vohs and David Lawrence awards, such as the Palliative Care Program in 2003² and the Perinatal Patient Safety Project Transfer in 2005.³ Many of the initiatives may initially be suggested by Board members, on the basis of their experiences and their knowledge of health care

Garfield Memorial Fund initiatives and projects with Intranet links

Following is a list of the current GMF initiatives and projects with Intranet links for more information.

- **Depression Initiative:** <http://insidekp.kp.org/GMF/initiatives/depression.html>
For more information, visit the Depression Initiative Web site:
<http://dor-ent1.kaiser.org/studies/sites/depin/index.shtml>
- **Care Experience Initiative:** <http://insidekp.kp.org/GMF/initiatives/care.html>
For more information, visit the Care Experience Web site:
<http://cl.kp.org/pkc/national/operations/cec/home.htm>
- **Patient Safety Initiative:** <http://insidekp.kp.org/GMF/initiatives/safety.html>
- **Clinician-Patient Communication Research Initiative (CPCRI):**
<http://insidekp.kp.org/GMF/initiatives/cpcri.html>
For more information, visit the Clinician-Patient Communication Web site:
<http://kpnet.kp.org/cpc/index.html>
- **Palliative Care Initiative (KPAN):** <http://kpnet.kp.org/cpc/index.html>
For more information, visit the KPAN Web site: <http://kpnet.kp.org/permfed/KPAN/index.html>
- **Clinical Informatics Research Network:** <http://insidekp.kp.org/GMF/cirn/index.html>
- **Weight Management Initiative:** <http://insidekp.kp.org/GMF/initiatives/weight.html>
- **HIV Initiative (HIVI):** <http://kpnet.kp.org/permfed/HIVI>
For more information about other funded projects through the GMF, visit the GMF Web site: <http://insidekp.kp.org/GMF/index.html>

issues, members' health care needs, or of ongoing research. Dr Weissberg and Mr Thomas both maintain ongoing conversations with clinicians and researchers throughout KP. Because the Board is small, it can be flexible and avoid the often lengthy decision-making process characteristic of many private foundations.

Through these initiatives, Mr Thomas and the Board have developed a strategy that allows the fund to be responsive to emerging and important health care trends within KP. The Board attempts to build their portfolio with this integrative approach so that each initiative overlaps with the others.

Dr Weissberg believes that this approach "builds a strong foundation for collaboration, interdisciplinary learning, sharing of best practices, and supports a method for rapid and sustainable implementation."

One example of the emphasis on partnerships and implementation is the In-Patient Home-Based Palliative Care Initiative, as funded by the GMF, which is now utilized in every KP Medical Center in Northern and Southern California.

Long-term goals are to continue to

develop each funded initiative into an independent, broader-based program with its own infrastructure (management, staffing, and resources). Then, each program should have the ability to acquire its own funding (from GMF and external sources) to support further research studies and to pilot new models of care.

"We've learned that, unfortunately, there are not enough funds to do all the research that's needed," concedes Mr Thomas. "We're unique. We used to be under the radar. Now, we're moving above the radar. We try to listen and help our researchers and clinicians come through the front door with their ideas. Too often, in order to get things done in our organization, you must go through a back window or door."

Dr Garfield is remembered for his innovative concepts of health care delivery, including prepayment, use of information technology, and preventive care. He also firmly believed in the value of research. In the second annual report of the Permanente Foundation in 1945, Dr Garfield noted, "It has always been our opinion that a medical care program worthy of perpetuation, in addition

to being economically sound, must provide teaching, training, and research, all so necessary for the maintenance of high-quality care."⁴

The Board of GMF and Mr Thomas will continue to support Dr Garfield's vision through the many projects and initiatives they have funded, launched, and nurtured. Since 1987, the GMF has gained national recognition and respect as a champion and sponsor of innovative approaches to health care delivery. KP members and communities have benefited from utilization of a small investment of member dues into research, which has yielded major advances in quality, efficiency, and knowledge. ♦

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Distinguished Service Award

"Distinguished physician, surgeon humanitarian, counsellor (sic), medical administrator, administrator in functional hospital design and trailblazing pioneer: he combined medical group practice with prepayment to create a comprehensive health care delivery system attractive alike to providers and consumers of medical care, which is nationally recognized as a significant step toward solution of today's medical care crisis . . . Not only did Dr Garfield define the basic principles and invent basic techniques of group practice prepayment, but he also welded them into a health care delivery system now serving more than two million people. His personal contribution to improvement of the medical face of America and indeed the world are incalculable."

— Award citation when Dr Garfield was presented the Distinguished Service Award by the Group Health Association of America, 1969

This "Moment in History" quote collected by Steve Gilford, KP Historian

Otto Loewi's Great Dreams

By Renate G Justin, MD

*for a thousandth of a second
I knew for certain
the secret of life
even if forgetting descended on me
and I forgot the moment I remembered
and not a word remained
except the taste of knowledge*

— *The Dream Notebook, Agi Mishol*

We regularly slept on our homework as youngsters, never doubting the old wives' tale that we would absorb knowledge, even through a pillow. We would go to bed unprepared, expecting to awaken the next morning fully prepared for our exam.

Was there a grain of truth in this childish belief? Does the brain continue its work while we are asleep? My great-uncle (Onkel), Otto Loewi, MD, would have answered "yes," as his wrinkled face lit up, his body returning to the straight, youthful posture of former times. As he talked, his words accelerated and his voice became louder, losing the huskiness of old age. Then, he once again would tell me about his dream, with the same words he used when he recorded it in his autobiography.

"The night before Easter Sunday of that year [1920] I awoke, turned on the light, and jotted down a few notes on a tiny slip of thin paper. Then I fell asleep again. It occurred to me at six o'clock in the morning that during the night I had written down

something most important, but I was unable to decipher the scrawl."² He would pause at this point and tell me how he had tried all day, unsuccessfully, to remember his dream and to interpret the scribbled note. He said that he went to bed early Sunday night and read for a while before turning out the light. Then, Onkel Otto continued, in an animated tone, he woke up at two or three in the morning, most unusual for him, and, yes, he knew what his dream had been about the previous night. He got up immediately and went to the laboratory.

What Onkel Otto's dream had revealed to him was an elegant experiment, which proved the theory of chemical transmission of the nerve impulse. "The hearts of two frogs were isolated, the first with its nerves, the second without. Both hearts were attached to Straub canulas filled with a little Ringer solution. The vagus nerve of the first heart was stimulated for a few minutes. The Ringer solution that had been in the first heart during the stimulation of the vagus was transferred to the second heart. It slowed and its beats diminished just as if its vagus had been stimulated. Similarly, when the accelerator nerve was stimulated and the Ringer from this period transferred, the second heart speeded up and its beats increased. These results unequivocally proved that the nerves do not influence the heart directly but liberate from their terminals specific chemical substances which, in their



turn, cause the well-known modification of the function of the heart characteristic of the stimulation of its nerves."^{2a} Sir Henry Dale of Great Britain, a long-time friend and colleague of Dr Loewi's, later identified one of the chemicals involved as acetylcholine. In 1936, Dr Loewi and Sir Henry Dale were awarded the Nobel Prize for their discovery, for Onkel Otto's dream.

In our conversations Onkel Otto often expressed gratitude and puzzlement. What made him dream the first night and what refreshed the dream the second night? What if the dream had not recurred? Would he have thought of the frog heart experiment while awake? Of course we could not answer those questions we could only speculate about them.

Otto Loewi was born in 1873 in Germany where he studied medicine and pharmacology. When he was a young man he had a determined, optimistic expression. As was the



Renate G Justin, MD, was in family practice with her daughter Ingrid Justin, MD, until both joined Kaiser Permanente. Dr Justin is now retired after 45 years of practicing medicine.

fashion, he wore rimless glasses, a vest, bow tie and a white handkerchief in his suit coat pocket. He and his family lived in Graz, Austria, where he was professor at the University, until Hitler invaded in 1938. The Nazis arrested Onkel Otto and his two younger sons, the older son and daughter were out of the country at the time. In exchange for his possessions and the Nobel prize money, which he had to transfer from a Swedish bank to a German account, the Nazis released him, and later his sons, from jail. After several months, "Sir Henry Dale arranged for Dr Loewi to come to England, and on his arrival presented him at the railway station with his [Sir Henry's] half of the prize."³ This generous gift helped Onkel Otto get by until he could find gainful employment. In 1940, Onkel Otto emigrated to the

United States and held a research professorship in pharmacology at the New York University Medical School. He died in 1961 in New York.

He was a man of untamed enthusiasm, not only for his chosen fields of medicine and pharmacology, but also for music, poetry, and history. He had a talent for forming loyal friendships both with his colleagues and students and encouraged many in their work. I admired Onkel Otto. His interest in my own life plans, as well as in my studies, drew us together and formed one of those rare friendships that spanned the decades of difference in our ages. I was gratified, when, in 1961, in Austria, there was a formal recognition and celebration of the 100th anniversary of Onkel Otto's birth and in 1973 a stamp was issued in his honor. This did not, however, make me feel any less angry about the indignities visited upon him in 1938.

In 1958, in a talk at the opening session of the International Congress of Biochemistry, Onkel Otto questioned whether we would ever discover the essential elements that define life. He added, that in no way, would the difficulty of uncovering these elements inhibit us from searching for them. He quoted the German poet Meyerhof who, in his poem, interprets

our unquenchable thirst for seeking the answer to the secret of life, as being the task given to us by God.

*"Daß er uns gab als einziger Beruf
Voll Staunen sein Geheimnis zu
enthüllen"⁴*

*(that He gave us as our only task
with awe, to unravel His secrets)*

Onkel Otto, in his dream, unraveled part of the mystery and moved us closer to understanding the central core elements of life. ❖

a Until 1921 it was generally assumed that transmission was due to the direct spreading of the electrical wave accompanying the propagated nervous impulse from the nerve terminal to the effector organ.²

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The Flow

There is a way between voice and presence where information flows.

In disciplined silence it opens

With wandering talk it closes.

— Rumi, 1207-73, Sufi mystic, poet, jurist, and theologian

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

By Gerard Livaudais, MD, MPH
Robert Unitan, MD
Jay Post

Frank Brennan, MD, a primary care physician, arrives at work at 7:00 am, to get a head start on the day. It’s a Monday and he knows his schedule will be full of patients wanting his care and attention. He enjoys being with his patients, but always needs more time. He diligently works through his schedule, focusing on one patient at a time. Dr Brennan worries about all the patients on his panel who need to come in but haven’t. He would like to get back to why he became a physician in the first place: to be with, talk to, and care for his patients in a personal way. But by the end of the day he is exhausted trying to stay on schedule. It’s only Monday. Simply running faster will not work. Dr Brennan thinks there’s got to be a better way.

Rob Unitan, MD, a pulmonologist from the NW Region, Samir Patel, MD, a family practitioner, and Gerard Livaudais, MD, an internist, both from the Hawaii Region, wondered about that “better way” and developed bold visions of how a new approach would work. Through a chance meeting in 2005 at the Institute for Healthcare Improvement (IHI) Summit on Clinic Redesign in Washington, DC, they discovered their common interests. Dr Unitan, Dr Patel, and Dr Livaudais created a new program to dramatically change the way they work that changed forever how they view “care delivery.”

“Our work is not the schedule” Dr Livaudais quoted Doug Eby, MD, whom he met at the Washington, DC, conference. “The work should really be our panel, not just those who come in sick.”^{1,2} Dr Livaudais knew that seeing one patient at a time didn’t work and that incremental refinement of our existing system would not get us there. “What we need,” Dr Livaudais continued, “is to totally rethink our methods of delivering care. We should redesign our system with a forward-looking concept that anticipates what we need to succeed to improve the health of the entire population we serve.”

What resulted was Total Panel Ownership and an easy-to-use Web-based member database called the Panel Support Tool.

—Tom Janisse, Editor-In-Chief

Total Panel Ownership

Responding to the challenges of the existing system, the Northwest and Hawaii Regions (Table 1) embarked on the transformation of the Care Delivery System, referred to as Total Panel Ownership. Beginning with Primary Care, this implementation began in 2005 with two pilot sites in the Hawaii Region; widespread implementation will continue in 2006 for both Regions.

Although there is no single definition of Total Panel Ownership, the following are its main elements:

- **The focus is on relationship.** This includes the relationship with the members of the panel as well as among members of the core team. It

has been statistically demonstrated that members who have a close relationship with their Primary Care Physician (PCP) are more satisfied.³ A strong relationship generates trust with the physician and other team members. In this environment, team members are able to function to the best of their ability.

- **The needs of the panel are met in the most efficient and convenient way.** In addition to the face-to-face office visit, a resource-intensive option, panel members are given more flexible access options: phone consults, phone advice, phone and e-mail-based care management, self care, group appointments and more.



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Jay Post, (right) is Director of Management Engineering for KP Hawaii. E-mail: jay.post@kp.org.

Opening Day Congratulations

December 9, 2005

Dear Panel Support Tool Team,

On behalf of the Hawaii Region’s executive team, chiefs, PIC’s, and Board of Directors, please accept our heart felt “mahalo nui loa” for your astounding collaboration, expertise, and will to succeed that allowed for the Panel Support Tool to be piloted this week. It’s fast, beautiful, and useful!!

It was my privilege to attend the Nanaikeola Clinic’s “day 1” experience and I am reassured that you have given our physicians, practitioners, and staff an outstanding tool to identify and treat “care gaps,” engage our members in the context “we know you and care about you,” and demonstrate improved evidence-based clinical outcomes.

I am flat out amazed and grateful. When KP talks about our “integration advantage,” I’ve always envisioned miraculous productivity. Your diverse expertise, passionate, synergistic design and product implementation is so appreciated. In Hawaii, “no ka oi” signals the very best. Congratulations all, no ka oi.

— Geoff Galbraith, Vice President, Quality Improvement,
Hawaii Permanente Medical Group

- A dedicated core team owns the care of the panel.** With “ownership,” the core team has the autonomy and freedom to innovate how care is delivered with an emphasis on being proactive, not reactive. Ownership means the team is responsible for the delivery of care, reaping the benefits or accepting the consequences. There is a strong personal incentive to care for the panel in the most effective and efficient manner.
- The team has tools to support the care of the panel.** The primary tool is the *Panel Support Tool*, which graphically displays “care gaps” for each member of the panel. The care gaps are based on the latest evidence of recommended care for members with various conditions and recommended preventive care on the basis of gender and age. The team works to close the gaps for all members of the panel. The team is encouraged to be creative in how the gaps are closed, including addressing the maximum number of nonacute needs during an acute visit.
- The team is proactive in meeting the needs of the entire panel.** Each member should be afforded value in return for his/her dues. One objective is to have an “annual touch” with each member of the panel. Offerings are customized on the basis of each member’s needs. A member with diabetes and heart disease may need intensive RN-based care management; a young member with no illnesses may need only basic information on maintaining a healthy lifestyle.

Table 1. Total Panel Ownership and Panel Support Tool team

Leslee Budge, MBA, Program Manager, Population Care Information Services, Care Management Institute
Ken Forbes, Care Management Analyst, Hawaii
David Gardelius, MS, IT Program Manager, Northwest
Monty Clover, MSIS, Database Application Developer, Hawaii
Jean Hartman, KP-IT, Database Administrator, Northwest
Dawn Hayami, Director of Population Care Support, Northwest
Gwen E Houser, Consultant from Accenture Consulting
Kathleen Keller, Population Care Support, Northwest
Pat Killow, KP-IT Web Developer, Northwest
Harold Kurt, KP-IT Project Lead, Northwest
Rick Leffler, KP-IT Database Administrator, Northwest
Gerard F Livaudais, MD, MPH, Physician Lead Internal Medicine, Hawaii
Leilani Longa, Operations Consulting Database Analyst, Hawaii
Chris Lutz, MBA, Clinic Manager, Hawaii
Rick Morse, KP-IT, Database Administrator, Northwest
Twila Mysinger, KP-IT Solution Design Consultant, Northwest
Samir A Patel, MD, Family Practice Physician, Hawaii
Jay Post, MS, Project Coordinator, Hawaii
Jada Snyder, KP-IT Web Designer, Northwest
Patti Stone, KP-IT Web Designer, Northwest
Kati Traunweiser, Primary Care Project Manager, Northwest
Robert Unitan, MD, Physician Lead Data Warehouse, Northwest
Trung QVu, Strategic Planning Database Analyst, Hawaii
Peter Weiser, National PCIS IT Program Manager, Program Offices
Guy Yamada, OD, MBA, KP-IT Database Analyst, Hawaii

The team tailors resources to meet individual needs and preferences.

- **Innovators are allowed to emerge and try new experiments.** Total Panel Ownership needs a nurturing environment in which “independent agents” move quickly and freely to explore new ground and try new “rapid-cycle” experiments that may lead to new solutions. An evolving concept, Total Panel Ownership is a flexible and open program that allows solutions to arise out of practice.
- **The natural “power” of the team is unleashed.** Total Panel Ownership’s intrinsic “attractors” make it inviting for teams. It thus becomes a self-sustaining change program generating its own power to continue, rather than relying on an external force-feed to keep it going.⁴
- **Total care is coordinated.** Total care means that primary care and specialty care should be seamless in providing services. Using the Panel Support Tool as the common ground for coordination, specialty and primary care can each identify the intersection where primary care and specialty care services meet.
- **There is accountability for resources.** Panel ownership includes the responsibility to manage panel resources and their associated costs. It is our cost structure that puts us at risk in the health care marketplace and presents the greatest challenge to the organization. Rather than

implementing a straight percentage reduction in the budget, our chosen method is waste elimination. Waste adds cost without adding value; therefore waste elimination does not compromise care. The Panel Support Tool is a natural place to reveal cost information and potential waste and make this information available for teams to use.

These are the core building blocks that the teams in Hawaii and the Northwest will use to help create the new care delivery system. Each clinic/team is self-governing and therefore free to create/design an improvement effort that supports one or more of these elements. Ideally, all of the above elements will be covered in the process and the best aspects of each will be combined to create the new, transformed care delivery system. Most of these teams will begin with the adoption and implementation of the Panel Support Tool.

The Panel-Support Tool

A Case of Then and Now:

Then: *James is a 39-year-old diabetic patient last seen by Dr Frank Brennan two years ago. Quiet and reserved, he recently quit his job and withdrew from all social interaction. Although his wife orders his medicine regularly, he throws it away. He hasn’t been monitoring his glucose for many months now. James is aware of a ‘nick’ on his shin that is looking angry but he remains impassive to his wife’s concerns.*

A Historic Moment Now Realized

One can envision a new health care system of the future, which will begin with a basic comprehensive health evaluation for each individual The result of that evaluation will chart each individual’s personal pathway through our health care resources toward optimal health. Periodic updating of health evaluation profiles will monitor the homeostasis of vital body systems and significant deviations will trigger computerized warnings and corrective instructions. Health evaluations will alert and advise measures to be taken against individual predictive risks be they lifestyle, hereditary, environmental or age/sex linked through time. Such individualized continuing health care would greatly reduce patient uncertainty and could, in large part, replace today’s chaotic random-entry demand with a smooth regulated use of appropriate resources that would not only be cost effective, but also would optimize the health of each individual through his lifetime. It should be clear this new medical care delivery system in this health care of the future could never be fully achieved without the large amount of individual information, cybernetic data feedback, protocols, advice rules, monitoring and surveillance that systematized health evaluation and computerization makes possible. That is the great promise of this new delivery system for medicine of the future.

— Sidney R Garfield, MD, 1975, co-founder of Permanente Health Plan, in a talk to medical students at the University of Southern California

Unfortunately, no one at the clinic knew about this, nor had they picked up on his depression, brought on by the anniversary of his father’s death five years ago. There simply hadn’t been enough time in the rushed visits to do more than a brief physical and a review and ordering of labs and medications. With an overloaded schedule every day, it’s not clear when anyone will notice that he hasn’t had his labs drawn, until his leg becomes serious enough to force him to come in for debridement and antibiotics.

Now: *James is a 39-year-old diabetic patient of Dr Frank Brennan who saw him one year ago. He’s in good control of his diabetes and though naturally reserved, has a good relationship with his physician and has great rapport with his physician’s medical assistant. He receives an e-mail from his team every three months, and expects a phone call every three to six months, as well. His progress, and that of every patient on the panel, is monitored by the team via the Panel Support Tool. Last week, while reviewing the diabetic portion of the total panel, the team was surprised that James was on the list. When they called him they recognized his remarkable lassitude, and encouraged James to come in. During the call, the team used the Panel Support Tool to uncover his overdue labs and medications, which had been ordered. Behavioral health, copied on the telephone encounter with a request, prepared to meet with James on the day of his visit. All in all, the combination of an existing relationship and a tool that prevents patients from “falling through the cracks” proactively averted a disaster with remarkable efficiency.*

The primary difference between these *then-and-now* case vignettes is the Panel Support Tool. As shown in these vignettes, the Panel Support Tool gives providers the capability to quickly and easily assess the health needs of any single member or any cross-section of the physician’s panel without awaiting the availability of analytic resources. The tool then helps providers take the needed action with the support of evidence-based systems of care.

The Panel Support Tool was created through a collaboration between clinicians and Kaiser Permanente Information Technology (KP-IT) from the Northwest and Hawaii Regions with support from the Care Management Institute’s Population Care Information System (PCIS) workgroup. Web-based, the Panel Support Tool was designed to compliment KP HealthConnect by giving us efficient and effective summary information at the PCP’s *panel* level rather than at the *patient* level. This required that the Panel

Support Tool be developed so that it: 1) is easily available online, 2) needs little or no training to use, 3) is powerful enough to do Standard-of-Care type screening, 4) provides instant analysis, and 5) enables immediate patient intervention. Significant support is also being received from the Institute for Healthcare Improvement (IHI) and the 21st Century Care Redesign, which is contributing ways to quickly develop, test, and implement ideas using PDSA improvement cycles.

The “Care Gap”—The Total Panel Ownership Measure of Quality

Care gap identification and calculation is a primary feature of the Panel Support Tool. The care gap is a numerical score representing the difference (or “gap”) between needed care and provided care. For example, patients with a history of diabetes, coronary artery disease, peripheral vascular disease, or cerebrovascular disease who have not filled a prescription for a statin or an ACE inhibitor in the past six months, or have no documentation of aspirin use, receive four points for each deficiency (ie, 12 points if they are missing all three drugs). If they are found to have poorly controlled hypertension, another two points are added. If they haven’t had their LDL checked in the past 12 months, this earns one more point.

Each night the Panel Support Tool extracts a set of specific data elements from KP HealthConnect and the regional data warehouse and displays the information on a dynamic spreadsheet with various color and numeric coding for easy reading (Figure 1). For example, the tool automatically sorts members with the highest calculated care gap to the top of the list for quick identification and action. The clinician and/or their support staff can sort for any number of conditions or parameters to identify common or prevalent health needs that may be addressed many-at-a-time instead of one-at-a-time. Total or composite care gaps can also be calculated for each panel and thus the net improvement in the health of the panel can be measured over time.

Navigating Through The Panel Support Tool

The Panel Support Tool is designed to be intuitive enough to require little or no training. The following describes the ease by which a user can navigate the tool and exercise its basic features:

After entering an ID and password, the tool opens to a list of all of the primary care providers in the Region. Clicking on a clinician’s name brings up the *Complete*

Panel View (Figure 1), which is a grid that stratifies the panel members according to their individual weighted care gap scores and disease severity classification, graphically displayed for diabetes mellitus, cardiovascular disease, congestive heart failure, renal insufficiency, hypertension, primary prevention screening (breast, cervical, and colorectal cancer screening, immunizations, blood pressure and lipid), and risk factors such as hyperlipidemia, obesity, and smoking.

From the *Complete Panel View* spreadsheet, clicking on the member's name takes the user to a *Patient Detail Screen* (Figure 2), which, in addition to care gaps, displays their most recent vitals, relevant medications, and core laboratory values. Hovering over the result displays the trend. Clicking on a member's medical record number, however, takes the user to a *Patient Snapshot Screen*, which lists each care gap contributing to the score. Hovering over most gaps with the cursor brings up a small window, which further defines the criteria for that specific deficiency.

The *Complete Panel View* grid is configured with each disease in a single column. The presence and severity of each disease, together with monitoring/guideline compliance is indicated by the color coding of each cell (or square) formed by the intersection of the disease column and the patient's row. For example, in a patient with diabetes and a glycosylated hemoglobin (HgbA_{1c}) less than 7% in the past six months the diabetes cell will be green. An HgbA_{1c} between 7-9% turns the cell yellow, and >9% turns it red. A diabetic without an HgbA_{1c} result in the past 6-12 months will be identified with a yellow square, and >12 months since the last HgbA_{1c} earns a red square. Detailed descriptions listing the parameters used in determining the color coding for all diseases are found in the *Glossary* (Figure 3).

While designed for the primary care provider, the Tool also supports users focusing on a specific disease, such as case/care managers. Clicking on the disease name at the top of each column stratifies all members of the panel in descending severity for that disease. Red indicators are found at the top of the grid, followed by yellow, then green. Patients identified in a specific disease registry are designated with a 'Y' in that cell. Panel members not identified as having that specific disease fall to the bottom of the grid.

Although the Panel Support Tool runs on the desktop outside KP HealthConnect, the user can easily toggle to and from the medical record for documentation and ordering. Work is ongoing to embed the tool within the HealthConnect home-space to facilitate greater integration with the medical record. The goal is to be able to launch Review or an Encounter for a specific member in HealthConnect directly from the tool.

Patient Activity Tracking

An important and useful feature of the Panel Support Tool is its ability to track panel activity by the PCP, specialist, or other caregiver on each member. These "ticklers" help the provider remember where s/he last worked on the panel. For example, the tool keeps track of which patients were "touched" within the last year

PCP: DEMODOC	Panel Size:	MRN	NAME	Age	Sex	Gap	DM	CVD	CHF	HTN	CKD	Last Seen	Rev'd
90000020	76	90000020	Patient20	76	F	19							
90000058	45	90000058	Patient58	45	M	17						1/27/2006	
90000028	50	90000028	Patient28	50	F	17						1/21/2006	
90000034	38	90000034	Patient34	38	M	17						3/8/2004	
90000101	35	90000101	Patient101	35	M	17							
90000033	45	90000033	Patient33	45	F	17	Y					7/12/2005	
90000193	62	90000193	Patient193	62	M	14	Y		Y			12/23/2005	1/31/2006
90000052	43	90000052	Patient52	43	M	14	Y			Y			
90000027	27	90000027	Patient27	27	F	14					Y	3/2/2005	
90000104	60	90000104	Patient104	60	M	14	Y	Y	Y			7/6/2005	
90000054	45	90000054	Patient54	45	M	13	Y					12/28/2004	
90000106	79	90000106	Patient106	79	F	12	Y			Y		9/3/2005	
90000192	49	90000192	Patient192	49	M	11		Y	Y			4/13/2005	1/31/2006
90000059	79	90000059	Patient59	79	F	11		Y		Y		8/29/2005	
90000048	49	90000048	Patient48	49	F	11							1/31/2006
90000018	54	90000018	Patient18	54	M	11			Y			7/29/2004	
90000022	85	90000022	Patient22	85	F	10						5/25/2004	
90000090	55	90000090	Patient90	55	M	10				Y		1/26/2005	
90000096	56	90000096	Patient96	56	F	9						1/4/2006	
90000082	57	90000082	Patient82	57	M	9						1/6/2006	1/31/2006
90000048	69	90000048	Patient48	69	F	9	Y			Y		1/21/2005	
90000088	57	90000088	Patient88	57	F	9						11/8/2005	
90000052	20	90000052	Patient52	20	M	9						8/26/2005	

Figure 1. The Complete Panel View.

PCP: DEMODOC
MRN: 900001084 Name: Patient1084 Age: 60 Sex: M Last PC Visit: 7/6/2005 Home: 900-001-084 Work: 900-001-084

Bolded drugs are dispensed in the last 3 months
 LISINAPRIL TAB 40MG Date:12/16/2005 Daily Dose:40
 TOPROL XL TAB 25MG Date:12/22/2005 Daily Dose:40
 NORVASC TAB 5MG Date:11/9/2005 Daily Dose:5
 FUROSEMIDE TAB 40MG Date:5/23/2005 Daily Dose:40
 DIGITEK TAB 0.25MG Date:12/22/2005

Statin - "START?"
 BP Meds - Most recent BP >= 180/110

Allergies -
 • Foot Screen Due
 • Eye Screen Due
 • HBA1c due
 • LDL due
 Never had an LDL screen or no LDL done in last year

• Flu Shot due
 • Tetanus-Diphtheria due
 • Colorectal screening due

** LDL 128 3/9/2003
 HDL 24 3/9/2003
 TRI 93 3/9/2003
 CHOL 171 3/9/2003
 ** A1C 9.0 7/7/2005
 ALT 70 7/6/2005
 ** CRE 0.8 7/6/2005
 BUN 10 7/6/2005
 GFR 104.8 7/6/2005
 ** ALB/CRE
 ** PRO/CRE 1.6 7/7/2005
 HGB
 HCT
 NA 136 7/6/2005
 K 4.9 7/6/2005

** Hover over the result to see trended results if available

Figure 2. Patient Detail Screen.

and which ones weren't. The tool can also identify all members of a panel seen in the Emergency Department in the past week, and displays each member's most recent hospitalization information. It also lists the date of their last primary care visit and can easily identify all not seen in the past year.

A Cross-Functional Team-Based Approach

The Panel Support Tool is designed to allow teams to maximize their support of the PCP. The team closest to the PCP is the Core Team: In Total Panel Ownership, a core team typically consists of a PCP and a dedicated support team, which includes: a Registered Nurse (RN), a Medical Assistant (MA), a Nurse Practitioner (NP), and a receptionist, although the exact composition is still in flux (for example one core team may have one PCP, one MA, and a .5 RN and another core team may have one PCP, .5 MA, and one RN.) Team members are empowered to self-organize and find creative ways to meet the needs of their panel.⁴ Over time, the core team will develop close-knit relationships among the members of the core team as well as between the core team and the panel of members. These relationships will lead to trust.

Future Directions: Specialty Care/ Primary Care Integration

The Panel Support Tool has great potential to promote better integration and care coordination between specialty and primary care. Work is in pro-

cess to provide views that can cut across panels and display data on all patients with a given disease. Its potential to support proactive coordinated care programs that can be led or managed by various teams who have access to the tool is tremendous. A fully functional demonstration version of the tool is available at: <http://devinternal.or.kp.org/im/demo/login.cfm>.

Chronic Conditions	Color	Specifications
DM	Red	In the DM registry and no A1C value or A1C > 12 months ago or A1C >= 9.0
	Yellow	In the DM registry and A1C is between 7.0 and 8.9 or A1C date is between 6-12 months ago.
	Green	In the DM registry, HbA1c < 7 and done within the last 6 months.
CVD (CAD, PVD or Stroke)	Red	In CVD and last LDL >=130 or GFR <= 30
	Yellow	In CVD and last LDL between 100 and 129 or grf between 30 and 90
	Green	In CVD and last LDL < 100
Heart Failure	Red	EF <=40
	Yellow	In HF and EF between 41 and 55
	Green	In HF and EF > 55
	Hypertension	Red
Yellow		Avg Sys between 135 and 139 or Avg Dia between 85 and 89 AND last Sys between 135 and 139 or last Dia between 85 and 89
Green		None of the above and last BP date < 12 months ago.
CKD	Red	GFR <= 60 or Nephropathy flag is not null
	Yellow	GFR between 61 and 90
	Green	GFR > 90

Figure 3. Glossary: Red, Yellow, Green Color Specifications.

Potential Benefits and Savings

The benefits and savings from Total Panel Ownership and the Panel Support Tool are significant. They include:

- **Avoidance of expensive acute care.** This is possible by allowing a competent analysis of the panel for developing needs.
- **Elimination of costly waste.** Large benefits are possible from improved coordination between primary care and specialty physicians working on the panel in an aligned, coordinated way.
- **More effective use of staff time.** By working more efficiently at the panel level rather than the one-member-at-a-time level staff can be more productive.
- **Increased member retention.** By better targeting and promoting programs, low-utilizing or healthier members will get more value for their paid dues and will be more inclined to renew. This obviously maintains/increases our market share.
- **Increased physician retention.** As the various PCP support teams join in, assess the PCP's panel and do additional corrective or preventive care under the PCP's general direction, the PCP receives a greater feeling of support in the workplace. This helps to avoid physician burnout and attrition.
- **Improved staff retention.** Staff are happier when given more sustainable and fulfilling work.
- **Better use of less expensive associate and support providers.** This can occur with better review of panel needs for identification of appropriate opportunities.
- **Less reliance on the resource-intensive clinic visit.** By giving the patient a greater range of options for access, they will naturally select those that are more efficient for themselves and the organization.
- **Greater involvement of staff on managing resource costs.** This capability begins with the provider level cost data.
- **Better overall delivery of quality care** due to all of the above.

It’s All About The Relationship

A core value to absolutely maintain is the time-honored “relationship” with the patient. Why is relationship important? Relationship is the hidden link between the member, staff, and PCP. Its power and presence is always there and exists in many ways, but isn’t necessarily noticed, appreciated, or understood. Although quality health care is delivered, the member cannot always judge that; however, the member does judge the quality of the relationship. That is what is valued. If the relationship isn’t good, the patient feels it. The member’s self worth is reflected in the relationship, eg, how the PCP values what the patient says. Patients with low self worth feel less empowered to change. Relationship is the “magic” element that can make operations special. Behind what is said and done, the patient notices the deep heart-based feeling that only comes from relationship. What ultimately lies at the core of operations, principles, and strategies, is the personal and professional relationship between members and physicians, team, and staff.

Grounded with a relationship focus, the team channels all interactions toward the PCP team. This requires patient education, external and internal marketing, agreements with the other PCP teams, and receptionist and scheduling support. Over time, systems such as scheduling have unintentionally evolved to obstruct panel ownership and relationship by appointing patients into the next available slot. The result has been that patients of Dr Jones saw Dr Smith even though Dr Jones was in clinic that day and vice versa (because Dr Jones’ appointments were filled with Dr Smith’s patients). Similarly, centralized call centers, disease management programs, mass mailings from “Kaiser” or “your doctor” all subtly replace the patient’s primary relationship with their PCP team. This does not diminish the merit of call centers, but simply points out the missed opportunities of more efficient, effective, and personal interactions occurring through an existing, trusting relationship.

How does Total Panel Ownership support “the relationship”? Relationship is intrinsic to the design in many ways:

- Flexible modes of access—relating to patients in ways other than the clinic visit
- Annual touches—maintain regular contact
- Personal health agreements—built on trust from an effective working relationship
- Panel support specialists—staff empowered and encouraged to establish a relationship with each member

- PCP team support—through team relationship
- Personal change—relating to the individuality of each patient
- Education and self-care—not as teacher but as partner in their health
- Panel database—through the panel database, we KNOW each patient better. To know each patient better is to relate to each patient better.

How Provider “Sustainability” Is Supported

Total Panel Ownership ensures provider sustainability in many ways:

- Work efficiencies—the Panel Support Tool provides an easy, satisfying way to work.
- Efficient access—less intensive use of appointment provides more breathing room in schedule.
- Work enrichment—the variety of access types makes work more interesting.
- PCP team support—team support is the highest physician satisfier.⁵
- Quality of work-life—physicians can do what they became physicians to do.
- Enjoyment of relationships—physicians have more opportunity to enjoy patients, team members, and colleagues.
- Energy generation—Total Panel Ownership encourages a culture of support for our providers that continuously recharges their battery.

Implementation to Date

As of February 2006, two clinics in Hawaii have gone live on the Panel Support Tool with about 100 users (half physicians and half support staff) signed up. The Northwest will begin rolling out its version of the Panel Support Tool in early March 2006, and has identified nearly 50 clinicians to pilot the tool by late April. The Hawaii Region is basing its 2006 Strategic Plan on Total Panel Ownership and the Panel Support Tool, with all clinics developing innovative plans to support its implementation. For example, the Hawaii Region is now planning a new “21st Century” Clinic on Windward Oahu, whose bold design will promote superior communication and relationships within the core team and between the core team and the patients. Fredrick Sands, MD, an internist at the Maui-Lani clinic, says, “The Panel Support Tool is great! It helps me track and manage my patients with chronic diseases, and it gives me a quick and efficient assessment of my patient’s preven-

tive care needs. Now I feel much more confident that I’m taking care of all my panel patients.”

Summary

Total Panel Ownership and the Panel Support Tool is a promising answer to the serious challenges of escalating costs, competition, and member demands. Under Total Panel Ownership, physicians and staff can become an integrated network of dedicated professionals, empowered to make changes they control, supported by efficient programs that take care of all their patients, with relationship-based care at the core. The Panel Support Tool is the breakthrough that allows us to look at all members and relate to them in an efficient, value-added way. By moving away from the one-patient-at-a-time concept, allowing more effective and efficient use of our resources and managing them in ways that add the greatest perceived value to each of our members, we will have greater capacity and capability to compete and thrive in the health care marketplace (and Dr Brennan, our PCP, will then have a sustainable and enjoyable practice within reach).

Conclusion

The intent of Total Panel Ownership goes beyond operational improvement—it’s really about creating an environment where the organization’s power can be focused on supporting true member needs. We want to do more than just focus on those who come to see us for their physical health issues. We want to know and satisfy the needs of each of our members—the high-utilizing members with multiple medical conditions and the low-utilizing, healthy members—and then

foster those behavior patterns that will keep them healthy and happy. This will allow those low-utilizing, healthy members, most at risk of leaving KP, to see value for their premium dollar. These outcomes are most possible when we are able to develop trusting relationships. That is the goal of Total Panel Ownership. Enabled by the Panel Support Tool, Total Panel Ownership makes it possible for us to know each and every one of our members and achieve a unique relationship with each. When it comes to care transformation, we believe it’s all about the relationship. ❖

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Opening Up

You know institutions tend to become static; they build walls around themselves to protect themselves from change and eventually die. You should fight that by opening up your thinking and your ideas, and work for change.

— Sidney R Garfield, MD, 1906-84, founder of the Kaiser Permanente Health Plan
This “Moment in History” quote collected by Steve Gilford, KP Historian



"Summer Storm"

Oil on canvas, 24" x 48"

by Carol Nelson

Carol Nelson is a medical technologist in the Central Support Laboratory in the Denver area. She is very involved in the Denver art community and enjoys creating in watercolors, oils, acrylics, and collage.

More of her artwork can be viewed on her
Web site: www.art.com/memberartist/Carol_D_Nelson.

Typhus, Chopsticks, and Filial Piety

By Lawrence A Dworkin, MD; Harry Dworkin, MD

When my father died in March 2004, one of my tasks was sorting through his old papers and photos. I knew he was a physician in the Army Medical Corp in WWII, serving in the China-India-Burma Theater, where he ran a field hospital caring for American soldiers and their Chinese allies. I found the following report scrawled on dog-eared sheets of paper now yellow with age.

This is a report of 250 cases of typhus fever seen in a clearing station in Burma from November 1943 through January 1944. Of this group, there were 13 deaths, a mortality rate of 5%. Our cases were mostly Chinese soldiers clearing the jungle; 50 cases were drawn from one Chinese company engaged in clearing elephant grass at an airfield.

The first cases were thought to be measles due to congestion of the eyes and nose, and the macular rash. The diagnosis was changed after one of these patients died. It was our first encounter with typhus, scourge of numerous armies.

Our Chinese patients were brought into our station 3-14 days after falling ill. The picture was confused with malaria, because of the headache, chilliness, high fever and generalized aching. However, the intensity of the headaches, the chilly sensations rather than the shaking chill of malaria, the anorexia and the acutely ill appearance suggested more than the usual malaria case. After the appearance of the rash and the initial lesion, diagnosis of typhus was simplified.

On admission, the patients were acutely ill, dehydrated, with severe headache, generalized muscular and joint aching, chilly sensation, anorexia, nausea and vomiting. In most cases, an initial lesion could be found, a central eschar of 1-2 mm with a surrounding raised areola. The location of the initial lesion varied; most commonly it was located on the abdomen, back or chest. The patient had to be unclothed completely and thorough search made, because these lesions were sometimes on the ankle, leg, thigh, arms, neck, mastoid process or buttock. A regional adenopathy was practically always present, and frequently a generalized adenopathy could be found.

The initial lesion was seen in 75% of our cases and appeared early. These lesions tended towards healing, even in the cases who died. The eschar would dry up and fall off in one-to-two weeks.

The rash occurred later, between the fifth and eighth day of the disease. Generally, it was macular, as seen in measles, except the reddish coloration was so faint the rash could be seen only by good light. The rash could be maculopapular or even pinpoint papules. The distribution was usually the abdomen, anterior and posterior chest. Several cases showed a macular rash on the face and a few had involvement of the extremities. The rash would disappear in two-to-four days. The rash was seen in 60% of our cases; undoubtedly the percentage would have been much higher if we had seen them earlier in the disease.

We had no interpreter most of the time, so had to depend on our poor command of the Chinese language for our medical histories.

Our laboratory facilities were limited to CBC and urinalysis. We were struck by the kidney damage, revealed by numerous granular casts and constant trace of albumin. RBCs and WBCs were frequently encountered in the urine. The urine served as a good indicator of prognosis, the state of dehydration, and severity of the disease.

Severe anemias are common in the Chinese due to hookworm and other intestinal parasites, as well as a vitamin deficient diet. Leukopenia is the most frequent finding in the tropical diseases encountered, so the majority of the patients had a leukopenia. The relationship between polys and lymphs showed no consistent pattern. One strange thing we encountered was the lack of eosinophils. Eosinophilias were routinely found in Chinese patients on the basis of intestinal parasites. The percentage of eosinophils was low or even absent in a large percentage of our cases.

The treatment of these cases was largely nursing. The sulfanilamides were used on the first group of cases encountered but proved of no value. Neosarsphenamine was tried and was soon discarded as being ineffectual. Fifty cc

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Harry Dworkin, MD, (right) (deceased) father of Lawrence Dworkin, returned from military service in WWII to practice medicine in Cincinnati, OH for 50 years. He spent his last few years as a KP member in Portland, OR. He died in March 2004 at age 92.



soul of the healer

of blood from a convalescent patient was given into the buttocks of a patient, but no benefit was derived.

Our treatment rapidly narrowed down to bed rest and large quantities of fluids by mouth and intravenously, iron, brewer's yeast, vitamins, citric acid, and forced feeding.

Fluid administration was the number one adjunct to life. Our supply of intravenous fluids was limited, so we had to content ourselves with giving 1-2000 cc of 5% glucose in saline, and supplemental fluids by mouth. Some patients would drink water willingly, some had to be coaxed, and still others would only take water after the addition of sugar. The water had to be hot, as our Chinese patients would not drink cold water. The tongue and urine findings were the most reliable indicator of success in combating dehydration. The tongue was a barometer to be read daily. Of the cases that died, no matter how vigorous we were in pushing fluids, the dehydration and acidosis would become progressive. The tongue would remain dry, the number of casts in the urine would increase, and urine output fall.

Few of these typhus patients would eat unless the importance of eating was explained. Many had to be fed; the use of chopsticks by an American ward man in feeding these patients was quite an act of juggling.

Many of the Chinese encountered had subclinical cases of avitaminosis. The loss of body fluids with typhus aggravated this, so we attempted to keep up the nutritional state of the body at all times. The patient had to be aroused from his apathy to be fed. Milk was given as an adjunct to the diet. Many patients would only take milk with sugar added. Two cases suddenly developed the red sprouting and bleeding of the gum tissue typical of scurvy. Vitamins were of extreme importance, and brewer's yeast and vitamin C were given. Before getting a supply of vitamin C, we

obtained wild lemons growing nearby and made a lemonade for the patients with scurvy. Their response was miraculous. Since anemia was common, powdered iron was made into pills, given daily.

The temperature fell by lysis, never by crisis. A break in the temperature could be expected two to three weeks after the onset of illness. A receding temperature often meant the patient was out of the woods, although in five cases, a normal temperature was seen for two to three days, only to be followed by the demise of the patient.

The truest indicator of the patient's recovery was seen before the fall in temperature, when patients would begin to eat without urging and gradually their appetite would increase. We learned that a Chinese soldier who does not eat is still acutely ill, and conversely, the picking up of the chopsticks by the patient's own volition means he is on the road to recovery.

The complications encountered were numerous, the most common being deafness. Fortunately, with convalescence, the hearing also tended to return to near normal.

My father's description of this epidemic makes scrub typhus due to *Rickettsia tsutsugamushi* most likely. This was 1943-44; chloramphenicol became available in 1947 and the tetracyclines were introduced in 1948. The mortality of typhus in the pre-antibiotic era often exceeded 50%.

I took some chopsticks up to my father's gravesite at Willamette National Cemetery, and placed them next to the bunch of flowers I usually bring. I like to think that some Chinese kids are picking up their chopsticks this morning, thanks to my father doing the best he could to pull their great-grandfathers through the typhus epidemic of 1943-1944, somewhere in the Naga Hills of Burma near Shimbwiyang. ♦

The Needs of Sick People

We try to have everything as nice as possible for them.
If anybody needs pleasant surroundings, who needs them as much as sick people?

— Sidney R Garfield, MD, 1906-84, quoted in Paul de Kruif's *Life Among the Doctors*
This "Moment in History" quote collected by Steve Gillford, KP Historian

Health Care and Public Opinion

By Michael J Pentecost, MD

Health care in America is always making news. Rising costs, uneven quality, and limited access are the grist of headline after headline. And beyond these core issues, stories about fraud and abuse, drug and device recalls, and medical malpractice bob up to the front page nearly as often.

A solution to these ills has become a sort of Riemann Hypothesis for public policy analysts and everyone—management professors like Michael Porter and Regina Herzlinger, politicians such as Newt Gingrich and Hillary Clinton, businessmen like Steve Case—is pitching in with suggestions.

These and many other earnest, smart and creative people have offered answers—pay-for-performance, focused factories, electronic medical records, chronic disease management, preventive medicine and wellness, consumer-directed health plans and many others.

As health professionals know all too well, despite the best of intentions, these strategies will only yield some of the answers. The daunting issues facing American medicine won't be solved with a sudden stroke of genius but rather it will require tough decisions and sacrifice by all following a national debate about priorities. And rather than the mar-

ketplace, many of these decisions must be made in the political arena, probably after some historic battles.

As they gird themselves for these confrontations, where do the politicians stand? When faced with such problems, most will turn for advice and counsel to those steadiest of friends—the public opinion polls—with some predictable questions.

What is the public say in these debates? Where do they stand on rising health care costs? What is America's commitment to the uninsured? What's their take on uneven quality and patient safety?

There is certainly no shortage of organizations glad to offer their help, either supporting or conducting polls—nonprofits such as the Commonwealth Fund, Public Agenda, Kaiser Family Foundation, Robert Wood Johnson Foundation and the Center for Studying Health System Change; universities like Chicago, Quinnipiac, the Roper Center at the University of Connecticut; private concerns such as Lake Snell Perry, Mathematica, the Gallup and Harris Polls; and the press including the *Wall Street Journal*, the *New York Times*, *USA Today* and television networks.

Not surprisingly, from 35,000 feet, the poll-

ing results don't look so good at this point. Compared with five other public issues, health care, at 34% satisfaction, is viewed the most negatively (the Constitutional system—77%; overall quality of life—77%; present government—54%; economy—54%; environment—51%). Americans even view the Canadian health care system better than their own (34% vs 49%).¹

Drilling down a bit, between costs, access and quality, concerns about costs generally predominate. In response to the question "Are you generally satisfied or dissatisfied with the total cost of health care in this country?" 78% of Americans expressed dissatisfaction, compared with satisfaction in 21%.²

In a 2005 study by the nonpartisan Public Agenda, only the war in Iraq (51%), terrorism (49%), and education (44%) had higher ratings of extreme importance than health care costs (42%).³

Improving access by increasing health insurance coverage is regarded as very important by 79% of the public (exceeded only by lowering costs at 82%). Nearly 60% worry a great deal about providing insurance for those Americans who cannot afford it. More than 80% support requiring businesses to provide insurance, expanding government programs such as Medicaid, and increasing government support of community health programs.⁴

Since the 1999 Institute of Medicine report, *Too Err is Human*,⁵ the public has been much more attuned to the issue of quality and patient safety. A 2002 study in Colorado found an overwhelming majority had concerns about quality, the lack of attention paid to safety and the absence of a reporting system.⁶

As informative as these polls are, there are many caveats in interpreting these data. First, unexpected political and economic events can

Rank	1992	1996	2000	2004
1	Economy, jobs	Moral values	Moral values	Economy, jobs
2	Federal deficit	Economy, jobs	Economy, jobs	War in Iraq
3	Health care	Education	Education	Terrorism
4	Family values	Taxes	Social security	Health care
5	Taxes	Health care	Taxes	Education
6	Education	Federal deficit	Health care	Social security

Adapted and reprinted with permission from Blendon RJ, Altman DE, Benson JM, Crodie M. Health care in the 2004 presidential election. *N Engl J Med* 2004 Sep 23;351(13):1314-22. (Table 1) Copyright © 2004 Massachusetts Medical Society. All rights reserved. Adapted with permission, 2006.

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Table 2. American's satisfaction with their own medical care, 1978-2000

Year	Percentage satisfied with care
1978	88%
1981	90%
1983	90%
1987	92%
1991	92%
1994	93%
1996	91%
2000	84%

Adapted and reprinted with permission from Blendon RJ, Benson JM. Americans' views on health policy: a fifty-year historical perspective. *Health Aff (Millwood)* 2001 Mar-Apr ;20(2):33-46. (Exhibit 7)

change things in a hurry. In Table 1, two new factors in electoral decision making emerged between 2000 and 2004.⁷ Because of the attacks of September 11, 2001, terrorism and the war in Iraq understandably rose to the top of public concerns, and resources, both tangible and emotional, had to be diverted from social programs to national defense.

Public opinion can also be quickly swayed by advertising or derogatory publicity. In 1950, in less than 18 months, opposition to President Truman's national health insurance plan grew from 38% to 61% because of fierce lobbying. As a result of the negative "Harry-and-Louise" ads and other lobbying attacks in 1994, support for President Clinton's health proposal dwindled from 59% to 40% in barely a year.⁸

The public's perception of health threats also changes, often dramatically. For instance, in 1999, AIDS was viewed as the nation's number one health problem, identified so by a third of the population. Five years later, it

was considered that important by only 5% of Americans, well behind costs, access, cancer and obesity.⁹

On occasion, the public's opinion is contradictory. In a Kaiser/Harvard poll in 2005, half of the respondents believed that the government was not doing enough to ensure the safety of pharmaceuticals, but 80% thought that prescription drugs were safe.⁴

The wording of a question, frequently not reported in a news sound bite, can make all the difference in the response. Consider the following example:

Which would you prefer: the current health insurance system in the US in which most people get their health insurance from private employers, but some have no insurance, or a universal health insurance program in which everyone is covered under a system like Medicare that's run by the government and financed by taxpayers?

Sixty-two percent respond with universal coverage.

Would you favor or oppose a national health plan, financed by taxpayers, in which all Americans would get their insurance from a single government plan?

Fifty-five percent oppose the plan.¹⁰

Polling is also confounded by the complexity of medical care with its intricate science and arcane language. For instance, the public has expressed little concern about infectious diseases as a health problem, but regards ebola, mad cow disease, and West Nile virus as major worries.¹¹

Finally, the one issue that is difficult to tease out of the polling is a unique type of selection bias. That is, while the polls carefully select a representative sample of the general

population, this group may have a skewed view of health care. For example, 5% of the public consume 50% of health care dollars annually with the other half spread out among the healthier 95%.¹² Is it realistic to think that the healthy half is as experienced as their unhealthy neighbors? As concerned about costs? Disturbed by poor quality?

Although 5% consume half of health care resources, one in five Americans spends nothing annually for medical care. When polled, suppose all of the unhealthy 5% believed that the quality of health care was terrible, the costs outrageous and access wretched. And the 20% who spent nothing thought everything was fine. That would mean that four times more Americans were satisfied than dissatisfied, but would this be an accurate reflection of the status of health care?

Despite these shortcomings of public polls, over the long term, truisms emerge. One is the declining faith of the people in the government's ability to solve complex social problems. From 1958 to 2000, the percentage of those who trusted Washington to do what is right only some or none of the time rose from 23% to 69%.⁷

Another touchstone is the enduring public faith in individual physicians and hospitals. For all the foibles of medicine, Americans still steadily hold both in high regard with 84%-93% expressing satisfaction with their own personal medical care (Table 2).⁷

Finally, how much has public opinion really changed? How much of the debate is *strum und drang* generated by the press, or a genuine groundswell of public opinion that will precipitate real change?

For more than half a century, medical care

Table 3. Public attitudes toward health care system, selected years, 1982-2002

	1982	1983	1984	1987	1988	1990	1991	1993	1994	1996	1998	2000	2002
	%	%	%	%	%	%	%	%	%	%	%	%	%
Minor ^a changes	19	21	26	29	10	16	6	13	20	11	15	15	17
Major ^b changes	47	50	49	47	60	59	50	49	44	52	49	52	49
Complete rebuild ^c	28	25	21	19	42	24	42	35	35	35	33	30	31
Not sure	6	4	4	4	2	1	2	3	2	1	2	2	3

^a Minor – on the whole, the health care system works pretty well and only minor changes are necessary to make it work better.

^b Major – There are some good things in your health care system, but fundamental changes are needed to make it work better.

^c Complete rebuild – The health care system has so much wrong with it that we need to completely rebuild it.

Adapted and reprinted with permission from Harris Interactive® Harris Interactive Health Care News (vol 2, issue 17, Aug 21, 2002) "Attitudes toward the United States' Health Care System: Long-Term Trends." (Table 2)

has been the focus of tumultuous politics, starting with the controversy surrounding President Truman's initial proposal for national health insurance in 1945; the passage of Medicare and Medicaid in 1965; Nixon's mandatory insurance plan of 1970; Clinton's Health Security Act in 1994. Yet in many ways the public's view remains remarkably stable (Table 3). Annual surveys of public attitudes about total health spending between 1973 and 1998 found that those who believed the spending was "too much" varied only from 2% to 5%.¹³

Much to their dismay and peril, policymakers, rather than having a clear public mandate, may have a fuzzy dashboard while confronting these difficult issues. ❖

Michael J Pentecost, MD, is a member of the Permanente Medical Group of the Mid-Atlantic States. This article is reprinted and adapted from his November 2005 "Washington Watch" column in the Journal of the American College of Radiology with permission. The views expressed here are his own and do not necessarily represent the views of The Permanente Journal or the MAPMG.

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One Thing I Know

Only one thing I know how to do. Not argue, but just go on trying to build a model of prepaid, group specialist medical care in normal times in an ordinary community.
If it works, the ordinary citizen will go for it ...

— Sidney R Garfield, MD, 1906-84, quoted in Paul de Kruijff's *Life Among the Doctors*
This "Moment in History" quote collected by Steve Gilford, KP Historian

announcements

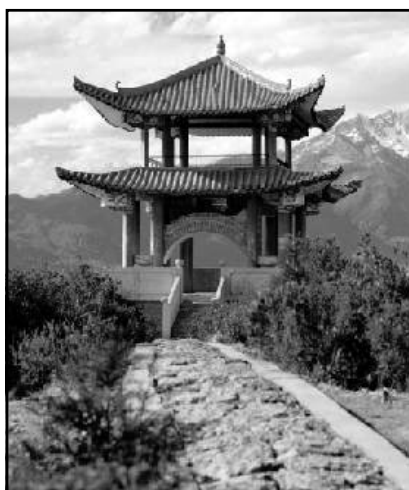
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*An integrated approach to serving the
diverse needs of an aging population.*

November 2-5, 2006
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Anaheim, CA

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Operator, at charles.james.kinsman@kp.org
or call 510-891-3809 for more information.



8th Annual Cardiovascular Medicine and Surgery (COAST) Conference

**September 15-17, 2006
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1700 Ocean Avenue
Santa Monica, CA**

For further information contact:
Physician Education/Education Services
KP Southern California Permanente Medical Group
100 S Los Robles, Suite 101
Pasadena, CA 91188
626-564-5338



**Kaiser Permanente
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Wednesday, June 28 – Saturday, July 1, 2006
7:00am - 1:00 pm

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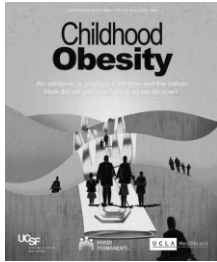
■ permanente in the news

A compilation of news, significant awards, and accomplishments about Permanente clinicians and employees and the Permanente Medical Groups.

KP News Roundup

KP Tackles Childhood Obesity with a 24-Page *NY Times* Insert

In response to childhood obesity and the epidemic levels it has reached, Kaiser Permanente (KP), in partnership with the University of California, San Francisco and the University of California, Los Angeles, has produced a 24-page magazine insert on the topic. Download a pdf version of the insert at: <http://insidekp.kp.org/insidekp/communicate/kplink/vol18/feature.htm>. Filled with colorful illustrations—and formatted for easy clipping and posting on bulletin boards and refrigerators—the insert contains



informative and useful content aimed at promoting better public understanding of childhood obesity. Emphasis is placed on useful strategies and tools for parents and nonclinical caregivers.

KP Physicians and Colorado's Educational Theatre Program Receive RJ Erickson Diversity Achievement Awards

Tat S Lam, MD, SCPMG, and **Lemuel Arnold, MD, TSPMG**, were honored at the 28th Annual National Diversity Conference, with RJ Erickson Awards in the Individual Category. The **KP Colorado Educational Theatre Program** also won the RJ Erickson Award in the Team Category. The RJ Erickson Achievement Award is presented to selected employees and physicians who distinguish themselves through their diversity advocacy, innovation, and service. Named in honor of Robert J Erickson, former general counsel for KP and lifelong advocate and champion of diversity in KP and the community, the awards are recognition of meritorious achievement in the field of cultural competence, workforce diversity, and community service. Over 900 KP employees and physicians attended the conference, which provides the opportunity for participants to come together, learn, listen, and share thoughts about the latest developments and trends in diversity management.

CMI Wins the Disease Management Association of America Award for Weight Management Initiative Work

KP's Care Management Institute (CMI) won the first Recognizing Excellence Award for the Best Application of Behavioral Change Principles to Disease Management from the Disease Management Association of America (DMAA).



Left to right, Paul Wallace, MD, former CMI Executive Director; Trina Histon, PhD, weight management initiative co-lead; a representative from the DMAA (name unknown); Keith Bachman, MD, internist for NWP and clinical lead of the weight management initiative; and Matt Stiefel, Associate Executive Director of Strategy and Development for CMI.

KP Earns Top Rating in 2005 HMO Quality Report for California

KP's Southern California Region earned the top rating in the 2005 HMO Quality report from the California Office of the Patient Advocate (OPA). The Region earned 10 out of a possible 12 stars and was the only health plan to earn excellent scores in the categories of "Care for Getting Better" and "Member's Rating of their Health Plan."

KP's Northern California Region was the next highest-rated plan with nine stars.

Southern California Permanente Medical Group (SCPMG)

Southern California Wins 2006 Vohs Award for Efforts to Improve Quality of Care

Southern California and the Mid-Atlantic States will share the 2006 James A Vohs Award for Quality, recognizing the Regions' efforts to improve quality of care. This is only the second time that two regions have been selected to share the award.



Barbara Caruso is a Senior Communications Consultant for The Permanente Federation. E-mail: barbara.caruso@kp.org.

The Permanente Medical Group (TPMG)

COO/Nurse Executive Honored with National Nursing Leadership Award

Linda Groah, RN, Chief Operating Officer and Nurse Executive, San Francisco Medical Center, was awarded the 2005 National Nursing Leadership Award by *Nursing Spectrum* and *NurseWeek* magazine, distinguishing her from a large field of professionals across the United States. Ms Groah previously won the 2005 Leadership Award for the state of California.

Physician Recognized for Contributions to Worker's Comp Reform

Doug A Benner, MD, Coordinator Occupational Health, Regional Occupational Health, Oakland Medical Center, was recently honored with the Rutherford T Johnstone Lectureship Award from the Western Occupational & Environmental Medical Association (WOEMA). Dr Benner received the award for his significant contributions to furthering the specialty of occupational and environmental medicine. As the 36th recipient of the award, he presented the Rutherford T Johnstone Lecture on the topic of Measuring Quality in Workers' Compensation Care at the organization's annual conference held in Monterey, California.

Northwest Permanente Medical Group (NWP)

Research Conducted by the Center for Health Research Leads to Changes in HEDIS

An article in the *Portland Scribe* detailed how research done at the Center for Health Research and other KP sites has led to a change in HEDIS, the national report card on key health indicators. Patients now will need to meet the criteria for asthma for two years rather than one. It was noted that many patients were misdiagnosed as having persistent asthma using HEDIS's one-year entry criteria.

Oregon CEOs Rank KP Third Most Admired Health Care Company

Oregon CEOs ranked KP the third most admired health care company, behind Oregon Health & Science University (OHSU) and OHSU's Doernbecher Children's Hospital. The survey was conducted by the *Portland Business Journal*.

The Southeast Permanente Medical Group (TSPMG)

KP Receives AID Atlanta Honors Award

As millions of people around the world recognized World AIDS Day on December 1, KP was applauded for its own efforts at the annual AID Atlanta Honors Event. KP was honored for its work in addressing AIDS and HIV and acting as a national model for research and treatment. Approximately 27,000 Georgians are living with HIV/AIDS. Georgia is the eighth most affected state in the nation.

Eleven Georgia Employees and Physicians Included in Who's Who in Black Atlanta Directory

Hundreds of Atlantans joined Ambassador Andrew Young and WSB-TV's Monica Kaufman Pearson for the unveiling reception for the 2005 Who's Who in Black Atlanta directory. **William Boddie, MD**, and **Debra Carlton, MD**, served on the host committee representing 40 of Atlanta's movers and shakers. Both received special plaques.

This year's directory featured 11 KP employees and physicians: **William Boddie, MD**; **Pat Burrows**; **Debra Carlton, MD**; **Reggie Mason, MD**; **Adrienne Mims, MD, MPH**; **Willie Rainey, MD**; **Beverly Thomas**; **Earl Thurmond, MD**; **Alonzo White, MD**; **Carolyn J Williams, MD**; and **Evonne Yancey**.

Colorado Permanente Medical Group (CPMG)

Physician Appointed to State Child Fatality Prevention Review Team

Governor Bill Owens recently appointed **Margaret Ferguson, MD**, pediatric hospitalist, to a new 17-member Colorado State Child Fatality Prevention Review Team. Dr Ferguson will represent physicians who specialize in traumatic injury of children. She will serve a three-year term on the commission, created by the passage of House Bill 1280, that gives official legal status to the state's efforts to study and track patterns of how children are dying in Colorado. The commission will develop policies that result in a greater rate of prevention.

Mid-Atlantic Permanente Medical Group (MAPMG)

Maryland Rates KP Best in State

The Baltimore Sun reported that the ninth annual HMO report card of the Maryland Health Care Commission rated KP best in the state. The report was compiled using medical records and patient surveys throughout the year. The report ranks KP above average in 15 of 33 categories, earning a “star performer” rating on 10 of those, which indicates above state average status for 3 years in a row.

Program to Control High Blood Pressure Wins 2006 Vohs Award

The Mid-Atlantic States Region’s Controlling High Blood Pressure was selected as a co-winner of the 2006 James A Vohs Award for Quality. The Committee agreed that the Mid-Atlantic programs had significant impact on important and large member populations, demonstrated significant improvement that will affect our members’ lives, and have attracted national recognition for KP.

Ohio Permanente Medical Group (OPMG)

Physicians Offer Health Advice on Local TV Health Program

OPMG physicians **Nicholas Dreher, MD**, Assistant Director, Primary Care, **Delilah Armstrong, MD**, Lead Physician, CHMC, **John Alfes, MD**, Lead Physician, Lakewood Medical Facility, **Mark Binstock, MD**, Chief, Ob/Gyn, and **Ronald Adams, MD**, Chief, Internal Medicine, were featured on WKYC-Channel 3’s Good Company program. The physicians provided health advice and prevention tips on such topics as: fad diets, diabetes, high blood pressure, depression, nutrition information on the updated food pyramid, osteoporosis, and cardiac care and heart disease. ❖

Barbara Caruso compiled this material from KFH and PMG newsletters and regional KP Web sites. To submit news of physician or PMG awards and recognitions, contact Ms Caruso at barbara.caruso@kp.org.

Eyes On The Stars

Keep your arms on each other’s shoulders
and keep your eyes on the stars
for innovation and change for the future.

— *Sidney R Garfield, MD, 1906-84, founder of the Kaiser Permanente Health Plan*
This “Moment in History” quote collected by Steve Gilford, KP Historian

Podiatrist's Delight

Visit TPJ on the Web for answers to this puzzle: www.kp.org/permanentejournal

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Created by Kenneth J Berniker, MD

Across

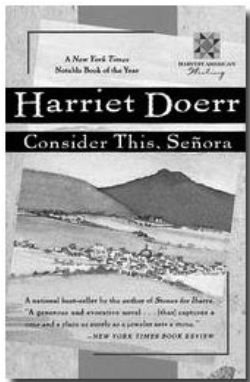
- 1 Body or gen preceder
- 5 Undiluted, as a drink
- 9 One's intense sweetheart
- 14 Tasty root
- 15 Singer Fitzgerald
- 16 Free computer operating system
- 17 DICTATOR (2 words)
- 19 Blatant
- 20 Middle Eastern leader
- 21 Part of an H&P (abbr)
- 23 Enzyme inhibited by phenelzine or tranylcypromine (abbr)
- 24 Energy-packed molecule (abbr)
- 26 BE RESPONSIBLE FOR AN EXPENSE (3 words)
- 30 Afternoon hour, perhaps
- 31 Head and neck surgeon, formerly (abbr)
- 32 Waters, or blue colors
- 33 Frontiersman Wyatt
- 35 Bunion site
- 38 17-A, 26-A, 52-A, and 63-A answers to each other, in a way
- 43 Lion, at times
- 44 Lake formed by Boulder Dam
- 46 Common bacteria
- 48 Some sporty car models
- 51 Drug often used in resuscitation, briefly
- 52 BE A DESPICABLE CHARACTER (3 words)
- 55 Specialist in today's theme answers? (abbr)
- 56 Dr Morgan of the comic strips
- 57 "All About ___", 1950 film that won six Oscars
- 58 Drill or scalpel, for example
- 60 Poetic feet
- 63 CHIEF OPPONENT
- 67 Russian emperors
- 68 Boat with a narrow, flat bottom
- 69 Indian of Montana or Ontario
- 70 Twin brothers of "Antiques Roadshow"
- 71 Baseball Hall of Fame member
- 72 Is, in Mexico

Down

- 1 Ventral wall muscles, popularly
- 2 New (prefix)
- 3 Sci-fi way to go from Point A to Point B
- 4 One on a list
- 5 Brain cell
- 6 Building addition
- 7 The A of "A&O" in a physical exam
- 8 Business card for a fortuneteller?
- 9 ___ Jo, world record breaking woman runner
- 10 Actress Ullmann
- 11 It may be pernicious
- 12 Large wall paintings
- 13 Praise highly
- 18 Teeming with
- 22 Commandment word
- 24 Dined
- 25 First word of a Christmastime poem
- 27 Common last option in a list of choices
- 28 The same (prefix)
- 29 Amply endowed, for a woman
- 34 Georgia-area KP Medical Director Bruce
- 36 Drink that may be amber or pale
- 37 Sweatshirt size
- 39 Emily Dickinson, for example
- 40 Median ___ (brain structure)
- 41 Phlebotomists, or teasers
- 42 Raiders' tackle Warren
- 45 Lower the lights
- 46 Tawdry entertainment
- 47 "Yeah I'm the ___", Beatles' lyric
- 49 Moon of Saturn discovered in 1684
- 50 Fruit of the blackthorn, used to flavor gin
- 52 Puncture
- 53 Not be captured
- 54 Large wading bird
- 59 First word of many children's stories
- 61 Term of familiarity for a guy
- 62 US draft org (abbr)
- 64 ___-Magnon
- 65 Mike Piazza, for part of his career
- 66 Affirmative vote

Kenneth J Berniker, MD, is a Board-certified Emergency Physician at the KP Vallejo Medical Center. Dr Berniker has long enjoyed solving crossword and cryptic puzzles and now creates his own. The challenges in creating the puzzles include: completing the grid with usable answers and perhaps a theme, generating interesting clues of suitable difficulty, being error-free in framing questions and answers, and injecting humor. Have fun, and please send him your comments. E-mail: kenneth.berniker@kp.org.





New York: Harcourt, Brace & Company; ISBN: 0156000024. Paperback 1993; \$13.

Consider This, Señora by Harriet Doerr

Reviewed by Arthur D Hayward, MD

Harriet Doerr attended Smith College in her youth, but it wasn't until she reached the age of 67 that she earned an undergraduate degree in history from Stanford University. Then, at an age to retire, she entered the creative writing program at Stanford and began her own career as a fiction writer. She won awards for *Stones for Ibarra* in 1984; and nine years later, at age 83, she published this gem, *Consider This, Señora*.

For the increasing numbers of Americans concluding first careers and contemplating the prospect of living another 25 or 30 years thanks to increasing longevity, Ms Doerr's late-life emergence as a fiction writer may inspire special admiration and raise a question. Could others of us, both physicians and our patients, have hidden creative talent? Who will support the exploration of that possibility? In any case, she shares with readers the sensibility of a highly competent author whose age and maturity seem to have brought her wisdom, understanding, and a kind of bemused indulgence.

In *Consider This, Señora*, Ms Doerr places four US expatriates in a small town in the Mexican countryside. All are starting a new phase of their lives: One has returned as an old woman to reconnect with the land of her birth. Two women have been disappointed in love. A failed businessman is in arrears in paying US taxes. Their stories illustrate how people, displaced in time, place, and culture, gain new perspectives and grow wiser about life's major dilemmas: love, suffering, death. The ability of memory: "... the brilliant patchwork of a never-ending past"^{1p144} to console and heal and to connect characters is one of several recurrent themes.

Though *Consider This, Señora* addresses profound issues, it is neither weighty nor ponderous. The book engages readers in short sections that bring to life serial moments and episodes in the lives of the four expatriates and their Mexican neighbors and friends. Making frequent use of quotations, Ms Doerr lets characters define themselves and tell their own stories. She also takes us inside the minds of her characters to show how misunderstandings and bafflement can proceed from conflicting cultural habits and preconceptions.

The book is primarily the story of Sue, a young artist who has divorced her mountain-climbing husband and harbors, but initially stifles, bitter memories. In two important chapters Ms Doerr narrates how the aging widow Ursula behaves with dignity and demonstrates both purposefulness and acceptance at the end of life.

The language of *Consider This, Señora* is uncomplicated; the narrative moves smoothly; the book reads easily. The many pleasures of reading this book include depictions of the landscape and scenes of everyday life in a remote Mexican village. The authenticity of detail and the author's gentle handling of her characters and their discoveries about life and about themselves suggest how the author's own life has given her the wisdom and understanding she eventually grants to her characters. Physicians seeing aging patients will find this an often-useful book to recommend in order to help patients see new possibilities in their lives—if not in the lives of the doctors themselves. ♦

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1. Doerr H. Consider this, Señora. New York: Harcourt Brace & Co; 1993.

Arthur D Hayward, MD, is a geriatrician and Chief of the Geriatrics and Long-term Care Department in KPNW. He visited Mexico for the first time in 1969 and has traveled about the country many times since. E-mail: arthur.d.hayward@kp.org.

The Best Effect

The best effect of any book is that it excites the reader to self activity.

— Thomas Carlyle, 1795–1881, Scottish essayist, satirist, and historian

WellWriting for Health After Trauma and Abuse: Five WellWriting Ways to Regain Your Health and Life

by Ellen H Taliaferro, MD

Reviewed by Vincent J Felitti, MD

An insight into the purpose of this unusual book is provided by the Swiss psychoanalyst, Alice Miller, in her observation, "The truth about childhood is stored up in our bodies Our intellects can be deceived, our feelings manipulated, our perceptions confused, and our bodies tricked with medication. But someday our body will present its bill"¹ *WellWriting* is a book designed to help difficult patients and, indirectly, their doctors.

In my early years of practice, at a time when I was furtively looking for help with difficult patients (regularly from radiologists), I was often troubled by the fact that so many of my patients didn't fit into the neat diagnostic categories described in Cecil² or Harrison.³ Moreover, there was no one to whom I could pass them on; no longer could I leave my problems behind by changing services. It never would have occurred to me that the patients themselves could be a resource, much less that their writing could be therapeutic.

The University of Texas psychologist, James Pennebaker, PhD, has studied and published convincingly on the benefits of autobiographical writing by patients.⁴ On several occasions in the past few years, autobiographical writing has been mentioned in *JAMA*⁵ as well as *The Permanente Journal*.⁶⁻⁸ Following Professor Pennebaker's advice, I personally have found it effective to tell anxious, depressed, and somatizing patients that, before they return, I want them to start sending me by e-mail a detailed autobiography of their lives in five-year segments. This, they understand, will be held in a private computer file and not be part of their general record. Many comply and are benefited; the benefits are long term, not necessarily immediate. I have benefited by understanding more about these men and women and how their life experiences slowly have transmuted into illness or disease. Of course, a few do not write; it is frightening as well as helpful to expose the inner reality of one's life by telling someone else.

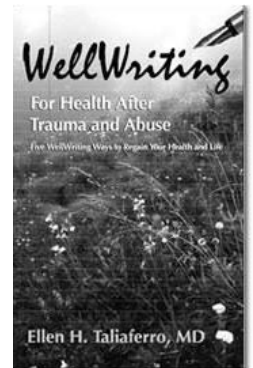
A small book has now been published that can help patients with this new task of autobiographical writing. Surprisingly, the book has been written by a former

Professor of Surgery! *WellWriting* is gently written, easing patients into their task of autobiographical writing, and particularly *re-writing*, for this process helps memories re-develop and insights grow. Useful examples are given that enable readers to understand how life experiences translate into physical symptoms. Encouraging quotations are sprinkled throughout. Prompts are skillfully provided to encourage writing at length and in depth.

WellWriting is a well-conceived idea for a book. Not only is this small volume likely to help patients, it will undoubtedly help physicians increase their breadth of understanding of why patients see doctors, which is quite different from why doctors see patients. Doctors will come to appreciate how patients' retelling of their life stories allows them to become desensitized to past traumatic experiences and to rethink how life experiences can underlie illness. This is a good book to use if one wishes to learn new ways of helping patients deal with old problems. ♦

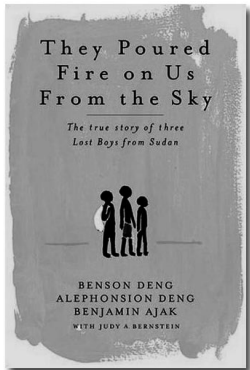
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Half Moon Bay (CA):
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paperback \$19.95

Vincent J Felitti, MD, has been with the Southern California Permanente Medical Group since its opening in San Diego in the late 1960s. E-mail: vjfmddca@msn.com.



New York: Perseus/Public Affairs; 2005. ISBN: 1586482696. \$25.00 311 pages.

They Poured Fire on Us From The Sky: The True Story of Three Lost Boys from Sudan

By Benson Deng, Alephonsion Deng, Benjamin Ajak, and Judy A Bernstein

Reviewed by Paula Johnson

In all of my years reviewing books, I have rarely come across a book as compelling and timely as *They Poured Fire on Us from the Sky*. This book is about a child's nightmare of being alone in the world, a nightmare for all who have seen the images of masses of humans: mothers, fathers, sisters, and brothers, who have been wiped off the face of this vast amazing country of Sudan by a brutal civil war that still rages today.

Alephonsion Deng, co-author, now works in the medical records department of Kaiser Permanente in San Diego. He has endured a life few ever know and survive. He is one of the Lost Boys of Sudan

In the mid 1980s, when their villages in southern Sudan were attacked by troops from the oppressive government in the north, thousands of young boys fled into the wilderness as their parents had instructed them, to avoid capture or death. As five and seven year olds, Benson, Alephonsion, and Benjamin crossed a thousand miles on foot, surviving starvation, thirst, wild animals, and disease along the way. Many boys never made it. Brothers, Benson and Alephonsion, became separated for five years, neither knowing if the other was still alive. After years on the run, experiencing and witnessing the horrors of a terrible civil war, they finally reached one of the most desolate refugee camps in the world where they languished for nine years, surviving on a half cup of corn meal a day. Finally in 2001, the United National High Commissioner for Refugees arranged for the US Government to accept them. If ever there were tired, poor, and homeless yearning to breathe free, it was these Lost Boys of Sudan.

This unforgettable story by Benson Deng, Alephonsion Deng, and Benjamin Ajak, with a forward by Judy A Bernstein, is a vivid portrayal of three of the more than

25,000 Lost Boys of Sudan who crossed the most treacherous part of Africa with the very human goal of surviving and uniting with their families again. Strangely, as you read, you almost feel that you are with these boys. The inspiration and hope of their story is so overwhelming that our day-to-day annoyances seem petty by comparison.

Whether it is the Lost Boys of Sudan, the Hmong of Cambodia, the Bantu of Somalia, or any other refugee group that has entered the American health care system, it is helpful for physicians, clinicians, and other health care givers to gain insight into the experience and culture of the patients by hearing the stories of their trauma. Although not everyone's experience is the same, unfortunately many are similar and they do have an enormous impact on the health of these people and their families.

Despite the sadness and suffering, the beauty in their written language and their tenacious spirits give us hope. Reading *They Poured Fire On Us From The Sky* has forever changed my skeptical mind about the future of this world. The boys are extraordinary examples of tremendous strength and fellowship to this day. A fast read, this book has much to teach while creating a vivid emotional experience. It brings alive the TV news coverage of the Sudanese civil war. It speaks on behalf of millions of children in Africa who are victims and cannot speak for themselves. The story of these Lost Boys is a gift to all who read it or who are touched by their lectures across this country. ♦

Editor's note: The authors have recently been honored with the National Conflict Resolution Center's 18th Annual Peacemaker Award for surviving one of the bloodiest conflicts on Earth, many years in UN refugee camps, and eventual relocation to San Diego where they have become productive men and teachers of peace. —VJF

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Every New One

... when you handle books all day, every new one is a friend and a temptation.

— The Historian, Elizabeth Kostova, American author

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Section A.

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Article 1. Controlling High Blood Pressure

Among the following choices, the intervention in the KPMAS Hypertension (HTN) program that probably had the least effect in the improvement of their 2004 HEDIS score was:

- the development of a feedback report
- the implementation of a BP measurement competency program
- the provision of education to all health care team members
- the involvement of the entire organization

The KPMAS HTN program was aimed at:

- all members
- only members with hypertension
- only members with hypertension and another chronic disease
- only members with a chronic disease as well as members with hypertension

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Article 2. Operation Innovation: A New Level of Care and Service for Breast Cancer Screening, Detection, and Treatment

All of the following processes were implemented to increase the Riverside Medical Center's mammography rate except:

- identified at-risk women and encouraged them to be screened through targeted/motivational telephonic messages and personalized communications at the point-of-service
- allowed all departments to book mammograms directly into the Radiology Information System. Guidelines for implementation were provided to Department Administrators
- identified nonresponders/nonacceptors for focused outreach efforts using stage-matched/tailored communications and materials
- provided access to screening mammography services in an outlying KP facility through a mobile mammography service

In order to shorten the time to diagnosis, the project team focused on improving and streamlining existing processes.

The following new processes were implemented except:

- radiologists committed to reading mammograms in a timely manner and returning patients within one-to-two days for a stereotactic breast biopsy (SBB)
- dedicated surgical consult appointments were created for postbiopsy patients with direct booking capabilities by Radiology/Diagnostic Imaging within three days of SBB with the goal to provide same-day surgical appointment access for suspicious lesions
- allowed the patient to self-refer to General Surgery for breast lumps
- pathologists committed to providing pathology report within 48 hours of receiving the specimen

(Continued on next page)

**Return
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form by
July 31, 2006.**

The Kaiser Permanente National Continuing Medical Education Program (KPNCEM) is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians. The KPNCEM takes responsibility for the content, quality, and scientific integrity of this CME activity. The KPNCEM designates this educational activity for up to two hours of Category 1 CME credit for each *TPJ* issue applicable to the AMA Physician Recognition Award and/or Physicians Award. Each physician should claim credit for only those hours that were actually spent in this educational activity. All authors in this issue report no conflicts of interest.

Continued from previous page.

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Article 3. Patient Safety Executive Walkarounds

Which statement is correct? The Patient Safety Executive Walkarounds Program works because:

- a. it allows regular discussions on patient safety with senior leaders
- b. considerable financial resources are deployed
- c. it has a systemwide tracking database on problems
- d. it is a proactive approach to resolving issues

Which statement is correct? The Executive Walkarounds has identified significant problems among the following groups:

- a. the work environment
- b. specific items about teamwork
- c. issues involving the patient
- d. issues related specifically to the task

page 83

Article 4. Health Care and Public Opinion

Americans believe that all of the following are threats to the public health EXCEPT:

- a. obesity
- b. AIDS
- c. fluoridation of water
- d. high medical costs
- e. cancer

The following university is commonly associated with news reports regarding health care polls:

- a. University of Connecticut
- b. Sonoma State
- c. Brigham Young
- d. Ohio State
- e. Vanderbilt

Objectives

1) to inculcate the use of evidence-based medicine as part of the science of medicine. 2) to stress the art of medicine via enhanced patient physician communication, improved care experience for patients, and more satisfying care giving experience for physicians and staff through better teamwork. 3) to review appropriate updates on the diagnosis and treatment of clinical conditions. 4) to describe infrastructure and systems improvements that lead to improvements in outcomes and patient care experiences.

Section B.

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

	Article 1					Article 2					Article 3					Article 4				
	Strongly Agree		Strongly Disagree			Strongly Agree		Strongly Disagree			Strongly Agree		Strongly Disagree			Strongly Agree		Strongly Disagree		
	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1
The article covered the stated objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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I understood what the author was trying to say.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section C.

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

Section D. (Please print)

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