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The principles and benefits of CME

The Permanente Journal is published by The Permanente Press

Clinical Medicine

Clinical Review: Evidence-based treatment

The significance of antibiotic resistance and the steps already taken to limit the emergence of resistant bacteria is explored in this edition for further action to promote antibiotics as a therapeutic tool.

Commentary

On the cover: “Les Fleurs du Château” by Mary McLean, MD, is a 36 by 48 cm oil on canvas in the impasto technique, a PVG Van Gogh-like paint strokes using very thick paint. This painting was inspired by sunflowers displayed in a window in one of the bedrooms of a chateau in the Loire Valley of France in July 2003. Dr. McLean was further inspired by the sunflower-covered French fields. This painting was painted in her studio at the Hawaii Medical center in southern California. She has had no formal art training aside from a few college art classes. "Les Fleurs du Chateau" is her second oil painting, she considers her style to be "impressionistic."
Assisting Hurricane Evacuees in Houston and Louisiana

Skip Skivington, MBA, Editor

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Philip J Tuso, MD, FACP

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Scott Abramson, MD

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Barbara Caruso

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Subscriptions: The Permanente Journal is available by group or individual subscriptions. For information about subscriptions contact 503-813-2623 or e-mail: permanente.journal@kp.org.

Submitting Manuscripts: Manuscripts submitted to TPJ are reviewed by members of the editorial staff and selected for peer review. For more information regarding manuscript submissions, read “Instructions for Authors” on our Web site at www.kp.org/permanentejournal or contact our editorial office.

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.

Editorial Office: The Permanente Journal

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www.kp.org/permanentejournal

Distribution: If you have any questions regarding distribution of this journal, contact 503-813-2623 or e-mail: permanente.journal@kp.org.

Where to find The Permanente Journal: A full-text version of this journal is available on our Web site: www.kp.org/permanentejournal. In addition, copies of The Permanente Journal are available in Kaiser Permanente libraries programwide and all national medical school libraries.
Empathy: In a Moment, a Powerful Therapeutic Tool

Conventional Objective Approach

Physicians are trained in the superiority of objective diagnosis and the use of physical agents for treatment effect. Historically, they are also trained to maintain maximum objectivity in patient encounters to ensure that cold, hard reason prevails in synthesizing symptom and event facts, physical examination findings, and laboratory and imaging tests. Prescribed treatment then takes the form of chemical agents, invasive procedures, or surgical intervention. While these bedrock methods have contributed greatly to the improvement of individual and public health, their success is predicated on the patient’s acceptance of the diagnosis and treatment, and their adherence to the physician’s recommendations. Furthermore, patients seeking medical care may not have a condition with a primary physical etiology, nor may they have the need for a primary physical treatment, nor do physical agents work best without the patient’s optimization through belief and behavior.

Communication Study

To explore the importance of the subjective in the effectiveness of medical practice I interviewed 60 of the highest-performing physicians on each of four Regions’ (Northern and Southern California, Hawaii, and the Northwest) near-equivalent “Art of Medicine” patient satisfaction survey of physicians’ communication and relationship behaviors. Of these, 20 were primary care physicians who participated in a Garfield Memorial National Research Fund naturalistic and observational study on “MD-Patient Communication,” for which there also is patient-stimulated recall while viewing the videotape of their live visit with their physician. Using a qualitative research approach of posing a standard set of six questions to each physician in a confidential, face-to-face interview, practice beliefs and behaviors were explored. These recorded and transcribed narratives were then coded for commonality and patterns. One of the questions was: “Do you believe, in the setting of a visit, that you, as a doctor, can create a therapeutic moment for your patient? In other words, that what you say, or how you say it, or your connection with your patient, has a treatment effect?” In conventional medicine, for doctors prescribing drugs for their patients’ medical conditions, a therapeutic moment occurs when the drug is ingested and reaches a therapeutic blood level.

Principal Findings

All of the highest-performing physicians agreed that they create a therapeutic moment for the patient (during the visit) to which they ascribe a treatment effect. The physicians believe the necessary context is relationship, and describe one or more of several empathetic activities that produce this moment, including: attention and presence, listening, connection, reassurance and support, explanation, understanding, insight, confidence, certainty, reciprocity, and a feeling of well-being. Physicians believe these activities or states are “part of the medicine” required to heal a patient’s illness and treat their medical condition. Physicians describe patient interactions of this nature as responsible for the physician’s sense of being valued, making an important contribution, and creating personal and professional well-being.

Implications for Policy, Delivery, or Practice

Relationship, short and long-term, is the necessary foundation, and it brings well-being for both patients and physicians. Highest-performing physicians note the benefit of communication education in improving their satisfying interactions with patients. Medical education, the format of the office visit, and leadership expectations must optimize and emphasize the essential value of subjective empathetic activities and states in creating the highest patient satisfaction and the most effective medical treatment outcomes.
Disaster Responses: Is the US Really Prepared?
Lessons from Anthrax, Tsunamis, and Hurricanes

The people of Kaiser Permanente (KP) continue to respond to the health care needs of survivors of major disasters. In this issue of *The Permanente Journal (TPJ)* (see page 59), we remember Katrina one year later by taking a glimpse at the experiences of KP responders as they cared for the evacuees in Houston and New Orleans.

**Past Disaster Responses**
*TPJ* has highlighted prior KP responses to disasters: natural—the December 2003 tsunami (Fall 2005;9(4):69-82), and man-made—the 2002 anthrax poisoning (Winter 2002; 6(1):56-61). Each situation is similar in public health challenges, yet each has its own unique challenges.

The response to Hurricane Katrina was no different. Though similar to our responses in Sri Lanka and Bande Aceh, personal testimonies demonstrate the many unique challenges the Katrina disaster presented to the KP teams mobilized to Houston and New Orleans—the most significant of which was poor logistical support.

**Who is in Charge?**
The accounts of the governmental confusion and difficulties in the Katrina response were reminiscent of the anthrax letter poisoning in the mid-Atlantic states in 2002. As an on-site infectious disease physician during this man-made disaster, I was amazed that it was never clear which person from which agency was in charge. Who is the spokesperson? Who is making decisions? Who is accountable—local or state health departments, or the CDC? As a result of this gap in leadership, major communication lapses ensued. I recall the KP response leaders in the command center having to watch CNN for updates—inappropriate.

This was vividly replayed in the Katrina response—*who is really in charge?* In responding to this disaster, the multilayers of government became more a liability than a strength.

**The Lesson from Bande Aceh, Indonesia**
As one of the responders to the tsunami disaster, I was very impressed with the central oversight of the many international agencies. There never was a question as to who was in charge—the Indonesian Minister of Health. At briefing sessions coordinating the disaster response, it was clear that the World Health Organization took the lead in overseeing the response but all plans were contingent on approval of the Minister of Health’s office. Without this clarity, leaders of agencies would have been in a Katrina-type mode of uncertainty as to when and where to become involved.

**Are We Ready for a Future Influenza Pandemic?**
On the basis of observation of past US responses to disasters, there is no doubt that the quarantine requirements of any future pandemic will stress our public health system. Past experiences suggest the following are essential for a successful response:

1. There must be one agency and one person who is visibly in charge, fully accountable, and has the authority (and the will!) to enforce essential quarantines. *Why would we think we can implement and enforce mandatory quarantines when we have proved we are unable to enforce mandatory evacuations?*
2. There must be clear communication channels from the agency in charge to responding agencies and, just as important, to the public.
3. We must practice—A basic requirement of emergency preparedness. After witnessing anthrax and Katrina, I personally do not believe that our country will be able to initiate effective quarantines without a significant investment in drills.

**Regardless, We Are Ready to Serve!**
Unfortunately there will be future natural and man-made disasters and our preparedness will again be tested. Whether our society is prepared or not, one thing is certain—there will once again be a need for the compassionate people to step forward and serve. ❖

“Those in authority must retain the public’s trust. The way to do that is to distort nothing, to put the best face on nothing, to try to manipulate no one.”
—John M Barry, *The Great Influenza*
Dear Sirs,

I don’t usually enjoy going to the Emergency Room to get stitches for my son, but my recent trip to the San Rafael, CA KP ER turned out to be a most rewarding experience.

Lying on the table in the waiting room was the Summer 2006 issue of The Permanente Journal featuring the articles commemorating the Garfield Centennial. I worked for Sidney Garfield, MD, as Mental Health Coordinator of the Total Health Care Program after I graduated from the Doctor of Mental Health Program at UCSF in 1980. I always felt that I was privileged to work with one of the true giants of American health care. I, too, believe that Dr. Garfield has never received his due recognition in the field, so many thanks for highlighting his groundbreaking contributions.

Dr. Garfield was truly prescient. Over three decades ago, he anticipated, wrote about, and implemented all of today’s buzzwords, such as disease management and demand management and primary care reengineering. He also pioneered population management (the authors of “Total Panel Ownership...” in the same issue would be behooved to read about his design of Total Health Care and acknowledge that Dr. Garfield thought of it all the way back in the 70s), automated medical records, consumer empowerment, integrating health education and behavioral health care into the primary care setting to meet the needs of the “well” and the “worried well,” and approaching the primary care delivery system with the productions, operations, and management vision atypical to medical settings. Robert Feldman, MD’s comments about Dr. Garfield’s gracious, generous, and unassuming demeanor definitely rang true, too. Working with Dr. Garfield as a 28-year-old definitely gave me the feeling that I was developing in the shadow of greatness.

My career has taken me on a meandering path since the Total Health Care Program. After a decade working at for-profit managed care organizations—I left my clinical role at Total Health Care in 1984 to attend Harvard Business School—I ended up with the conviction that something was seriously amiss in our health care delivery system, as it focused primarily on cost control, rather than enhancing the experience of health care consumers. So, in 1997, I founded a company called CareCounsel that contracts with employers to act as advocates for their employees and retirees as they navigate the complex health care landscape. I want your readers to know that our firm would be out of business if everyone was a KP member. But, alas, that is not the case, so CareCounsel has thrived.

In closing, Dr. Garfield was a true innovator and a real inspiration in my professional life. Thank you, thank you and thank you for honoring him so well.

Lawrence N Gelb, MBA, PhD
President and CEO, CareCounsel
San Rafael, CA

Editor,

The Summer 2006 edition of The Permanente Journal is outstanding! I am reading the articles by and about Dr. Garfield which is of such interest to me that I am reading it between seeing patients. Dr. Garfield’s Scientific American address could have been written today—sort of a sad commentary.

Michael S Alberts, MD, General Surgeon
Mill Plain Medical Offices
Vancouver, WA

Editor,

The Summer 2006 issue blew me away. Ignition came from the article “Otto Loewi’s Great Dream.” I was rocketed back to NYU Medical School, 1944, when, as a second-year medical student, Dr. Otto Loewi was our professor of pharmacology. He shared with the whole class his dream experience that won him a Nobel Prize. Seeing it “up in lights” in the journal “set me afire.” Perhaps you are acquainted with Charles Grossman, MD, a ninety-year-old practitioner in Portland, OR. He is a friend who went to NYU a few years before I did and came to Oregon to work in the original Portland Permanente group. He eventually left for solo practice but I suggest that he would be a good subject for a journal article. He was the first clinician to treat a patient with penicillin and, in 1977, he led the first party of US doctors to visit the People’s Republic of China. I was one of that group along with Vera Katz, former mayor of Portland. Dr. Grossman’s story is unusual and interesting. Thank you for sending me the journal.

Ralph Crawshaw, MD
Chair of Collegium for the Study of the Spirit of Medicine, The Foundation for Medical Excellence, Portland, OR

Editor,

When I was in residency in New York City, in 1970 or 1971, I had the privilege of helping to provide care to Mrs. Garfield who came to be treated by the Chairman of our department at the hospital where I trained. It was an honor for us to realize that persons came to our medical center for care from far and wide.

Sylvain Fribourg, MD
Retired—Panorama City Medical Center

Editor,

Dr. Garfield was truly prescient. Over three decades ago, he anticipated, wrote about, and implemented all of today’s buzzwords, such as disease management and demand management and primary care reengineering. He also pioneered population management (the authors of “Total Panel Ownership...” in the same issue would be behooved to read about his design of Total Health Care and acknowledge that Dr. Garfield thought of it all the way back in the 70s), automated medical records, consumer empowerment, integrating health education and behavioral health care into the primary care setting to meet the needs of the “well” and the “worried well,” and approaching the primary care delivery system with the productions, operations, and management vision atypical to medical settings. Robert Feldman, MD’s comments about Dr. Garfield’s gracious, generous, and unassuming demeanor definitely rang true, too. Working with Dr. Garfield as a 28-year-old definitely gave me the feeling that I was developing in the shadow of greatness.

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In closing, Dr. Garfield was a true innovator and a real inspiration in my professional life. Thank you, thank you and thank you for honoring him so well.

Lawrence N Gelb, MBA, PhD
President and CEO, CareCounsel
San Rafael, CA
To the Editor,

I was very pleased to read about the advances in genetic services in the KP Southern California Region. The diagnosis and possible treatment of rare genetic disorders such as Fabry’s disease is laudatory. However, I must sadly note the absence of a much more common and treatable genetic disorder affecting mainly our adult patients, ie hemochromatosis. There must be a large group of undiagnosed but treatable patients with this disorder within our general patient population.

Hemochromatosis was the subject of a review article in your Journal a number of years ago (Winter 1999; Update: Winter 2004). The author of that article was able to establish (about 35 years ago), a screening program for the disorder in the general KP population in the San Diego Region. Screening required only one or two relatively inexpensive blood tests for most cases. These tests may be ordered with the first routine labs in newly enrolled patients. Unfortunately, the state of California doesn’t yet require the testing of patients for hemochromatosis.

Hemochromatosis was also a topic at one of our annual Southern California Pediatric Symposia in the 1990s. A case report of one affected patient was included in the lecture syllabus. The report was of a KP physician who served in the Southern California Region for more than 25 years. He is also one of my closest friends. His disease went undiagnosed while he was under the care of 14 KP physicians. He estimates that, in the 15 years since retirement, his medical care has cost KP and government systems about two million dollars. It can be argued that most, if not all, of his medical problems can be traced back to his hemochromatosis. I include in that statement the very real threat of suicide.

Since we do care for the aging population, more and more of our patients may live to become symptomatic from their diseases. Can we afford to wait until they die? Would any of the authors care to discuss the factors within our organization that have acted to restrict the spread of screening programs for hemochromatosis to all the regions of the KP patient care organizations?

Glenn C Szalay, MD (Retired)
Formerly, Harbor City Service Region
Southern California Permanente Medical Group

—Reply

In response to Dr Szalay’s letter, we would like to address the impact of population screening for hemochromatosis. Although we agree with Dr Szalay that we all need to support the development of sound genetic screening programs within KP, the main purpose of our article was to illustrate the history of genetic services at SCPMG. We are sorry if our article gave Dr Szalay the impression that Regional Genetics at SCPMG are not advocates for genetic screening programs. Our department has been involved in the coordination and implementation of a number of screening programs in Southern California, including the California Expanded AFP program for fetal anomalies, the California Newborn Screening program, and our own internal prenatal program for cystic fibrosis carrier testing.

Although a number of experts support the idea of a population screening program for hemochromatosis, there are many issues to evaluate and resolve before such a program can be adopted. An assessment might include the following: disease incidence/prevalence; the nature and implications of the screening test options; genotype/phenotype correlation; treatment options; and other factors. The CDC does not recommend population screening for hemochromatosis. Genetic evaluation and testing is appropriate for those with a family history and for patients who are symptomatic.

As resolutions evolve for the issues surrounding population screening for hemochromatosis, our organization should continuously re-evaluate such screening. The topic was recently referred to our technology assessment group for an evaluation of evidence and assessment of the current expert consensus. Thank you for raising an important question.

Monica Alvarado, MS
Regional Genetics, SCPMG

Reference
Dear Sirs,

Your article entitled “Total Panel Ownership and the Panel Support Tool—Its All About the Relationship” (Summer 2006) provides us with some very much-needed encouragement. Many of us have lost touch with our professional roots and are having difficulty remembering why we became doctors in the first place. It is invigorating to see the vision at KP unfolding.

This latest initiative demonstrates that your organization is serious about supporting the doctor-patient relationship; something that many health care leaders have told us is no longer sustainable and will soon be “lost forever.”

The article also points to two other essential requirements for transforming health care: First, we can no longer afford to allow “value” to be defined for us by agencies that are external to our organizations.

The evidence on which outside agencies have based the value of and reimbursement for health care has been meager at best, and is becoming increasingly irrelevant as we move towards more collaborative models of health care delivery.

As we come to know our patients more intimately, no one else is in a better position to define what their needs are, and no one else is better qualified to determine the value of the health care that we bring to them.

The other essential requirement for transforming health care is something that leaders in other industries have known for well over a decade, but only a handful of leaders in health care have been able to recognize or incorporate into their organization’s daily operations. We are now in a “knowledge economy” and the key to any organization’s success will be the implementation of an overarching strategy for “knowledge management.” Indeed, such strategies may very well prove to be the basis for the integrated delivery system’s competitive advantage in the health care marketplace.

Organizations that view their employees as “knowledge workers,” treat them with respect, and provide the environment for them to continuously innovate and improve what they produce have nothing to fear from those that continue to treat them like commodities.

It’s all about the relationship.

Leon F Baltrucki, MD
Staff Pathologist
Department of Pathology & Laboratory Medicine
Veterans’ Affairs Medical Center
West Palm Beach, Florida

Let us hear from you.

We encourage you to write, either to respond to an article published in the Journal or to address a clinical issue of importance to you. You may submit letters by mail, fax, or e-mail.

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Be sure to include your full address, phone and fax numbers, and e-mail address. Submission of a letter constitutes permission for The Permanente Journal to publish it in various editions and forms. Letters may be edited for style and length.

Editor,

Will you please explain to me what a private health insurance policy commonly includes?

There are a lot of discussions about this in Romania now, and I would like to know the American model. During the awful communist years, everybody had taken about 6% of his wages for the health system. Then, when he felt ill, he went to the dispensary or to the hospital and had blood tests and operations performed for free. If he wanted to be operated on by a famous professor, then he had to pay a big tip, directly in the pocket of the professor, but the hospital or the health system got nothing out of this tip. This system is still working now, but there is less and less money coming into the health system, and the medicines, water, and electricity are more and more expensive. That is why our health minister tries to make a reform, and include only certain basic blood tests and some basic medical interventions (we do not yet know exactly which ones), while other tests or, for example, esthetic operations must be paid to the hospital in cash by the patient who asks for them, or by private health insurance. I find this quite fair.

I read an article about these private health insurance policies that have had no success with us so far, because everybody prefers the cheaper way. If the health system reform will be started, then the private insurance policies may be successful, and I would like to know how they are in USA. Are there cheaper ones and more expensive ones? What do some less expensive ones include? What would the expensive ones include? This is a new field for me, and I am very curious about it.

Roxana Covali, MD, PhD
Radiologist
Iasi, Romania
E-mail: rcovali@yahoo.com

—Reply
Readers,

I have passed this request to sources in Kaiser Foundation Health Plan but hope that individual physicians may wish to respond to Dr Covali’s question about what health insurance is like in America. Her e-mail address is rcovali@yahoo.com.

Vincent J Felitti, MD
Book Review Editor
San Diego Medical Center
Abstracts of Articles Authored or Coauthored by Permanente Physicians, Nurses, and Investigators

**From the Northwest:**
Web-based weight management programs in an integrated health care setting: A randomized, controlled trial.

**OBJECTIVE** To assess the efficacy of a Web-based tailored behavioral weight management program compared with Web-based information-only weight management materials. Weight change and program satisfaction were assessed by self-report through an Internet-based survey at three- and six-month follow-up periods.

**RESEARCH METHODS AND PROCEDURES** Participants, 2862 eligible overweight and obese (BMI = 27 to 40 kg/m²) members from four regions of Kaiser Permanente’s integrated health care delivery system, were randomized to receive either a tailored expert system or information-only Web-based weight management materials. Weight change and program satisfaction were assessed by self-report through an Internet-based survey at three- and six-month follow-up periods.

**RESULTS** Significantly greater weight loss at follow-up was found among participants assigned to the tailored expert system than among those assigned to the information-only condition. Subjects in the tailored expert system lost a mean of 3 ± 0.3% of their baseline weight, whereas subjects in the information-only condition lost a mean of 1.2 ± 0.4% (p < 0.0004). Participants were also more likely to report that the tailored expert system was personally relevant, helpful, and easy to understand. Notably, 36% of enrollees were African American, with enrollment rates higher than the general proportion of African Americans in any of the study regions.

**DISCUSSION** The results of this large, randomized control trial show the potential benefit of the Web-based tailored expert system for weight management compared with a Web-based information-only weight management program. Reprinted with permission. Copyright 2006, NAASO.

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**From the Northwest:**
Treatment escalation and rise in HbA1C following successful initial metformin therapy.

**OBJECTIVE** To describe secondary failure of initial metformin therapy in patients who achieved initial HbA1C <8% and to identify predictors of failure.

**RESEARCH DESIGN AND METHODS** We identified 1288 patients who achieved A1C <8% within one year of initiating metformin as their first-ever antihyperglycemic drug. Subjects were followed until they added/switched antihyperglycemics, they terminated Health Plan membership, or December 31, 2004. We defined secondary failure using two separate but overlapping approaches: 1) addition/switch to another antihyperglycemic drug or 2) first A1C measurement >8% after at least six months on metformin.

**RESULTS** The best A1C achieved within one year of metformin initiation was the most powerful predictor of avoiding secondary failure. Approximately 50% of subjects whose best A1C was 7-7.9% added/switched antihyperglycemics within 36 months, whereas it took >60 months for those in the 6-6.9% A1C category to reach a 50% failure rate. Those who achieved an A1C <6% did not reach a 50% rate of adding/switching drugs until 84 months. For the alternative secondary failure outcome, about half of those whose best A1C was 7-7.9% reached an A1C >8% within 24 months. Only approximately 25% of subjects in the 6-6.9% category failed by 48 months, and >80% of subjects in the <6% category remained below 8% through 60 months.

**CONCLUSIONS** Whether defined by adding/switching to another drug or by reaching an A1C of 8%, secondary failure is inversely associated with the reduction of A1C achieved within the first year of metformin monotherapy. Copyright © 2006 American Diabetes Association. From Diabetes Care, Vol 29, 2006;504-9. Reprinted with permission from The American Diabetes Association.

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**From Southern California:**
Spirometry is related to perinatal outcomes in pregnant women with asthma.

**OBJECTIVE** The purpose of this study was to test the hypothesis that maternal asthma symptoms and pulmonary function are related to adverse perinatal outcomes.

**STUDY DESIGN** Asthmatic pregnant women were recruited from the 16 centers of the Maternal Fetal Medicine Units. Forced expiratory volume in one second was obtained at enrollment and at monthly study visits, and the frequency of asthma symptoms was assessed from enrollment to delivery. Perinatal data were obtained at postpartum chart reviews.

**RESULTS** The final cohort included 2123 participants with asthma. After adjustment for...
demographic characteristics, smoking, acute asthmatic episodes, and oral corticosteroid use, significant relationships were demonstrated between gestational hypertension and preterm birth and lower maternal gestational forced expiratory volume in one second. The data did not show any significant independent relationship between asthma symptom frequency and perinatal outcomes.

**CONCLUSION** Lower pulmonary function during pregnancy is associated with increased gestational hypertension and prematurity in the pregnancies of women with asthma, which may be due to inadequate asthma control or factors that are associated with increased asthma severity.

Reprinted from American Journal of Obstetrics and Gynecology, 194(1), Schatz M, Dombrowski MP, Wise R, et al; National Institute of Child Health and Human Development Maternal-Fetal Medicine Units Network; National Heart, Lung, and Blood Institute. Spirometry is related to perinatal outcomes in pregnant women with asthma. 120-6, Copyright 2006, with permission from Elsevier.

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**From Northern California:**
Short-term outcomes of infants born at 35 and 36 weeks gestation: we need to ask more questions.

**Escobar GJ, Clark RH, Greene JD. Semin Perinatol 2006 Feb;30(1):28-33.**

**BACKGROUND** Newborns who are 35 to 36 weeks gestation comprise 7.0% of all live births and 58.3% of all premature infants in the United States. They have been studied much less than very low birth weight infants.

**OBJECTIVE** To examine available data permitting quantification of short-term hospital outcomes among infants born at 35 and 36 weeks gestation.

**DESIGN** Review of existing published data and, where possible, re-analysis of existing databases or retrospective cohort analyses.

**SETTING** Multiple hospitals and neonatal intensive care units in the United States and England.

**PATIENTS** Premature infants cohorts with infants whose dates of birth ranged from 1/1/98 through 6/30/04.

**MAIN OUTCOME MEASURES** 1) Death, 2) respiratory distress requiring some degree of inotropic respiratory support during the birth hospitalization, and 3) rehospitalization following discharge home after the birth hospitalization.

**RESULTS** Newborns born at 35 and 36 weeks gestation experienced considerable mortality and morbidity. Approximately 8% required supplemental oxygen support for at least one hour, almost three times the rate found in infants born at ≥37 weeks. Among 35 to 36 week newborns who progressed to respiratory failure and who survived to six hours of age and did not have major congenital anomalies, the mortality rate was 0.8%. Following discharge from the birth hospitalization, 35 to 36 week infants were much more likely to be rehospitalized than term infants, and this increase was evident both within 14 days as well as within 15 to 182 days after discharge. In addition, late preterm infants experienced multiple therapies, few of which have been formally evaluated for safety or efficacy in this gestational age group.

**CONCLUSIONS** Greater attention needs to be paid to the management of late preterm infants. In addition, it is important to conduct formal evaluations of the therapies and follow-up strategies employed in caring for these infants.

Reprinted from Seminars in Perinatology, 30(1), Escobar GJ, Clark RH, Greene JD. Short-term outcomes of infants born at 35 and 36 weeks gestation: we need to ask more questions. 28-33, Copyright 2006, with permission from Elsevier.
From Southern California:
Screening of EEG referrals by neurologists leads to improved health care resource utilization.

The objective of this study was to determine if screening by a neurologist of all non-neurologist electroencephalogram (EEG) referrals prior to approval reduces the number of inappropriate requests. This retrospective survey included 600 consecutive EEG requests referred by non-neurologists with scrutiny (p = .334, c-square test). Scrutiny by a neurologist of EEG referrals from non-neurologists led to a reduction in the number of normal EEG results. This suggests that inappropriate EEG requests for nonepileptic patients that yield normal EEG results are significantly reduced with scrutiny. This can help reduce the indiscriminate overuse of EEGs by non-neurologists thereby leading to better utilization of health care resources.

From Northern California:
Outcomes of a disease-management program for patients with recent osteoporotic fracture.

INTRODUCTION The purpose of this study was to evaluate outcomes of a disease-management program designed to increase rates of bone-mineral-density (BMD) testing and initiation of osteoporosis medication among patients with a recent osteoporotic fracture.

STUDY DESIGN We identified 744 consecutive patients aged ≥ 55 years who were seen at either of two of 14 Kaiser Permanente medical facilities in Northern California (KPNC) after sustaining a fracture of the hip, spine, wrist, or humerus between April 2003 and May 2004. These patients were invited to participate in a study of the Fragile Fracture Management Program, whose protocol used fracture-risk assessment tools to determine treatment recommendations. Postfracture care of study participants was compared with usual postfracture care received by osteoporotic-fracture patients at 12 other KPNC facilities.

RESULTS Of the 744 patients who were invited to participate in the study, 293 (39%) agreed to participate, and 169 (23%) completed the evaluation. Of these 169 patients (127 women, 42 men), 65 (51%) of the women and seven (17%) of the men qualified for drug treatment; of these 72 patients, six (86%) of the men and 41 (63%) of the women accepted the offered treatment. At the two study locations, rates of care (BMD testing or prescribing osteoporosis medication) were about twice as high as rates of usual postfracture care observed at 12 other medical centers in KPNC.

CONCLUSIONS Compared with patients who received usual care for osteoporotic fracture, patients participating in a postfracture disease management program had substantially higher rates of medical attention given for osteoporosis; however, the overall yield of the program was low. This low uptake rate was related to factors not previously appreciated: many patients refused participation in the program; a high proportion of younger women—and men of all ages—did not qualify for treatment; and treatment was refused by one in three study-qualified women and by one in seven study-qualified men. Additional efforts are needed to overcome patient barriers to improved osteoporosis evaluation, treatment, and participation in postfracture programs.

CLINICAL IMPLICATION: A fragility fracture should automatically signal the need to evaluate a patient for osteoporosis as well as for secondary reasons for bone loss to prevent subsequent fractures. This study points out the need for improved patient education about osteoporosis; providers need to encourage increased patient participation in osteoporosis education in order to improve patient acceptance of osteoporosis evaluation and treatment, and patient compliance with long-term osteoporosis treatment.—MC ✤
From KP Northern California, KP Northwest, KP Southern California: Physician and patient perspectives on clinician-patient communication during clinic visits: Do you see what I see?


BACKGROUND: Despite its importance in forming clinical relationships, there is limited information on how patients and physicians perceive their own communication during outpatient visits. We examined physician and patient perspectives on physician skills and behaviors during actual outpatient visits.

METHODS: Using facilitated individual reviews, we asked primary care physicians (n = 15) and two of their regularly scheduled patients (n = 30) to watch videotapes of their own visit and identify significant communication skills or behaviors. Using content analysis, two coders independently categorized the comments into themes, using transcripts of the facilitated reviews. The coders agreed on 70% of the coding categories; a third coder resolved any discrepant response codes. We compared the frequency of themes noted by physicians and patients respectively.

RESULTS: Subjects made 904 total comments (mean = 15.1 per visit; 17.1 physician and 13.0 patient comments), which were categorized into 18 themes. The most prevalent themes identified by both physicians and patients were: physician explanation skills (58.3%) and listening skills (55.0%). One physician stated, “I think one thing that is important is to give people information as you go … people are very anxious about the physical … let them know it’s normal or what you find and what it means. Because at the end, you may forget to mention it or it may be just too much information [to discuss all at once].” Compared with patients, more physicians focused on communication skills to improve visit/time management, while more patients focused on the importance of physician attitudes toward communication (93% vs 20% and 0% vs 47% for physicians and patients respectively).

CONCLUSIONS: The facilitated review approach could help identify useful communication skills and opportunities from both physician and patient perspectives. These preliminary findings also suggest some discrepancies exist in the two perspectives, such as physician attitudes. Additional research is needed to better understand how physicians and patients view clinical communication.

From National Cancer Institute, Group Health Cooperative, Henry Ford Health System, KP Northern California, KP Southern California, KP Northwest, KP Hawaii, KP Colorado, University of Massachusetts Medical School, and Cancer Research and Biostatistics: Secondary prevention: Priorities in breast cancer screening; recruitment, detection, or follow-up?


BACKGROUND: Despite high screening rates within seven integrated health plans, 17% of invasive cancers are late-stage. But, screening is a process not just a test. To set priorities regarding how to further reduce late-stage disease, it is important to understand whether and where the screening process broke down within these plans.

METHODS: We conducted retrospective reviews of chart and automated data for three years prior to diagnoses of late-stage (metastatic and/or tumor size >3 cm) cases) and early-stage breast cancers (controls) in 1995-1999 among an identifiable population of >8.2 million people. We categorized their first screening mammogram in the 13-36 months prior to diagnosis as 1) none (absence of screening), 2) negative (absence of detection) or 3) positive (potential breakdown in follow-up). We compared the proportion (two-sided test) of cases and controls and estimated the likelihood of late-stage as a function of race and refusal-of-breast-care. Among late-stage cases, we evaluated demographic characteristics associated with absence of screening.

RESULTS: The distributions of absence of screening, absence of detection, and potential breakdown in follow-up differed among case (52.1%, 39.5%, and 8.4%, respectively) and control (34.4%, 56.9%, and 8.8%, respectively) subjects (p = .03). Among all women, the odds of having late-stage cancer were higher among women with an “absence of screening” (OR = 2.17, 95% CI = 1.84 to 2.56; p < .001) or who refused care prior to the study period (OR = 3.16, 95% CI = 2.11 to 4.73). Among late-stage disease subjects, women were more likely to be in the absence of screening group if they were aged 75 years or older (OR = 2.77, 95% CI = 2.10 to 3.65), unmarried (OR = 1.78, 95% CI = 1.41 to 2.24), or without a family history of breast cancer (OR = 1.84, 95% CI = 1.45 to 2.34). A higher proportion of women from census blocks with less than a 50% likelihood of a college education (58.5% versus 49.4%; p = 0.003), or an annual income of less than $75,000 (54.4% versus 42.9%; p = 0.004) were in the absence of screening category compared to all other categories combined.

CONCLUSIONS: To further reduce late-stage breast cancer occurrence, top priority for screening implementation should be given to reaching unscreened women, including those who are older, unmarried, low income, and less educated.
From KP Colorado:
Rehabilitation characteristics in community-dwelling, nonagenarian patients admitted to skilled nursing facilities.
Conner DA, Barnes C.

**BACKGROUND** The distinction of “65 years of age and older” is increasingly recognized as an artificial one. Geriatric researchers are beginning to recognize distinct groups of older adults. We examined rehabilitation characteristics of community-dwelling HMO nonagenarian members (90 years of age and older) who received rehabilitation in skilled nursing facilities.

**METHODS** Retrospective analysis of the records of 928 community-dwelling HMO members 90 years of age and older, admitted to one of seven skilled nursing facility for rehabilitation following a hospitalization or decline in function. Measures included admission motor and cognitive FIM, days post onset, medical complexity, age, gender, therapy hours, days of therapy, and total FIM gain at discharge. Logistic regression determined significant predictors of the proportion of patients discharged to the community (home, board and care, or an assisted-living facility), and adequate rehabilitation progress defined as a gain of one or more FIM points per day.

**RESULTS** Average age was 92.8 years (range: aged 90-to-107 years). Average SNF length of stay was 10.9 days. Sixty-three percent of patients were discharged to a community setting. Patients discharged to the community were admitted with significantly greater total FIM, cognitive FIM, and motor FIM, as well as fewer days post onset and lower medical complexity. Admission motor and cognitive FIM were significant predictors of discharge to the community. Patients achieving adequate rehabilitation progress were admitted with significantly greater total FIM, cognitive FIM, and motor FIM, and lower medical complexity. Predictors of adequate progress included admission cognitive FIM, admission motor FIM, and days post onset.

**CONCLUSIONS** More than 60% of patients, 90 years old and older, were discharged to a community setting following rehabilitation. Admission cognitive and motor FIM, medical complexity, and days post onset are important measures influencing rehabilitation outcomes in this older population.

From HealthPartners:
The impact of comorbid depression on CHD in the elderly: Health status and clinical outcomes.
Whitebird RR, Rush WA, O’Connor PJ, Asche SE, Solberg LI, Rush MM.

**BACKGROUND** Depression has been established as a significant risk factor for patients with chronic heart disease (CHD) with growing interest focused not only on quality-of-life concerns, but on the effects depression may have on important clinical and health status factors. The purpose of this investigation was to examine the impact of depression on important clinical and health status factors in elderly patients with CHD.

**METHODS** Data are from a four-year multisite collaborative study that used a combination of survey, chart audit, and administrative data to examine improvement strategies that lead to best care practices for patients with chronic disease including CHD. Depression was assessed using the PHQ2 to identify the cardinal signs of depression. Logistic and multiple regression analyses were used to examine the relationship between depression and clinical measures including blood pressure, LDL lipid measurement, and perceived health status measures.

**RESULTS** Depression was not significantly related to clinical outcomes of LDL, SBP, or DBP, but was significantly related to poorer perceived health status measures including decreased physical health (p < .001) and physical activity (p < .001), increased arthritis (p < .0001), and poorer patient assessment of their primary health care (p < .004). Depression was also significantly related to lower psychosocial functioning including lower perceived social support (p < .0001) and strongly held beliefs that CHD is a future threat and currently causing problems in their life (p < .0001).

**CONCLUSIONS** These findings suggest that depression has significant implications for physical and psychosocial health and should be assessed and monitored in providing care for elderly patients with CHD.
soul of the healer

“Santillana Home”
photograph
By David Clarke, MD

David Clarke, MD, is a gastroenterologist for Northwest Permanente. This photograph was taken on a trip to Spain in 2005.
Emergency Cardiology: 
A Review of Recent Literature

By Amal Mattu, MD

Introduction

At the University of Maryland Emergency Medicine Residency, members of the emergency medicine faculty each review a different organ system so that the department stays familiar with current literature. I enjoy emergency cardiology, so that is the topic I review. The articles for this review come from a database of more than two dozen American and European cardiology, emergency medicine, and internal medicine journals examined weekly. In addition, with other faculty members, we use several abstract services to ensure that we do not miss important articles from other journals. Altogether, we review several hundred articles, editorials, and reviews each month, which are selected because they reflect some important change in the standard of care. For the most part, these are all original research articles. Two final criteria are relevance to emergency medicine and conclusions that are supported by the data.

I present here my most recent review, with topics grouped by common themes: acute coronary syndrome (ACS), congestive heart failure (CHF), syncope, and resuscitation.

Acute Coronary Syndrome

Risk Factors

Prognostic value of elevated biomarkers in diabetic and non-diabetic patients admitted for acute coronary syndromes

Of course, if a patient has chest pain and diabetes, we take it very seriously, but there is a new understanding in the United States and Europe regarding the significance of diabetes. Diabetes, previously considered a risk factor for coronary atherosclerosis, is now considered an equivalent of coronary atherosclerotic disease; the diabetic patient should be assumed to have coronary artery disease.

Fazel et al studied 1951 patients who presented with ACS: 31% had diabetes, and of those, 71% had elevated levels of cardiac biomarkers. Diabetic patients were less likely to present with ST-segment elevation and more likely to have myocardial infarctions (MIs) with non-ST-segment elevation. Prior evidence indicates that some oral hypoglycemic medications attenuate the magnitude of ST-segment elevation during MI. A diabetic patient may have an ST-segment elevation of only 0.5 mm, in contrast to an elevation of 1 mm to 2 mm in patients who do not take oral hypoglycemics.

In addition, these diabetic patients were much more likely to have congestive heart failure (CHF), pulmonary edema, and renal failure while hospitalized. In-hospital mortality for diabetic patients was 90% greater than in nondiabetic patients (7.3% versus 4.0%), and six-month mortality in diabetic patients without elevated biomarkers (cardiac enzymes) was the same as or worse than that for nondiabetic patients with positive troponin test results. With diabetes now considered so significant, at the University of Maryland Medical Center we generally admit these patients to a higher level of care than for nondiabetic patients with similar presentations.

Presentation

Meta-analysis of possible external triggers of acute myocardial infarction

Culic et al reviewed 17 different studies involving a total of 10,000 patients who presented with ACS. Patients were asked what they were doing when their chest pain began. The majority of these patients were physically active—6.1% had been engaged in heavy physical activity and 29% in mild to moderate activity. However, 21% of the patients had been awakened from sleep by pain, and almost 7% were involved in some emotionally stressful situation when pain began. These data demonstrate the importance of avoiding the tendency to label “stress” as a benign entity—it can precipitate a heart attack.

Also, 8% of the patients in this study who had MIs...
were eating something when their cardiac pain began. Reflux esophagitis is the most common misdiagnosis of MI, as indicated by malpractice cases against emergency medicine specialists, cardiologists, and internists. According to the cardiology literature, 20% of patients with MIs and unstable angina describe their pain as indigestion. Furthermore, 15% of patients with MI get some pain relief and 7% get complete pain relief with antacids. Never employ Maalox use as a diagnostic modality to distinguish between reflux and MI. The literature also indicates that almost 50% of patients with MIs report that they had an increase in belching with their cardiac pain and that gastroesophageal reflux is more common in patients with cardiac disease than in the general population. In a separate study by Dobrzycki et al., 50 patients with angiographically proven cardiac disease underwent simultaneous 24-hour electrocardiography and 24-hour esophageal pH monitoring to correlate episodes of acute reflux with cardiac ischemia. Twenty-one percent of episodes of electrocardiographically proven ischemia—ST-segment depression or ST-segment elevation—were associated with acute episodes of reflux. Patients with gastroesophageal reflux had more frequent episodes of ST-segment depression, and when these patients had acute reflux, their ST segments stayed depressed for a longer period of time than did ST segments for patients without gastroesophageal reflux. Patients with gastroesophageal reflux had more frequent episodes of ischemia, worse ischemia, and more prolonged episodes of ischemia than did patients without it. The authors then treated all of the patients with proton pump inhibitors and found that not only pH levels but also the magnitude of ST-segment depression improved in all patients. The important lesson from this study and literature as far back as the 1960s is that acute gastroesophageal reflux may actually provoke or worsen cardiac ischemia. The concept of a direct association between reflux esophagitis and acute cardiac ischemia is termed linked angina and was first described in 1962. When patients present with reflux symptoms, they may be having reflux, but that reflux may be inducing cardiac ischemia as well. I recently reviewed two cases of missed MIs; in both, the MIs were misdiagnosed as reflux. In one of the cases, the emergency department physician admitted the patient, who had a troponin level of 0.4 ng/mL (a minor elevation) and Wellen’s sign (an electrocardiographic abnormality of biphasic T waves in the mid-precordial leads, indicative of significant proximal left anterior descending coronary artery disease). The patient was sent for endoscopy by the inpatient physicians, where reflux esophagitis and the presence of some esophageal erosions were confirmed. Because of this and a positive response to antacid therapy, the cardiologist diagnosed reflux and sent the patient home, ignoring the troponin level and the electrocardiographic change. The patient died a week later at home because of a large left anterior descending coronary artery lesion and a large anterior MI.

Evaluation of a clinical decision rule for young adult patients with chest pain

Marsan et al. looked at 1023 patients age 24-to-39 years who presented with chest pain. Patients using cocaine were excluded. Of the 98% for whom there were 30-day follow-up data, 5.4% were found to have ACS; One of 20 patients younger than age 40 years with undifferentiated chest pain presenting to the emergency department had ACS. Also, 2.2% died because of MI or underwent emergency bypass or percutaneous coronary intervention (PCI). In the course of two or three shifts at the University of Maryland Medical Center, I see 20 people with chest pain. On the basis of the statistics of Marsan et al., I can expect that one of the patients I see during those shifts is going to have ACS, and I can expect that in six shifts, one patient is going to have an adverse cardiac event (one of 50 patients younger than age 40 years dies, has an MI, or undergoes emergency bypass). From the data, Marsan et al. created a very low-risk protocol: If patients have no cardiac history and either no risk factors or normal electrocardiographic findings and normal cardiac enzymes, then their risk is only 0.14%. Even so, a 23-year-old woman presented to the University of Maryland Medical Center Emergency Department with chest pain and dyspnea on exertion. She was not obese and had only a single cardiac risk factor—bad luck. Her electrocardiograph showed flat T waves in lead II, inverted T waves and mild ST-segment depression in leads III, and arteriovenous fistula. My colleagues argued with the inpatient service to get her admitted despite the fact that she was only 23 years old and had no known risk factors. After MI was ruled out, she was discharged the next morning. Four days later, she presented to another hospital in Baltimore with a troponin level of 12 ng/mL; in the catheterization laboratory there, she was found to have a 100% lesion of the right coronary artery. The take-away point is this: Do not discount cardiac concerns even in young patients. One of my colleagues
treated a 12 year old with MI who had no risk factors, did not use cocaine, and had not taken sympathomimetics or cold medicines. The patient went into his parents’ bedroom in the middle of the night, diaphoretic, and they took him to the local hospital. Electrocardiography showed that the patient was having an acute ST-segment elevation MI, so he was transferred to a pediatric hospital, where the catheterization laboratory found that he had vasospasm. He will be taking beta-blockers and calcium channel blockers for the rest of his life.

Diagnosis

Single indeterminate-range troponin is associated with inpatient mortality in patients presenting to an emergency department.

Until 2005, my institution considered a troponin-I level greater than 1.5 ng/mL to be positive and a level less than 1.5 ng/mL to be of no concern. Increasingly, cardiology literature published since 2002 indicates that patients with “indeterminate” or “marginally elevated” troponin-I levels (> 0 ng/mL but < 1.5 ng/mL) have a higher six-month and one-year mortality than patients with negative values. The study by Waxman and Husk,° presented earlier in 2005, indicated that these patients also have increased inhospital mortality—5.5% for those with an indeterminate level and 8.3% for those with positive values. Patients with negative troponin values had a mortality of only 2.3%. The lesson is that troponin levels represent a continuum of risk. Every gradation of elevation of troponin puts the patient at a higher risk for short- and long-term mortality, so troponin levels not in the “positive” range cannot be discounted. Any value other than zero must be taken seriously.

Treatment

Association of intravenous morphine use and outcomes in acute coronary syndrome: Results from the CRUSADE quality improvement initiative

In an article published in the American Heart Journal in 2005, Meine et al7 described a nonrandomized retrospective study of patients admitted through the CRUSADE Registry—a multicenter registry of 57,039 patients from more than 443 hospitals across the US with non-ST-segment elevation and ACS—that evaluated patients’ medications, interventions, inhospital outcomes, and discharge treatment. Thirty percent of patients received morphine within the first 24 hours of admission. All evidence-based therapies for the morphine group versus the nonmorphine group were identical, as were the severity of illness and electrocardiographic abnormalities. Patients who received morphine within the first 24 hours had a slightly higher risk of death (odds ratio, 1.48) and a higher likelihood of postadmission MI, CHF, and cardiogenic shock. It is not clear whether the morphine caused these problems, which could also result from a histamine effect or direct myocardial depression, which has been demonstrated before. In any case, until further notice, be cautious about giving morphine to patients for whom there is a strong suspicion of ACS, maximize nitroglycerin dosing, and send patients with intractable pain to the catheterization laboratory.

Times to treatment in transfer patients undergoing primary percutaneous coronary intervention in the United States

In 2004, many studies focused on routine transfer to other hospitals for percutaneous intervention. The current American College of Cardiology–American Heart Association (ACC-AHA) guidelines recommend PCI (balloon inflation) within 90 minutes and thrombolytics after this time frame. In a 2005 study of 4278 patients from 419 hospitals undergoing interhospital transfer for primary PCI, Nallamothu et al6 found that the median total door-to-balloon time was 180 minutes, 90 minutes longer than the national guideline. Only 4.2% of the 4278 patients were given PCI within the recommended 90 minutes. The presence of comorbid conditions, absence of chest pain, delayed presentation after symptom onset, nonspecific electrocardiographic findings, and presentation to a hospital during off-hours were associated with longer times. Nallamothu et al noted that even at US hospitals with PCI capability, the time to balloon inflation was 120 minutes.

How long does it take from a patient’s arrival in the catheterization laboratory to get the balloon inflated? Many physicians think they do a great job when they transfer patients to the laboratory within 60 minutes. But what happens once a patient gets to the laboratory? The team meets the patient, obtains a quick medical history and does a rapid physical examination, obtains informed consent, moves the patient into the procedure room, prepares the patient, dapes the patient, inserts the catheter into the patient’s groin, threads the needle, injects dye, finds the infarcted artery, threads the needle down into that artery, and blows up the balloon. On average, the time from arrival at the cath-
Pharmacological facilitation of primary percutaneous coronary intervention for acute myocardial infarction

Many articles now propose routine transfer of patients with an ST-segment elevation MI to the nearest site for PCI if there is not a catheterization laboratory in the local hospital. Many physicians are doing such routine transfers. Unfortunately, however, when patients are transferred for PCI, they rarely undergo PCI within the recommended 90 minutes of presentation. As described earlier in this article, even physicians in hospitals with catheterization laboratories do not usually get these patients to the laboratory within 60 to 90 minutes. Despite the delay in both situations, only a few physicians also administer thrombolytics and then transfer patients.

In an editorial in the Journal of the American Medical Association, Gersh et al looked at multiple reports to determine the likelihood of success of either facilitated PCI (thrombolytics or G2B3A receptor antagonists followed by PCI) or transfer for PCI or thrombolytics alone. They concluded that the longer the time from the start of symptoms to intervention, the greater the benefit of PCI compared with thrombolytics. Current cardiology literature is weighted in favor of making the intervention decision on the basis of time of onset of the patient’s symptoms. Gersh et al recommended that if a patient arrives within two hours of symptom onset, the physician should perform PCI only if a balloon can be inflated (open artery) in the catheterization laboratory within 60 minutes—not 90 minutes as has traditionally been specified. If this cannot be done, Gersh et al recommend administering thrombolytics because their benefit will outweigh any gained by transfer to a catheterization laboratory for PCI. Gersh et al recommend considering facilitated PCI—administering thrombolytics or abciximab and then transferring the patient—if the patient arrives two- to three hours after symptom onset, and extending the allowable time to PCI to 90 minutes if the patient arrives more than three hours after symptom onset.

Abciximab as adjunctive therapy to reperfusion in acute ST-segment elevation myocardial infarction: A meta-analysis of randomized trials

Another important study concerned facilitated PCI with abciximab (ReoPro). De Luca et al reviewed randomized trials involving 27,115 patients with ST-segment elevation MI treated with abciximab. The condition worsened in patients who were given thrombolytics and abciximab, but the condition improved in patients who underwent angioplasty and received abciximab. The latter group had better outcomes and no increase in intracranial bleeding rates. The 2004 ACC-AHA guidelines and the European literature strongly support administering abciximab before performing PCI, and the ACC-AHA guidelines rank abciximab in a higher class than any of the other G2B3A inhibitors. Yet why are so many more physicians using eptifibatide? Perhaps the latter drug is more heavily marketed.

Congestive Heart Failure

Morphine for acute decompensated heart failure: valuable adjunct or a historical remnant?

In the world literature on morphine in decompensated heart failure, there is practically no evidence demonstrating that morphine decreases preload in the central circulation. Where did this concept arise? Studies from the 1970s indicated that when physicians injected morphine into patients’ peripheral veins, the veins vasodilated slightly. From this, it was extrapolated that morphine decreases preload. However, if a patient is short of breath, I want to know about the status of the central circulation, not what’s happening in the periphery. Swan-Ganz catheter data in patients who receive morphine show no decrease in central circulation...
preload, and in fact morphine may be associated with a decreased ejection fraction. Peacock et al\textsuperscript{12} found that in 14\% of 20,282 patients in the Acute Decompensated Heart Failure National Registry (ADHERE)—patients admitted with CHF—who received morphine had a five-fold increase in mortality (13\% versus 2.4\%), a five-fold increase in need for intubation and ventilation (39.7\% versus 14.4\%) and intensive care unit admission rate (15\% versus 3.0\%), and a more prolonged hospital stay (5.6 days versus 4.2 days). There was no difference between the morphine and nonmorphine groups in terms of age, vital signs, or comorbidity.

**Risk stratification for in-hospital mortality in acutely decompensated heart failure**\textsuperscript{1-3}

Fonarow et al\textsuperscript{13} analyzed clinical outcomes from the ADHERE (more than 10,000 patients from 265 hospitals) to determine which of 39 factors are predictive of inhospital mortality for patients admitted with decompensated heart failure. The three best predictors, in decreasing order, are elevated blood urea nitrogen level (>43 mg/dL), systolic blood pressure at admission <115 mm Hg, and serum creatinine level at admission >2.75 mg/dL. Patients with none of these factors had a 2\% mortality rate; those with all three factors had a 22\% mortality rate. Using these factors may help determine what level of care patients need. The current practice at my institution is that patients who have even one of these three factors are automatically sent to a step-down unit, an intensive care unit, or a critical care unit. One would presume that this higher level of monitoring is more beneficial than simple telemetry monitoring in patients known to be at increased risk of mortality.

**Risk of worsening renal function with nesiritide in patients with acutely decompensated heart failure**\textsuperscript{4,4} and **Nesiritide and worsening of renal function: The emperor’s new clothes**\textsuperscript{5,5}

This article by Sackner-Bernstein et al\textsuperscript{4} and the accompanying editorial by Teerlink and Massie\textsuperscript{5} discuss the association of nesiritide, a heavily marketed drug, with worsening of renal function in patients with decompensated heart failure. Sackner-Bernstein et al\textsuperscript{4} reviewed five randomized trials of nesiritide in more than 1200 patients. Because complete data from the studies were not available, the authors obtained them from the US Food and Drug Administration (FDA). They concluded that patients who received nesiritide had an increased risk of worsening renal function. These patients did not have an increased need for dialysis, but 11\% (versus 4\% of control subjects) needed extra medical intervention—presumably renal consultation, ultrasound, urinary electrolytes—which translates into increased costs for the patients who received nesiritide. In addition, Sackner-Bernstein et al\textsuperscript{5} conducted a study of nesiritide and its effect on mortality, again obtaining data from the FDA. They found only three randomized double-blind trials in which the authors actually reported 30-day mortality; 485 patients received nesiritide and 377 were control subjects. Sackner-Bernstein et al found that patients receiving nesiritide had a 7\% mortality at 30 days versus the 4\% for control subjects. We already know from the Vasodilation in the Management of Acute Congestive Heart Failure studies that these patients also have a higher 90-day mortality rate.

The bulk of data shows that there is no indication for nesiritide in the Emergency Department for routine treatment of patients with decompensated heart failure.

**Syncope**

**Impact of the application of the American College of Emergency Physicians recommendations for the admission of patients with syncope on a retrospectively studied population presenting to the emergency department**\textsuperscript{7}

Elesber et al\textsuperscript{7} assessed the utility of the clinical policy of the American College of Emergency Physicians (ACEP) for the evaluation and treatment of patients presenting with syncope. Specifically, they wanted to determine whether the policy would help detect (and result in admission of) all patients with a cardiogenic origin of syncope. The ACEP policy has two main levels of recommendation, levels B and C. The level B recommendation is to admit patients with syncope with any of the following: history of CHF or of ventricular arrhythmia (including premature ventricular contraction); associated chest pain or other symptoms compatible with ACS; evidence of CHF or valvular heart disease on examination; or electrocardiographic findings of ischemia, arrhythmia, prolonged QT interval, or bundle branch block. The level C recommendation is to consider admission for patients with syncope and any of the following: age >60 years, history of coronary artery disease or congenital heart disease, family history of unexpected sudden death, or exertional syn-
thought, chest rates really do matter. Perhaps in contrast to traditional thought, chest compression rates really do matter.

Elesber et al evaluated 200 adult patients presenting with syncope, 24 of whom had cardiac syncope. When the ACEP level B recommendation was applied to the study population, all patients who on further workup were found to have cardiac syncope would have been admitted from the Emergency Department (100% sensitivity) and 81% of patients with no cardiac syncope would have been discharged (81% specificity). The admission rate would have been 28.5%. When the level C recommendation was applied to the population, the sensitivity, specificity, and admission rates would have been 100%, 33%, and 71%, respectively. The authors essentially concluded that applying the level B recommendation would both allow all cases of cardiac syncope to be detected and reduce hospital admission rates, whereas adding the level C recommendation would increase admissions without offering any advantage. Note that routine admission of elderly patients does not seem to be warranted unless they meet level B criteria. The main drawback to the study was its small size. Larger validation studies are underway. If the validation studies also support following level B criteria only, it should change our practice with regard to our approach to patients with syncope.

**Resuscitation**

_Chest compression rates during cardiopulmonary resuscitation are suboptimal: A prospective study during in-hospital cardiac arrest_18_

The AHA recommends chest compressions at a rate of 100 per minute. Abella et al18 studied 97 cardiac arrests and found that the chest compression rate was <80 per minute in 37% of patients and <70 per minute in 25%. Higher compression rates were significantly correlated with initial return of spontaneous circulation: For a rate of 95 compressions per minute, there was a 75% return, and for 100 compressions per minute, a 42% return. Perhaps in contrast to traditional thought, chest compression rates really do matter.

Many recent prehospital studies have also focused on the importance of chest compressions, and many others have significantly downplayed the role of ventilation. In fact, when patients are ventilated too rapidly, this decreases venous return by increasing intrathoracic pressure and decreases cardiac output, a combination associated with worse outcomes. A study at a well-known major academic medical center recoded bagging rates for all patients in cardiac arrest. The average bagging rate was 55 compressions per minute. When bagging is that frequent, venous return and therefore cardiac output are severely compromised.

**Conclusion**

These are the lessons of the studies reviewed here: Beware of diabetes. It is now considered an atherosclerotic disease equivalent, not just a risk factor. Consider admitting these patients at a higher level of care. Do not discount chest pain, including pain in patients under emotional stress. Avoid making a quick diagnosis of reflux in patients with chest pain or reflux symptoms; consider the possibility of an atypical presentation. Any elevation of troponin levels should be taken seriously, and discuss with the cardiologist when the workup is going to occur. As for treatment of ACS with morphine, just say “no!” Transferring patients for PCI takes a lot longer than is immediately apparent. Remember, the average time to balloon inflation was three hours in transferred patients, not 90 minutes. Facilitated PCI is going to become more and more common to buy time for transfer to another site. The best evidence supports the use of abciximab over eptifibatide. Beware renal dysfunction in patients with CHF. Elevated blood urea nitrogen and creatinine levels are two of the three factors that most accurately predict a poor prognosis in patients with CHF who are admitted to a hospital. Be wary of using nesiritide in patients with CHF. For patients with syncope, follow level B ACA-AHA recommendations. For patients in cardiac arrest, focus on the basics: Stop hyperventilation and increase the chest compression rate.

**Acknowledgment**

Katharine O’Moore-Klopf of KOK Edit provided editorial assistance.

**References**


More

The more that you read,
the more things you will know.

The more that you learn,
the more places you’ll go.

— Dr. Seuss (Theodor Seuss Geisel), 1904-1991, Pulitzer, Peabody, and Emmy Award-winning author and cartoonist
soul of the healer

“Sunrise and Ship”
photograph
By Adrian Kalil, CRNA

Adrian Kalil, CRNA, is a staff anesthetist in the Northwest Region. Mr Kalil has a background in commercial art, which he traded for health care. He took this photograph on a recent trip to the Sea of Cortez and Baja Peninsula.
The Effect of a Predialysis Calcitriol Administration Protocol on Postdialysis Parathyroid Hormone Levels

Abstract

Patients with chronic kidney disease often develop secondary hyperparathyroidism because of decreases in 1,25(OH)₂-vitamin D (calcitriol) levels. These changes may be ameliorated with appropriate administration of oral calcitriol during the predialysis period. A calcitriol administration protocol was used with patients beginning on June 1, 2001. Mean serum intact parathyroid hormone (iPTH), calcium, and phosphorous levels from the three months preceding and three months following initiation of dialysis were measured. A significant difference in iPTH levels between patients treated under the calcitriol protocol and patients in the control group was observed. In addition, patients treated under the protocol were more likely to receive calcitriol than those who were not. No significant difference in serum calcium or phosphorous levels was observed. Administration of calcitriol via a protocol in predialysis patients reduced iPTH levels among patients after the initiation of dialysis.

Introduction

Patients with end-stage renal disease (ESRD) frequently develop secondary hyperparathyroidism because of decreased production of 1,25(OH)₂-vitamin D (calcitriol) in the kidneys. As a result, patients may develop osteomalacia or osteodystrophy. The onset of secondary hyperparathyroidism occurs early in chronic renal failure. Patients with glomerular filtration rates (GFRs) as high as 60 mL/min/1.73 m² may begin to produce decreased levels of calcitriol, resulting in increased intact parathyroid hormone (iPTH) and increased serum phosphorous levels.¹

Prevention of secondary hyperparathyroidism with either oral or intravenous administration of calcitriol has been recommended for dialysis patients.¹,² The use of calcitriol among patients with chronic kidney disease has been suggested, though evidence for its use is limited. The demonstrated benefits of predialysis calcitriol administration include a decrease in serum parathyroid levels.³,⁴ The primary risk of calcitriol administration is an elevated serum calcium level.

In addition, concern exists regarding the development of adynamic bone disease, which occurs with overzealous suppression of parathyroid hormone.⁵

The National Kidney Foundation has created guidelines, on the basis of expert opinion,⁶ that recommend 25-hydroxyvitamin D repletion for patients with low 25-hydroxyvitamin D levels and GFRs between 15 and 60 mL/min/1.73 m². The guidelines further recommend the use of an active vitamin D sterol (such as calcitriol) for patients with a GFR <15 mL/min/1.73 m². They do not address the use of calcitriol in patients with elevated parathyroid levels and GFRs >15 mL/min/1.73 m².

A potential benefit of predialysis calcitriol administration is decreased secondary hyperparathyroidism after institution of hemodialysis. Because the development of secondary hyperparathyroidism is variable, a coordinated program of monitoring and administration would seem relevant. To examine this issue, we constructed a predialysis calcitriol administration protocol and began applying it to patients with chronic kidney disease.
The Effect of a Predialysis Calcitriol Administration Protocol on Postdialysis Parathyroid Hormone Levels

Methods

Beginning on June 1, 2001, our group initiated a pre-ESRD calcitriol administration protocol (Figure 1). Patients with chronic renal failure were referred by their nephrologists to our case management dietitians before starting dialysis. Levels of iPTH were assessed at the time of referral by case management dietitians, who then initiated oral calcitriol administration if indicated. Serum calcium and phosphorous levels were measured and monitored as well, and patients were observed until the initiation of dialysis. On dialysis initiation, the pre-ESRD calcitriol protocol was stopped and patients were given either intravenous calcitriol or paracalcitol with dialysis.

Before June 1, 2001, patients were monitored by individual nephrologists who monitored iPTH, calcium, and phosphorous levels with no specific coordination. The level of predialysis calcitriol was determined and adjusted by individual physicians. Patients initiating dialysis (and thus enrolled in the calcitriol protocol) after June 1, 2001 were designated a study group. Patients initiating dialysis prior to June 1, 2001 were designated a control group. Serum levels of iPTH, calcium, and phosphorous were determined for both groups before and after dialysis initiation (Table 1).

Patient records from three dialysis units were reviewed. Patients older than aged 18 years were included in the review if they had had an iPTH level checked within three months before the onset of dialysis and a level within three months after the onset of dialysis. Patients who received prior renal replacement therapy (transplantation, peritoneal dialysis, hemodialysis) or who had parathyroid disease unrelated to renal failure were excluded.

Variables collected included predialysis and postdialysis serum calcium, phosphorous, and iPTH levels. Age, sex, and calcitriol dose were re-

Figure 1. Calcitriol protocol, iPTH, intact serum parathyroid hormone
corded as well. Control group and study group pre- and postdialysis serum iPTH, calcium, and phosphorous levels were compared using one-way analysis of variance.

Results

Forty patients were included in the study, 24 in the control group and 16 in the study group. Fifty percent of patients (20) in the total population were male, and 50% patients in both control and study groups were male as well. The mean age of the overall population was 61.8 years, and the mean ages of study group and control group patients were 60.6 years and 62.6 years, respectively. Mean estimated GFR at the beginning of the study for the study group was 19.2 mL/min per 1.73m² and for the control group was 18.7 mL/min per 1.73m².

There was no significant difference in the mean iPTH between the study and control groups during the three-month period preceding the initiation of dialysis. After starting dialysis, patients in the study group had lower mean iPTH levels than those in the control group. The difference was significant during the first month after dialysis but not during the second month (Figure 2).

There was no significant difference between mean serum calcium and phosphorous levels in the study and control groups. Patients in both groups had little overall change in serum calcium levels throughout the course of the study (Figure 3). Patients in both groups had an overall increase in mean serum phosphorous levels from the predialysis to postdialysis periods (Figure 4).

Twenty-two patients within the total population received calcitriol during the three months before the initiation of dialysis. A majority of patients in the study group received calcitriol and a minority of patients

Table 1. Characteristics and serum calcium, phosphorous, and intact parathyroid hormone levels for 40 adult hemodialysis patients before and after dialysis initiation

<table>
<thead>
<tr>
<th></th>
<th>Study</th>
<th>Control</th>
<th>P value</th>
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<tr>
<td>Age in years</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean (± SD)</td>
<td>60.7 (19.1)</td>
<td>62.6 (15.3)</td>
<td>.72</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
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<tr>
<td>Male n (%)</td>
<td>12 (50)</td>
<td>8 (50)</td>
<td>1.00</td>
</tr>
<tr>
<td>Female n (%)</td>
<td>12 (50)</td>
<td>8 (50)</td>
<td></td>
</tr>
<tr>
<td>Intact parathyroid hormone levels (mg/dL)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean (minimum–maximum)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>90–60 days before dialysis</td>
<td>462 (86–1,426)</td>
<td>368 (26–1,130)</td>
<td>.34</td>
</tr>
<tr>
<td>59–30 days before dialysis</td>
<td>426 (101–968)</td>
<td>405 (76–1,096)</td>
<td>.80</td>
</tr>
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<td>29–0 days before dialysis</td>
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<td>606 (128–1,190)</td>
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<td>1–30 days of dialysis</td>
<td>268 (106–623)</td>
<td>609 (331–935)</td>
<td>.02</td>
</tr>
<tr>
<td>31–60 days of dialysis</td>
<td>335 (222–553)</td>
<td>547 (156–939)</td>
<td>.56</td>
</tr>
<tr>
<td>Calcium levels (mg/dL)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Mean (minimum–maximum)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>90–60 days before dialysis</td>
<td>8.7 (7.8–10.3)</td>
<td>8.7 (7.3–9.8)</td>
<td>.72</td>
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<td>59–30 days before dialysis</td>
<td>8.7 (7.3–10.0)</td>
<td>8.8 (7.7–9.9)</td>
<td>.59</td>
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<td>29–0 days before dialysis</td>
<td>8.6 (7.6–10.2)</td>
<td>8.2 (4.6–9.7)</td>
<td>.19</td>
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<td>1–30 days of dialysis</td>
<td>8.2 (7.6–11.3)</td>
<td>8.8 (8.0–9.6)</td>
<td>.15</td>
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<td>31–60 days of dialysis</td>
<td>8.3 (7.0–9.3)</td>
<td>8.7 (5.1–10.0)</td>
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<tr>
<td>Phosphorous levels (mg/dL)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean (minimum–maximum)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>90–60 days before dialysis</td>
<td>5.1 (2.7–7.1)</td>
<td>5.1 (3.7–7.3)</td>
<td>.96</td>
</tr>
<tr>
<td>59–30 days before dialysis</td>
<td>5.3 (2.7–9.1)</td>
<td>5.5 (3.2–7.6)</td>
<td>.62</td>
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<td>29–0 days before dialysis</td>
<td>5.9 (3.3–10.2)</td>
<td>5.7 (4.6–7.9)</td>
<td>.55</td>
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<td>1–30 days of dialysis</td>
<td>5.4 (3.3–7.8)</td>
<td>5.8 (3.6–8.7)</td>
<td>.49</td>
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<td>31–60 days of dialysis</td>
<td>6.6 (5.3–7.5)</td>
<td>5.6 (3.4–7.8)</td>
<td>.14</td>
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<td>Calcitriol prescription before dialysis n (%)</td>
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<td></td>
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<td>Yes</td>
<td>12 (54.5)</td>
<td>4 (22.0)</td>
<td>.04</td>
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<tr>
<td>No</td>
<td>10 (45.5)</td>
<td>14 (88.0)</td>
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</table>

Figure 2. Mean intact parathyroid hormone (iPTH) levels.
The Effect of a Predialysis Calcitriol Administration Protocol on Postdialysis Parathyroid Hormone Levels

In the control group received it. Patients in the study group who received calcitriol had a lower mean iPTH level than those in the control group within the first month after the initiation of dialysis. Patients in the study group who did not receive calcitriol had a lower mean iPTH level than those in the control group. Patients in both control and study groups who received calcitriol had lower mean serum calcium levels than those who did not receive calcitriol during the month after initiation of dialysis (Table 2).

**Discussion**

This study examined the benefit of applying systematic monitoring of serum iPTH, calcium, and phosphorous levels and systematic administration of calcitriol in a pre-ESRD population. Patients referred to case management dietitians had significantly lower iPTH levels after the initiation of dialysis than those not monitored under the protocol. There was no significant difference in serum calcium and phosphorous levels between the two groups. The most obvious explanation for the difference would seem to be careful monitoring and the administration of calcitriol when appropriate.

The difference in iPTH levels at the onset of dialysis did not seem to reflect the indiscriminate use of calcitriol (as evidenced in Table 2), although patients monitored under the protocol were much more likely to receive calcitriol than those who were not. Patients in the study group who did not receive calcitriol appear to have had low average iPTH levels (mean iPTH within the first 30 days after initiation of dialysis was 128 mg/dL) mitigating against its use. The reason for the lack of patients in the control group who did not re-

**Table 2. Mean serum intact parathyroid hormone, calcium, and phosphorous levels 1 to 30 days after hemodialysis initiation**

<table>
<thead>
<tr>
<th></th>
<th>iPTH (mg/dL)</th>
<th>Calcium (mg/dL)</th>
<th>Phosphorous (mg/dL)</th>
</tr>
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<tr>
<td>Calcitriol</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study group</td>
<td>313</td>
<td>8.8</td>
<td>6.0</td>
</tr>
<tr>
<td>Control group</td>
<td>520</td>
<td>9.0</td>
<td>6.2</td>
</tr>
<tr>
<td>No calcitriol</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study group</td>
<td>128</td>
<td>8.6</td>
<td>4.7</td>
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<tr>
<td>Control group</td>
<td>428</td>
<td>9.1</td>
<td>5.0</td>
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</table>

iPTH, intact parathyroid hormone.
ceive calcitriol seems likely to reflect oversight, or a lack of realization of the potential importance of predialysis calcitriol administration. The fact that there was a better outcome (lower postdialysis iPTH levels) despite less calcitriol being administered in the study group suggests that careful monitoring and appropriate administration are at least as important as simply prescribing calcitriol to a population with chronic kidney disease.

The lack of significant differences in mean calcium or phosphorous levels may have resulted from the use of phosphate binders in both groups. We could not adequately assess the predialysis use of phosphate binders in the control group, because a prescription is not required for many kinds of phosphate binders, leaving no evidence in the medical records of phosphate binder use.

When managing the treatment of patients with chronic kidney disease, nephrologists confront a variety of issues, ranging from dietary education to placement of access and medication changes. Monitoring bone disease and secondary hyperparathyroidism may be considered less of a priority than other issues during the period leading up to dialysis. Oversight of bone disease management with the use of a protocol to monitor serum calcium, phosphorous, and iPTH levels may be a means for avoiding this problem. Dietitians familiar with bone disease issues, patient education, and calcitriol use seem an appropriate group to help in this endeavor. Our experience confirms this assertion.

Prior studies have compared different regimens of calcitriol administration and have found benefits in decreasing the use of multiple oral boluses and single weekly boluses of calcitriol. Our protocol was derived from a review of other studies as well as clinical experience. Other protocols may be effective as well.

Limitations

This study is retrospective, includes patients from only three dialysis units, and excludes patients for whom there were not predialysis iPTH measurements, which may have led to selection bias. There might have been a significant difference in calcium and phosphorous levels between the study and control groups that was not evidenced because of insufficient numbers of patients. Parathyroid hormone levels are an indirect measurement of future bone disease, potentially a more relevant clinical outcome. Finally, we studied iPTH, calcium, and phosphorous levels within a fairly short period preceding dialysis. Variation in the outcomes of patients monitored very early in the course of their disease may be markedly different than for those monitored at later stages.

Future Directions

It is surprising how little clinical literature is available regarding the administration of predialysis calcitriol. Long-term studies need to be conducted of patients with chronic kidney disease, examining when, how often, and how much calcitriol should be administered to prevent bone disease. In addition, the role of phosphate binder administration warrants study.

Acknowledgment

Katherine O’Moore-Klopf of KOK Edit provided editorial assistance.

References


Hope

Hope is necessary in every condition.

— Samuel Johnson, 1709-84, English poet, essayist, biographer, and lexicographer
How Can We Manage Hyperlipidemia and Avoid Rhabdomyolysis in Transplant Patients?

Case Summary
A 25-year-old man with a history of perinuclear antineutrophil cytoplasmic antibodies-associated vasculitis presented to the ambulatory clinic with five days of diffuse myalgias and muscle tenderness. The patient had undergone kidney transplantation three years before presentation and had no post-transplant complications. He was maintained on cyclosporine, prednisone, and mycophenolate mofetil. Simvastatin 20 mg daily was started two months after transplantation for development of post-transplant hyperlipidemia. Three months before presentation, the creatinine concentration was 1.8 mg/dL. Two months before presentation, the simvastatin dosage was increased to 40 mg daily.

Results of laboratory studies done at presentation were remarkable for the following: creatine kinase, 25,000 U/L; aspartate aminotransferase, 767 U/L; alanine aminotransferase, 620 U/L; and creatinine, 2.3 mg/dL. Urinalysis revealed 4+ blood and 2+ protein. The cyclosporine concentration, 265 ng/mL, was above the normal range of 100 to 200 ng/mL. A diagnosis of rhabdomyolysis was made on the basis of the symptom of myalgias in the setting of acute renal failure and an elevated creatine kinase concentration. Simvastatin was discontinued, and the patient was instructed to self-hydrate. At one day, five days, and two weeks after initial presentation, follow-up clinical evaluations found that symptoms had eased, and follow-up laboratory studies showed improvement.

Cyclosporine and Statins
Cardiovascular disease is the most significant cause of death in patients with a functioning renal allograft (Figure 1).1 Hyperlipidemia is very common in these patients,2 making strict lipid control a key to reduce mortality. Post-transplant hyperlipidemia is caused by many factors, including age, body mass index, genetic predisposition, and receipt of immunosuppressive agents such as cyclosporine, prednisone and rapamycin.

The increased daily dosage of simvastatin to 40 mg with concomitant use of cyclosporine caused rhabdomyolysis in the patient described in this case study. Thus, this case illustrates important facts about the concomitant use of statins and cyclosporine in transplant patients. First, these patients may present to the outpatient clinic with slight and minor complaints, making it important for the primary care provider to have a high index of suspicion of rhabdomyolysis. Second, patients taking cyclosporine and a statin medication are at risk for contracting rhabdomyolysis, a known drug-drug interaction.3 Finally, close monitoring and...
patient education are important to help reduce the development of rhabdomyolysis.

**Statin Metabolism**

Statins vary in their characteristics (Table 1). Although statin serum concentrations increase when administered with cyclosporine,3,4 the reasons differ.

Cyclosporine is an inhibitor of the cytochrome P450 isoenzyme 3A4 (CYP3A4) and possibly of the active transport mechanisms OATP2 (organic anion transporting polypeptide-2) and P-Glycoprotein, which are involved in the biliary excretion of statins. Lovastatin, simvastatin, and atorvastatin are metabolized by CYP3A4. Lovastatin and atorvastatin are excreted into the bile, and simvastatin is likely to be excreted to the bile, causing increased serum concentrations when used with cyclosporine. Fluvastatin is metabolized primarily by the cytochrome P450 isoenzyme 2C9 (CYP2C9), but is also extensively excreted in the bile, causing increased serum concentration when used with cyclosporine. Pravastatin and rosuvastatin are not metabolized by CYP3A4; nonetheless, increased concentrations of these drugs have also been observed when administered with cyclosporine perhaps because these drugs are substrates of OATP2.5,9

<table>
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<tr>
<th>Statin</th>
<th>Daily dosage (mg/day)</th>
<th>CYP metabolism</th>
<th>P-glycoprotein substrate</th>
<th>OATP2 substrate</th>
<th>Lipophilic</th>
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<tr>
<td>Atorvastatin</td>
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<td>3A4</td>
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<td>20-40</td>
<td>2C9</td>
<td>No</td>
<td>No</td>
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<tr>
<td>Lovastatin</td>
<td>20-80</td>
<td>3A4</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes*</td>
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<td>10-80</td>
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<td>Yes</td>
<td>Yes</td>
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<td>Rosuvastatin</td>
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<td>2C9 (minor)</td>
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<td>Yes</td>
<td>No</td>
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<td>Simvastatin</td>
<td>20-80</td>
<td>3A4</td>
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### Managing Hyperlipidemia in Kidney Transplant Patients

Managing hyperlipidemia in kidney transplant recipients should follow the National Kidney Foundation Kidney Disease Outcome Quality Initiative guidelines,10 which state that kidney transplant recipients should be considered at high risk for cardiovascular disease. The guidelines consider that a low-density lipoprotein concentration of less than 100 mg/dL is optimal.

Statins are the mainstay of medical treatment in kidney transplant recipients. They not only improve the lipid profile but may also protect graft function and directly impede atherosclerosis.11 Depending on a patient’s lipid profile, one may initially institute dietary modification, increased physical activity, and weight-reduction therapies.12,13 However, this is rarely enough to achieve target levels, and statin therapy should be initiated. Studies have shown the efficacy and safety of low dose statin therapy in this population.2,11,12,14 In particular, an average daily dosage of 10 mg simvastatin and 20 mg lovastatin had proved efficacy with minimal adverse outcomes.15,16 Fluvastatin and pravastatin have also proven to be of benefit in this population.3,10,17

Other interventions are recommended in those with other types of dyslipidemias that cannot be controlled with statins.13 The addition of fish oil by itself has been tried if the patient’s lipid profile initially shows isolated hypertriglyceridemia or in combination with a statin in patients with mixed hyperlipidemia. Fish oil may reduce platelet aggregation, decrease blood pressure, and benefit graft function. Addition of a fibrate is not recommended because of the increased risk of myopathy in patients on statins. However, fibrates may be used as monotherapy for patients with low HDL associated with high triglycerides. Care must be taken to monitor creatinine and cyclosporine levels with fibrate use because their levels may decrease. The minimal dose needed to achieve the lipid goal is recommended. The use of niacin is limited mainly because of flushing and gastrointestinal side effects.

Giving antioxidant vitamins or folate to those with hyperhomocysteinemia to reduce the effects of oxidized LDL has not shown to be effective in preventing cardiovascular outcomes.11 Cyclosporine increases homocysteine concentrations perhaps by disrupting folate-assisted remethylation.11 Supplementing folic acid to correct this in patients on cyclosporine would not be beneficial because the folate cannot be utilized for remethylation.
When target lipid levels cannot be achieved by medical management, thought is given to changing the patient’s immunosuppression regimen. These adjustments are best made by the nephrologist. Prednisone can sometimes be tapered with or without a change in the azathioprine or mycophenolate mofetil dose. Cyclosporine can also be adjusted in such a manner. Sirolimus may also cause hyperlipidemia and can sometimes be discontinued or replaced. Tacrolimus has not been reported to cause hyperlipidemia.

**Recommendations**

On the basis of current evidence, we recommend the following:

- Periodically check levels of aspartate aminotransferase and alanine aminotransferase.
- Check activities of aspartate aminotransferase, alanine aminotransferase, and creatine kinase upon:
  - Start of statin therapy.
  - Change of statin dose.
  - Start of drugs known to interfere with cytochrome P450.
- Complaints of symptoms.
- Higher than therapeutic cyclosporine levels.
- Start statin daily dosage at 50% of the daily dosage for nontransplant patients and titrate up to no more than 25% of the maximal dose in nontransplant patients. (Statin medications have been safely used at these dosages.)
- Monitor symptoms of rhabdomyolysis while patients are on statin therapy.
- Educate patients about their symptoms so they can report them to their doctor when they occur.
- Discontinue a statin if rhabdomyolysis develops and check cyclosporine and serum creatinine levels.
- Hospitalize a patient in the following situations:
  - Increase in creatine kinase more than mild.
  - Oliguria or acute kidney failure develop.
  - Pain more than mild; overall functioning decreases; self-hydration not reliable.

Consider prescribing fluvastatin or pravastatin as suitable alternatives to other statins because few side effects related to myopathy for these two have thus far been reported.

**Acknowledgment**

Michael S Altus, PhD, ELS, provided editorial assistance.

**References**

Clinical Evidence Review: Best Practices

Diabetes Mellitus Update

**Introduction**

Patients with diabetes mellitus comprise over 10% of Kaiser Permanente (KP) nationwide membership. Because complications accompany the disease, patients with diabetes account for a disproportionately increased share of medical expenditures. In the KP Northern California Region, patients with diabetes use 2.4 times more medical resources than patients without diabetes. Cardiovascular complications of diabetes are particularly excessive and devastating. In the KP Northwest Region, macrovascular complications account for 62% to 89% of the cost associated with inpatient treatment of diabetes-related complications. Historically, treatment of diabetes emphasized control of blood glucose level. However, studies have shown that glucose control alone does not have a statistically significant effect on preventing cardiovascular disease (CVD), although the trend for successful prevention of CVD is in a positive direction. In addition, there is strong clinical evidence that the use of a combination of three medications— aspirin, ACE-inhibitors, and statins—can reduce the incidence of cardiovascular disease by 75%.

This article, part of a series highlighting key aspects of guidelines and care programs from the KP Care Management Institute (CMI), is an overview of part of the recently completed 2006 KP National Adult Diabetes Guidelines. Members of the committee that assembled these guidelines are listed in Table 1. One section of the guidelines is devoted to CVD prevention and discusses the evidence supporting seven interventions proven to decrease macrovascular complications of diabetes. The clinical practice guidelines are available at http://cl.kp.org/pkc/national/cmi/programs/diabetes/guideline/index.html.

**Case Study: Dan’s Devastating News**

During what he thought was to be a routine office visit, Dan learned he had diabetes. Dan was instantly devastated—after all, he was only 55 years old—but then recalled that his father was diagnosed with diabetes at age 52. His father’s diagnosis was quickly followed by onset of hypertension, a heart attack, congestive heart failure, and, finally, death from a stroke (at age 58 years). Equally disconcerting to Dan was the fact that three of his uncles had diabetes and that, despite good control of their blood glucose levels, all three died of similar complications before age 60. Dan’s doctor told him that his blood sugar was 300 mg/dL (16.65 mmol/L) and that he was overweight at 240 lb (108 kg). Dan also learned

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### Table 1. 2006 CMI Adult Diabetes Guideline Development Team

<table>
<thead>
<tr>
<th>Contact Persons</th>
<th>Guideline Development Team Members</th>
</tr>
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<tbody>
<tr>
<td>Michelle Wong, MPH, MPP - Care Management Institute</td>
<td>Yerado Abrahamian, MHS - Southern California</td>
</tr>
<tr>
<td>R James &quot;Jim&quot; Dudl, MD - Care Management Institute</td>
<td>Jill Arnold, PharmD - Ohio</td>
</tr>
<tr>
<td>Michelle Wong, MPH, MPP - Group Health Cooperative</td>
<td>Larry Ballonoff, MD - Colorado</td>
</tr>
<tr>
<td>R James Dudl, MD</td>
<td>Rradhika Breden, MD - Northwest</td>
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<tr>
<td>Jennifer Day, PharmD - California Division</td>
<td>Michael Herson, MD - Northwest</td>
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<tr>
<td>Michelle Wong, MPH, MPP - Care Management Institute</td>
<td>James Hipkens, MD - Georgia</td>
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<td>R James &quot;Jim&quot; Dudl, MD - Care Management Institute</td>
<td>Fred Horn, MD - Northern California</td>
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<td>Timothy Hsieh, MD - Southern California</td>
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his blood pressure was elevated at 150/90 mm Hg, his LDL cholesterol level was high at 160 mg/dL (4.14 mmol/L), and his HDL cholesterol level was low at 35 mg/dL (0.91 mmol/L). In addition, although he tried many times to quit, Dan still smoked. Dan’s doctor told him that he had a high risk of having a heart attack, stroke, cardiac surgery, or hospitalization in the next ten years. The doctor said other things, but Dan couldn’t remember anything else. A feeling of hopelessness overwhelmed him. He felt that he would inevitably follow in his father’s footsteps. What Dan did not yet know was that if he used an appropriate diet, exercise, and several commonly used medications, he could take control of his diabetes and would probably proceed down a markedly altered path from that of his father.

Figure 1. 10-Year CAD Risk (%) and Recommendations for Dyslipidemia Drug Treatment
(For people WITHOUT known atherosclerosis or Chronic Kidney Disease Stages 3-5)

General notes:
1. The 10-Year CAD Risk (%) and Recommendations for Dyslipidemia Drug Treatment tables use the Framingham equations (1991) to estimate the 10-year CAD risk in people without known atherosclerosis or chronic kidney disease at baseline.
2. In deriving the treatment recommendations, weights were applied to predicted events to compensate for the longer life expectancy in younger age groups. The CAD event risk (%) in each cell is not weighted. For information on assumptions used in the model for the CAD Risk and Recommendations for Dyslipidemia Drug Treatment, go to the Clinical Practice Guidelines Intranet Web site at: http://kpnet.kp.org/california/scpmg/CPG.

* Known atherosclerosis = documented CAD, carotid (>50% stenosis) or peripheral artery disease, abdominal aortic aneurysm, or atherosclerotic TIA/CVA. Chronic Kidney Disease Stages 3-5 = National Kidney Foundation (NKF) Stages 3-5, defined as Glomerular Filtration Rate (GFR) <60 ml/min per 1.73 m², persisting at least 3 months. See Dyslipidemia Management in Adults Guideline for detailed description.

b The Heart Protection Study showed that people with diabetes ≥40 years old without CAD are at high risk for CAD and derive a large benefit from statin treatment, regardless of baseline LDL-C. A 10-year CAD risk ≥2.5% is roughly equivalent to the risk of people with known CAD. Therefore, for people with diabetes ≥40 years old, and for people with 10-year CAD risk ≥2.5%, the recommendations are: use statin treatment, regardless of baseline LDL-C; the goal is LDL-C <100 mg/dL; after LDL-C is at a goal, an optional goal is non-HDL-C <130 mg/dL. Clinical judgment is advised when considering lipid-lowering medications in people with diabetes at very low 10-year CAD risk (<7-10%).

c Positive FHx of early atherosclerosis = family history of CAD or peripheral or carotid artery disease in a first degree relative <55 years old (male relative) or <65 years old (female relative).
Calculating Dan’s Risk for CVD Events: “High Risk” as Defined Using The Framingham and HOPE Data

Which patients with diabetes have the highest risk for heart disease? The CMI diabetes guidelines recognize that not every type of treatment for CVD reduction can be given to all patients with diabetes; treatment risks, side effects, compliance with medical follow-up and medication regimen, and resource limitations preclude such uniform treatment. However, assessing CVD risk in each patient with diabetes and targeting for treatment those patients at “high risk” (these patients stand to benefit the most from preventive therapy) constitutes a logical, practical approach to population-based diabetes care. The Southern California Permanente Medical Group guidelines use the classic Framingham formula to calculate risk of a CVD event (eg, heart attack, stroke, or hospitalization). At the time and place of the office visit, most KP clinicians already have the data needed to determine this risk (Table 2). These data are used in a formula to calculate risk (expressed as a percentage) of a CVD event occurring during the next ten years. Different methods are available for accessing tools to calculate this risk. One such method is to use the Intranet at the Web site http://cl.kp.org/scal/cpg/cpg/html/SCPMG_DyslipidemiaCADRisk Table2005.pdf where the formula to calculate this risk is available. Alternatively, high risk may be defined by the criteria used in the HOPE study: patients with known CVD or patients with diabetes aged ≥55 years who have one of the following additional CVD risk factors: hypertension; total cholesterol level of >200 mg/dL (>5.17 mmol/L) or LDL cholesterol >130 mg/dL (3.36 mmol/L); HDL cholesterol level <35 mg/dL (<0.91 mmol/L); or being a smoker. To calculate Dan’s ten-year risk for CVD by using the table shown in Figure 1, first scan the top rows of the table (choose the table for males) to find Dan’s age (55 years), LDL cholesterol level (160 mg/dL [4.14 mmol/L]), and HDL cholesterol level (55 mg/dL [0.91 mmol/L]). Next, using the risk factors in the left-hand column, find the cell that reflects a hypertensive smoker with diabetes; this cell is found at the bottom of that HDL column. The table shows that Dan’s risk of having a CVD event in the next ten years is 36%. Dan would have reason to be depressed about such news if it were not for the powerful treatments available that may literally make a life-or-death difference to him. Preventing CVD is as simple as AABBCC (Table 3). A: Aspirin. Angiotensin-converting enzyme inhibitors (ACE-I); Blood pressure level; Beta-adrenergic blocking drugs (beta blockers); treatment for Cholesterol and dyslipidemia; glucose control with metformin; and Smoking cessation. B: Blood Pressure Control

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Table 3. Seven CVD prevention strategies from the CMI diabetes guideline

A: Aspirin
B: Blood pressure control
C: Cholesterol and other lipid optimization
D: Glucose control specifically with metformin (for type 2 diabetes)
E: Smoking cessation

A: Aspirin

The CMI diabetes guidelines state that patients with diabetes age 40 years and older should be treated with at least 81 mg/day of aspirin unless contraindicated. For patients at lower CVD risk, the CMI diabetes guidelines workgroup decided that the potential risks for aspirin-induced bleeding outweighed the proven benefit of aspirin therapy for CVD. Key support for this conclusion is provided by a meta-analysis of “high-risk” patients with diabetes (most of whom have established CVD) treated with aspirin vs placebo. That analysis showed a decline of 16% in CVD events in the treated group (absolute risk reduction [ARR] = 2%, number needed to treat [NNT] = 50).

B: Blood Pressure Control

The CMI diabetes guidelines recommend initiating antihypertensive therapy in patients with diabetes who have systolic blood pressure level >140 mm Hg, diastolic blood pressure level ≥85-90 mm Hg, or both. The target blood pressure level is 130/80 mm Hg, ACE-I, diuretics, or combination therapy of diuretics/
ACE-I are the recommended first-line antihypertensive therapy, but additional antihypertensive medication may be needed for optimal control. One large study, the United Kingdom Prospective Diabetes Study (UKPDS),\textsuperscript{12} showed that people with diabetes who were treated with either an ACE-I or beta blocker had a 44% decline in incidence of stroke (ARR = 3.7%, NNT = 27) and in incidence of myocardial infarction (ARR = 7%, NNT = 14) as well as a 24% decline in any diabetes endpoint (ie, stroke, myocardial infarction, sudden death, angina, heart failure, renal failure, amputation, eye disease, or peripheral vascular disease) (ARR = 1.65%, NNT = 60). This study also showed that 29% of the patients needed three or more medications to lower their blood pressure.\textsuperscript{12} Use of thiazide diuretic agents produced a 34% decline in CVD events (ARR = 10.1%, NNT12 = 10) compared to placebo in the subpopulation of patients with diabetes described in the large Systolic Hypertension in the Elderly Population (SHEP) study.\textsuperscript{13}

**B: Beta Blocker**

The CMI diabetes guidelines list use of beta blockers as recommended for patients with diabetes and a history of myocardial infarction (MI) and as an option for secondary prevention of CVD in patients with diabetes without previous MI.\textsuperscript{8} The best evidence of benefit is shown for patients after myocardial infarction: in the Bezafibrate Infarction Prevention study,\textsuperscript{14} subgroup analyses of patients with diabetes receiving beta blockers during the study period showed that these patients had 44% fewer myocardial infarctions (ARR = 6.2%, NNT = 16) than did patients with diabetes who did not receive beta blockers. These study findings were supported in a retrospective review.\textsuperscript{15}

**C: Cholesterol**

The CMI diabetes guidelines recommend treating patients with diabetes and dyslipidemia for secondary prevention of cardiovascular events.\textsuperscript{8} It is recommended that statin therapy be prescribed for all patients age 40 to 80 years with diabetes and TC ≥ 135, regardless of LDL level. The guidelines recommend an LDL cholesterol treatment goal of less than 100 mg/dL in patients age over 40 with diabetes. The most supportive data come from the Heart Protection Study (HPS), which treated almost 6000 patients with diabetes between ages 40 and 80 years for five years.\textsuperscript{16} Allowing for noncompliance, the program found that use of 40 mg/dL simvastatin produced a reduction of about 33% in major vascular events among patients with diabetes (ARR and NNT not determined from data provided). For patients with diabetes who did not have established CVD at entry into the study, these results represent avoidance of about seven major cardiovascular events per 100 patients treated for five years.\textsuperscript{17} Although not reported for the subset of patients with diabetes, the Heart Protection Study showed no statistically significant excess liver disease or rhabdomyolysis in the treated group compared with the control group.\textsuperscript{18} Moreover, in regard to secondary prevention, the Scandinavian Simvastatin Survival Study trial found that patients with diabetes who were treated with statins for secondary prevention of CVD events had a 42% reduced risk of major coronary events (ARR = 13.8%, NNT = 7), a finding that confirmed the benefit found in the Heart Protection Study.\textsuperscript{19}

**C: Glucose Control Using Metformin**

The CMI diabetes guidelines recommend metformin for use as the first line drug in obese, middle-aged patients with type 2 diabetes.\textsuperscript{8} The best evidence supporting this recommendation is derived from the UKPDS study of type 2 diabetes,\textsuperscript{20} which showed that patients with diabetes who were treated with metformin had a 36% lower mortality rate from all causes (ARR = 7.1%, NNT12 = 14) than did patients with diabetes treated conventionally. In addition, patients with diabetes who were treated with metformin had a 52% risk reduction (ARR = 13.5%, NNT12 = 7-8) of diabetes-related endpoints (ie, sudden death; hyperglycemia; hypoglycemia; fatal or nonfatal myocardial infarction; angina; congestive heart failure; stroke; renal failure; amputation; vitreous hemorrhage; retinopathy; blindness in one eye; or cataract extraction), and had fewer strokes (ARR = 2.2%, NNT12 = 48),\textsuperscript{21} and fewer MIs (ARR = 7%, NNT = 16).

**S: Smoking Cessation**

The CMI Diabetes Guidelines workgroup did not formally review the literature on smoking cessation in patients with diabetes; instead, the committee accepted the conclusions in the British Medical Journal’s Clinical Evidence: “People with diabetes are likely to benefit from smoking cessation at least as much as people who do not have diabetes but have other risk factors for cardiovascular events.” Although little new or diabetic specific data on smoking cessation exist, many data conclude that the subgroup with diabetes is likely to benefit from smoking cessation and that this group should therefore be advised to stop smoking.

**Implementing Treatment Protective Against CVD: Impact on Dan’s CVD Risk**

On the basis of the large studies cited here, the additive relative risk reduction for a CVD event exceeds 50% for aspirin, ACE-I, statins,
metformin, and smoking cessation. However, not all benefits are certain to accrue by simple addition. Nonetheless, some evidence exists that the benefits may be cumulative. For example, in regard to the combined effect of taking ACE-Is, the HOPE study showed that benefits of this therapy occurred in patients who were already taking aspirin, lipid-lowering drugs, and beta blockers. Therefore, a reasonable plan would be to tell Dan that he will probably reduce his risk substantially by starting the recommended treatment.

What Dan's Doctor Should Recommend

A: Aspirin
Dan is at "high-CVD risk" because he has a 36% risk of having a CVD event in the next ten years. Starting 81 mg/dL or 325 mg/dL of aspirin is recommended.

B: Beta-Blocker
Dan does not have known CVD and thus does not meet the guideline’s criteria for treatment. However, because many hypertensive patients with diabetes eventually need three antihypertensive agents, use of a beta blocker (ie, atenolol, 25-50 mg daily) would be reasonable if other antihypertension treatment fails to achieve the target pressure level of 130/80 mm Hg.

C: Cholesterol Treatment
Dan’s baseline LDL is >150 mg/dl and his ten-year risk for CVD is >20% indicating initiation of lipid-lowering therapy. The recommended action is to start drug therapy with 40-80 mg lovastatin or 40 mg simvastatin daily, confirm normal kidney and liver function when starting the medication (to assure safety), and check lipid panel results and alanine aminotransferase (ALT) level after two months.

D: Blood Pressure
Dan’s systolic blood pressure level was 150 mm Hg. Use of an ACE-I is already recommended; however, because Dan’s systolic blood pressure is >15 mm Hg above the target level, one could consider simultaneously starting hydrochlorothiazide at 12.5 mg to 25 mg daily. Dan’s blood pressure should be checked after three weeks, and the medication dose should be titrated to achieve the target blood pressure level, 130/80 mm Hg.

E: Glucose Control with Metformin
Dan meets the criteria of being a middle-aged, obese patient with type 2 diabetes. The recommendation is therefore to prescribe 500 mg/day metformin for glycemic control initially and then titrate the dosage to achieve a usual glucose target.

F: Smoking Cessation
Dan should be advised to stop smoking. Use of a KP regional smoking cessation program is suggested. When Dan and his physician had a talk, the doctor noted Dan’s disheartened look and asked about the cause. Dan admitted he was depressed because he felt that he was inevitably progressing to a heart attack, stroke, or early death.

Dan should be advised to stop smoking.

Dan became energized; knowing that he could take achievable steps to prevent a death similar to his father’s …

| Table 4. Practical summary of CMI diabetes guideline for preventing CVD |
|-----------------|----------------------------------|
| Aspirin | Adult dose of aspirin is 81-325 mg/dL; do not use in patients with low (<10%) ten-year CVD risk. |
| ACE-I | Use in patients with CVD or microalbuminuria or who are aged >55 years and have either hypertension, LDL cholesterol level >130 mg/dL (3.36 mmol/L), HDL cholesterol level <35 mg/dL (0.91 mmol/L), or who smoke. Target therapy is lisinopril 10-20 mg/dL. |
| Blood pressure | Start therapy if blood pressure level is >140/90 mmHg; target BP is ≤130/80 mmHg; diuretics or ACE-I are preferred first line agents; use a combination of ACE-I, beta-blocker, diuretics if a single drug is not sufficient to control HTN. When BP is more than 20/10 mmHg above goal, initiate combination therapy. |
| Beta-blocker | Use to treat CVD or to control blood pressure. Atenolol 25-50 mg/dL is appropriate dose. |
| Cholesterol | Treat all diabetes patients age 40 to 80 years old with a statin, regardless of baseline LDL. Target LDL is <100 for patients over age 40 with diabetes. |
| Glucose (metformin) | Metformin is the preferred glucose control agent for treating middle-aged, obese patients with type 2 diabetes. |
| Smoking cessation | Advise smokers to stop smoking. |

CVD = cardiovascular disease, HCTZ = hydrochlorothiazide, SBP = systolic blood pressure, ACE-I = angiotensin-converting enzyme inhibitor.
clinical summary of the CMI diabetes guidelines for CVD prevention.

Summary

Patients with diabetes are at high risk for CVD and should be considered for evidence-based forms of intervention proven to reduce CVD risk and to decrease mortality. All patients over age 55 years with one additional risk factor should be prescribed an ACE inhibitor. All patients with diabetes over age 40 should be prescribed a statin and should be treated with 81 mg daily aspirin unless contraindicated. Proper glucose control, blood pressure control, treatment with a beta-blocker (if appropriate), and smoking cessation counseling will prevent or reduce progression of macrovascular and microvascular complications.

References


Preventing Antibiotic Resistance: The Next Step

By Jeffrey B Ritterman, MD

Abstract
There is universal agreement that the emergence of antibiotic-resistant bacteria is a significant health problem, leading to preventable morbidity and mortality. Kaiser Permanente (KP) has made great strides in improving the antibiotic-prescribing behavior of its physicians, thereby limiting the emergence of antibiotic resistance in the clinical setting. This, however, is only a beginning. Greater than 70% of the antibiotics used in the United States are for nontherapeutic purposes in animal feed. The resulting emergence of resistant bacteria that cause human disease is described. I propose a campaign throughout KP to broaden our prevention efforts by phasing out meat, dairy, poultry, and fish products raised using antibiotic feed additives.

A Successful First Step
If we want to preserve antibiotics as a valuable therapeutic tool, we must seriously address the crisis of antibiotic resistance. Toward this end, the Chiefs of Infectious Diseases of The Permanente Medical Group in Northern California have enlisted the support of primary care physicians in a campaign to eliminate the unnecessary use of antibiotics. Our prescribing patterns are scrutinized and we are coached to prescribe antibiotics only when they are clearly needed. This campaign has been extremely successful in altering the prescribing behavior of physicians treating upper respiratory tract infections (Figure 1).

The Larger Problem
As remarkable as this achievement is in improving our prescribing behavior, it alone will have limited success in preventing the emergence of antibiotic resistant bacteria (Figure 2). The reason is quite simple: Most antibiotics are used not in people but as feed additives in the meat production industry. The Union of Concerned Scientists estimates, for example, that 70% of all US antibiotics are given in this way to beef cattle, swine, and poultry (Figure 3). Antibiotics are mixed with animal feed, typically not for any therapeutic purpose but to promote growth or to compensate for the inevitable infections in animals raised indoors under stressful, crowded conditions. As we would expect, the widespread use of antibiotics selects for resistance. Bacteria are nature’s champions in shar-
ing their genetic information with one another. Once resistance emerges, it may spread widely. More than half of the antibiotics added to animal feed belong to classes of antibiotics used in human medicine, including penicillins, tetracyclines, macrolides, and streptogramins. The development of resistance to the drug used in animals often confers resistance to the antibiotic used in humans.

Once resistant bacteria emerge in the gastrointestinal tracts of animals, there are a variety of ways for them to enter into the human population and cause illness. First, we ingest the bacteria in undercooked meat products or on foods contaminated by raw meat juices. Multiple studies have now shown that meat and poultry obtained from supermarket shelves routinely carry antibiotic-resistant bacteria. A study done in Washington, DC found that 20% of ground meat obtained in supermarkets was contaminated with Salmonella and that 84% of the isolates were resistant to at least one antibiotic. Similar results have been found in poultry contaminated with Campylobacter jejuni resistant to fluoroquinolones. The rise in fluoroquinolone resistance occurred after their introduction for use in poultry operations. In mid-2005, the US Food and Drug Administration banned such use because it exacerbates fluoroquinolone resistance in Campylobacter. This was the first time that agency had ever withdrawn approval for use of an agricultural antibiotic because of concerns about antibiotic resistance. Another study found that 17% of chickens from supermarkets in four states were contaminated with Enterococcus faecium that was resistant to the streptogramin antibiotic quinupristin-dalfopristin (Synercid). The study’s authors attribute this resistance to the use of virginiamycin, a related streptogramin antibiotic, in chicken feed.

Another pathway of entry for resistant bacteria is through direct human contact with the animals. This occurs most often in those who work with animals harboring the bacteria. The well-documented case of a child who acquired a strain of ceftriaxone-resistant Salmonella that was identical to one isolated from the cattle on his family’s ranch is a very likely example of such transmission. In addition, these antibiotic-resistant organisms frequently contaminate local ground water, rivers, and streams and the air in and around meat production facilities. The health effects of this water and air pollution are as yet unmeasured.

The Human Cost

The most clearly documented human illnesses resulting from the routine use of antibiotics in animal feed are food-borne illnesses. The Centers for Disease Control and Prevention reported more than 300,000 hospitalizations and 5000 deaths yearly due to food-borne illness. One third of these deaths can be traced to consumption of tainted meat. Many of these are caused by resistant organisms. Resistant food-borne pathogens also tend to be more virulent than susceptible ones are.

Of larger concern than food-borne illness is the spreading of resistant bacterial infections among humans. Although the health and economic cost of community-acquired resis-


Figure 3. Conditions promoting resistance: antimicrobial use in nondiseased animals.2
tant infections is as yet unmeasured, we do have data on hospital-acquired resistant infections. The National Institute of Allergy and Infectious Diseases reported that there are two million hospital-acquired infections in the United States each year, more than 70% of which are due to resistant bacteria, resulting in 90,000 deaths yearly. The US Department of Health and Human Services reported that the hospital cost for just six common kinds of resistant bacterial infections is at least $1.3 billion per year.

It is difficult to determine the true number of resistant bacterial infections attributable to the agricultural use of antibiotics. The critical variable determining the incidence of both hospital-acquired and community-acquired resistant bacterial infections is the rate of asymptomatic carriage of resistant bacteria in the local population. It is the human-to-human transmission between these asymptomatic carriers that causes outbreaks of antibiotic-resistant illness. We know that agricultural antibiotic use increases the human carriage of resistant organisms and that phasing out this use results in a markedly decreased incidence of human carriage.

The Solution
There is a tested, effective approach to the problem of antibiotic resistance: simply phase out the use of antibiotics as routine animal feed additives. Invoking the precautionary principle, our European neighbors have shown that such a phase-out can make a significant difference. For example, Denmark began phasing out additives in the early 1990s. Between 1994 and 2001, antibiotic use in the Danish meat production industry decreased 54%. During the same period, vancomycin-resistant *Enterococcus* was virtually eliminated from the Danish poultry industry with no change in the price of meat (Figure 4).

Avoparcin, a vancomycin analogue, was one of the antibiotics phased out and was the presumed source of the vancomycin resistance. Effective January 1, 2006, the European Union banned the use of all remaining classes of antibiotics as growth promoters.

A large number of medical professional organizations in the United States, including the American Medical Association, the American Public Health Association, the American Academy of Pediatrics, and the American Academy of Family Physicians, have called for phasing out the routine use of certain antibiotics in meat and poultry production.

In August 2005, the KP Chiefs of Infectious Diseases for Northern California added their “strong support” to this effort (Figure 5).

In order to curtail the public health crisis of antibiotic resistance and to help protect the public’s health, we, the Chiefs of Infectious Diseases of Kaiser Permanente, Northern California, strongly support efforts that encourage the purchase and consumption of meat, poultry and fish which have been raised without the nontherapeutic use of antibiotics.

Our Challenge
The scientific evidence is mounting and the dangers are clear. We at KP are in a position to provide national leadership in this extremely important area. We have made an excellent first step by changing our prescribing behavior. Now it is time for us to take the next step. Once again, we can follow through on a statement of support with a commitment to strong action.
European health professionals and meat producers have shown us what is possible. Following their example, we can start with our own hospitals, cafeterias, and vending machines. I suggest that we begin a national campaign throughout KP to phase out, in our hospitals and clinics, all meat, poultry, dairy, and fish products raised using antibiotic feed additives. We can then educate our staff and members to do the same in their home kitchens. Our example will encourage others to follow suit. There are more than 8.4 million KP members living in nine states and the District of Columbia. By our sheer size, we can help create a large market for food animals raised without antibiotics. By taking this step, we will simultaneously decrease the emergence of resistant bacteria and their adverse health effects and demonstrate our ability to be national leaders in this important effort.

Acknowledgments

The author wishes to thank John Balbus, MD, MPH; Vivien Feyer, EDM, CAS; Karen Florini, JD; and David Wallinga, MD, for their helpful comments, suggestions, and corrections. Katharine O’Moore-Klopf of KOK Edit provided editorial assistance.

References

A Faustian Choice

A very Faustian choice is upon us: whether to accept our corrosive and risky behavior as the unavoidable price of population and economic growth, or to take stock of ourselves and search for a new environmental ethic.

— Edward O Wilson, b 1929, scholar and naturalist, Professor and Curator of Entomology at the Museum of Comparative Zoology at Harvard University
Farm Pens and Prescription Pads

Physicians and medical centers are the front lines of the battle against antibiotic resistance in infectious bacteria. Government agencies, professional organizations, and health care corporations have developed various directives and control mechanisms to help guide physicians toward prescribing practices that minimize the development and dissemination of antibiotic resistance. But as Jeffrey Ritterman, MD, points out in “Preventing Antibiotic Resistance: The Next Step,” (page 35) the quantity of antibiotics routinely administered to livestock and poultry as feed additives appears to dwarf human use. The evidence that using antibiotics as feed additives contributes significantly to the problem of antibiotic resistance in humans has been acknowledged by the major medical associations, including the American Medical Association, American Academy of Family Physicians, American Academy of Pediatrics, and dozens of others, leading them to call for an end to this practice.

Physicians have taken many necessary steps to curtail unnecessary uses of antibiotics in humans, but what can they do about antibiotic practices on farms? Plenty.

Doctors provide a trusted, authoritative voice to the public. Greater awareness of this misuse among physicians can translate into greater awareness and concern among their patients. And an educated, mobilized public can help counter industry denial and government inaction.

Just as important is the role physicians play as leaders within medical centers and other large health care institutions. Medical centers have an impact on society that goes well beyond the health services they provide. They are universally among the largest employers in any given region. Kaiser Permanente (KP), as an example, has been the largest private sector employer in Los Angeles County for the past three years. Over the past decade, medical centers have recognized their significant role and responsibility in broader environmental and societal issues through organizations like Health Care Without Harm (HCWH) and Hospitals for a Healthy Environment (H2E).

These organizations are reducing the health care industry’s environmental footprint and changing markets by getting medical centers to adopt standards and purchasing policies to minimize use of toxic materials, such as mercury. With 140,000 employees, 30 medical centers and over 8 million enrolled patients, KP’s actions and policies will influence the nation’s economy.

And among health care institutions, KP is known as a pioneering leader. KP’s adoption of a purchasing policy that minimizes use of antibiotics in agriculture would help educate other hospitals, food services, and members of the public about the need to take similar steps.

The adoption of purchasing policies that curtail antibiotic overuse in food animals—notably use of medically important antibiotics as feed additives—is already affecting the market. Environmental Defense has helped McDonald’s (the world’s largest meat purchaser), as well as Compass America and Bon Appetit (two of the nation’s largest food-service companies) craft policies that restrict certain antibiotic uses in chicken. The Compass America policy also addresses the use of antibiotic feed additives in pork. While these policies are only first steps, they are having some real impacts. Indeed, earlier this year USA Today reported that several of the nation’s largest chicken producers had dramatically cut their overall antibiotic use; Tyson’s reported a drop of 93%. However, it’s not clear to what extent similar steps have been taken throughout the chicken industry, and there is still much to be done in reducing antibiotic use in pork, cattle, and other food animals.

It’s possible that we are approaching a tipping point on this issue, but we are not there yet. Moreover, there are no regulatory or legislative guarantees that any of the progress made so far in reducing nonessential antibiotic use will be maintained. This is why it’s so important for the medical profession and the health care sector to put their money where their mouths are, so to speak, and join these major food companies in setting purchasing policies to move the market away from routine uses of antibiotics in food animals. No economic sector is as directly affected by the challenge of antibiotic resistance as the health care sector.

And no other sector’s action has the same authority and influence on this issue. As comedian Marty Feldman has said, “the pen is mightier than the sword and much easier to write with.” Physicians, while restraining their pens from writing unnecessary antibiotic prescriptions, should employ them to help move the food industry away from unnecessary antibiotic use in food animals.

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El Milagro [The Miracle]

"What is life? It is the flash of a firefly in the night. It is the breath of a buffalo in the wintertime. It is the little shadow which runs across the grass and loses itself in the sunset."

— Crowfoot, Blackfoot warrior and orator

In the medical profession, dealing with someone mortally ill leaves little time for the surrounding medical staff to consider how the patient feels emotionally, what medical treatment is to be taken, what family members are experiencing, and the mysticism and magic involved in healing.

Less than two months ago, I stopped breathing.

I live with a chronic condition: Multiple Sclerosis (MS) has been part of my life for over 15 years. Now in the chronic-progressive phase, I use a wheelchair. I have always eaten well and avoid alcohol, cigarettes, and drugs. Other than MS, I have been ill very little.

What happened?

I got pneumonia in the beginning of November. My friends Peter and Julia were visiting from England and this is their account:

“Our visit to New Mexico was a great joy for us both as we had not seen Karen for seven years and we were looking forward to catching up with news and seeing where she lived. Our visit came just after the first bout of pneumonia and although Karen seemed to be better she was in fact valiantly fighting against the infection. We all longed to be able to talk nonstop and to do things together but she was not really well enough. However, we did manage to have many wonderful chats and laughs, often in the evening between the shifts of the care staff when we were ‘in charge.’ Positioning her in her wheelchair always produced great giggles due to our incompetence. It was a very emotional leave-taking; Karen was not well enough to come to the Amtrak station with us and parting was difficult, as we did not know when or if we would see each other again.”

Though I felt better, a week after their departure the pneumonia came back with a vengeance. I had a temperature of 104 degrees. Cold, wet rags were added to help lower the fever, and the home hospice nurse gave me morphine to ease the pain. I then told my helper, Angela, I was sleepy and I wanted to “chill.”

This is where the amazing saga begins. For some reason, I asked Angela, to sit with me—something I never do—while I rested. It was then that I stopped breathing due to the respiratory depressive affect of the morphine. Angela shook me, slapped me, and basically got me back to breathing, none of which I felt nor remembered.

What I do recall is her looking at me intensely and saying, “Don’t leave me now!” About that event, Angela says, “Karen had a bad reaction to the morphine. It was an experience that I will never forget. I found myself literally fighting for her consciousness. I felt in my heart that if I gave in to her unconsciousness, I would lose her.”

That evening, two people stayed with me as I slept in the chair, the upright position helping me to breathe better. A friend, Paula Thaidigsman, a retired Nutritional Therapist says the following:

“Angela and I had agreed it might be safer and less stressful to allow Karen to spend the night in her chair. For several hours she slept peacefully while I sat close by, watching her to be sure that she was still breathing. I found myself literally fighting for her consciousness. I felt in my heart that if I gave in to her unconsciousness, I would lose her.”

The next morning, I woke up really sick, in much pain, my chest gurgling with each breath, my face ghastly white, and blood coming out of my mouth, possibly due to the large amount of Ibuprofen I was taking—and it wasn’t even Halloween! That morning, I was getting 83% oxygen saturation on my own, and was given oxygen to ease the struggle.

Editor’s note: The author of this article is a quadriplegic who is severely dysarthric as a result of multiple sclerosis; she lives alone at home with the assistance of three helpers. She previously wrote a successful and interesting newspaper column on disability, which has been collected into a book (see review page 92). She was asked to write this article to help physicians understand how patients feel in such dire circumstances and how our involvement, or lack thereof, is perceived.

— Vincent J Felitti, MD

Karen G Stone
Columnist and Disability Activist

Less than two months ago, I stopped breathing.
Then, more amazing things happened: Unaware of what happened the day before, but feeling *extremely* tired, I turned to Angela, and said, “Call my family.” And proceeded to go downhill.

Because of the excessive amount of phlegm, and the severity of my illness, double pneumonia was suspected. A stream of people started to come ... and the phone began ringing nonstop. A golden thread that was part of the tapestry included my physician. Though I had prior contact with her, it was this event that revealed to me her true nature. If I had to use one word to describe her, it would be “grace.”

During this whole episode, my physician dealt with friends, family, assistants. She exuded calmness, intelligence, compassion, and thoughtfulness. Part of her approach to healing is teamwork. Decisions were always reached by consensus. I was never left out of the loop.

I felt she respected how the situation would play itself out. She allowed the mysticism and magic to be a part. Without being dominant, she listened sans judgment, gently made suggestions, and rolled her sleeves up to do whatever was needed. I did not find out for three days after I took the morphine what had happened ...

Because the doctor was telling my family that I had a 50/50 chance of surviving with the proper antibiotics—otherwise it was 20/80—and because many people were saying good-bye to me at this juncture, I realized this was no ordinary cold. However, the thought that I was dying never occurred to me.

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I consider myself a very spiritual person and have reflected on my feelings of death. I have spent years meditating on the aspect of letting go. Part of this search has made me a long-time admirer of Stephen Levine and his partner/wife, Ondrea. (See sidebar.)

Following in the footsteps of Elisabeth Kubler-Ross, author of *On Death and Dying*, they write in an open and poetic manner about death and dying issues. As a result, my feelings about death have been greatly enlightened and comforted by their words. My fear of death does not exist. And because I have lived such a good life, I hold dear Stephen Levine’s words, “We die as we live.”

I still refused to go to the hospital. Being surrounded by my plants, animals, and the familiar was a more appealing option. So to paraphrase Mark Twain, I’m glad the rumor of my death was precisely that: a rumor. Due to fantastic support of friends, family, and doctors, I am still here. I felt surrounded and very cradled by love. After finishing all the drugs, I was quite unprepared for my emotional fallout, a common phenomenon that occurs frequently among patients that have survived a medical crisis. Though I experienced a great deal of amnesia during the crisis, I truly realized just how close to death I had been and was reeling from that as well. The fear of death did not bother me, but the flurry involving the details of my final affairs overwhelmed me. In brief, this experience was an excellent dress rehearsal.

I am now taking probiotics, acidophilus, and other good stuff like protein powder drinks—I am trying my best to gain weight and rest a lot. A select few have received a phone call from me. Mark Twain said, “Be good, and you will be lonely.” I am not lonely, but I am being good and avoiding crowds.

As a professional photographer in my earlier days, two images used as wallpaper on my computer came to mind during this crisis. The first image I posted shortly after my initial bout with pneumonia. Though this photograph was taken in broad daylight, the overall hue was dark, albeit colorful. As a close-up, the image involved a small creek deep in the woods. Taken in Oregon during the autumn, the creek was surrounded by moss-covered rocks, dotted with brilliant, fallen leaves. It is an introspective image. The second image, posted during the recovery days, reveals how my health was lifting. Taken from an airplane, the photograph of snow-covered mountain tops radiating in the early morning sunlight included a very blue sky. What a place. When looking at this image, I cannot help thinking about Edna St Vincent Millay’s poem, *God’s World*:

O world, I cannot hold thee close enough!
Thy winds, thy wide grey skies!
Thy mists, that roll and rise!

Thy woods, this autumn day, that ache and sag
And all but cry with colour! That gaunt crag
To crush! To lift the lean of that black bluff!
World, World, I cannot get thee close enough!

It is now five and a half months later. I am full of “piss and vinegar.” Having faced death so closely, I have had the opportunity to test any residue of fear. It does not exist.

Vietnamese Buddhist monk, Thich Nhat Hanh, aptly describes very well my life as of present, “You become aware of the fact you are alive. You are still alive and you are walking on this beautiful planet ... The greatest of all miracles is to be alive.”

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### Stephen and Ondrea Levine Reading List

- Living Into Life and Death
- A Year To Live: How to Live this Year as If It Were Your Last
- Who Dies? An Investigation of Conscious Living and Conscious Dying
- Unattended Sorrow: Recovering from Loss and Reviving the Heart
- A Gradual Awakening
- Guided Meditation

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El Milagro [The Miracle]
Team Disputes at End-of-Life: Toward an Ethic of Collaboration

**Team Disputes at End of Life**

There are persistent calls for improving end-of-life care in the United States. Several recurrent issues make end-of-life care suboptimal, including disputes among members of the health care team. Difficulties in end-of-life care arise around issues such as: variability in practice, poor communication among providers, lack of consensus regarding plan of care, incomplete documentation, and differences of opinion regarding the definition of futility. Despite documented support for improved collaboration among health care providers, the struggle to work together continues, often to the detriment of patients and their families, and more profoundly to the caregivers.

The system for delivering end-of-life care is fragmented and current models for providing care are unsustainable. In a recent Hastings Center report, Murray and Jennings cite three areas that require rethinking assumptions regarding end-of-life care. These include paying greater attention to the end-of-life care delivery system, the approach to advance directives and surrogate decision making, and managing conflict and disagreement. The disjointed and complex system for providing end-of-life care is costly, confusing, and invites legal intervention as the dominant response to anger, mistrust, and unmet needs. This serves no one well.

Given the likelihood of continuing to provide care within fragmented and complex structures, we must look for and identify successful patterns. Often, we are able to come together, reach consensus, coordinate care, and resolve disputes, resulting in a respectful, authentic, and compassionate caress; a concerted action aligned with our common purpose to do no harm.

To provide better end-of-life care, we are compelled to create a normative ethic of collaboration, to transition toward more effective engagement, toward a higher level of professional consciousness. Our fragmented system has evolved to a level of complexity that demands a rebalancing, a swing toward integration that enables us to respond collectively to the overwhelming challenges in our clinical environments. We can transform our approach to end-of-life care by making conscious choices to work together, not just side by side.

Creating an ethic of collaboration as a foundation for practice will allow us to better meet the needs of patients and to fulfill our own desire to do meaningful work.

**Toward an Ethic of True Collaboration**

True collaboration is a way of being and a way of working. It requires a personal commitment to self-awareness and development of skills for interacting at multiple levels. Collaboration occurs at the intersection between self-reflection and active engagement; it is simultaneously a conscious act by individuals and the product of group wisdom. It is the antidote to the epidemic of fragmentation that runs throughout our organization and our system for providing end-of-life care. Collaboration requires time and commitment; in return for that investment we gain understanding, build trust, discover common purpose, and expand possibility. An ethic of collaboration provides a foundation for addressing paradox and ambiguity, and for managing differences that, if left unaddressed, can lead to moral distress and service fatigue.

**Starting From Where We Are**

So how far do we need to travel to find an ethic of collaboration among health professions? Our dominant ethical principles of do no harm, distributive justice, patient autonomy, and integrity in practice do not expressly indicate an ethic of collaboration. On closer examination, however, it is clear that the threads of true collaboration are woven into our current ethos.

Collaboration requires reflection on our effectiveness in negotiating with colleagues on behalf of patients. Awareness of this and our ability to acknowledge others is the first step in patient advocacy.

To do no harm, the most fundamental of our ethical obligations, we must work together. Complexity dictates that no one person has enough information to care individually for the patient. Collaborative practice underlies nonmaleficence. Coming together is the only way to consistently prevent harm to patients.

Distributive justice by its nature involves a broad view of the needs of a community. Through discussion and consensus we are better able

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Debra Gerardi, RN, MPH, JD
Chair of the Program on Health Care Collaboration and Conflict Resolution at the Werner Institute for Negotiation and Dispute Resolution at Creighton University School of Law

“Fragmentation consists of false division, making a division where there is a tight connection and seeing separateness where there is wholeness. Fragmentation is the hidden source of the social, political, and environmental crises facing the world.”
— David Bohm

The Permanente Journal/ Fall 2006/ Volume 10 No. 3
Commentary

"Culture matters. It matters because decisions made without awareness of the operative cultural forces may have unanticipated and undesirable consequences. ... The argument for taking culture seriously, therefore, is that one should anticipate consequences and make a choice about their desirability."

— Edgar Schein

To determine just and equitable solutions in the face of competing interests and limited resources, patient autonomy, respect for an individual’s capacity for self-determination, reflects the personal responsibility patients carry and underscores the fiduciary duty of each practitioner to provide a framework built on trust from which patients can make decisions. Trust is the determining factor that enables collaboration.

True collaboration blends individual commitment with group action. Integrity in practice through truth-telling, reliability, equanimity, and fidelity, has long been an expectation of practitioners and goes to the heart of our individual commitment as professionals. Without a commitment by each individual to contribute and participate with integrity, there is no collaboration.

The guidelines found in the ethics codes of various professional groups range across the collaboration continuum. The levels of ethical responsibility fall into five categories: professional conduct (citizenship), acknowledgment, cooperation, collaboration, and active conflict engagement. The categories reflect a progression in professional engagement and provide a glimpse into the attitudes each profession holds toward collaborative practice. A look at the words used within these codes reveals the stories each profession has crafted to define their role including respect for hierarchy, expectations of cooperativeness, acknowledgment of alternative points of view, and collaboration for the sake of the patient’s well-being. Each code is distinct and provides insight into the assumptions that lie at the heart of each professional culture.

Professional Cultures

Underlying our ability to engage with each other in resolving differences are professional cultures that reinforce fragmented approaches to end-of-life care and impact our ability to appreciate the contribution of others, to integrate ideas, to communicate effectively, to problem solve holistically, and to make sense of complexity. Structural and professional divisions create containers that make connection and collaboration difficult.

Professional cultures are composed of those things we see and what we do not see. Below the surface are unconscious assumptions that drive professional behavior. Within each profession are assumptions that can sabotage efforts to communicate clearly and collaborate effectively. Surfacing these assumptions and testing their validity is the key to building understanding and managing differences between professions.

Tools for Expanding Capacity to Collaborate

The field of alternative dispute resolution offers a number of processes and techniques to improve individual skills and enable groups to come together. Facilitation and mediation have traditionally been used to manage conflict and build agreement, particularly when there is a loss of trust or perceived differences that impede decision making or problem solving. Dialogue is a process that enables groups to establish common purpose, test assumptions, and collectively develop deeper meaning. Coaching and mentoring processes create clarity and promote self-awareness by providing structured feedback in a supportive environment. Appreciative inquiry helps groups to identify patterns of success. Through positive inquiry into stories of success, groups can move forward by envisioning solutions that build on what is already working. Integrating these tools into clinical practice is a practical means for advancing collaboration.

Enhancing Our Delivery Systems

Most health care organizations have a need to redefine their processes for responding to conflict and for resolving disputes. System designs that enable productive engagement is a special application in the field of dispute resolution. Drawing on principles of emergence and self-organizing behavior, organizations can identify reliable methods for fostering collaborative problem solving and effective dispute resolution enhancing the ability of health care professionals to work together and truly live out their ethical obligations.

Conclusion

End-of-life care is fragmented and requires that we examine our commitment to work collaboratively as a means for improving end-of-life care and managing team disputes. Techniques used by conflict specialists can enhance the capacity of health care professionals to transition their practice toward a culture of collaboration.

References


Presented March 2006 at the Northern California Kaiser Bioethics Symposium, San Ramon, CA.
My Life as a Doctor in the World Health Organization

By Einar Helander, MD, PhD

Editor’s Note: Over the course of time, I have come to see how easy it is to believe that what we believe and what we do medically in the United States must generally be the way medicine is viewed and practiced in most countries. We hope, therefore, that the readers of The Permanente Journal will be interested every so often to hear physicians around the world describe their medical practices, so that we all may better understand the wide range of what physicians do.

This issue’s contribution is from Einer Helander, MD, PhD, a distinguished Swedish physician, trained as a cardiologist and biochemist, who has spent much of his professional life as Chief Physician for the World Health Organization, visiting countries most of us would not consider going to, and spending his time there among the destitute and the disabled. Dr Helander is the author of The World of the Defenseless a soon-to-be-published medical book about disability and abuse around the world, including some eye-opening stories from the United States.

— Vincent J Felitti, MD

At the end of one’s life, one often reviews one’s life decisions. At the age of determination, when I had finished my specialty training, I had three choices: I could remain at the fabulous and well-equipped National Institutes of Health in Bethesda, MD to continue working with one of the most fascinating basic problems of physiology and biochemistry—the molecular mechanisms of muscle contraction; or I could return to Sweden with an academic career in rehabilitation and social medicine, as the government’s consultant. But, I also had an offer to work at the World Health Organization (WHO); I accepted it and I have had no regrets.

I am a Swede and my initial background is totally academic: biochemistry in the laboratory of Arne Tiselius, internal medicine, and medical rehabilitation. My life changed after becoming involved in 1967 with a cardiac rehabilitation program at the WHO regional office in Copenhagen. In 1974, I left for Geneva and became a staff member of WHO at headquarters. I was to work in developing countries where I would focus on persons with disabilities: the poorest among the poor and the most underserved of all. I was totally unprepared for such field work.

WHO was set up in 1948 as a specialized agency of the newly founded United Nations (UN). WHO’s objective, set out in its Constitution, is “…the attainment by all peoples of the highest possible level of health.” Health is defined in WHO’s Constitution as “…a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.”

Prior to the development of WHO, and even the UN, the Pan American Health Organization (PAHO) was developed in 1902 (as the Pan American Sanitary Bureau) to combat disease, lengthen life, and promote physical and mental health in the Americas. With the development of the League of Nations and its Health Programme, incorporating PAHO became important because the United States was not a League member. The advent of World War II and the development of the UN, in 1945, and WHO, in 1948, made the incorporation of PAHO even more significant if WHO was to be truly universal. PAHO’s desire to maintain independence led to the decision to create regional networks for WHO with offices in Washington, DC, Copenhagen, Alexandria/Cairo, Brazzaville, New Delhi, and Manila. Although this added a layer of bureaucracy, all countries in the world joined WHO. They are able to belong to whichever regional office they choose and the headquarters (HQ) remain in Geneva.

When I arrived at WHO, there was a remarkable and charismatic Director-General, Halfdan Mahler, MD, (1973-1988). He initiated a complete change of WHO’s policies, placing emphasis on programs for primary health care: everyone in the world...
was to have access to at least the basic and most-needed health services, near where they lived. In 1978, when the final preparations for change were ready, WHO and UNICEF held a conference in Alma-Ata, (Soviet Union at that time; now Kazakhstan). All countries adopted the “Health for All by the Year 2000” policy. This program had four components, of which one was rehabilitation. I was put in charge of developing the practical program for this; nothing existed before.

My director at WHO was Kenneth Newell, MD, a great innovator and the person behind the primary health care program and the introduction of appropriate technology. The first thing I asked for when I arrived in 1974 was to be sent to a developing country to get some experience: that happened to be Iraq. Saddam Hussein, then Vice President, was the de facto ruler. Following several years of drought, Saddam had twice imported large amounts of grain for Iraqi farmers to use as seeds. The grain had been routinely pre-treated with a pesticide, alkyl mercury. Unfortunately, because of the lack of other food, in 1972, about one million farmers and their families had made bread from the poisoned grain and eaten it. The aftermath was a widespread epidemic of alkyl mercury poisoning that killed thousands. Among the survivors, there were an estimated 100,000-200,000 persons with blindness, tunnel vision, ataxia, or paralysis. Two years later, the Iraqi government requested funds from WHO for two expatriate physiotherapists to deal with this problem. I went to evaluate the situation. Providing two physiotherapists clearly was an ineffective solution in a country where the farmers lived far from each other in places that not even jeeps could access. To get to a small settlement of an extended family with some 40 people, we walked for an hour in 50° C (122° F) temperatures. By the time we were through, however, I had learned three important lessons.

My first lesson was about spontaneous family-based rehabilitation. During the two years following the disaster, many in this extended family had died and about one third of its surviving members had persisting sequelae of mercury poisoning. With no help, family members themselves had trained many of the disabled individuals at home. They trained blind people, mobilizing them so they could walk alone, using canes. They had trained paralyzed children successively to sit up, to move their arms and legs, to stand up, to walk, to dress, to feed themselves, and other activities of daily living.

Mothers and grandmothers, without any schooling, had played key roles in achieving these results; in fact, the results often were identical in quality to those one would have expected had professionals been involved. There was no need to send Western therapists to provide rehabilitation; given the numbers of victims involved, the original request was pure window-dressing. The lesson was that dedicated family members—even when totally uneducated—can find ways of providing effective rehabilitation. This was again confirmed during continued field work in Africa, Asia, and Latin America carried out from 1974 to 1979. These experiences resulted in the new official WHO strategy and program of Community-Based Rehabilitation (CBR). Thirty years later, this program functions in about 90 countries.

The second lesson from my visit to Iraq was equally unexpected. There were no statistics available on the extent of the poisoning, but a Swedish organization later provided statistical analysis. My conclusion from their data is that over a million people were affected. In an effort to discover something about the mortality, I visited the local pathologist in a small town south of Baghdad. Yes, he said, there had been many deaths but, because of “government security rules” he was explicitly forbidden to tell anybody how many. I wondered whether Saddam perhaps was embarrassed by publicity about his “government-organized” poisoning, most likely the largest ever in the world.

An important side observation came as I was waiting for the pathologist to receive me. I saw three women, all in black and with covered faces, leaving his office. I casually asked why they had come to see a pathologist. It appeared that he was also the police doctor and these women were a mother with her two daughters. They had been sent by the police to him because the father had raped the girls when he was drunk on locally brewed alcohol. There was nothing the pathologist could do because the women refused all examinations. He added that incest was not uncommon; many infants resulting from incest disappeared soon after birth. This event—in my early days at WHO—spurred me to continue asking questions for 30 years about family violence, child abuse, and other maltreatment. I discovered that these phenomena have a very high incidence in developing countries but, because the subject is taboo, nobody
speaks spontaneously about them and almost nothing gets published. One of the most abused groups are children with developmental disabilities. The results of this research appear in an upcoming book, The World of the Defenseless.²

My third lesson came a year later, when I visited Indonesia. I had opportunities to stay there several times while a major disability survey was being set up and an Indonesian organization invited me to study several of their projects in Central Java. We traveled for some weeks to small villages and stayed in tiny guesthouses; tropical rains and an active volcano in the neighborhood somewhat impeded our transportation. I was shown local rural development programs built on community mobilization. In one such village, the community leader had for the last ten years mobilized the entire community in many projects. All men worked every Saturday on these projects without any pay. The rich families, instead of working, provided money for the equipment and building materials. Other funds came from local taxes on land, rice harvests, buildings, weddings, and much more. There were 16 different taxes when I visited; these taxes were raised and spent locally. Decisions were made and accepted in a democratic way.

The first of this village’s projects was to build an irrigation system for their rice fields. When this was ready, there were three rice harvests a year, an important increase from the prior rate of one harvest per year. The increase in rice production gave jobs to everyone; it also increased the local taxes so that more projects could be financed. Building latrines and eliminating the open sewers that cause infectious diseases especially among children followed; also collecting and disposing of garbage. Next, was a primary health care program: three women were chosen to become health workers and were sent to a course in a nearby town. When they returned, they introduced immunizations, a maternal and child health program, and a nutrition program. At that time, malnutrition was widespread in Indonesia. The village leader told me that it took just three months to eradicate malnutrition. All newborn babies were regularly examined and weighed by the health workers and, when there were any signs of impaired growth, the family was visited. The health worker gave lessons at home in nutrition and how to give the baby supplementary foods; she showed how vegetables could be added to the polished rice that was the staple diet. Families started growing vegetables in their own backyards. These preventive health services were paid by a small insurance fee raised from the entire population. It included a weekly visit by a doctor. Essential medications were dispensed at the health center. Because the villagers deemed insufficient the education provided by the government, the community built an additional school and hired their own teachers. The old curriculum was improved by adding new subjects: health, how to cultivate additional foods and set up fish dams, community work, and childcare. There was an active child-to-parent inform-
the Republic of Korea (South) and visited a government-initiated, countrywide, rural development project (Saemaul Undong) that was based on community mobilization. Reports showed that, between 1971 and 1975, villagers built 24,645 miles of village roads, 25,761 miles of farm roads, 50,952 small bridges, 83,023 irrigation ponds, 11,301 dykes, 1570 water channels, 27,051 village halls, 13,258 village warehouses, 372 village factories, and 11,235 water-supply systems. They carried out reforestation projects of 3,965,500 acres of land and installed 10,429 village telephones. They accumulated US$456,875,000 in agricultural cooperative savings, US$46,666,000 in fisheries cooperative savings, and US$55,416,000 in village credit union savings. The government invested about US$579 million on these Saemaul projects, but the value of completed projects is estimated at 2.5 times the government spending. I concluded that development programs using community mobilization work well both locally and nationally. They are excellent models and it is surprising that they have not been copied more.

Work continued at WHO; Dr Mahler went on decentralizing the control and use of funds from HQ to the regional offices and to the field. WHO obtains its income from contributions paid by the Member States, generally in proportion to their national incomes. In addition, some countries supplement WHO’s budget with voluntary contributions. WHO spends annually an average of between US$1 and 2 billion, excluding some special programs that have their own funds. This is not enough to meet more than a small part of the health needs of the developing countries. Therefore, program officers at HQ try to raise funds from outside donors. This was not easy for a new program like the CBR even though its regular annual budget for field programs was just US$20,000. The CBR program mainly developed because of voluntary extra-budgetary funds from the government of Sweden, my home country. In 1979, one year after the Alma-Ata Conference, we had developed with Swedish economic assistance an 800 page technical manual, *Training in the Community for People with Disabilities*. This was composed of 30 instructional packages for family training; these are simple texts using only 1300 different words but with 2200 drawings to illustrate how to home rehabilitate polio victims, the blind or deaf, children and adults who are mentally disabled, and people with mental illness, epilepsy, and leprosy. All these training packages were based on our direct observations of “spontaneous rehabilitation” of the type first observed in Iraq and then in nine additional countries; the manuals encouraged community mobilization for their implementation. In addition, advice was given about schooling, job training, and economic activities. We had well-developed evaluation and reporting procedures from the start. The manual went through extensive field testing and peer review, is translated into 54 languages and is now widely used. Later, we added several managerial components: surveying, planning, service delivery development, personnel training, and a computerized evaluation system for quality, cost, efficiency, and effectiveness. Special management courses are held for participants from 90 countries.

We had no problems inside WHO to get the new CBR strategy and program fully accepted. Outside, however, there was great resistance for several years in many developing countries where there were small, mostly residential rehabilitation centers that had been set up by overseas nongovernmental organizations (NGOs); they felt criticized and perhaps economically threatened by the new and radical change that was taking place. The professionals felt that, by transferring skills and knowledge to the families, almost all of whom were living in extreme poverty, they would lose their jobs. This was of course totally unfounded, but some 150 highly critical articles were written against the WHO strategy, accusing, among other things, the CBR program of bribing personnel in the test countries to report good results. Finally, after about ten years, resistance came to an end. The CBR program is still the disability and rehabilitation unit’s main input to the WHO’s regular program.

All components of the Primary Health Care program, including rehabilitation, were meant to be set up and managed by national governments, but during the 1980s and 1990s the International Monetary Fund (IMF) and the World Bank (WB) were in full swing introducing “structural adjustment.” These international organizations virtually controlled the political and economic decisions of many poor countries. Health and social programs were cut in a large number of countries. What happened is accurately described by the United Nations...
Research Institute for Social Development (UNRISD) in a publication in 2002, the WB and IMF “… prided themselves in not wasting their time on ‘soft’ things like social policy in designing their ‘structural adjustment’ programs … Diverting resources to social policy, which softens the blow of adjustment on the weaker sections of the society, was regarded as a way to slow down the necessary adjustments …. This was pursued to the point of producing a widely spread international counter-reaction in the form of a call for ‘adjustment with human face’ by those who … were deeply concerned by what they saw as unnecessary human suffering caused by such programs in their unadulterated forms.”

Although the IMF and WB stated that they were engaged in eradicating poverty, in reality they advised the governments of a very large number of developing countries to cut social personnel, social services, and safety nets aimed at the destitute, thereby causing poverty among the poorest to increase. As a result, governments were constrained from introducing CBR and other social programs; this made the situation very difficult for WHO’s CBR initiative. Joseph Stiglitz, a 2003 Nobel Laureate in Economics and a former WB Senior Vice President and Chief Economist, later wrote they have “… implemented a set of standard economic theories that have sometimes failed, caused havoc, riots, and substantial destruction of economic and institutional assets.”

Stiglitz resigned from the WB and is now one of its biggest critics, becoming one of several well-reputed economists speaking openly against the incompetence of the aid industry. Although the WB sounds like a giant, it is small, lending out each year about US$18 billion. By contrast, there are ten banks, mainly in USA and Japan, that have over US$1 trillion in assets. Fortunately, bilateral cooperation organizations, particularly the Nordic countries, Canada, and the Netherlands, along with some large international NGOs actively supported local NGOs to set up CBR.

In 2000, a major publication, *The Declaration of the Millennium Development Program,* described activities related to the eradication of poverty. It was the outcome of the world’s largest summit, supported by all governments and all large international organizations. Unfortunately, it contains nothing specific about how to solve the problems of the poorest: persons with disabilities, widows (each of these two groups constitutes 5% to 7% of the world’s population), the landless, families without a breadwinner, single parents, and those who must send their children to work instead of school. It provides no information about what to do about alcohol and illegal drug abuse, about family planning, about the pervasive violence in the world, and how to solve the corruption of judicial systems in which few poor people feel that they can trust the police and the courts.

After I left WHO, I stayed another eight years with the UN Development Program. During the last seven years of these years, I have worked with country projects and management. All of these were jobs inside large bureaucracies, WHO being the most complex with rules and procedures that cover several thousand of pages. During my time, there were still some loopholes, if you could find them; but every year more rules were introduced.

Working with international organizations can be rewarding if you are encouraged and allowed to present and carry out innovative strategic ideas. You have to create a free space for yourself, and it helps if you can raise the necessary funds outside the organization. In the area of disability and rehabilitation no strategy existed; the temptation to take on this job was for me the irresistible attraction of the impossible. Other colleagues with less courage preferred to make no waves. WHO is an intergovernmental organization, and all 190 Member Countries have the right to a proportion of the professional posts. Many people in higher posts are political appointments, who have approval power over all projects. As in all bureaucracies, power plays are common.

Once you have endured the initiation time and learned about the constraints, you will go out to the field and discover the real problems. Over the course of 30 years I have traveled to over 100 countries, and worked in 88 of them. When your medical practice is there, you can forget about most laboratory tests, x-ray equipment, medications except a few essential ones, blood transfusions, or surgical equipment beyond the most simple. You will buy a good pair of shoes so you can walk to roadless villages. It is most useful to have good training in physical examination using your own senses, and practical knowledge of diagnoses—although you will quickly find a large number of health conditions you never have heard of. You will need to commu-
communicate with the local village and slum dwellers; you need to stay with them, sleep in their guesthouses, and eat their food. You will soon find a number of very intelligent persons—some literate—who are able to contribute to community development and carry out simple components of a health program. A good beginning is often to clean up the dirt and garbage that surrounds everybody. But what finally overwhelms you is the sheer number of people in need of help, literally billions. For that reason, we realized that we would reach more people if we had simple, practical books with instructions. We produced nine such manuals for the CBR program.

The most striking problem in the world is poverty; it took me some time to realize that the poor are sacrificed routinely. The population of the developing countries is now well over five billion; three billion are under the poverty level. The overseas aid they receive, after deduction of administrative and other overhead costs, is a pittance that varies from US$1-5 per poor person per year. The combined income of the 25 million wealthiest people in the USA equals the combined income of the two billion poorest in the developing world, a one hundred to one ratio. Fifty years of international development aid has left few traces. Health care quality has developed with WHO’s technical work, but 750 million people still lack primary health care. Anyone doing this work learns there is no place for romantic ideas; the world is run by the citadels of economic power: the IMF, the WB, the WTO, and the finance ministers of those rich countries who operate these organizations. So far, there has been more talk and declaration than impact on poverty levels; sometimes programs have increased poverty, caused havoc, riots, popular uprisings, widespread and costly destruction of assets, and mass killings.

The solution—as I see it—is that the developing countries should start to mobilize their own resources. They must make it a policy that everyone will work for the collective good—their own community—and undertake action programs in the interest of all. I have seen this function well in about a dozen countries. What I saw in Iraq, Indonesia, and South Korea some 30 years ago, and then in many other countries, is effective. Mobilization works much better than any development program directed from afar using international donor money, or from far above directed by the ineffective bureaucracies of national governments. Let the people decide what is important for them, plan for what is needed, and then do the job. Motivate them to do it, which is easy if they know that the benefits are for them. What rich countries can do is to set up national and regional courses for community management training, employing those local leaders who have had success. Further developments needed relate to secondary education, to the availability of uncorrupted local judicial systems, and to government performance.

Being a doctor in developing countries has many unfamiliar aspects for a clinician. You try to help with what you know; you try to transfer knowledge and skills to local populations to make them more independent. When I was 15, I heard a visitor asking my mother “What is Einar going to do?” My mother replied, “Einar will do something for the poor.” Never did she or I at that time realize that doing something for the poor is ultimately politics. But even so, there is also room for the individual doctor to contribute and to be the voice of the defenseless.

References
“Chaco Canyon, New Mexico”

Watercolor

By Patty Stelz, RN

Patty Stelz, RN, works in the Emergency Department at the Kaiser Permanente Sunnyside Medical Center in Clackamas, Oregon. She is a mostly self-taught artist and works primarily in watercolor. Her inspiration comes from experiences and travels.
Primary Care in Romania

By Macrina Florescu, MD

Editor’s Note: As part of our series on medical practice around the world, we present an article on rural general practice in Romania. Although a few of the author's problems are similar to ours, most are quite different. This article has been translated for us by Roxana Covali, MD, PhD, a Romanian radiologist.

— Vincent J Felitti, MD

To become a general practitioner, after I had graduated the Gr T Popa University of Medicine and Pharmacy in Iasi, Romania and became an MD, I passed the national examination to enter general practice residency in June 1999. I then studied and worked as a resident physician for three years in big university hospitals in the following specialties: surgery, pediatrics, psychiatry, dermatology, internal medicine, infectious diseases, obstetrics and gynecology, and one year in an urban primary health care unit (dispensary) for adults and children. After every stage I had a written examination and a practical examination. During certain stages (pediatrics, surgery, obstetrics and gynecology) I even worked as an “on-duty” physician, and during the surgery stage I also worked in the emergency room where I became accustomed to diagnosis and treatment of emergencies.

Upon graduation, I had two choices: go directly to the countryside to work in a dispensary or pass the very difficult national examination for entering the general practice residency and, upon completion, work as a “specialist” general practitioner. There were positive and negative aspects to either choice. I chose the second, harder, option.

I learned and practiced many techniques I could not have learned otherwise. I treated difficult cases that can be seen and treated only in university hospitals, which greatly widened my medical horizon. The graduates who chose to go directly to the dispensary in the countryside became simple general practitioners. A few years ago, the Health Minister gave an order making all general practitioners with more than eight years in a dispensary in the countryside “specialist” general practitioners, without any examination or any period of university hospital work and study. They of course were very happy, but this left my specialist colleagues and me few open places to practice.

After these three years of study and work, I passed the examination for the professional degree of “specialist” general practitioner, which included a written, a practical, and an oral examination with a board made up of three medical university professors. About one month later, I passed an employment examination and my grades allowed me to choose a village dispensary close to my hometown, so I can commute by train. To sign a contract for health services with the health care system, I had three months in which to sign up on my “general practitioner’s list” at least 500 people who had paid their health insurance taxes.

A general practitioner, specialist or not, is paid according to his/her list. Every person on the general practitioner’s list represents a certain number of points, depending on age (neonate, adult, elderly). For every point, a fixed amount of money is given by the health care system to the general practitioner. From this money must be paid the nurse’s wages, the practitioner’s and the nurses health care and social security taxes, water, electricity, firewood for winter heating, and first aid medicines. The remaining money belongs to the doctor. Unfortunately, there are situations when this remaining money is lower than the minimum national wage (±$125 USD per month).

If your list includes 2000 or 3000 patients, then you may earn more and are a very fortunate general practitioner. Many general practitioners have 1500 or fewer patients on their list and must fight to keep them there. There are cases when a patient comes in the dispensary late in the evening, or at night, finds only the physician on duty, (not necessarily the patient’s personal general practitioner), receives emergency treatment, and then is asked for personal data. Next time

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the patient goes to the dispensary s/he may find out that s/he has been added to the list of the emergency physician, even if s/he did not request this relocation, or agree to it.

On the other hand, when the payment-point system was first introduced in the late 1990s, those physicians already in dispensaries were the first to compile their lists, and they already had many patients. As the number of general practitioners in the dispensaries grew year by year, and the number of patients was constant, the newly arrived physicians had to make their own lists from depleted populations. These newly arrived physicians were happy to write a new patient on their list, while the previous physician was not happy to lose one. There were even situations when the patient was written on somebody else’s list without asking for it. Newspapers wrote a lot about the arguing between general practitioners who fought to retain their patients.

At the end of the 1990s, when few general practitioners worked in the urban or rural dispensaries, the point value was high and it was said that general practitioners made good money. It was even said that the incomes of these rural general practitioners were greater than the wages of physicians who worked in hospitals where the basis for salary was different. At a time when there were few physicians working in rural dispensaries in the 1990s, newspapers related their good incomes to the point system and thereby encouraged physicians to choose to be general practitioners. As the number of general practitioners in the dispensaries increased, incomes stabilized or slowly decreased. For the same work, payment slowly became less from one year to the next and the lure of the point system decreased.

In 2004 my village became a town and the minimum number of patients on a physician’s list to contract with the health care system rose dramatically to 1000. Meanwhile, step by step, I managed to buy for my general practitioner’s office a refrigerator, a glucometer, a small sterilization device, and surgery sets. In 2004, because there was no hospital in this new town a “Permanent Medical Center” was organized. Physicians are on duty in their own offices, and the one on duty has to pay for the nurse and the medicines used.

When I began my practice, most of my patients were unemployed gypsies (an ethnic minority), beneficiaries of the social security system, who had not been included on the lists of the three other physicians working there before my arrival.

One day, a young gypsy woman came in, accompanied by a relative. In order to consult her, I invited the relative out. At that moment, the patient became visibly anxious, and did not want to undress. I spoke nicely to her, trying to calm her down, but it was useless. She insisted that her relative enter the room, too, and be with her. I invited the relative back in, and the patient relaxed. After I established the diagnosis, both women started to ask questions about the possible disease, at the same time.

I prescribed some medicines, including antibiotics, for the severe cold she had, explained to them how to take those pills, and sent them home. When they came back for the check-up, several days later, the patient felt better, but not as good as I expected. I asked a lot of questions and finally I got the explanation: she swallowed the antibiotics with wine, because she knew that wine is good for health!

That’s why now, when I prescribe antibiotics to gypsy patients, I always tell them not to drink wine while they take the pills, if they want a good result. And many of them seem unconvinced.

There are other situations when I explain to both gypsy spouses the treatment, and after I finish, the husband will explain to the wife something, I do not know what, in their own language. They say he explains the treatment to her, but I do not understand why, because she understood the Romanian language, and had asked me questions about the disease. Before they leave, I always ask the wife once again: “Is it all clear to you? Do you have any questions?”

The poor, unemployed, generally uneducated gypsies, remain an unsolved problem in Romania. They do not want to listen to the physician’s recommendations, nor do they want to obey certain medical requirements, but they do want good medical results. Special attention and a lot of patience must be paid to these individuals who are socially assisted and paid a certain amount of money per month by the state.

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The Gr T Popa University of Medicine and Pharmacy in IASI, where Dr Florescu studied.
Ethnographic Studies in the Principles of Clinical Medicine

By William L Toffler, MD

Oregon Health and Sciences University (OHSU) introduced the Principles of Clinical Medicine (PCM) course in 1992 with the intent of providing medical students early in their training with a patient-centered care context. Students are enrolled in this two-year, longitudinal course at the same time they are learning basic sciences. PCM consists of two components: a weekly preceptorship in which students spend four hours a week with a community physician and four hours in classes focusing on the knowledge, skills, and attitudes involved in providing patient-centered care. Classes are taught with large-group presentations followed by small-group discussions, and include an introduction to patient examination and diagnostic reasoning as well as to key patient-care issues drawn from epidemiology, medical ethics, organization of health care systems, and the behavioral and social sciences. We believe this curriculum better prepares our students for their third-year required rotations, as well as for their relationship with patients throughout their medical career.

One of the goals of this curriculum is to help students develop cultural sensitivity. This is not an easy task. Some students come to medical school feeling that they are open-minded about other cultures; there-

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before they are culturally competent. Nevertheless, we wish all students develop the kind of knowledge of and experience with other cultures that they will need as physicians. To do this we must walk a fine line between teaching salient characteristics of various cultures, which students dismiss as “stereotyping,” and giving them vague advice about the importance of treating all patients with equal respect and trying to understand their worldviews.

Another goal is to develop students’ ability to reflect thoughtfully upon key issues affecting their future practice of medicine. Students engage in group discussions with their peers and physician group leaders; they also are required to write a quarterly essay. Essay assignments vary in structure and content. Specific requirements have evolved over the years along with the curriculum but the overall goal of encouraging self-reflective thinking and writing remains unchanged. In 2001, we attended a national meeting of the Society of Teachers of Family Medicine at which we were inspired by the work of Dorothy Mull, PhD, a medical anthropologist at Keck School of Medicine at University of Southern California. Dr Mull taught students more about the patients they were seeing from the Los Angeles Latino community by assigning them an “ethnographic interview.” With her assistance, each student found a patient from the Latino community, arranged for a home visit, and interviewed the patient with the assistance of a list of specific questions she had prepared for them.

As we all know, we never learn as well from books as we do from lived experience and this method of introducing students to patients with lives and worldviews very different from their own was innovative and intriguing. We wondered if it would work in Portland, where ethnic communities are far less defined and where few students work with preceptors that see ethnically diverse patient populations.

With Dr Mull’s permission, we adapted the assignment. At first, we framed the assignment as an opportunity for students to interview a patient who would be considered “underserved.” We also asked for more personal reflection on the experience—that is, to relate their individual patient’s situation to what they have learned during the PCM quarter devoted to discussion of US health care policy and economics. Some students did interview patients of different cultures and ethnicities and their experiences greatly impressed the small-group leaders who read the essays on the basis of their experiences. However, finding a patient was difficult for some students and they opted to interview friends or next door neighbors, who are “underserved” simply because they had no health insurance. Although this could be a valuable learning experience, it did not meet the goal of increasing students’ cultural sensitivity. So last year, we rethought the assignment and reworded it to specifically ask that students interview a patient “from an ethnic or cultural background other than your own.”

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calling,” but refused to name any organized religion to which she subscribed. She first met her husband at a local church gathering when she was 12; she noted that they were married “in the eyes of the lord” when she was 14. She has since had ten children and three miscarriages, and continues to refuse to use any form of birth control. Questioning revealed that her husband controlled all aspects of the family’s daily life from what they were to wear, to where they could go, and with whom they could interact. Her main support came from the other members of her church.

Household Composition
Mrs Doe reported that she is now the sole provider in the house because her husband had been recently convicted of child abuse relating to his religious practices. After a long struggle with Child Protective Services (CPS), Mrs Doe was allowed to retain custody of her children, and has not been to visit her husband since his incarceration. She lives in a three-bedroom house about 20 minutes outside of town with her ten children who range from aged 16 years to 9 months. Review of the medical records revealed that a CPS worker continues to make home visits several times each month.

The family distributes itself fairly evenly amongst the bedrooms with the four older boys sharing one bedroom, the four older girls in another, and the two youngest sleeping in their mother’s room. Mrs Doe did express some concern over finding enough space for all the children as they continued to grow older. She also related a great deal of trepidation for the time when her husband returns from prison as things were beginning to change in his absence.

Material Possessions, Transport, and Family Support
Questioning revealed that the slightly more rural location of the family home proved to make certain tasks quite difficult. They did not own a car, and before the last six months there was no phone in the house. When she needs to go to town, Mrs Doe walks about five minutes to a neighbor’s house, and they travel together. The entire community belongs to the same church, and this serves as a vital support network for the family. Mrs Doe even made mention of the church owning part of the house she lived in, but this was not elaborated on with further questioning.

The family also has no TV or radio, and receives no outside communication like newspapers or magazines.
Because this assignment involved sending medical students out into the community, we initially had to obtain permission from OHSU legal affairs and the School of Medicine. The activity was approved, provided we added a requirement to the assignment that students obtain written permission from patients to be interviewed, advised students who arranged home visits not to go alone, and reminded students that in visiting homes as health care professionals they were required to report any suspicions of child abuse. These guidelines seemed sensible for any home visit, no matter what the socioeconomic or ethnic status of a patient. Nonetheless, some students perceived these precautions as culturally insensitive with an implicit assumption that patients of other cultures are more dangerous or more prone to domestic violence.

Sometimes students teach their faculty as much as we teach them! Their concerns have been heard. Appropriate revisions to the wording of the assignment are complete and we will strive to communicate these changes more effectively to next year’s students.

That said, most of our students in this and past years have responded quite favorably to this assignment, acknowledging that it can be among the most valuable and memorable experiences of their first two years. It moves them out of their comfort zone and enables them to learn things about patients and cultures that they never would otherwise. We consider it to be the best opportunity we offer to promote the practice of culturally sensitive medicine. Our faculty continue to be amazed not only that students learn so much, but that they often write so eloquently about these experiences.

When I matriculated in medical school more than three decades ago, no time was devoted to these important issues. Our medical school curriculum has been revised to address many of these shortcomings. The insights, capacity for self-disclosure, and openness to growth reflected in these essays by second-year students suggest that our efforts have been worthwhile. These “Voices of the Future of Medicine” give me great hope and confidence—hope for the future of our profession and confidence in the exceptional quality of care these future physicians will ultimately provide their patients.

I am grateful to Dr Janisse for suggesting and making it possible to publish some of our most-talented students’ writings in The Permanente Journal, and to the Collegium for the Study of the Spirit of Medicine, a group within The Foundation for Medical Excellence (TFME), a Portland, OR organization, for recognizing the worth of this experience and for developing a scholarship program in 2007. This truly exemplifies the spirit of medicine.

All of the children’s educational materials are provided by the church, and taught by Mrs Doe and until recently her husband. Additional familial support is absent because Mrs Doe has not spoken to her biological family since she left home at 16. Her husband strongly disapproved of her family’s way of life, but she did admit that she has been tempted to call her mother since her husband has been in jail. The CPS worker she had been working with had encouraged her to do this.

**Family Work and Income**

Prior to Mr Doe’s arrest, he modestly supported the family through employment. Mrs Doe related that he worked overtime so the family could afford some extras occasionally. At the time of the interview, however, no one was working outside of the home, and the family was being supported entirely by state assistance and the generosity of fellow members of the church. Mrs Doe tries to supplement this by taking in sewing projects, but she is having a hard time keeping up with the work while still trying to care for ten children. She mentioned that her eldest had offered to get a job, but she didn’t like the idea of her kids supporting the family. At this point in the interview she brought up the idea of attempting to change her situation by perhaps heading back to live with her parents, but she wasn’t sure if that would even be an option after not speaking to them for so long.

**Housing Costs**

This was not covered in the interview past the reference to the church owning part of the house the family occupied.

**Medicines and Herbs in the Home**

No medications were allowed in the home, and healing was provided mainly in the form of prayer. Specific herbal remedies were not discussed.

**Folk Medical Beliefs and Practices**

Up until recently, Mrs Doe’s husband had forbid members of the family from accessing traditional allopathic medical care. Because the family relies so heavily on faith for healing, most medical problems are treated by attending a prayer service for the afflicted individual. Members of the church gather together, sometimes for days, and pray for health and recovery. Mrs Doe did relate that her husband’s views were quite extreme even within their church. Many other members sought out care from allopathic providers in addition to turning to faith for healing. She had also received prenatal care during each of her pregnancies even though she would only begin coming to the doctor in her third trimester. All of the children had also been to the doc-
Health Problems in the Family
Mrs Doe reported that she was “healthy as a horse,” aside from the fact that her periods weren’t regular yet. She also said that the children were doing quite well. Specific health issues were not discussed. She was, however, open to the suggestion of bringing the children in for a checkup some time in the future.

Health Hazards in and Around the Home
As the entire interview was conducted in the clinic, the home was only described. It can be surmised, however, that the greatest health hazard around the home is lack of supervision. Mrs Doe admitted that she has a hard time keeping track of all the children throughout the day, and that she occasionally has to leave them home alone while she runs errands. The older children watch the younger ones; however, the house is located on a busy county road and there have been times when one of the younger children has been found playing out by the street. The CPS worker has tried to address this concern and adequate childcare is one of the conditions of Mrs Doe retaining custody.

The other main concern addressed in the interview was the uncertainty of Mr Doe’s response to some of the household changes that have taken place while he’s been in jail. He won’t be released for three years, but there was discussion throughout the interview about developing a plan for dealing with this eventualty.

Risk Factors for Inadequate Health Care
From the information obtained during this interview, it seems that the main risk factors for inadequate health care for this family are their lack of transport, their rural location and consequent isolation, the huge responsibility of caring for this family that is now sitting on the shoulders of one woman, and the impending return of a controlling patriarch. Mrs Doe has taken many steps toward improving her family’s access to health care, but the biggest obstacle remains the desire and community support to seek out the care that is necessary.

My Personal Reflection on This Interview
Mrs Doe was one of the first patients at my preceptorship with whom I performed a complete history and physical; that was one of the things that made her very memorable. However, I noticed something else even as I conducted the interview that made our encounter remain so vivid in my memory. Even now as I sit at my desk writing this, I can feel the knot in my stomach that I first experienced sitting with her in the exam room that day. I enjoy getting involved in the lives of my patients—my interest in people was one of the main reasons I decided to become a doctor—but something about my reaction to Mrs Doe disturbed me.

My very visceral response to her history stemmed from something that I hadn’t yet encountered in the clinic. I disapproved of the choices she had made with her life. I didn’t understand them and, even though I tried to sit back and listen objectively, I found that I was judging her as she told her story. I’ve always tried to put my opinions aside when working with other people. I make every attempt to focus on a common goal and work around disagreements that we may have in our personal ways of viewing the world. There was something different about my encounter with Mrs Doe, however, and I’ve spent a lot of time since that day trying to sort that part out.

I think one of the main differences lies in the very framework of the doctor-patient encounter. As physicians we take for granted that our patients walk into our offices every day and openly relate personal information they may not share even with those closest to them. Mrs Doe had never met me but she told me bits of her personal life as if I were an old friend. It made my response to her lifestyle even more difficult for me to take. She trusted me to take the information she was telling me and then to make decisions with her best interests at heart. It was an unspoken contract between us and one that I cherished. I just hadn’t thought about how my personal beliefs might come to affect it. Then as we confronted the idea of access to care this term in Principles of Clinical Medicine, I started to think about a different side of access. We’ve spent a lot of time over the past few weeks exploring access on a systems level, but what about access on a more personal level? The truth is that access to good medical care goes beyond the system right into the exam room where two people work together to resolve their differences and achieve a common goal. I’ve found myself wondering if it’s possible to provide the same level of care when you disagree so strongly with how your patient chooses to live his or her life?

One of the interesting things that I’ve realized from this exploration is that I probably would have felt differently about Mrs Doe’s situation had she not been so similar to me. I’ve seen a lot of Russian Orthodox women in clinic who lead lives with many similarities to Mrs Doe’s but I haven’t felt the same sense of disapproval when I’ve interviewed them. I view their lifestyle as stemming from the cultural background into which they
were born, rather than from a lifestyle they chose to adopt. With Mrs Doe things were different. She grew up just a few miles from where I had. Her family sounded very familiar to me, yet she had ended up in such a different place. I chose to pursue an education, a career, and science; she chose to pursue a family and faith. I wondered how we could find common ground in the clinic when we come from such vastly different places—and is that even necessary to provide her with care?

I know a lot of physicians who would say that it’s not. They feel quality care can be provided no matter how you feel about someone’s beliefs or lifestyle. I’d like to think they were right. I also think that most physicians feel about medicine the way a lot of people feel about religion. We believe in it. There are basic tenants that we feel go without saying. The first is that everyone wants the same kind of care, or at least that everyone wants the best care available. After all, we have the evidence, scientific trials, and systematic reviews of the literature. What could be better than that? It turns out that there’s something else assumed in that contract between patient and physician; and it’s that the physician knows what is best when it comes to health care. That was really the thing that ultimately bothered me about my time with Mrs Doe. I kept wondering how she could raise her children and not bring them to be seen when they were sick. I believe in the healing power of things outside of medicine, but I also believe that there are times when it’s safer with science. I wanted to ask her how she could not provide her children access to modern medicine, or at least medications, when they were sick but it was not the time or the place.

All of this has led me to an entirely different way of thinking about access to care. Perhaps to truly make care accessible to all of our patients we have to recognize some of our own limitations, and how they affect how we, as providers, view our patients. Can I really keep my assumed contract with Mrs Doe—that I’ll make the health care decisions that are in her best interest—if I’m constantly second guessing the personal choices she makes in caring for herself and her family? A simpler way to look at this is to think of a patient who smokes, or who is morbidly obese. What assumptions do I make about that person when I walk into the exam room? Do I provide that person with the same access to care I do others? I doubt that those patients always receive the same preventive care as their healthier counterparts. Yet, we don’t like to think of access in that way. As providers we prefer to take every opportunity to point the finger at something or some-one else. The health care system is broken. Drug companies charge too much for medication. I get reimbursed to spend no more than 15 minutes with a patient and that is just not enough time to do my job well. When are we going to turn the tide on ourselves? When are we going to look in the mirror and admit that even if we lived in the world of a perfect single-payer health care system, there would still be a problem with access to care? Until we learn to admit our own fallibility, and face the judgments that we make about our patients, we’re never going to improve upon that problem.

I’m not a systems person. I don’t see my life in the policy sphere, so I prefer instead to contemplate these more personal issues when it comes to global problems. I think we can improve patient access to health care by how we approach every office visit. I need to realize that when I encounter another Mrs Doe I will bring a certain amount of prejudice to that encounter. I’ll do the same thing when I interview the patient with advanced COPD who just won’t quit smoking or the obese patient who, despite all my efforts, just can’t seem to lose weight. I’ll bring in a sense of knowing what I think best and I might even have the science to back it up. And although sometimes I’ll find empathy for those who can’t or won’t follow the path I’ve set for them, a lot of the time I won’t. It’s not something anyone wants to admit, but it is the truth and I learned it without even asking the day I interviewed Mrs Doe.

I’ve always prided myself on being nonjudgmental. That is one of the reasons this process of reflection hit me so hard. Health care is a personal business and, although the system may play a role in getting someone in the door, it’s what happens once s/he is in the office that has the biggest impact. I think I could provide Mrs Doe with good quality care should she be my patient in the future. I don’t think, however, that I could provide her with the same kind of care she’d receive from someone who could truly empathize with her beliefs. Our patients need us to be able to look beyond our own views to see what is in their best interest. Unfortunately, our views aren’t like a fence you can peak through to see the other side. Our views are more like a lens that colors what we see no matter where we look. The only hope we have of moving beyond that limitation is taking the time to learn what color our lens is so we can always keep in mind how it’s coloring our world. The process of interviewing Mrs Doe brought me closer to discovering how my own beliefs shape my encounters with patients. I hope to take away from this experience the tools to continue to develop this awareness throughout my career.
Assisting Hurricane Evacuees in Houston and Louisiana

By Skip Skivington, MBA, Editor

On Saturday, September 10, 2005, the California Emergency Medical Services Authority called. The US Surgeon General’s Office had requested that the state provide medical support in the Houston area to treat Hurricane Katrina evacuees. This population had critically depleted local medical resources and their ability to provide adequate care.

By early Monday morning, an 11-member Kaiser Permanente (KP) medical team from Northern and Southern California was on their way to Houston. As part of KP’s Procurement and Supply organization, the Health Care Continuity Management Department was developed following the 2001 anthrax attacks, and has programwide responsibility for responding to and managing emergency and crisis situations.

Unfortunately, most of the Houston and Louisiana logistical and medical mission objectives and requirements had not yet been clearly developed by our federal hosts, including travel arrangements, appropriate multilevel emergency credentialing and licensing, and team member replacement procedures if the mission continued.

On Saturday, September 17th, I joined the Houston team to provide additional, frontline support and overall team leadership. Team one was treating hundreds of patients per day at various clinic locations in both the Louisiana and Houston areas. Team members saw patients in schools, churches, shopping centers, convention centers, and other nontraditional locations.

On September 21st with Hurricane Rita approaching the US Department of Health and Human Services ordered an evacuation of all emergency workers. Two days after Rita made landfall, the US Surgeon General’s office requested additional medical support. Within 48 hours I led a new 24 member KP medical team back into the greater Houston area. Austere medical operations continued with our physicians, nurses, and mental health providers seeing hundreds of needy patients each day in incredibly spartan locations with improvised medical supplies and equipment. In addition to the medical team, Al Carver, Vice President, National Pharmacy Operations, provided an overnight shipment of critically needed vaccines (100 doses of Hepatitis A, 500 doses each of tetanus, hepatitis B and pneumococcal vaccine) during Team two’s deployment. Team two remained in Houston until October 14th.

Each person involved with this mission continues to share their personal experiences and the incredible stories of survival from the patients. Participation in the mission was life affirming and in many cases was life-changing. This experience affirmed individual decisions to enter the health care profession. Even though each evolving day of the crisis brought on new challenges every person associated with the mission indicated they would, without hesitation, volunteer again to go on a similar mission.

— Skip Skivington, MBA, Interim Vice President of Supply Chain and Director of Operations, Procurement and Supply, Program Offices

KP Hurricane Disaster Response—Houston

By Annette Saunders, LCSW, MBA
Colorado Regional Headquarters, Denver, Colorado

The opportunity to be part of a KP team who volunteered their time and expertise in providing quality patient care with hurricane evacuees was one of the most personally rewarding and satisfying experiences in my life. Team members were giving, caring, selfless, hard working, committed and fun with the clear goal of patient care foremost in their mind and hearts. We actively listened to evacuees expressing their concern about basic survival, grief over the loss of loved ones and loss of meaningful possessions, concerns about where they were going to live and how they were handling difficulty with sleep, nightmares, and anxiety. In addition to talking with them about their experiences, we helped with immediate problem solving when we could and helped them to connect with community resources. The team also took care of each other to lessen the impact of vicarious trauma. The shifts were split when possible, we helped each other to take a break when it was clear it was needed, we heard and gave positive feedback and affirmations to each other and we talked a lot about our experiences. We are Kaiser Permanente! ❖

Plaquemines Parish, LA, October 18, 2005 — A house floats in an irrigation ditch—far from its foundation due to Hurricane Katrina.
kp in the community

Assisting Hurricane Evacuees in Houston and Louisiana

Changed By Those We Touched

By Hilde Hithe, RN, BS
Bellflower Medical Offices, Southern California

I had the privilege of staying in Houston for one week of the two-week deployment. It was by far the most profound week of my life. The way 20 strangers came together and worked as a team, identified needs, and sought out solutions made me so very proud to be a part of the KP family. I know there will be many stories of how KP was able to help those in need. I wonder if those whose lives we touched realize how they have touched and changed our lives.

Assisting the Evacuees in New Orleans—Letters Home

By Hernando Garzon, MD
Sacramento Medical Center, Northern California

I was deployed with FEMA’s Urban Search and Rescue (US&R) system to run medical operations for 800 federal US&R personnel in New Orleans. US&R teams made more than 6500 rescues. The following are excerpts from my e-mails to friends and family.

9/12/05: We entered a house and found a 91-year-old wheelchair-bound woman calf deep in water. After 13 days trapped in her house, her legs were in very poor condition and she was very dehydrated having run out of water 4-5 days earlier. With some wound care on scene and a helicopter transport to a hospital. Each rescuer got a kiss on the cheek.

Highlights:
• Decontamination procedures for the highly polluted waters are a major medical issue for our rescuers.
• Roaming packs of dogs are becoming an increasing hazard for rescue personnel.
• Only three open hospitals.

My helicopter flights leave me astonished at the devastation. The massive displacement of people and damage to this city is almost beyond comprehension.

9/16/05: We completed a primary search of all residential units in the city of New Orleans and are starting secondary searches of areas under deepest water. The water continues to recede about a foot per day making our search easier. The mud in the streets is up to a foot thick in places.

The evidence of the suffering and displacement of people lies everywhere. Almost every elevated freeway and areas of high ground where people gathered are littered with blankets, clothing, dolls and strollers, personal possessions, stranded cars, and more—

9/17/05: We all got a huge lift when we found one more person alive—the story made national news. It was a 71-year-old diabetic man, still wearing his last two hospital bracelets. He had not eaten in 16 days and was surviving on sips of water from a 32-ounce cup. He survived the initial flood in his attic for over a week.

9/20/05: I toured the area most ravaged by a broken levee where blocks of houses were simply torn from their footings and washed away (the 9th ward). To stand on that levee and look over the sea of rubble gives a perspective on this calamity that the scenes on television do not. Life is simply so fragile. Despite how we seek comfort and security, life at its essence is uncertain.

9/25/05: Fortunately, the damage from Hurricane Rita was not as bad as it could have been. What was once dry is now under 2-5 feet of water, so teams are once again continuing to search in more difficult conditions. The good news is that we only have a little left to complete all operations in New Orleans. I will be heading home tomorrow.

Thank you for all of your help and support. This effort is truly a group effort by many more than just the rescue personnel here.

New Orleans, LA, September 16, 2005—Local rescue workers transport a 71-year-old resident who was rescued by members of the FEMA Urban Search and Rescue, California Task Force 3. The man survived in his attic for 18 days with just a gallon of water.

New Orleans, LA, September 16, 2005—Local rescue workers transport a 71-year-old resident who was rescued by members of the FEMA Urban Search and Rescue, California Task Force 3. The man survived in his attic for 18 days with just a gallon of water.

New Orleans, LA, September 18, 2005—Members of the FEMA Urban Search and Rescue, Florida Task Force 1, check the vital signs of Reynie Johnson, a 39-year-old man who was found alive on Sunday in one of the hardest hit areas from Hurricane Katrina. Mr Johnson was found when one of the Oregon National Guardsman knocked on his door.
Working The System

By Reza Borhani, DO
Hayward Medical Center, Northern California

As an Emergency Physician, I frequently experience the difficulty of working a patient through the “system”—This is by far one of the most challenging aspects of my work. Unfortunately, during the disaster relief, this process was again one of the most demanding tasks. I was, however, amazed at how well my team members accomplished this. Team members gave their own money to patients unable to receive free medication because of the nuisances of the “free medication” system. Team members relentlessly tried to get specialty care providers (dental, vision, etc) for patients in need of specialty services. Colleagues pushed their medical capabilities to the limit, trying to maximize the help given to the victims. I have never been so proud to be part of the KP Medical Group and it was truly an honor to serve with such a wonderful group of people. Finally, I want to recognize those who stayed behind, covered our shifts, and managed short-handed.

From Katrina to Rita:
The Answer is Blowing in the Wind

By Evan Bloom, MD
South Sacramento Medical Center, Northern California

I had the opportunity to work in several different sites in Houston, but probably saw more patients at St Agnes than anywhere else. Although I’m a pediatrician, I ended up treating quite a few adults. Many from the shelters had developed a respiratory illness, which had spread rapidly in the crowded conditions. Medical emergencies arose from the crowded conditions and the heat. One day I helped a woman who had a prolonged seizure while in line and an elderly man with a probable MI. I treated children with chronic health issues left unattended because of the collapse of the medical infrastructure. I asked one mother if her frail child was okay. She replied “Well, they pronounced him dead in July.” He had suffered head trauma in a motor vehicle accident. When taken off the ventilator, he would no longer eat well. I got some Pediasure® to feed him through his gastrostomy. I did the same for another child with congenital heart disease who was supposed to be on continuous feeds overnight. There were some kids due for regular well-child checkups; I managed that and gave them their standard immunizations. It seemed to create a little normality in their lives. At the Hong Kong Mall clinic, there was a woman who, when trying to clean the mold from her home in New Orleans had developed a facial rash. Upon finding her home unlivable, she returned to Houston.

One of the hardest things to watch was the reaction of evacuees to the approach of Hurricane Rita. In the hotel with us were many evacuees from the New Orleans area. As they watched the news reports they realized that they would have to move again—many of them were in tears.
A Conversation with Marion Nestle: Straight Talk About Obesity, Nutrition, and Food Policy

Transcript edited by Jon Stewart, Public Policy Editor

Marion Nestle, PhD, MPH, does not lack for opinion about the role of the food industry in the etiology of America’s obesity crisis. She freely expresses her point of view as one of the most outspoken and influential voices in the national debate on public health nutrition and food policy. Dr Nestle has devoted much of her professional life to the nutrition issues that individuals, institutions, and policymakers are struggling with today: how to make better choices about what we eat.

Dr Nestle is the Paullette Goddard Professor in the Department of Nutrition, Food Studies, and Public Health at New York University. Her degrees include a PhD in molecular biology and an MPH in public health nutrition, both from University of California, Berkeley. Her research focuses on the analysis of scientific, social, cultural, and economic factors that influence dietary recommendation and practices. She is the author of three books, Food Politics: How the Food Industry Influences Nutrition and Health, Safe Food: Bacteria, Biotechnology, and Bioterrorism, and her latest book, What to Eat (May 2006), a guide to navigating the supermarket and making sensible food choices.

In April 2006, Dr Nestle visited Kaiser Permanente (KP) in Oakland at the invitation of the KP Institute for Health Policy. She sat down with a group of about 30 KP practitioners and staff to talk about food policy and the connections with nutrition and health. The following is an edited transcript of her remarks.

**Question: What are the messages that seem to be getting through to consumers? What works?**

You have to ask: where does the public get its information about diet and health? I would say mostly from the food industry, which uses health to sell products. Information also comes from the media, which tends to focus on single nutrients and single dietary factors, almost never on healthy lifestyles, mainly because it is too boring to talk about healthy lifestyles.

The central thesis of my new book, What To Eat, is that the key dietary messages are stunningly simple: Eat less, move more, eat more fruits and vegetables, and don’t eat too much junk food. It’s no more complicated than that. But there is no comprehensive educational campaign behind those messages, or any concerted effort to explain what they mean. Instead, the focus is always on single products, single nutrients, or single foods.

**Question: How can KP deliver clearer, more effective messages about nutrition and healthy eating?**

Obviously, health claims on package labels work splendidly. I recently spent some time with a reporter from Time Magazine at a local Safeway supermarket where we went up and down the aisles looking at products. We noticed that practically every single product has a health message on it of one kind or another. The labels proclaim about vitamins, or heart disease, or cancer, or immune system function. People see the health claims and are deeply, profoundly confused. They’re confused about vitamins, transfats, low fat, Atkins diet, the glycemic index, and their effects on all the different diseases. And no government or health agency is helping them to put all the information together to demonstrate that precisely the same diet can be appropriate for almost all of those diet-related conditions, or explaining that you really don’t have to worry...
much about individual nutrients or foods if you’re eating halfway decently. But to do so, you need to make food choices. But the current food environment promotes unhealthful eating as the default. We need to change the environment so the default is to make healthier choices—offering smaller portions, for example.

**Question: Is the research community offering any useful directions for us?**

Brilliant behavioral research is coming from experimental behaviorists and economists who are looking at environmental cues and triggers for overeating. Brian Wansink at Cornell, for example, has demonstrated the power of external cues that make people eat more than they should—if you serve food in larger bowls people will eat more; if you serve a whole sandwich instead of a half sandwich, people eat a whole sandwich even if they’re not hungry; and if you give people a big muffin they consume more calories than if you give them a small one.

These cues can overcome any kind of cognitive information about healthy eating, and they completely overpower issues of personal responsibility. An environment that is full of these kinds of cues undermines people’s ability to make reasonable decisions about how much they should eat, because nobody wants to be thinking about curtailing calories while they’re eating. This research suggests that we must change the environment in ways that make it easier for people to eat in a more rational way, such as making smaller portions the default choice or keeping candy out of sight. More research needs to be done in this area, but I don’t think randomized clinical trials are the best way to do it.

**Question: What about the need for more evidence-based interventions?**

The term “evidence-based” is so overused in nutrition that it sends up red flags every time I hear it. It is used to prevent giving useful advice—eat less sugar, for example. This is good advice (sugars have calories, but no nutrients) but no clinical trial can ever prove that following this advice prevents obesity. I don’t think we’re ever going to have the kind of evidence for diet and health that you can get for drugs and cigarettes. Diets are too complicated. We cannot do randomized clinical trials on these issues and expect to get clean, clear results.

The reports on low-fat diets that recently came out of the Women’s Health Initiative have only added to the public confusion. And they ruined my life for two weeks. You can’t expect large groups of trial subjects to change their diets that much for that long. The questions asked by these trials aren’t really answerable by this approach, because they focus on single nutrients or dietary factors instead of the more complex dietary patterns. We need to rethink the way we study diets and whether we can find a better way than randomized clinical trials to answer the scientific questions.

Just because research on diet and physical activity is harder to do doesn’t mean it isn’t deserving of the best possible thought and planning. Complicated issues deserve serious attention to ways in which to study them. Nutrition is a thinking person’s field, but it’s not often treated that way.

**Question: You’ve spoken about the analogy of the smoking campaign to the campaign for better nutrition and physical activity. But do you think it’s going to take that long to make significant progress?**

Yes and no. The food industry is responding by making healthier-looking products—what they call “better for you” products that are at least marginally lower in trans fats, salt, sugar, and the like. They are pushing things like “whole grain.” Whole grain sugary kids’ cereals are a joke—they have practically no fiber. And I recently picked up a box of cereal in a New York supermarket that had no sugar at all. It was a completely unsweetened kids’ cereal. It will be interesting to see how long it stays on the market.

The most obvious explanation is that the industry is trying to head off lawsuits by offering these kinds of products. If nobody is buying them, it is because the companies are not putting any money into marketing them. Advertising Age recently came out with a diagram of the amount of money that PepsiCo spends to promote Frito-Lay healthy products as compared to the spending on Frito-Lay junk food products. They spend $20 million to $30 million each year on media marketing of Doritos® and Tostidos®, but less than $1 million to $2 million on the healthier baked products. So you have to ask the question, is “healthier” junk food really an improvement, especially if it’s not being marketed? I don’t think so.

Real improvement will come from serving smaller portions. But few companies are offering products in smaller portions. With kids, it’s easier. If you want kids to eat smaller portions, you give them smaller portions.
health systems

A Conversation with Marion Nestle: Straight Talk About Obesity, Nutrition, and Food Policy

Question: What are the most promising food policy pressure points where the right interventions might really make a difference?

Promising isn’t the same as effective. I’ve said many times that the two biggest barriers to doing something about obesity are Wall Street and campaign election rules—Wall Street because of the pressure on our big publicly traded food companies to emphasize short-term growth strategies; companies are forced to produce evidence of growth every 90 days. And campaign spending rules because we’ll never get anything out of government as long as our leaders are beholden to those same big companies for campaign funds. Everything else is what my students call Band-Aid measures.

Having said that, many Band-Aids are worth doing, and the obvious place to start is in schools. In public health terms, schools are the low-hanging fruit. Lots of changes can be made in schools by parents who are committed and willing to pressure principals and school food service directors to do the work that is needed. I see what’s happening in schools as a major national social movement—one that is grass roots from the bottom up. It’s exciting to see democracy in action this way.

Question: How do you respond to claims that many of the targeted interventions to promote healthy eating have little evidence of effectiveness behind them?

No one change—like going from whole milk to low-fat milk, for example—is going to show evidence of effectiveness in changing the obesity rates. Look what had to change in order to cause the high rates of obesity. Between 1980 and 2000, farm production increased the number of calories in the food supply by 700 a day for every person in the country. That food has to be marketed and sold. So maybe the first thing you need to deal with is farm production. That’s why there is so much interest in making health an issue in the 2007 farm bill.

Also, portion sizes increased, food became available in more places—vending machines came into schools in the 1990s. I like to ask: At what point did it become acceptable to eat in bookstores, as it is today? Gas stations have turned into food stores. And when did it become normal for kids to decide on their own what they were going to eat? These are huge social changes that need to be reversed or altered to make progress on obesity prevention.

You add up all those changes and it’s clear that single, targeted interventions, like going from whole milk to low-fat milk, will make little difference in obesity rates. These need to be one of many environmental changes designed to make it easier for parents to eat better themselves and to feed their kids more healthfully.

Question: You mentioned farm production as a factor in food policy. As you know, the farm bill is coming up for authorization in Congress in 2007. How should healthy eating advocates try to influence that legislation? What should the focus be?

For starters, we need to get subsidies removed from corn and soybeans. Corn is the basis of corn sweeteners, and soybeans are the basis of soy oil which, hydrogenated or not, is used in many junk food products. Analyses of food products show that costs per calorie decline with increases in the proportions of corn sweeteners and soy oils in foods. Those are the ingredients in cheap junk foods. So the objective should be to make farm policy support the growers and producers of fruits, vegetables, and healthier food products.

Question: What are the most promising areas for focusing research efforts on healthy eating?

If you are concerned about obesity, you want to change the environment so it is more supportive of healthier food choices. The question becomes how to do that. This puts us in the realm of behavioral research, not clinical research. We need to know more about how to motivate people to change on the personal responsibility side, and how to make healthier choices easier for them on the environmental side. Both are necessary; you can’t motivate people to make dietary changes unless those changes are easy to do. So the essential question becomes: How do you make it easier for people to eat more healthfully?

Question: Is the health care industry doing anything that’s particularly useful in terms of promoting nutrition and healthier lifestyles?

Hmmm. Good question, but I can’t think of any examples. The health care system is designed for treatment, not prevention, and until there’s a way to make prevention pay nobody will talk about it or do anything about it. KP is the only game in town where prevention pays. Your organization benefits if people...
are healthier, but I can’t think of any other institution in America where that is true. This gives KP a rare privilege and a responsibility, and if you don’t take full advantage of it you will be missing a rare opportunity.

References

Building a Healthy Food Environment at Kaiser Permanente

By Lynn Garske, Environmental Stewardship Manager
Jan Sanders, Director, National Nutrition Services, Procurement and Supply
Loel Solomon, PhD, Director, Community Health Initiatives, Community Benefit Program

Kaiser Permanente (KP) has been working to improve the health of its members, employees, and the communities it serves as well as the health of the environment by increasing access to fresh, healthy food in and around KP facilities. For over 18 months, a multidisciplinary group of physicians, dietitians, food service managers, health educators, and operations support leaders have been working on a variety of healthy food efforts, both as part of a crossregional KP Food Workgroup and as participants in myriad local healthy food efforts.

Elements of this effort:

- **Farmers’ Markets.** KP opened its first farmers’ market on the grounds of the KP Oakland Medical Center in May 2003. The initiative took off like wildfire across the organization. As of April 2006, KP now hosts more than 28 farmers’ markets of varying scope at medical centers in its Northern California, Southern California, Northwest, Colorado, Georgia, and Hawaii Regions. There are plans for more. The weekly markets provide a cost-effective community service, as they are open to the broader community and not only members and staff. The markets provide a clear community benefit, as many of the areas in which they operate previously had no regular access to fresh fruit and vegetables. The markets are part of KP’s overall commitment to improve the health of not only our members but of the communities we serve.

- **Cafeterias, vending machines, coffee carts, and catering.** As part of its commitment to improving the health of its members and employees, KP is focusing on the provision of fresh, healthy food options in its cafeterias, vending machines, coffee carts, and catering. In the Northern California, Southern California, Northwest, and Hawaii Regions, medical centers are making nutritional changes in their food preparation methods and selection. For instance, many KP cafeterias have begun to use trans-fat-free oil in food fryers, providing low/nonfat dressings and is offering more salad bars with fresh fruits and vegetables. Other changes include offering trans-fat-free margarines, hormone-free milk, and more nutritional breakfast offerings. In the Northern California Region, all medical center cafeterias have switched to trans-fat-free oils. Earlier this year, KP facilities began implementing a “Healthy Picks” program requiring all vending machines to have at least 50% healthy options, accompanied by health education and promotions to encourage healthy vending machine choices. And hormone-free milk is now standard for inpatient meals and in hospital cafeterias in KP’s Northern California, Southern California, Northwest, and Hawaii Regions. Other regions will soon follow.

- **Seasonal and locally sourced foods.** Seasonal purchasing of produce has been integrated with traditional purchasing practices, and fresh fruit is now the default dessert instead of a sweet dessert in KP’s Northern California and Southern California Regions. In KP’s Northwest Region, seasonal purchasing has been integrated with traditional food purchasing, and organic standards are being discussed with food suppliers. In KP’s Hawaii Region, seasonal purchasing has been integrated with traditional purchasing for cafeteria and inpatient food services. KP is also working with local farmers, community-based organizations and food suppliers to increase the availability of locally sourced food through a number of “farm-to-hospital” demonstration projects. The primary goal of local sourcing is to reduce negative environmental impacts by decreasing the distance food travels from farm to plate. Local sourcing can also improve the economic vitality of communities in and around KP service areas and increase the freshness and taste of fruits and vegetables that enter KP’s food supply. Farm-to-hospital demonstration projects are being conducted in Northern California, Southern California, and the Northwest Regions. In addition, weekly farm boxes are now being provided to KP employees in one of KP’s regional office buildings in downtown Oakland. Over 200 employees participate in this program. The boxes are filled by farmers that participate in the farmers’ market at Oakland Medical Center a few blocks away.
Abstract

Context: The rate of overweight (OW) in children in the United States has more than tripled since 1980. The health consequences of pediatric OW include type 2 diabetes and significant illness later in life. Treating pediatric OW is a necessity; however, health care clinicians have minimal access to successful and comprehensive treatment modalities for addressing it.

Objective: Kaiser Permanente of Georgia (KPGA) offers a group medical appointment clinic, Operation Zero (O.Z.), as a referral program for preadolescent and adolescent patients who are in the 85th or higher percentile for body mass index (BMI) for their age. The eight-session clinic uses a family-oriented approach and provides a supportive group environment with interactive learning, games, physical activity, and creative problem solving. The goal of the program is to improve lifestyle behaviors for nutrition and physical activity. Clinically, meeting these goals can manifest as reductions in body fat (BF), waist size, and BMI-for-age percentile. Two implementation models help improve dissemination of the program within KPGA.

Design: Baseline and eight-week postclinical outcomes for O.Z. participants were analyzed to determine program effectiveness. A retrospective analysis with a control group looked at long-term clinical outcomes to determine weight maintenance. Main outcome measures were weight, BMI-for-age percentile, waist size, and percentage of body fat (%BF).

Results: At eight weeks after program completion compared with baseline, there were significant reductions in %BF and waist size for the total sample and specifically for adolescents, preteens, and participants who attended six or more sessions. Among O.Z. participants, there were insignificant increases in weight at six months after program participation and BMI-for-age percentile at one year after participation. At six months, the mean change in weight and BMI in the O.Z. group was statistically less than the mean change in the control group.

Conclusions: A structured, family-oriented weight management program is effective in changing measures consistent with improved weight management.

Introduction

Both the prevalence and health consequences of childhood overweight (OW) make it an issue that the health care industry can no longer sidestep. Kaiser Permanente Georgia (KPGA) has stepped into a leadership role by improving the delivery of care for overweight pediatric patients and those pediatric patients at risk for OW. Specifically, KPGA offers and strongly recommends an award-winning weight management group medical appointment program, Operation Zero (O.Z.), for preadolescent and adolescent patients who are in the 85th or higher percentile for body mass index (BMI%) for their age. (In 2005, the Cooper Institute conducted an in-depth review and evaluation of programs addressing childhood OW and awarded O.Z. a Gold Star.) The rate of OW in children, defined as a BMI% ≥ 95th percentile, has more than tripled since 1980 in the United States. Among children and teens aged 6 to 19 years, 16% are considered OW. Compared with national rates, the rates for the state of Georgia show that it has a particularly remarkable epidemic of childhood OW, where 33% of middle school and 26% of high school students are OW or at risk for being OW, defined as having a BMI% between the 85th and 95th percentile. Likewise, among youth aged 5 to 18 years within KPGA, 17% are OW and another 17% are at risk for being OW.
OW children are at risk for many health problems. Immediate physical health conditions are strongly correlated with OW, including orthopedic conditions, respiratory problems and sleep apnea, and gastrointestinal diseases. A child's mental health, self-esteem, and body image can also be affected by OW.5

Perhaps the greatest health condition linked with pediatric OW is insulin-resistant diabetes mellitus (type 2 diabetes). One study documented a ten-fold increase in the incidence of juvenile-onset type 2 diabetes, with >90% of the new cases being OW.6 OW often leads to an increased magnitude of insulin resistance, which in turn leads to type 2 diabetes.7,8 Childhood OW is the most prominent and modifiable risk factor for type 2 diabetes.9

The long-term complications of childhood OW are significant. Data suggest that the risk of illness later in life is proportional to the level of OW in childhood.10 These illnesses include coronary artery disease, atherosclerosis, colon cancer, arthritis, and diabetes.9 Plus, the development of cardiovascular risk factors progresses with OW from childhood into adulthood. For example, prospective studies show that OW children are nine to ten times more likely to develop hypertension in adulthood than their non-OW matched peers.5

The health complications of childhood OW will eventually place an ever-expanding burden on the health care system, underscoring the necessity to treat pediatric OW before it becomes adult OW. Although different approaches have been used at all levels of health care to address pediatric OW, health care clinicians have had few successful and comprehensive alternatives to offer to OW pediatric patients and their families. In fact, there has not been a comprehensive program addressing the management of pediatric OW with sufficient sample sizes to demonstrate statistically significant improvements in primary care practices and patient outcomes.11,12 For KPGA, finding a solution to the problem was motivated by the need to fill the void that had been felt by pediatric clinicians, members, and the overall health system.

**Program Description**

O.Z., a pediatric OW group medical appointment clinic, is a referral program for at-risk-of-OW and OW preadolescent and adolescent patients. The clinic uses a family-oriented approach and incorporates behavior-change strategies to address the behaviors, knowledge, attitudes, and self-efficacy of patients and their parents regarding nutrition and physical activity. Monitoring clinical outcomes on a weekly basis, setting weekly goals, and self-monitoring are integral to the success of the program. Operation Zero was chosen as the name because the program’s long-term goal is zero incidence of health problems associated with being OW—namely, hypertension, hypercholesterolemia, and type 2 diabetes. The goals for O.Z. are weight maintenance in growing children and adolescents and improved knowledge about and lifestyle behaviors regarding nutrition and physical activity. Clinically, these goals can manifest as reductions in body fat, waist size, and BMI%. Reductions in cost of care are an expected long-term benefit for the Health Plan.

O.Z. includes weekly one-hour appointments for two months (the core program), followed by another four appointments at three-month intervals (the After-O.Z. program), for a maximum group of 15 patients and their parents. O.Z. provides a supportive group environment with interactive learning, games, physical activity, and creative problem solving. The O.Z. sessions are held either on weekday evenings or Saturday mornings. O.Z. is a family-based intervention that requires one parent or guardian to participate in each session and at home. Participants and parents receive an O.Z. manual that includes health education, activities, and recipes. Either a health educator or a clinician facilitates the group sessions with nursing staff support and participation of either a dietician or professional chef at various sessions. Every session begins with measure-

**Table 1. Content of Operation Zero program sessions**

<table>
<thead>
<tr>
<th>Core program sessions</th>
<th>Concept</th>
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<tbody>
<tr>
<td>“What’s the Big Deal?”</td>
<td>Motivation</td>
</tr>
<tr>
<td>“Making the Cut”</td>
<td>Knowledge deficit</td>
</tr>
<tr>
<td>“Get Moving and Grooving”</td>
<td>Lifestyle activity</td>
</tr>
<tr>
<td>“Shaping Up in the Kitchen”</td>
<td>Cooking techniques</td>
</tr>
<tr>
<td>“Who’s to Blame?”</td>
<td>Disordered eating</td>
</tr>
<tr>
<td>“Label It Before You Table It”</td>
<td>Confusing labels</td>
</tr>
<tr>
<td>“Smart Choices Eating Out”</td>
<td>Temptation</td>
</tr>
<tr>
<td>“Operation Snack Attack”</td>
<td>Maintaining change</td>
</tr>
<tr>
<td><strong>After-Operation Zero sessions</strong></td>
<td><strong>Concept</strong></td>
</tr>
<tr>
<td>“You Don’t Eat Meat!”</td>
<td>Protein benefits</td>
</tr>
<tr>
<td>“Cooking with Beans”</td>
<td>Fiber benefits</td>
</tr>
<tr>
<td>“What Are You Drinking?”</td>
<td>Empty calories</td>
</tr>
<tr>
<td>“Grilling to Perfection”</td>
<td>Healthy cooking</td>
</tr>
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Data suggest that the risk of illness later in life is proportional to the level of OW in childhood.10
Kaiser Permanente Georgia’s Experience with Operation Zero: A Group Medical Appointment to Address Pediatric Overweight

The concepts covered in the O.Z. sessions are outlined in Table 1. Strategies for addressing attitudes and building self-efficacy are incorporated into the program, including pedometer games, interactive learning, competition (for prizes), cooking demonstrations, and exercising as a group.

O.Z. is designed for participants to sequentially improve on specific behavioral goals for nutrition and physical activity. Homework assignments are provided weekly to move participants stepwise toward reaching these behavioral goals. Goals are designed to be easily achievable, yet also help reverse the factors contributing to pediatric OW. The lifestyle goals are as follows:

- Increase milk consumption until drinking four glasses a day.
- Decrease milk fat until drinking fat-free milk.
- Increase fruit and vegetable servings until eating five servings a day.
- Eat breakfast every morning.
- Increase the number of days being physically active for 60 minutes until active five days a week.
- Decrease sedentary behavior to less than one hour per day.
- Increase the number of steps per week on a pedometer until taking 70,000 steps per week.

O.Z. was originally designed by Luke Beno, MD, and has been successfully implemented with his health care team at his medical office since July 2001. In 2003, the Department of Prevention and Health Promotion began leveraging O.Z. The program was disseminated to additional medical offices, and a process evaluation was conducted with staff members and facilitators. This effort resulted in awareness of implementation barriers, including staffing, patient attendance, financial support, and enrollment issues. Most health care teams found end-of-day staffing and acute care patient demand to be barriers to replicating O.Z. This led to creating two new implementation models for the program:

- The Health Care Team Model with support from the Health Education Department: A pediatrician facilitates the program on weekday evenings; the health care team supports the program with managing referrals, scheduling, and conducting measurements; and the Health Education Department supports the program fiscally and with coordination.
- The Health Education Model: The Health Education Department supports and coordinates the program by having health educators facilitate the program on the weekends.

The models differ by variables for facilitation, scheduling (time of day, day of week), composition of support staff, and participants’ financial input. The program goals, intervention strategies, clinician referrals, cofacilitation, and program content remain consistent between the two implementation models. These new formats better suit the needs of the other medical offices and improve dissemination of the program within KP and for the other Kaiser Permanente (KP) regions that have expressed interest in replicating the O.Z. program.

The cost of O.Z. is approximately $2000 for the core program and $1200 for the After-O.Z. program. With full participation, the cost is equivalent to $137 and $80 per participant for the core and After-O.Z. programs, respectively. These costs include consultation fees and/or salary for chefs, dietitians, health educators, and nursing staff members and costs for class supplies, including pedometers, workout videos, and prizes. Costs also include in-kind contribution for physician facilitation. O.Z. facilitators, cofacilitators, and nursing staff members commit approximately two hours per week for an O.Z. session, whether it is the core or After-O.Z. program.

Program Evaluation

Between 2001 and 2003, there were 135 participants in the O.Z. program. KPGA analyzed this sample to describe program participation and to determine the extent to which O.Z. is effective. Data collection occurred as part of the O.Z. program, not specifically for program evaluation, and data are often incomplete because of attrition and poor documentation.

### Table 2. Characteristics of Operation Zero participants (2001–2003)

<table>
<thead>
<tr>
<th>Sex</th>
<th>Count (n = 135)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>74</td>
<td>55</td>
</tr>
<tr>
<td>Female</td>
<td>61</td>
<td>45</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age category</th>
<th>Count (n = 135)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Youth (≤ age 10 years)</td>
<td>36</td>
<td>27</td>
</tr>
<tr>
<td>Preteen (age 11–12 years)</td>
<td>41</td>
<td>31</td>
</tr>
<tr>
<td>Adolescent (≥ age 13 years)</td>
<td>57</td>
<td>43</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Insulin resistance at baseline</th>
<th>Count (n = 135)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>88</td>
<td>67</td>
</tr>
<tr>
<td>No</td>
<td>13</td>
<td>13</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Attendance</th>
<th>Count (n = 135)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 6 sessions</td>
<td>57</td>
<td>42</td>
</tr>
<tr>
<td>≥ 6 sessions</td>
<td>78</td>
<td>58</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BMI% at baseline</th>
<th>Count (n = 135)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 85th percentile</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>85th – 94.99 percentile</td>
<td>26</td>
<td>22</td>
</tr>
<tr>
<td>≥ 95th percentile</td>
<td>85</td>
<td>73</td>
</tr>
</tbody>
</table>

BMI%, percentile for body mass index for age.

a Testing for insulin resistance is not a prerequisite for participation in O.Z., so data are missing.

b In 18 cases, height was missing and BMI% could not be determined.
Examination of a sample of the participants (Table 2) shows:

- Insulin resistance (defined as the ratio of fasting glucose to fasting insulin of < 7) in 87% of participants
- OW in 73% of participants
- Risk of OW in 22% of participants
- Risk for developing type 2 diabetes for the majority of O.Z. participants because they are OW and may already have insulin resistance.

During the eight-week core program, participants demonstrated a mean weight change of 0.47 lbs and a body mass index change of −0.11 kg/m² (Table 3). BMI% was reduced, on average, by 0.04%, and there were mean reductions in percentage of body fat (%BF) and waist size. Paired samples t-tests were conducted to determine whether eight-week post-test values were significantly different than baseline values for weight, BMI%, %BF, and waist size. There were no significant reductions in weight or BMI%, but significant reductions in %BF and waist size were demonstrated with the total sample (Table 3) and specifically among patients who attended six or more sessions, preteens, and adolescents. Among boys, there were significant reductions in %BF only, and among girls, there were significant reductions in waist size, plus a trend for significant reductions in %BF (Table 4). There were no significant reductions in any body composition variable for children who attended fewer than six sessions and for youth aged eight-to-ten years.

### Retrospective Analysis

Although the short-term alteration in body fat and waist size is an exciting outcome, long-term weight maintenance and subsequent decreases in BMI% are other important outcomes for O.Z. A retrospective analysis was conducted to determine long-term clinical outcomes for O.Z. participants and a control sample. We abstracted weight, BMI, and BMI% from medical records for a sample of patients aged 11-to-17 years (youth were omitted) who completed O.Z. in 2001–2002 and a control sample of members who never attended O.Z. and were matched for age, sex, and BMI% (Table 5). Data were pulled from clinic visits, where body fat, waist circumference, and sometimes height were not routinely documented. For the control group, data from a clinic visit in 2002 were used as a baseline. Clinic visits 4 months to 8 months later were regarded as a 6-month postvisit and visits 9 months to 18 months later as a 1-year postvisit.

Paired samples t-tests were conducted to determine whether six-month and one-year postvisit values were significantly different from baseline values for weight, BMI, and BMI%. O.Z. participants had an insignificant weight gain of 2.35 ± 9.90 lbs, whereas the control group had a significant weight gain of 7.64 ± 10.00 lbs at the six-month postvisit (Table 6). For both the control and O.Z. groups, there were insignificant increases in BMI or BMI% at the six-month postvisit.

From baseline to the one-year postvisit, for both the O.Z. and control groups, there were significant increases

---

### Table 3. Change in body composition variables from baseline to after intervention and significance testing for the total sample

<table>
<thead>
<tr>
<th>Body composition variable</th>
<th>n</th>
<th>Mean change</th>
<th>Range (minimum-maximum)</th>
<th>SD</th>
<th>p value (1-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight change (lb)</td>
<td>115</td>
<td>−0.24</td>
<td>−11.00 to 8.80</td>
<td>4.11</td>
<td>NS</td>
</tr>
<tr>
<td>BMI change (kg/m²)</td>
<td>113</td>
<td>−0.11</td>
<td>5.70 to 4.21</td>
<td>1.15</td>
<td>NS</td>
</tr>
<tr>
<td>BMI% change (%)</td>
<td>112</td>
<td>−0.04</td>
<td>−13.00 to 19.00</td>
<td>2.79</td>
<td>NS</td>
</tr>
<tr>
<td>Body fat change (%)</td>
<td>68</td>
<td>−1.18</td>
<td>−23.40 to 6.60</td>
<td>3.8</td>
<td>&lt;.05</td>
</tr>
<tr>
<td>Waist size change (in.)</td>
<td>32</td>
<td>−0.61</td>
<td>−4.00 to 2.50</td>
<td>1.5</td>
<td>&lt;.05</td>
</tr>
</tbody>
</table>

BMI = body mass index; BMI%, percentile for body mass index for age; NS, not significant.

---

### Table 4. Statistically significant subpopulations of the total sample

<table>
<thead>
<tr>
<th>Sample</th>
<th>Variable</th>
<th>n</th>
<th>Mean change</th>
<th>SD</th>
<th>p value (1-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attended ≥ 6 sessions</td>
<td>Waist (in.)</td>
<td>28</td>
<td>−0.55</td>
<td>1.41</td>
<td>&lt;.05</td>
</tr>
<tr>
<td>Body fat (%)</td>
<td>45</td>
<td>−1.63</td>
<td>4.39</td>
<td>&lt;.05</td>
<td></td>
</tr>
<tr>
<td>Preteens (age 11–12 years)</td>
<td>Waist (in.)</td>
<td>6</td>
<td>−1.21</td>
<td>1.40</td>
<td>&lt;.05</td>
</tr>
<tr>
<td>Body fat (%)</td>
<td>20</td>
<td>−1.68</td>
<td>4.09</td>
<td>&lt;.05</td>
<td></td>
</tr>
<tr>
<td>Adolescents (age 13 years)</td>
<td>Waist (in.)</td>
<td>16</td>
<td>−0.70</td>
<td>1.57</td>
<td>&lt;.05</td>
</tr>
<tr>
<td>Body fat (%)</td>
<td>31</td>
<td>−0.58</td>
<td>1.61</td>
<td>&lt;.05</td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td>Waist (in.)</td>
<td>19</td>
<td>−0.92</td>
<td>1.34</td>
<td>&lt;.05</td>
</tr>
<tr>
<td>Body fat (%)</td>
<td>37</td>
<td>−1.09</td>
<td>4.07</td>
<td>0.06</td>
<td></td>
</tr>
<tr>
<td>Boys</td>
<td>Body fat (%)</td>
<td>31</td>
<td>−1.28</td>
<td>3.41</td>
<td>&lt;.05</td>
</tr>
</tbody>
</table>

---

### Table 5. Characteristics of retrospective analysis population

<table>
<thead>
<tr>
<th>Count (%)</th>
<th>Operation Zero group (n = 43)</th>
<th>Control group (n = 42)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>24 (56%)</td>
<td>19 (45%)</td>
</tr>
<tr>
<td>Male</td>
<td>19 (44%)</td>
<td>23 (55%)</td>
</tr>
<tr>
<td>Age category</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preteen (age 11–12 years)</td>
<td>19 (44%)</td>
<td>18 (42%)</td>
</tr>
<tr>
<td>Adolescent (≥ age 13 years)</td>
<td>24 (56%)</td>
<td>24 (57%)</td>
</tr>
<tr>
<td>BMI% at baseline</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 85th percentile</td>
<td>1 (2%)</td>
<td>5 (15%)</td>
</tr>
<tr>
<td>≥ 85th percentile</td>
<td>39 (98%)</td>
<td>29 (85%)</td>
</tr>
<tr>
<td>Attendance at Operation Zero</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 6 sessions</td>
<td>19 (44%)</td>
<td>NA</td>
</tr>
<tr>
<td>≥ 6 sessions</td>
<td>24 (56%)</td>
<td>NA</td>
</tr>
</tbody>
</table>

BMI%, percentile for body mass index for age; NA, not applicable.
in weight and BMI. For the control group, there was also a significant increase in BMI% of 0.76% ± 1.60%, and the O.Z. group had an insignificant increase of 0.22% ± 1.22% (Table 7).

Independent sample t-tests were conducted to determine whether mean changes in weight, BMI, and BMI% in the O.Z. group differed from the mean changes in the control group. From baseline to the six months postvisit, there was a significant difference between the mean scores for weight and BMI for the O.Z. and control groups (Table 6). The O.Z. group had significantly lower mean changes than the control group. From baseline to the one-year postvisit no significant difference was demonstrated for any mean score (Table 7).

**Conclusions**

The results demonstrate that the O.Z. program helps children reduce %BF and waist size within the eight weeks of the core program. These levels of significance are maintained among patients who attend more than six sessions, preteens and adolescents.

There are no significant reductions or trend for significant reductions, along any body composition variable, for youth aged eight-to-ten years. As a result, KPGA now offers the program to only preteens and adolescents aged 11 to 17 years.

Participants must attend six or more sessions (75% of the program) to realize the immediate benefits. To help bolster retention, program improvements were implemented in 2005, including use of weekly reminder calls and placement of the most satisfying sessions early in the program. In addition, clinicians are encouraged to be selective with their referrals, referring patients and parents who are ready to change and willing to commit to an eight-week program.

Long-term clinical data for O.Z. participants and a control sample suggest that the program is effective for weight maintenance at six months after completion but not at one year afterward. The trend for statistically significant increases in BMI% over the course of a year was not true for the O.Z. group. However, the mean change in BMI% in the O.Z. group was not different from the mean change in the control group. Although these results demonstrate that the program is on track for attaining its goal of being a long-term weight maintenance program, more effort is needed to keep participants on course with weight maintenance for one year afterward.

One explanation for this long-term result can be ex-

---

**Table 6. Mean changes from baseline to six months afterward and significance testing**

<table>
<thead>
<tr>
<th>Body composition variable</th>
<th>Arm</th>
<th>Mean change from baseline to six months afterward</th>
<th>p value (1-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Weight (lb)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O.Z. group</td>
<td>26</td>
<td>2.35</td>
<td>7.64</td>
</tr>
<tr>
<td>Control group</td>
<td>18</td>
<td>1.90</td>
<td>7.46</td>
</tr>
<tr>
<td>BMI (kg/m²)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O.Z. group</td>
<td>12</td>
<td>–1.06</td>
<td>0.79</td>
</tr>
<tr>
<td>Control group</td>
<td>10</td>
<td>0.79</td>
<td>0.79</td>
</tr>
<tr>
<td>BMI%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O.Z. group</td>
<td>12</td>
<td>–0.10</td>
<td>–0.36</td>
</tr>
<tr>
<td>Control group</td>
<td>10</td>
<td>–0.36</td>
<td>–0.36</td>
</tr>
</tbody>
</table>

BMI, body mass index; BMI%, percentile for body mass index for age; NS, not significant; O.Z., Operation Zero.

*1* (17) = –3.246, p < .05.
*2* (17) = –1.736, p < .05.
*3* (20) = –2.129, p < .05.

**Table 7. Mean changes from baseline to one year afterward and significance testing**

<table>
<thead>
<tr>
<th>Body composition variable</th>
<th>Arm</th>
<th>Mean change from baseline to one year afterward</th>
<th>p value (1-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Weight (lb)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O.Z. group</td>
<td>36</td>
<td>14.75</td>
<td>19.53</td>
</tr>
<tr>
<td>Control group</td>
<td>27</td>
<td>19.53</td>
<td>14.95</td>
</tr>
<tr>
<td>BMI (kg/m²)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O.Z. group</td>
<td>24</td>
<td>1.22</td>
<td>1.60</td>
</tr>
<tr>
<td>Control group</td>
<td>18</td>
<td>1.60</td>
<td>1.60</td>
</tr>
<tr>
<td>BMI%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O.Z. group</td>
<td>24</td>
<td>0.22</td>
<td>0.76</td>
</tr>
<tr>
<td>Control group</td>
<td>18</td>
<td>0.76</td>
<td>1.86</td>
</tr>
</tbody>
</table>

BMI, body mass index; BMI%, percentile for body mass index for age; NS, not significant; O.Z., Operation Zero.

*1* (35) = –6.228, p < .05.
*2* (27) = –6.791, p < .05.
*3* (23) = –2.124, p < .05.
*4* (23) = –2.973, p < .05.
*5* (17) = –1.741, p < .05.
plained by the After-O.Z. program. After-O.Z. was not implemented during the early years of O.Z., from which the retrospective sample was pulled. Plus, KPGA has experienced trouble with implementing a well-attended and effective After-O.Z. program ever since. Developing and implementing successful methods for a follow-up program may improve long-term results for O.Z.

The power of the analysis might have been limited by the small sample size of both the program evaluation and retrospective analysis. The data had been collected at either an O.Z. session or clinic visit, and data collection was often incomplete and inconsistent. Body fatness data were not available from clinic visits, so we were unable to follow whether decreases in body fat and waist size were sustained over time.

This evaluation looked solely at clinical variables; however, implementation of lifestyle changes is an important goal of O.Z. A current study is measuring lifestyle changes for O.Z. participants and sustainability of changes. This same study, funded by the Garfield Weight Management Initiative, is also evaluating the two implementation models of O.Z. and the process of disseminating the program to the Mid-Atlantic States Region. Other future studies can examine cost savings, reversal of insulin resistance, outcomes for parents and siblings, and whether certain homework goals are more important and effective than others.

Expense is going to be a concern for any health plan interested in replicating O.Z. Funding decisions are based both on expense and realistic long-term outcomes. O.Z. is affordable and presents reasonable long-term outcomes for weight maintenance. A structured, family-oriented weight management program that is affordable to implement in a health care setting is effective in changing measures consistent with improved weight management. O.Z. offers a successful and comprehensive alternative for pediatric clinicians to offer OW patients and their families.

Acknowledgment

Katharine O’Moore-Klopf of KOK Edit provided editorial assistance.

References


Ten Tips for Staff Satisfaction Assessment Interviewing

By Michael P Quirk, PhD

Today, organizational evaluation includes feedback on financial performance, quality of care, and customer service; staff satisfaction data must be considered as well. Staff satisfaction is measured through a variety of instruments like People Pulse and the Work Environment Assessment. Clinician managers and health care administrators typically meet with work groups to discuss these results, usually with the hope of improving them. However, conducting these group dialogues can be challenging. How does one keep the discussion open and constructive, avoid discouraging negativity, yet draw out engagement? With these dilemmas in mind, the following “Ten Tips” in brief and elaborated versions are offered to prepare for and conduct interviews with staff. The tips are drawn from the psychological literature about how to gather information, create behavior change, and achieve organizational outcomes.

### Table 1. Brief Version

<table>
<thead>
<tr>
<th>Tip</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Set the stage</td>
<td>Staff satisfaction is important in its own right and it is essential to fulfilling our group purpose to transform health care for our patients and our communities.</td>
</tr>
<tr>
<td>2. Clarify intent</td>
<td>While staff satisfaction scores can always be improved, the larger question is what contributes to/interferes with your satisfaction now.</td>
</tr>
<tr>
<td>3. Ask open-ended questions</td>
<td>Open-ended questions allow those interviewed to tell their story about satisfaction, as opposed to being asked questions that result in a “yes or no.” It is important to make the interview as “safe” as possible for people involved and to give them adequate time to talk.</td>
</tr>
<tr>
<td>4. Keep as a backdrop the connection between what you hear and the staff satisfaction assessment questions</td>
<td>Much of what people say about satisfaction will be helpful in figuring out what’s on their mind with specific satisfaction questions. If they don’t mention their immediate work setting, you can explore this topic more one-to-one or in smaller groups. Or in the larger organization, ask about “big” Group Health/KP once you are well into the interview.</td>
</tr>
<tr>
<td>5. Establish who has control</td>
<td>As people tell you about what contributes to/interferes with their satisfaction, gradually and gently nudge them to tell you about both who (is this an individual, a local, and/or organizational issue?) has some control over their satisfaction and what helps with acceptance when the issue is an inescapable reality.</td>
</tr>
<tr>
<td>6. Seek to understand which staff behaviors give a yield—however minimal—to satisfaction and resilience</td>
<td>This is a deepening of the inquiry about what people do to take control of their work lives. The intent of these questions is to get at the specifics of the behaviors and the values staff and teams use to cope with and/or perhaps master the challenging aspects of their work life.</td>
</tr>
<tr>
<td>7. Be aware of the factors that contribute to high-performance organizations</td>
<td>Organizations that manage from the two Rs—Rules and Rewards—and that lead with the three Is—Inspiring purpose translated into Intellectually stimulating work and Individual opportunities to contribute—are most successful. Your interviewees will tell you how many of these two Rs and three Is are at or could be in play.</td>
</tr>
<tr>
<td>8. Identify how people change and explore where we are in the process</td>
<td>The interview process is first about gathering information before taking action. Being clear about this helps everyone set expectations for themselves more realistically and also foreshadows next steps.</td>
</tr>
<tr>
<td>9. Paraphrase and eventually summarize “what you heard” for corrections, validation, and engagement</td>
<td>Making sure you understand what was communicated and correcting the misunderstandings is the essence of both a good interview and a good leader. It also serves as a shared understanding from which to launch next steps.</td>
</tr>
<tr>
<td>10. Say “thank you” and foreshadow the move into action planning</td>
<td>Since you can’t mandate it, consider whatever input you get a gift for which you express gratitude. Let people know: a) when they’ll get a summary of the understandings about satisfaction and the recommendations for improvement; and b) how that will be used in the future.</td>
</tr>
</tbody>
</table>

Michael P Quirk, PhD, is the Director for Group Health Cooperative’s Behavioral Health Services. He is a clinical and organizational psychologist and maintains a limited treatment planning assessment service for his mental health colleagues.
Ten Tips for Staff Satisfaction Assessment Interviewing

Elaborated Version

1. Set the stage. Simply say: “Staff satisfaction is always an important issue. It is important in its own right and is also essential to fulfilling our organizational purpose to transform how health care is offered to our patients and communities.”

2. Clarify the intent. “Yes, staff satisfaction assessment scores have recently come out, and now is a good time to check in with one another concerning what contributes to and interferes with our satisfaction. The intent is to have an open discussion on this topic so that we all can learn what things we can do to improve satisfaction—yours, mine, ours.”

3. Ask open-ended questions.

The best way to get to how people experience satisfaction is to ask open-ended questions. This is as straightforward as inquiring: “Please tell me about what it is that increases satisfaction with work?” Ask the alternative question: “What interferes with your satisfaction?” or “What haven’t I asked that is important to you concerning satisfaction?” Throughout, make it safe, otherwise there is a limit to what you’ll hear and learn. Address safety: “I can imagine there may be a hesitancy to answer these questions out of concern that some may not like what you say. I am open to and believe we will profit from as complete a dialogue as is reasonable for you.” Staff will test your openness, and if they find you are true to your word, they’ll say a lot. It is best to have hour-and-a-half meetings to get beyond the first 45 minutes of formality and mutual caution, and then on to franker discussions.

4. Keep as a backdrop the connection between what you hear and how it relates to specific staff satisfaction assessment questions. You might say: “We are holding these meetings right now because we have received staff satisfaction assessment results. They are a mix of strengths and concerns that vary from workgroup to workgroup.” Jumping into the specifics can turn the assessment into an interrogation, and generates a lot of unproductive anxiety. Staying with open-ended questions lets you know what’s up with most specific concerns and how they crosswalk to the satisfaction categories (ie, clarity of direction, recognition, etc). Yet, important material may not get covered. Often those are areas that are very close to and/or very far away from the people in the room. For example, if how well senior leaders have set directions, clarified priorities, and created engagements are concerns that have not been raised in the open-ended discussion, you might raise the question as follows: “I’m aware that our department/clinic/section was concerned that X issue was not going well, and I would like to learn from you what’s going on there and what you believe would improve it.” For concerns very close to home like relationships with immediate supervisors, people get nervous in a large group meeting—especially if there are outsiders in the room. It’s better to handle these sorts of questions one-on-one or in smaller groups, and if the supervisor is viable, have him/her make the inquiries.

5. Establish who has control.

As you ask your questions, gently nudge the responders to give you their sense about who has their hands on the controls to improve satisfaction. What we are looking for falls into three buckets: what I control, what you control, and what is simply an inescapable reality that can only be controlled to the extent that people decide to accept it and come to peace with it. As for what “I” can control, those are the multitude of things that make up my work environment that are here for me to shape or organize as I see fit. The things that the collective “you/they” control includes work conditions that leaders may be able to modify in support of better organizational performance and improved staff satisfaction. Sponsorship of the Internal Collaborative (ie, rapid cycle team learning experience organized around the Plan, Do, Study, Act approach) has been a big success story of senior leaders moving from admonishing staff about access to creating an empowerment opportunity. Finally, for external control, it is helpful to hear what gets people to the acceptance part of the serenity prayer and what gets in the way. A controversial example is the cost of health care and the issue of premium sharing for health care employees.

6. Seek to understand which staff behaviors give a yield—however minimal—to satisfaction and resilience. In the mental health business, there is the solution-oriented strategy. Appeal to people’s constructive sense of themselves. This is self-efficacy: it means being capable of coping—and sometimes of mastering the behaviors that, notwithstanding difficulties, get you through life successfully. Refine the locus-of-control question by drilling down into how individuals and groups manage the stress, complexity, and ambiguity of their work experience. For even the most downtrodden staff member, there is usually a nugget of self-efficacy that can go into your eventual sum-up of what contributes to satisfaction. Often, these discussions tell us about people’s resilience, values, adaptability, and, quite frankly, their belief in the dream of what we aspire to through our organizational purpose.
Remember, leading is like learning a second language. …

7. Be aware of the factors that contribute to high performance. Bernard Bass, PhD, did the groundbreaking work about what organizational practices result in high performance. To abbreviate a ton of research and several books into a few sentences, organizations are the most successful that have Rules and Rewards for following through (think performance agreements as an example), and engage staff via Inspirational purpose (ie, to transform health care), with corresponding Intellectually challenging work, where there is an Individual opportunity to contribute. The organizing constructs described here are about management (the two Rs) and leadership (the three Is). All five constructs can be translated into what you can do and what staff can do. In an interview, you can use these constructs for filing away information you acquire with the goal of aligning our way of behaving organizationally with a further fulfillment of the two Rs and three Is.

8. Identify where people are in the process. James Prochaska, PhD, has documented the contemplative, cognitive, active, and reflective model of how people change. Its practical utility is in clarifying where people are in their “change readiness.” If a person is just beginning to think (contemplation) about satisfaction with only preliminary interest in getting information (cognition), and there is an effort to move that person quickly into initiatives (action), they are likely to fall flat. If you are a year or two into reporting staff satisfaction scores and experimenting with improvement strategies, people are well into the change process. Being clear about the stage of change will also help keep expectations reasonable for all. Especially when satisfaction is related to being able to influence leaders, you’ll get credibility by sharing that you gather information before taking action.

9. Paraphrase and eventually summarize what you heard for corrections, validation, and engagement. In its simplest terms, an interview as a conversation has its greatest impact when the interviewer conveys what s/he “got” from the discussion by way of understanding the other party. This is not a pass/fail test. Remember, leading is like learning a second language—never completely natural—but you can acquire the needed skills and be reasonably fluent. If you misunderstood or missed information (because there was too much of it, or the message was not clear, or your/my biases interfered with getting to the other’s sense of truth), the fact of calling that out in correcting your understanding helps you from a credibility perspective. It says to the other party that you attempted to capture what was said and when it got missed, you went back and extended yourself further to get it right. These shared understandings then become the bridge for building towards action steps.

10. Say “thank you” and for shadow the move into action planning. There are many things as a manager you can require of others at work. You can hope for, but not dictate, cooperation during an interview where the goal is to get peoples’ truth about what helps and hinders staff satisfaction. Therefore, express gratitude by saying thank you. However, it is not helpful to go into self-flagellation about what you did or didn’t do that negatively impacted staff satisfaction. À la the paraphrasing tip, simply say that “you heard” that there were things you as a leader/manager could do to improve satisfaction. It is also important to conclude by saying that you will go the next step to get down on paper what you heard indicated could be done that would be helpful. Finally, tell people when they should expect the summary; how they can give you feedback about it; when the recommendations will be put into action; how the results will be measured and communicated; and when there will be an opportunity for a follow-up discussion like the one held today.

Appreciation is extended to Dolly Dixon-Payne for her assistance in the preparation of the manuscript.

References

Learn To Serve

Author Eugene B Habecker wrote, “The true leader serves. Serves people. Serves their best interests, and in so doing will not always be popular, may not impress. But because true leaders are motivated by loving concern rather than a desire for personal glory, they are willing to pay the price.” To serve means to provide unconditional love that benefits people. Several years ago, I developed an acrostic for the word SERVE to help me remember the important aspects of servant-hood.

| Serve | Sacrifice | Empathy | Relationships | Values | Empowerment |

**S for Sacrifice**

The word *sacrifice* is used to describe the selfless good deeds we do for others. Self-sacrifice is the only way to truly serve your neighbor. Sacrifice means giving up trying to fulfill your needs and focusing on the needs of other people. Sacrifice does not mean thinking of your self less. Sacrifice means thinking of your self less often. It is easy to be self-centered. Nothing useful occurs without sacrifice. There are no shortcuts to success. We fail to reach our potential when we fail to pay the price. There is a difference between wanting to “be” a leader and wanting to “do” leadership. All leaders want to be a leader but not everyone has what it takes to “do” leadership. Leadership is hard work and requires sacrifice. In his book, *Good to Great*, Jim Collins says “Great leaders are plow horses not show horses.” There is no magic in good companies becoming great companies. Sacrifice and hard work are the key ingredients to success. Good to great companies believe they will prevail despite obstacles. Sacrifice allows us to focus on the task at hand so we may succeed. There is no success without sacrifice. A leader who wants to help his organization must be willing to pay the price to ensure long-lasting success.

**E for Empathy**

The root of the word *empathy* is PATHOS—the Greek word for feeling. Leaders that have empathy are kind, loving, and understanding. They are truly compassionate towards other people. Empathy means to be attuned to the emotional signals of other individuals—to try and put yourself into another’s shoes. Empathy requires good listening skills, an understanding of cultural diversity, and an awareness of what is not obvious. True empathy requires thinking of yourself less and of others more. Because the healing of others may help us heal ourselves, empathy plays an important role in growth and development.

In reality, you will not succeed if your heart is not in the right place. Succeeding in life first requires a change in heart then a change in mind. This is passion. Passion means that you care more than other people do. Passion means you are willing to go the extra mile to get results. In medicine, I often hear patients say, “I do not care how much you know until I know how much you care.” People know that all physicians have the ability to care for patients (they are competent) but they also know that great doctors are the doctors who really care about their patients (they are compassionate). Great leaders care about people.

**R for Relationships**

Developing relationships is the key to success in an organization. Developing relationships is the key to building trust. There is no dichotomy between self-interest and concern for others. Without relationships, we cannot be truly happy, we cannot be truly successful. One of the benefits of relationships includes moving from “me” mode to “we” mode. Another benefit of good relationships is that they keep you from being discouraged or losing focus.

**V for Values**

Our key values are accountability, flexibility, and innovation. As a leader, we need to hold ourselves and...
others accountable for their performance and behavior. We often substitute accountability for popularity. However, being popular does not guarantee success. To be successful, we need to be accountable for measurable outcomes. Flexibility means we are open minded. We create environments as leaders that allow other people to express their viewpoints. We listen to what others have to say and take that information into consideration before making a decision. A flexible leader is open-minded. Servant leaders are innovative. They “think outside the box.” They are not afraid to fail so they will try to introduce ideas that perhaps no one has thought of before. Servant leaders are creative and vision (not fear) driven.

E for Empowerment

Empowerment means inspiring other people to be more than they think they can be. Empowerment means giving others the power to be successful. The ability to empower another individual is an important leadership skill. It represents the fact that you have acquired skills that help you solve problems and allow you to pass the knowledge on to other people to help them solve problems. It allows your circle of influence to increase and allows you to help more people than you could with your own limited resources. Great companies have strong leaders. To be successful, great companies learn to empower their leaders to be great leaders.

Real Servants

Real servants do what needs to be done. They are servants first and leaders second. They do not complain of how hard a project is or how long it will take. Real servants are willing to sacrifice time and resources to help those in need. They know that to get a job done may mean doing a menial task or some job that others may say “is beneath me.” They work hard to make sure their direct reports succeed. They empower other people to be successful.

Great opportunities in life often disguise themselves as small tasks. Do not be deceived because it is the little things in life that determine the big things. We can all be great because we can all learn to serve.

References


Everyone Can

Everyone can be great because everyone can serve.

— Reverend Martin Luther King, Jr, 1929-1968, Nobel Peace Prize winner and civil rights activist
The Danger of Doctorspeak

Editor’s Note: Most practitioners have had a similar experience to the hospitalist in this story by Scott Abramson, MD:

What we said was not what the patient heard. In a profession that relies so heavily on the spoken word, miscommunication may have serious adverse consequences. Combine unfamiliar jargon with fear, pain, or other confounding conditions and the setup for confusion is complete.

Health care has its own language, acronyms, and jargon familiar to us and yet foreign to those with whom we need most to communicate.

To avoid this confusion, there are some steps practitioners can take:

- Review the basic principles of good clinician-patient communication. For example, check in frequently with the patients to make certain they are understanding and ask if they have any questions.
- In our communication, avoid using words that might be confusing to patients and use alternatives (see Table 1 for examples of words.Expressions that are often confusing).

I’m sure our readers have other similar examples of terms they have used that resulted in confused patients. If so, please write the Journal so other readers can learn from your experience.

— Lee D Jacobs, MD

This is a true story about medical jargon and how it may confuse our patients.

A while ago, I happened to be involved in a hospitalized patient-family conference. There seemed to be about ten family members present, all very devoted and concerned, though not particularly medically sophisticated. With much compassion and patience, the hospital-based specialist doctor reported that the x-rays showed what was, almost certainly, a newly discovered cancer. The doctor pointed out the multiple brain lesions on the MRI. She informed the family about other lesions showing up in the bone and still other lesions in the liver. The primary lesion, she suspected, was most likely in the lung. She then explained how lesions could spread from the primary to different parts of the body. The family listened respectfully, but they seemed more than a bit puzzled by it all. Suddenly, one brave family member blurted out, “What’s a lesion?”

For a moment, the doctor looked crestfallen. It occurred to her that in the last five minutes, nothing she had said had been understood. Then she made a brilliant recovery. “A lesion,” she promptly declared, “is a cancer spot.” She then went through the same spiel again, but this time, instead of the word “lesion” she substituted the term, “cancer spot.” This time, as she spoke, the family nodded with understanding. When the doctor had finished her explanation, the family, though clearly saddened by the bad news, asked about the possibility of treatment.

“Good question,” replied the doctor, “but first we need to get tissue …” ♦

Originally printed in Medical Staff Education News, Greater Southern Alameda Area, May 2006 and online at: http://kpnet.kp.org/cpc/quick/doctorspeak.html.

Table 1. Caution: confusing and emotionally provoking words!

<table>
<thead>
<tr>
<th>Procedure</th>
<th>History</th>
<th>Acute Prognosis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Generic Invasive</td>
<td>Non-formulary Disability</td>
</tr>
<tr>
<td>Procedures: We need to do a …</td>
<td>Lumbar Puncture</td>
<td>An HIV test</td>
</tr>
<tr>
<td></td>
<td>Debridement</td>
<td>Dialysis</td>
</tr>
<tr>
<td></td>
<td>Chemotherapy</td>
<td>… it might hurt a little</td>
</tr>
<tr>
<td>Consultation: We need to refer you to a …</td>
<td>Psychiatrist</td>
<td>Hospice</td>
</tr>
<tr>
<td></td>
<td>Surgeon</td>
<td>Oncologist</td>
</tr>
<tr>
<td></td>
<td>High-risk pregnancy specialist</td>
<td></td>
</tr>
<tr>
<td>Diagnosis: There is a possibility of …</td>
<td>MRSA infection</td>
<td>An infiltrate</td>
</tr>
<tr>
<td></td>
<td>Stroke</td>
<td>Heart Attack</td>
</tr>
<tr>
<td></td>
<td>A Defect</td>
<td>Cancer</td>
</tr>
</tbody>
</table>

Scott Abramson, MD, is a neurologist with The Permanente Medical Group in Northern California. He is Chair of the Physician Wellness Committee at Hayward, CA. E-mail: scott.abramson@kp.org.
Sitting on a wooden bench
in the subtle winter sunlight
outside this hospital
I've worked at for 27 years,
careful to avoid the callous
that envelops hospital staff
too long employed.

We forget, underneath our carapace
the emotions, the lives we touch
and destinies connected to
the faint shadows of all
who enter and leave
by the front door.
Some come laughing in,
others come crying out.
Babies are born two floors
above the morgue.
We try to realize
what we can do
with what we should.

We have the technology
to deny nature. We try
to balance knowledge
with wisdom. Doctors
have to live with their
decisions. They have to
look into God's glass eye
and see their own reflection.

I know anxiety and fear
because I've had my own
family here. I've sat
at my father's bedside
and tasted tears. Whenever
I hear an overhead page
"CODE 99," I stop and wonder
if someone's leaving,
or going to paradise.

I look down at my own nametag
with my photograph on it
and thank God it hangs
from my breast pocket,
not my big toe. Today
I took a baby aspirin
to keep my blood thin.
Tears taste salty.
Babies are born
two floors above the morgue.
“The directions on the bottle of blood-pressure pills read simply enough: ‘Take once a day until finished.’ But a Mexican immigrant still wobbly in her English, misreads just one word. In her native Spanish, ‘once,’ means 11. The pills, if taken too many at a time, make her dizzy—or worse. They could kill her.”

The lack of comprehensible and usable written and spoken language is a major barrier to health communication targeting primary and secondary disease prevention and is a major contributor to the misuse of health care, patient noncompliance, and rising health care costs. Without appropriate and quality language services, limited-English proficient (LEP) and non-English proficient (NEP) patients experience compromised health care—often relying upon “safety-net” public and nonprofit providers, and using alternative or underground sources of care.

At Kaiser Permanente (KP), we have an opportunity and an obligation to improve the health and quality of life of our members. KP’s membership is a microcosm of the diversity of our nation and our world, representing over 100 different languages. For members whose primary or preferred language is other than English, our ability to provide patient-centered care is often challenged when we cannot communicate effectively in their languages. For example, how do we manage informed consent? How do we ensure that LEP/NEP patients have correct and complete information to follow pre-operative instructions as well as access to medical benefits and coverage information? The availability of qualified interpreters and comprehensible written in-language material is thus paramount to ensuring equal access to health information and crucial for treatment adherence, patient safety, and quality care.

**Current State of Translations**

Our current systems are in a state of chaos when it comes to translating written materials. KP, as with other health care organizations, is overwhelmed by the task to provide high-quality translations for members while maximizing efficiency and containing costs. Mounting pressure from federal and state regulations and mandates pertaining to cultural and linguistic services (ie, Title VI of the Civil Rights Act, Culturally and Linguistically Appropriate Services (CLAS) Standards, and state-specific cultural and linguistic regulations) has created an urgency to translate member-informing materials for our linguistically diverse membership. Yet, little or no guidance is offered from legislative and accreditation agencies to help health care delivery systems comply with regulatory requirements. Additionally, there are no established health care industry standards for ensuring quality translations. Thus, the reaction throughout the industry has been to translate materials immediately and arbitrarily. A myriad of processes and systems exists among different health care organizations, and even within KP. Variations in translation protocol can be found at all levels of operation: regional, facility, and departmental. The translation of materials often ranges from asking a “bilingual” staff person or family member at hand to hiring independent contractors with varying degrees of health care and translation expertise. Therefore, the accuracy, literacy level, cultural appropriateness, and other components of in-language materials are often unpredictable. In some languages, health care con-

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cepts and terminology used in the US do not exist, creating the need for commitment and resources to standardize approaches for meaningful and appropriate translations. Table 1 illustrates some errors in translations, which contribute to consumer confusion.

Programwide Assessment

As part of a Programwide initiative to ensure quality translation and equal access to in-language materials, in 2005, National Diversity’s National Linguistic & Cultural Programs (NLCP) implemented a survey to examine how providers and staff accessed translated materials at the department and facility levels. NLCP directed this survey to providers and staff Programwide, who reflect diverse cross-functional groups and work with translated materials in various capacities. The survey was developed as a Web-based tool that was completed and returned through an online survey provider.

Survey Findings

Survey data showed that little has been formally documented at KP about its translation work (ie, supply, utilization, and processes), particularly since the responsibility of translating materials has been left to facilities and/or departments. Furthermore, translations usually are done in arbitrary, at-hand, or quick-fix means due to the lack of translation infrastructure, systems, and protocols.

Survey respondents identified various challenges, including:

- Lack of knowledge on how to access translated materials.
- Lack of departmental and/or facilitywide budgets to translate materials.
- Lack of organizational structure in general to share and access materials.
- Questionable quality of available translated information.
- Significant delays in getting translations completed.
- Materials in Spanish and Chinese are limited, and other language materials are more sparse.

Additionally, many survey respondents expressed frustration and a sense of powerlessness in dealing with translations. A few respondents shared that:

“Employees have to spend hours trying to find the right contact for something that is outside of their daily routine.”

“It is difficult to find excellence in translation service, as there are often a multitude of errors in translation.”

Furthermore, the NLCP Translation Survey found that providers and staff desired guidance and resources to obtain high-quality and cost-effective translations for their patients. They offered various solutions to begin addressing the challenges faced. Many stated that KP should:

- Adopt a centralized process for translations that is organized on a regional or national level.
- Build a system that would increase access to existing available language materials. Specifically, create a document repository or clearinghouse of translated materials.
- Develop a standard, formal procedure for coordinating the translations process.
- Establish a pool of KP-approved translation vendors that meet various business requirements (ie, cost, quality, efficiency)
- Standardize key documents such as consent forms, member letters, etc, to minimize the number of documents to be translated.

The survey findings shed light on the Programwide operational reality that translations are often being duplicated within each region, facility, and even department because there is little or no communication or coordination on what has been or what needs to be translated. To date, there is no readily available data on existing translated materials to make ac-

<table>
<thead>
<tr>
<th>Table 1. Inaccurate translations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inaccurate translations when terms do not exist in the target language(s):</td>
</tr>
<tr>
<td><strong>Term</strong></td>
</tr>
<tr>
<td>Co-payment</td>
</tr>
<tr>
<td>Behavioral health workshop</td>
</tr>
<tr>
<td>Nurse practitioner</td>
</tr>
<tr>
<td><strong>Literal word-for-word translation errors:</strong></td>
</tr>
<tr>
<td>Safe sex</td>
</tr>
<tr>
<td>Patient</td>
</tr>
</tbody>
</table>

* A patient is not always someone who is sick, especially in a preventive health care environment.

... translations usually are done in arbitrary, at-hand, or quick-fix means due to the lack of translation infrastructure, systems, and protocols.

### Table 2. Select examples of translation errors in KP documents

<table>
<thead>
<tr>
<th>Discharge policy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>English:</strong> To ensure a timely and smooth departure, please prepare for an 11AM discharge.</td>
</tr>
<tr>
<td><strong>Spanish translation:</strong> To ensure an opportune and soft game (or match, as in soccer match), please prepare for an 11AM discharge.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Calcium for Health pamphlet</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>English:</strong> These ideas may make it easier for you to digest milk products.</td>
</tr>
<tr>
<td><strong>Spanish translation:</strong> Maybe with milk products it would be easier to digest.</td>
</tr>
</tbody>
</table>
curate assessments of their demand and supply, version updates, quality, and accessibility. Absent the mechanisms or processes to share, track, and monitor the quality of translated materials, duplication and inconsistency (including brand) will persist throughout the organization often creating poor quality in-language materials (Table 2).

Addressing Some of the Challenges with Translations through Key NLCP Initiatives

National Coalition for Quality Translation in Health Care

Since there are no nationwide benchmarks nor agreement on how to ensure quality health care translation, NLCP led the development of and convened the National Coalition for Quality Translation in Health Care (NCQTH or Coalition) in 2004, with funding support from The California Endowment.

The formation of this Coalition represented a groundbreaking effort to bring together diverse key stakeholders and content experts (Figure 1). By leading the efforts of this Coalition, KP hopes to inform and influence industry policy and practice.

Some of NLCP’s major accomplishments to date include establishing a quality process for health care translation and working towards standardizing health care terminology in languages other than English. With the help of the Coalition, a standardized Spanish Health Care Glossary was completed and field-testing is in progress. The next phases of the Coalition’s work include standardizing KP’s glossaries in Chinese, Vietnamese, Korean, Russian, and Armenian.

The Coalition’s work impacts both KP and the community at-large by improving comprehension and consistency of in-language materials.

Research Agenda: Quality and Cost Study

With a grant from The California Endowment, NLCP examined whether instituting a quality assurance process yielded higher quality, saved turnaround time, and decreased costs for translating written materials. The process compared the error rates of four well-known independent vendors with a model developed by the San Francisco Center of Excellence for Linguistic and Cultural Services (SF COE). This study found that KP’s model for assuring quality translation yielded the lowest average error rates compared with the other vendors, 38% cost savings and an average time saved of 51%.

Interestingly, highest quality does not correlate with highest cost, however, the least costly vendor produced the lowest quality translations.

Strategic Directions

On the basis of clinical, operational, and field experiences, along with validation from our translation survey and research, the necessity of a translation infrastructure has become an organizational imperative.

As an integrated delivery system, KP is well positioned to leverage cutting-edge technology, operational expertise, and a proven quality translation model. Instead of functioning in silos, medical facilities and departments Programwide can benefit from utilizing a centralized translation infrastructure and a standardized quality translation process.

NLCP has created an enterprise-wide infrastructure model, and leads the strategic collaboration, partnership, and contribution of all regions. As such, our organization will be able to ensure quality review, eliminate redundancy, contain costs, and share resources across the Program. More importantly, our diverse membership will benefit from accurate, consistent, and culturally and linguistically appropriate written materials throughout the Program. Thus, the enterprise approach can positively impact and improve service quality, and address health and health care inequities related to language barriers.

What Providers and Staff Can Do Now

As NLCP continues to advance the development and implementation of the centralized translation infrastructure, providers and staff can take some
QualityTranslations: A Matter of Patient Safety, Service Quality, and Cost-Effectiveness

Action Steps
Before using translated materials:
1. Make sure that an English source document is available for your review.
2. Verify that there is a match between the English version and the translated version (ie, an English version of a genetics questionnaire was updated; however, the translated version still exists in the older version).

In the absence of these two criteria, the quality of the translated documents is highly questionable. Please alert your facility/department designee responsible for translations.

Be a change agent and get involved in improving patient-centered communication:
– Participate in the National Coalition for Quality Health Care Translations and other NLCP initiatives.
– Seek opportunities to increase your cultural and linguistic skills to create a sense of welcome and trust with your LEP/NEP patients.

For more information on the progress of the Enterprise-wide Translation Infrastructure, the Coalition, and consultation, contact National Linguistic and Cultural Programs, National Diversity at 510-271-6386.

immediate action steps. (See Sidebar: Action Steps.)

Acknowledgment to our reviewers: Ronald Knox, VP and Chief Diversity Officer; Dennis Lum, VP of Channel Strategy and Systems; Merri E Keeton, National Linguistic and Cultural Programs; Deborah Gould, MD, Pediatrics; Glenda Carroll, Patient Safety; Rakesh Shah, National Compliance; and Yanping Dong, Emerging Markets.

a For more information, please visit the Department of Justice Web site at: www.usdoj.gov/crt/cor/coord/titlevi.htm.


c The majority of responses were from Northern and Southern California.

d The California Endowment Grant Number 20012268

e This study tested a sample set of documents in Spanish representing topics in health education and member marketing.

References


Simply put, diversity is how we achieve our mission, and how we grow the business.

—Ronald Knox, VP and Chief Diversity Officer
Wither Primary Care?

The report from the American College of Physicians (ACP) didn’t pull any punches. Primary care is on the verge of collapse. Senior physicians are retiring or leaving the field; medical students are avoiding the discipline like the plague; health care capital is in full retreat; new technology investments are lagging. With demand for primary care services expected to skyrocket, the timing couldn’t be worse. As the demographic bulge of baby boomers begins to turn 60, the ranks of Medicare patients will grow from 39 million to 72 million by 2030, then comprising nearly one fifth of the population.1

By 2015, the number of Americans with a chronic medical condition will swell from the current 120 million to 150 million.1 To care for all these patients, the corps of general internists will need to expand from 106,000 in 2000 to 147,000 in 2020. On the supply side, the news is just as troubling. Over a third of American physicians are over 55 years of age and many are expected to retire in the next decade. And just when the pipeline should be increasing, it’s drying up with a steep decline in interest in primary care careers among medical students.2 The student’s concerns about the field mirror those of their attendings and senior practitioners … too little respect, too much work, long hours, endless paperwork, administrative hassles … not to mention poor pay.2 And better compensation is right where the ACP report, The Impending Collapse of Primary Care Medicine and Its Implications for the State of the Nation’s Health Care, aims most of its recommendations.1

A couple of the proposals are novel and destined for a studied, if not chilly, reception. A couple are old-fashioned and conventional enough to make Wilbur Mills proud. One of the new initiatives is a mechanism of delivering primary care dubbed the advanced medical home. These certified medical practices would provide comprehensive, coordinated, preventive services with advanced technology to assure efficiency, value, quality and patient satisfaction. The other nontraditional proposal is a dramatic expansion of pay-for-performance programs that would reward physicians financially from sources such as Medicare Part A hospital funds. These resources would permit practices to invest in health information technology and data collection tools. Collectively, this money could be used by medical organizations to develop evidence-based standards and strategies to optimize chronic care.

The two more traditional ACP recommendations involve amending a couple of familiar fixtures around Washington, DC—the sustainable growth rate calculations and the resource-based relative value schedule. To better understand these issues, a brief review of Medicare history is in order.

When Medicare began in 1965, physicians were paid on the basis of their usual and customary charges—no fee schedules, no price controls, no volume limits—none of that. Predictably, spending soared at a 13% annual rate and in 1975 President Ford and Congress instituted the first limitations on physician fees, capping any increases to a rate termed the Medicare Economic Index. But with no concurrent restraints on the volume of services, annual spending grew 15% annually from 1975 to 1991, far outpacing other economic indicators.3

In 1992, Medicare began its first attempt to control the number and intensity of services with volume performance standards, or VPS. If volume went up, two years later fees went down proportionately. But with over a tenfold variation from year to year (0.6% to 7.5%) VPS proved too erratic and unpredictable.

Enter the Balanced Budget Bill of 1997 and the new magic bullet … the sustainable growth rate (SGR). SGR calculations are a function of three major variables: 1) the percentage change in fees for physician’s services, 2) the estimated number of Medicare fee-for-service beneficiaries, and 3) changes in the ten-year cumulative gross domestic product.

The mechanism has no shortage of critics. The most common complaint is that the payment mechanism almost fiendishly uncouples cause and effect. A responsible, thrifty practitioner has absolutely no control on the other nearly half a million physicians who provide Medicare services. But if a significant number of doctors are profligate in their spending, everyone bears the burden.

The second issue that drives physicians ballistic is the addition of prescription drugs into the spending targets. Even though doctors do not sell or profit from pharmaceuticals, or control their approval or costs, drugs are included because they are “incident to” professional services.

Of course, prescription drug costs have risen much faster than other components of the national health care budget.4 And as a result, the drug component of SGR increased from 3.7% to 9.8% between 1996 and 2003.5

Finally, the cumulative nature of SGR can and has magnified mistakes. In 1998-1999, the government overestimated the number of Medicare recipients enrolled in managed care plans, thereby underestimating the growth in gross domestic product per capita.

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Thus, SGR was incorrectly lowered which in turn reduced payments to physicians. Not only has the error never been corrected, it continues to be compounded by the ten year rolling of average gross domestic product calculations. Because of this accumulative nature, if spending targets aren’t met one year (or are obviated by Congress as is frequently the case), the future cuts become even more draconian. And while Congress blinked again in the recent showdown over 2006 Medicare fee cuts, few are comfortable with these nerve-wracking annual budget duels.

In defense of SGR, federal officials have a straightforward retort—it works. Simply stated, it works when nothing else has. Like a straightforward retort—it works. Simply stated, it works when nothing else has. However, other primary care disciplines, the ACP, legitimately concerned about the future impact of SGR on their incomes, seeks abolition of or a dramatic change in this vehicle.

Back to Medicare history, at the same time Congress was tinkering with price and volume controls, they became aware of alleged internal inequities within the physician fee schedule, namely that procedures in surgery and radiology were overly compensated compared to cognitive services. That led to the resource-based relative value schedule (RBRVS), created in the late 1980s by William Hsiao, MD, of the Harvard School of Public Health. Implemented in 1992, the RBRVS was meant to rid the system of historical distortions and base fees on real resources expended and the actual business costs of a practice.

In the wake of these changes, primary care flourished with Medicare fee increases of 16.5% to 36% between 1991 and 1997. But the good times didn’t last and between 1997 and 2004, primary care compensation fell well below that of procedure-oriented specialties. That retrenchment leads to the last ACP proposal—a re-examination of RBRVS methodology—all with an eye toward moving some of its components (ie, physician work units and practice expenses) to their side of the column. In an era of electronic communication, telephone consultation, distant monitoring and telemedicine, physicians argue that historical reliance on face-to-face encounters for compensation is so outdated that the entire system needs to be reworked.

So, based on these two new and two old ideas, will primary care survive? Certainly. But will the sustainability of the discipline depend on financial resources being diverted from other sources such as hospitals? Or other specialties? The lights on Capitol Hill and K Street will burn long into the night answering those questions.


References

www.acponline.org/hpp/statehc06_1.

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**A Cause That is Just**

The probability that we may fail in the struggle ought not to deter us from the support of a cause we believe to be just.

— Abraham Lincoln, 1809-1865, 16th President of the United States
“Travel” Medicine

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.

Visit TPJ on the Web for answers to this puzzle: www.kp.org/permanentejournal

Created by Kenneth J Berniker, MD

Across
1 Popular drinks
6 Narrow strip of material, as in a fence or shade
10 Surrounded by
14 It may be “served with coffee,” as by certain alternative practitioners
15 Indian dress
16 ___ the Clown
17 HAVING A BABY
19 At the highest point
20 Spring holiday
21 Paper that might show possession
23 Emotional poem
24 ___-mo
25 Be decisive
27 Bring up
29 CAPABLE OF PRODUCING A TRANCELIKE STATE FOR ONESSELF
34 Muscle protein
37 ___ play (go to the theater, 2 wds)
38 San ___ resort on the Riviera
39 Blood-forming regions
41 Tries to hit a moving target (2 wds)
43 Middle Easterner, often
44 What a urologist might do to a prostate, slangily
46 Decrepit
47 PATHWAYS FOR ASPIRING MED SCHOOL PROFESSORS, OFTEN (2 wds)
50 Concorde, for example (abbr)
51 Leading anti-TB drug (abbr)
52 Insect beloved by Edward O’Wilson
53 Cook with microwaves, familiarly
57 Certain Greek letters
59 “Do ___ not ...” (3 wds)
62 One of the winds
64 FIRST CRACK AT BEING A REAL DOCTOR
66 Dork
67 Close
68 Naproxen, as available without a prescription
69 This, to a Mexican
70 Actress Verdon
71 Trims, as nails

Down
1 Relinquishes
2 Jermaine or Tatum
3 Racer voted Horse of the Year five consecutive times in the 60s
4 Broadcast
5 Goal for Mariano Rivera
6 Uzbekistan, once (abbr)
7 ___ matter to rest (2 wds)
8 English composer of “Rule Britannia”
9 What a big cat might use to grab you (2 wds)
10 Nationwide org for attorneys (abbr)
11 STANDARD PART OF A NEURO EXAM (2 wds)
12 Sports wear maker
13 Opiate or other illicit drug
18 The “E” in “QED”
22 Scout unit
26 Treat with excessive kindness or indulgence
28 Subjects for thoracic surgeons
29 Global aircraft manufacturer based in France
30 Numero ___
31 Employee who always agrees with his boss (hyph)
32 “___ ...” (where you can reach me, 2 wds)
33 World wide maker of fragrances
34 “Amo, amas, ___”
35 Service rendered at the hospital
36 OXYGEN ___ (molecular mechanism)
37 Concordes, for example (abbr)
38 Needle that was popular with couples?
39 Bristles of grasses or insects
40 Gaining, but not without a struggle
41 Treat with excessive kindness or indulgence
42 Vessel that was popular with couples?
43 “___ ...” (where you can reach me, 2 wds)
44 Certain Greek letters
45 “Do ___ not ...” (3 wds)
46 Decrepit
47 PATHWAYS FOR ASPIRING MED SCHOOL PROFESSORS, OFTEN (2 wds)
50 Concorde, for example (abbr)
51 Leading anti-TB drug (abbr)
52 Insect beloved by Edward O’Wilson
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KP’s Care Management Institute Receives AHIP Award

Kaiser Permanente’s (KP) Care Management Institute (CMI) is the winner of the American Health Insurance Plans (AHIP) Innovation and Excellence in Chronic Care Award in the large affiliated category. The award was presented for the Aspirin-Lisinopril-Lovastatin (A-L-L) Initiative.

The A-L-L Initiative demonstrates the rapid and widespread adoption of successful strategies to prevent adverse cardiovascular events among members with coronary artery disease and diabetes. The Initiative was developed in response to rigorous clinical studies and simulation modeling that demonstrated a significant potential for reduced morbidity and mortality among individuals at risk for myocardial infarction and stroke. The treatment strategy includes simple protocols of three classes of fixed-dose generic medications: aspirin, cholesterol-lowering drugs called statins, and blood pressure medication called ACE-inhibitors (Lisinopril).

Also gaining recognition from AHIP was KP HealthConnect, which was a finalist for the AHIP Foundation’s Innovation and Excellence Award in Health Information Technology.

The Innovation in Chronic Care Award recognizes member organizations for their successful efforts to improve the management of chronic disease through innovative models of care.

The Permanente Medical Group (TPMG)

Physicians Receive Sidney R Garfield Exceptional Contribution Award

Four TPMG physicians—David Baer, MD; Sobha Kollipara, MD; John Rego, MD; and KM Tan, MD—received the recently renamed Sidney R Garfield Exceptional Contribution Award for their work in developing programs for our members and physicians. This award was established by the TPMG Board of Directors in 2000 to recognize physicians who have been instrumental in the development and dissemination of new ideas that have had a significant impact on patients, colleagues, and the broader community.

David Baer, MD, Chief of Oncology at the Oakland Medical Center, used his self-taught computer programming skills to create an electronic system to help manage chemotherapy for cancer patients in Oakland: the Case Management for Medical Oncology with Laboratory and Outcome Tracking (CAMMOLOT).

Sobha Kollipara, MD, Pediatric Endocrinology at North Valley, organized the first Kaiser Kids Diabetes Camp to teach children with type 1 Diabetes how to cope with and manage their diabetes in a nonmedical setting where the children could interact with each other. In 2003, Dr Kollipara launched the High Five to Health Program to identify the increased number of children at risk for type 2 Diabetes and to teach them the importance of eating better and being more active.

John Rego, MD, Chief of Radiology, San Francisco, has been at the forefront of the creation, storage, and transmission of digital images since 1994, when he championed a Picture Archival and Communication System (PAC) to store and review ultrasound images in San Francisco.

KM Tan, MD, Chief of Radiology, San Rafael, and CME Editor of The Permanente Journal, cocreated the KP School of Radiology Technology in 1989, in an attempt to address the shortage of radiology technicians and continues to serve as the President and Medical Director and as an active member of the Board of Directors.

Northwest Permanente Medical Group (NWP)

Clinician Receives Book of the Year Award from HIMSS

Dean Sittig, PhD, Director of Applied Research in Medical Informatics, received the 2005 Health Information and Management Systems Society (HIMSS) Book of the Year Award, for his work as coauthor of
Improving Outcomes with Clinical Decision Support: An Implementer’s Guide.

**The Southeast Permanente Medical Group (TSPMG)**

KP Recognized for Work in Maternal and Child Health

Laura Kale, MD, the Georgia Region’s Chief of Ob/Gyn, accepted an award on behalf of KP from the Healthy Mothers Healthy Babies organization. KP was recognized for its support of the organization and partnership efforts in maternal and child health care.

KP Receives Award from Georgia Breast Cancer Coalition

Susan Garrison, MD, Associate Medical Director of Primary Care Services and Facility Operations, accepted an award on behalf of KP from the Georgia Breast Cancer Coalition (GBCC). The GBCC’s mission is to advocate, to educate, and to eradicate breast cancer.

**Colorado Permanente Medical Group (CPMG)**

KP Colorado Wins National Environmental Leadership Award

The Colorado Region received the 2006 National Environmental Leadership Award from Hospitals for a Healthy Environment (H2E), in recognition of KP Colorado’s efforts to drastically reduce waste and the use of hazardous chemicals in the communities we serve. Since 2002, KP Colorado has: recycled more than 25,000 mercury-containing fluorescent lamps; recycled more than 1900 tons of paper and cardboard and 52 tons of plastic; and decreased the use and disposal of photo-processing chemicals by an estimated 70% by converting the Radiology Department to digital imaging in almost all cases.

The Leadership Award is given each year to facilities or health care systems that are setting the standard for environmental programs and policies. H2E recognizes organizations for embracing safer building products, energy and water efficiency, safe working practices, and a commitment to public health demonstrated through the reduction of waste.

**Mid-Atlantic Permanente Medical Group (MAPMG)**

Physicians Received Exceptional Contribution Awards

Three physicians—Betty Chang, MD; Leslie Ellwood, MD; and Robert Sjogren, MD—received the Exceptional Contribution Award for their contributions which are above and beyond what is expected of MAPMG physicians as part of their daily duties and responsibilities. In addition, Stuart Katz, MD, received the G Nicholas Rogentine Jr Professionalism Award, which is granted to a physician who has served the MAPMG for 20 years or more and has demonstrated outstanding clinical wisdom, charisma, and compassion.

Dr Chang was recognized for her work with the Specialty Care Redesign and her efforts with CMI to improve Asthma Care throughout the Region. Dr Ellwood has served in a variety of positions, President of the American Academy of Pediatrics, Virginia Chapter, and President of the Medical Society of Northern Virginia. Dr Sjogren is active in hepatology, bringing research projects to MAPMG clinics so that KP members can benefit from the most up-to-date treatments for hepatitis C. Dr Katz received his award for his work fostering excellence in patient care, his knowledge of urologic literature and development of a relationship with The George Washington University Medical Center, and his commitment to teaching urology residents.

The G Nicholas Rogentine Jr Professionalism Award is named after G Nicholas Rogentine Jr who served KP in many capacities in his 25-year career. Dr Rogentine was a legend throughout the medical group for his knowledge, generous spirit, charisma, and professionalism.

**Ohio Permanente Medical Group (OPMG)**

President and Executive Medical Director Ronald Copeland, MD, Receives Honors

Ronald Copeland, MD, FACS, President and Executive Medical Director of the Ohio Permanente Medical Group, was honored as a recipient of the Southern Christian Leadership Conference’s (SCLC) Dr Martin Luther King, Jr award. The SCLC is committed to making health care in the African-American community a major part of its 2006 agenda. Dr Copeland was recognized for his commitment to helping educate medical professionals about disparities in health care and his
involvement in various efforts to help improve access among African Americans to health insurance, medical information, and educational resources that offer guidance about pro-active self care.

Dr Copeland was also invited to serve on the technical Advisory Panel on Healthcare Disparities, part of The National Quality Forum's (NQF) Ambulatory Care Project. The panel’s overall mission is to conduct a systematic review of ambulatory care project measures that can be used to identify and address health care disparities. The new panel has 18 members and intends to finish its work within two years.

The National Quality Forum is a private, not-for-profit membership organization created to develop and to implement a national strategy for health care quality measurement and reporting.

Southern California Permanente Medical Group (SCPMG)

Ralph John DiLibero, MD, orthopedic surgeon at the Los Angeles Medical Center was inaugurated as the 135th president of the Los Angeles County Medical Association (LACMA), the largest medical association in the state of California.

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.

The Lesson Never Forgotten

One lesson we never forgot was the effect of this plan on our own attitudes. When we were going broke we’d been anxious, although ashamed of it, to have injured workers enter our hospital. That meant remuneration, meeting payrolls, continuing to exist and live. Now, since we received the income anyway, we were really anxious that the workers remained unhurt. We started our own safety engineering to accomplish this. And as we worked to prevent accidents, we realized that we were still on the old fee-for-service system, by preventing accidents, we would be rapidly eliminating ourselves.


This “Moment in History” quote collected by Steve Gilford, KP Historian
Natalya Nicoloff, NP, is in Internal Medicine at the KP Medical Center in Hayward, CA. She comes from a family of artists starting in Macedonia four generations ago. “View from the Water” was painted from a photograph taken while Ms Nicoloff was visiting a small village in China last summer.
Awakening to Disability: Nothing About Us Without Us
by Karen Stone

In addition to being witty, readable, and filled with helpful information, Karen Stone's book, *Awakening to Disability* is important for physicians and health caregivers for three main reasons:

a) It introduces in a very human way the disability community, which includes patients, acquaintances, friends, strangers, clients, and relatives.

b) The tenuousness of life. You could join that community this evening on your commute home. We can and should prepare for such an event.

c) You or someone close to you may already have a significant disability.

Ms Stone normalizes the world of disabilities. She bursts myths and lets us know what we are afraid to know: people with disabilities are the same as people without. She confronts prejudice and reduces anxiety with practical ways to overcome barriers of fear and awkwardness. The best part is that she makes us laugh while doing all this.

You’ll learn the nuances of language: the correct term is *a person with a disability*.

You’ll learn the nuances of etiquette: it is not appropriate to touch a wheelchair or guide dog. It is important to sit when talking with someone who is sitting.

You’ll learn the nuances of architecture: an inch may be a mile for a person navigating a wheelchair over a strip of wood nailed to the floor or across a lush, thick carpet.

You’ll learn the nuances of attitude: the author skewers those who refer to the person with a disability as if s/he were not present.

Ms Stone shares just enough research, alerting us that at least 20% of the population have some level of disability, most live in poverty.

She describes Denmark’s brilliant cost-cutting decision to replace nursing homes with government-subsidized mixed living complexes and the Swedish housing policy, requiring new construction to pay special regard to the needs of people with physical disabilities and the elderly. She also describes Vancouver, Canada’s successful experiment with separate accessible transportation. Most people need accessible homes and transportation at some point.

Your patients will also benefit from this book, which illuminates the deep emotions of grief and loss experienced by people with disabilities. It gives a context for the importance of collaborative medical care in which shared decision making empowers and engenders cooperation. It describes the disability rights movement and such heroes as Ed Roberts who moved mountains by refusing to take “No” for an answer. Spending lonely nights in University Hospital in an iron lung, he received his PhD from the University of California at Berkeley despite initially being turned away. He became director of the California Department of Rehabilitation in 1975 and is considered by many to be the Martin Luther King, Jr of the disability rights movement.

Some topics covered in this wide-ranging treatise on disabilities are: diet and exercise, education, jobs, attendant care, money, nursing homes, and suicide.

Ms Stone describes the solitary journey each person travels into the unknown territory of disability. As her own neurologic disability progressed, her once physically active life slid slowly to a halt, but her life as a journalist blossomed. She writes primarily about coping with physical disabilities, but devotes space to abuse of people with disabilities and “invisible disabilities” including mental illness.

She puzzles over causes of mental illness, describing her own fierce depression that led to a suicide attempt as she awakened to her disability. I had puzzled over these symptoms too. I contacted Ms Stone to discuss new research from the Adverse Childhood Experiences Study by Kaiser Permanente and the Centers for Disease Control and Prevention that helped me understand the origin of depression. Without hesitation, she welcomed me as a friend and colleague. You will probably consider her a friend and colleague too, after reading *Awakening to Disability*.

**Reference**

The China Study
by T Colin Campbell, PhD, and Thomas M Campbell, II

Reviewed by Jerome Stenehjem, MD

Out of a morass of conflicting nutritional studies and popular books comes The China Study, a finely woven tapestry of scientific inquiry and personal experiences of a highly respected NIH-funded scientist. This impressive work by T Colin Campbell, PhD, and his son Thomas provides chilling insights into how our nation has arrived in the third millennium with some of the highest rates of obesity, cancer, and heart disease in the world. Many of the revelations in this book could serve as an indictment of the medical profession but it becomes clear that there is plenty of blame to go around.

The authors note that cancer death rates from the 1970s to 1990s were unchanged in spite of the “War on Cancer.” Obesity rates have more than doubled in 30 years and health care-related death is now the third leading cause of death in America.1 But, as the story unfolds, these phenomena demonstrate not a failure of medical treatment but that the very need for treatment can be prevented.

Tracing the parallel emergence of modern nutrition and modern chemistry in the late 1800s, the authors show how the term “protein” became synonymous with high-quality nutrition. This concept was embraced by the emerging techno-agricultural industries and dovetailed with the expanding affluence of middle America. In the mid 1960s, Dr Campbell was asked to help solve the tragic and pervasive problem of childhood malnutrition in the Philippines, a problem of inadequate dietary protein easily solved by introducing peanuts into the diet. However, recent evidence had shown that peanuts were often contaminated with a fungus that produces the potent carcinogen, aflatoxin. Indeed, Dr Campbell’s investigation found high levels of aflatoxin in the urine of Philippine children afflicted with primary liver cancer. His sleuthing eventually revealed that the peanut butter was laced with aflatoxin from mold-ridden peanuts. This investigation might have ended as yet another triumph of science over disease. However, recent scientific blow that could only leave the proponents of high protein diets staggering in a pugilistic daze.

Animal protein consumption becomes the linchpin of Dr Campbell’s work, which unavoidably positions him in diametric opposition to powerful agro-pharma-economic interests. But the Campbell duo delivers blow after scientific blow that could only leave the proponents of high protein diets staggering in a pugilistic daze. As Abramson illustrated in his book Overdo$ed America,2 so does The China Study expose the forces that protect the status quo and their economic interests at the expense of the consumer’s health and wellbeing. Going beyond the perils of high animal protein consumption, the authors provide useful insights into the benefits of a whole plant-food diet without holding any expectation of mass migration to their beliefs. Those who find these conclusions too foreign should suspend their disbelief until they have read The China Study.

References

Jerome Stenehjem, MD, is a physiatrist and medical director of Sharp Rehabilitation Center in San Diego. As a physiatrist he manages patients with a broad variety of disabling conditions. He has a particular interest in the interactions between nutrition, disability, and weight management.
Goodman & Gilman’s The Pharmacological Basis of Therapeutics, 11th edition
Laurence L Brunton, PhD; John S Lazo; and Keith L Parker, editors

Reviewed by Vincent J Felitti, MD

There are few technical books that remain in a leadership position for 65 years. The Pharmacological Basis of Therapeutics is one. Physicians, teachers, and medical students have voted for Goodman & Gilman with their feet and with their pocketbooks for over six decades. The question is not whether this is an important and useful text, but why?

A sentence by the original authors in their 1940 preface still describes the 11th edition: “This book has also been written for the practicing physician, to whom it offers an opportunity to keep abreast of recent advances in therapeutics and to acquire the basic principles necessary for the rational use of drugs in his/her daily practice.” The book’s 65 chapters are grouped into 15 sections: General Principles, Drugs Acting at Synaptic and Neuroeffector Junctional Sites, Drugs Acting on the Central Nervous System, Drug Therapy of Inflammation, Drugs Affecting Renal and Cardiovascular Function … Chemotherapy of Microbial Diseases, Chemotherapy of Neoplastic Diseases … Hormones and Hormone Antagonists, Dermatology, Ophthalmology, Toxicology, plus two appendices on prescription writing and patient compliance, and on the design of dosage regimens.

Reading the sections on general principles reminds one that, with the notable exception of antimicrobial and antiparasitic therapy, pharmacology is the science of altering human physiology by chemical means. The well-written chapter on treating hypertension illustrates this concept nicely; it is a pleasure to read and a vast improvement over the PDR or drug company ads. So too is the chapter on principles of antimicrobial therapy. Given the large number of authors, some chapters are easier to read than others, but none can be faulted for lack of well-organized and referenced information. Comparison of the current edition with the fifth edition of only 30 years ago provides an interesting insight into changing times. Then, the great Louis Weinstein personally wrote all the chapters on antimicrobial agents. Given the large number of authors, some chapters are easier to read than others, but none can be faulted for lack of well-organized and referenced information. Comparison of the current edition with the fifth edition of only 30 years ago provides an interesting insight into changing times. Then, the great Louis Weinstein personally wrote all the chapters on antimicrobial agents. In the current edition, five experienced and specialized physicians are required for that task.

Even so, a book this size is not the end-all of pharmacology. Some uncommon drugs or drug uses are not described; fortunately, references are provided to information in earlier volumes about some once-major drugs no longer available in the US: eg, emetine, which has uses, though no market, far beyond its amebicidal activity. Unusual uses of medications are noted, eg, cimetidine as a treatment for warts because of its immunostimulant effects. At the other extreme, one imagines the current avian influenza threat will generate great interest in the section on anti-influenza agents. Surprisingly, immunizing agents are barely mentioned in a total of three pages. The ever-increasing complexities of HIV treatment are covered in an understandable fashion.

Appendix 1 deals with prescription writing, the potential for errors in drug orders, and patient compliance. The book closes with nearly 100 pages of tabular pharmacokinetic data providing nicely organized data on oral bioavailability, excretion, volume of distribution, half-life, and other information that is occasionally needed but usually difficult to locate for commonly prescribed medications.

While Goodman & Gilman is no quick-read, it is surprisingly clearly written, logical, and interesting. It is also an awesome realization to see how much one never knew, added to what one once knew but forgot. Nevertheless, the logical, step-wise organization of The Pharmacological Basis of Therapeutics provides a much greater sense of confidence in one’s ability for self-development than do drug company ads or their frequently underwritten large clinical trials for me-too drugs. I once knew an older physician in Baltimore who said he read ten pages every night from the then-current second edition. While this was easier to do with earlier editions, the task is still not inconceivable.

Reference
Section A.

Article 1. Emergency Cardiology: A Review of Recent Literature

When patients with ST-segment elevation are transferred to another hospital for primary percutaneous coronary intervention (PCI):

- ACC-AHA guidelines recommend balloon inflation within 180 minutes
- ACC-AHA guidelines recommend arrival to the catheterization lab within 90 minutes
- The time to balloon inflation usually exceeds the ACC-AHA recommendations
- Patients should be treated with eptifibatide prior to transfer
- Patients should be treated with morphine prior to transfer

Patients with acutely decompensated heart failure:

- Should routinely be treated in the ED with nesiritide
- Have decreased length of stay in the hospital when treated early with morphine
- Have proven decreased mortality when treated early with nesiritide and morphine
- Have significantly increased mortality when they present with renal dysfunction
- Are at greatest risk of in-hospital mortality when their systolic blood pressure at presentation is >200

Return completed form by October 31, 2006.

Article 2. The Effect of a Predialysis Calcitrol Administration Protocol on Postdialysis Parathyroid Hormone Levels

Patients with chronic kidney disease often have:

- Hypocalcemia
- Hyperphosphatemia
- Secondary hyperparathyroidism
- All of the above

Treatment of bone disease in patients with chronic kidney disease is best accomplished via:

- Administration of calcitriol
- Phosphate binders
- Dialysis
- Management via renal dieticians
- Erythropoetin

Article 3. Kaiser Permanente Georgia’s Experience with Operation Zero: A Group Medical Appointment to Address Pediatric Overweight

The stepwise behavioral goals for O.Z. participants do not include:

- Decrease milk fat until drinking fat-free milk
- Increase water consumption until drinking eight glasses a day
- Increase fruit and vegetable servings until eating five servings a day
- Increase milk consumption until drinking 4 glasses a day

Which program evaluation result is not true:

- 87% of participants have insulin resistance
- During the eight-week core program, compared to baseline, there were significant reductions in body fat percentage and waist size for the total sample
- During the eight-week core program, compared to baseline, there were significant reductions in waist size for youth
- At six-months post compared to baseline, O.Z. participants had a nonsignificant weight gain

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(Continued on next page)
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.

<table>
<thead>
<tr>
<th>Article 1</th>
<th>Article 2</th>
<th>Article 3</th>
<th>Article 4</th>
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<tbody>
<tr>
<td>Strongly Agree</td>
<td>Strongly Disagree</td>
<td>Strongly Agree</td>
<td>Strongly Disagree</td>
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<td>5</td>
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<td>3</td>
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</tbody>
</table>

The article covered the stated objectives.
I learned something new that was important.
I plan to use this information as appropriate.
I plan to seek more information on this topic.
I understood what the author was trying to say.

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

__________________________
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Section D. (Please print)
Name: ________________________
E-mail: ________________________
Address: ________________________
Signature: ________________________
Date: ________________________

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“Las Flores du Chateau” by Melinda Lacerna Kimbrell, MD, was inspired by the sunflower paintings of Van Gogh like print strokes using very thick paint. This painting was inspired by sunflowers displayed in a vase in one of the bedrooms of the Chateau in the Loire Valley of France in July 2005. Dr Kimbrell has used acrylics using very thick paint. This is her second oil painting, she chooses her style to be “impressionistic.”

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Tom Jannis, MD
8 Disaster Responses: Is the future preventable? Lessons from Anthrax, Tsunamis, and Hurricanes
Lars Jacobs, MD

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14 Emergency Cardiology
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