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Ms Matthews is a mammography technician at the Garden Grove Medical Center in CA. While taking photography classes at Cypress College, Ms Matthews was exposed to the idea of using radiography to photograph objects. The idea further developed when she began work on a semester project making radiographs of flowers, which required that she advance her skills at printing using color separation. Ms Matthews wanted to demonstrate to patients the detail and quality that the mammography machine can obtain and several of her radiographs hang in mammography rooms at several Southern California Kaiser Permanente Medical Centers.

The Permanente Journal
Fall 2007/Volume 11 No. 4

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

By Jeryl McGaw, MS, RN, ND
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Elizabeth A Chester, PharmD
Carol Ann Barnes, MS, PT, GCS

Abstract

Introduction: Patients with complex medical care needs often embark on multiple care transitions over an extended period of time. As these patients or their caregivers often become the chief source of communication for complex medical situations, each transition can create an opportunity for health care errors. Combining the efforts of the established departments of Chronic Care Coordination (CCC), Clinical Pharmacy Call Center (CPCC), and Continuing Care, Kaiser Permanente Colorado created programs to further safe care transitions.

Methods: Two key goals for safe care transitions were established: 1) reductions in medication errors and 2) increased follow-up with care plans. To achieve these goals, communication plans targeted at medication reconciliation, patient education, and coordination of outpatient recommendations were established. Expected outcomes included reductions in medication errors, decreased Emergency Department and hospital admissions, decreased readmissions, and increased outpatient follow-up and medication compliance.

Results: A review of medication-reconciliation records for intervention patients indicated that >90% of all discharge summaries contained at least one potential drug-related problem including duplicative drugs, omitted therapy, and medication contraindications. After skilled nursing facility discharge, patients who were transitioned by CPCC clinical pharmacists were: 1) 78% less likely to die; 2) 29% less likely to need an Emergency Department visit; and 3) 17% more likely to follow up with primary physicians and clinicians than were patients in the usual care group. Health care cost savings for patients seen by the CCC program demonstrated, conservatively, an annualized per patient savings of $5276. For 763 patients enrolled in 2003, this amounts to an estimated, annualized savings of $4,025,588.

Conclusions: Patients are becoming more informed and involved in their care, but they require ongoing education and coaching to become effective advocates for themselves. Identification of unintended medication discrepancies and potential drug-related problems and increased follow-up during care transitions can improve patient safety and quality of care while saving health care resources.

Introduction

In an increasingly taxed health care system, patients with complex medical care needs may often find themselves treated in a number of acute care settings, with the unspoken goal of transitioning to a lower acuity level at the earliest opportunity. Many of these patients will embark on multiple care transitions over an extended period of time either for several acute episodes or for the same episode of care. Within the health care delivery system, as patients pass between physicians, nurse practitioners, and pharmacists, the patient often becomes the chief source of communication for complex medical situations, meaning that each transition will create an opportunity for health care errors. These patients generally lack the perspicacity to determine which experiences or pieces of information transferred to them are the most salient to pass on to the next provider.1–4 Similarly, in a health care setting where even the best clinicians may be relying on faxed or copied information, communication may not merely get lost in the translation but may just get lost altogether.

The substantive work of Eric Coleman and others5–12 has clarified the
adverse outcomes often associated with the transition process. Such transitions can be from multiple care sites, such as from a hospital to a skilled nursing facility (SNF) or home, from an SNF to hospital or home. Although transition-communication errors can occur between health care settings, some of the most profound miscommunication may occur as the patient is transitioned to home and becomes wholly responsible for his or her own care. Coleman and others have identified four factors most notably associated with improved outcomes under these circumstances: 1) assistance with medication self-management, 2) a patient-centered record owned and maintained by the patient to facilitate cross-site information transfer, 3) timely follow-up with primary or specialty care, and 4) a list of red flags indicative of a worsening condition and instructions on how to respond to them. Similarly, they have identified two mechanisms for achieving these factors: 1) a personal health record and 2) a series of visits and telephone calls with a “transitional coach.”

Incorporating the ideology of this work, Kaiser Permanente Colorado (KPCO) developed two synergistic programs at two key points of transition to lessen the opportunities for suboptimal care transition experiences: 1) from an SNF to home and 2) from hospital to home.

Combining the efforts of the established departments of Chronic Care Coordination (CCC), Clinical Pharmacy Call Center (CPCC), and Continuing Care, KPCO created programs for care transitions. Two key goals for improvement were established that built on the work of Coleman and others: 1) reductions in medication errors and 2) increased follow-up with care plans. To achieve these goals, it was necessary to formulate communication plans targeted at medication reconciliation, patient education, and coordination of outpatient recommendations. Expected outcomes included reductions in medication errors, decreased Emergency Department (ED) and hospital admissions, decreased readmissions, and increased outpatient follow-up and medication compliance.

It was determined that for families experiencing sentinel health care events and transitioning to often-uncertain home care settings, telephone initiatives would likely be the most successful at optimizing participation in transition programs and minimizing travel to clinics. Additionally, given the multiple foci and complexity of communications that would occur, use of the electronic medical record (EMR—ie, HealthConnect) was instituted as the primary form of transfer and communication of information. Fortunately, in KPCO, HealthConnect is available at core hospitals and in all pharmacies and outpatient facilities. In toto, these fundamental practices have allowed for the establishment of two successful transition care processes.

Department Descriptions

**Chronic Care Coordination**

The KPCO CCC Department includes 13.5 full-time equivalents (FTEs) of licensed clinical social workers. Members of this department have had significant training in chronic disease management, goal-setting, and motivation communication. In addition, these staff members have a comprehensive understanding of resources available both through Kaiser Permanente and in the community. Each outpatient clinic has at least one chronic care coordinator on staff. More than 90% of the care provided by this team is by telephone. Patients generally are referred to this team through the in-baskets or pools available in HealthConnect. Most communications are sent directly to the individual clinic “hospital follow-up pool.” This obviates the need for clinicians to be familiar with the individual names of nurses, as all pools have the same name, with the individual clinic name placed at the end so that providers need only the name of the patient’s home clinic. These in-baskets are monitored five days a week, with cross-coverage from other team members when necessary.

**Clinical Pharmacy Call Center**

The KPCO CPCC Department consists of 20.0 FTEs of clinical pharmacists and 6.0 FTEs of pharmacy technicians. The CPCC provides service to the entire Colorado Region; thus, its clinical pharmacists provide medication-management services to multiple patient populations. Members of the CPCC team have substantial training in polypharmacy detection and management, along with extensive experience in managing the care of patients with multiple comorbid conditions. The CPCC’s clinical pharmacists provide telephone care using established protocols for communication, comprehensive documentation, and interactions with patients and their caregivers. In addition to SNF transitions, the CPCC manages medication transitions for members new to Kaiser Permanente and reaches out to patients eligible for Medicare Part D for medication therapy management.

**Continuing Care**

The KPCO Continuing Care Department consists of 9.0 physician FTEs and 9.0 nurse practitioner FTEs. These practitioners monitor more than 100 SNF, long-term care (LTC) facilities, and assisted-living facilities (ALFs) in the Colorado region. There are approximately 300 patients per month discharged from the SNFs and more than 1100 patients monitored in LTC facilities and ALFs by Continuing Care providers. Using a process developed in collaboration with the CPCC and CCC departments, practitioners enter a discharge summary, in a format designed with input from pharmacy and primary care, in the EMR on the day of discharge and forward it to the CPCC.
Methods

I. Transition Program Descriptions

From Skilled Nursing Facility to Home

Kaiser Permanente (KP) nurse practitioners and physicians from the Continuing Care Department conduct onsite rounds at eight contracted SNFs that care for KP patients. These nurse practitioners and physicians generate thorough discharge summaries and use discharge communication forms that are communicated via HealthConnect to the CPCC. The CPCC pharmacists receive these notes and contact the individual patient or his or her caregiver within the following 24 to 48 hours. Before contacting the patient, the pharmacist reviews the patient’s discharge medication orders, prior outpatient medications, and medications that the patient received from the SNF to take home. After reconciling all medications, including addressing any duplication, discontinuations, new initiations, and potential drug–drug or drug–disease interactions, the pharmacist calls the patient’s home. During the conversation with the patient or caregiver, the pharmacist recommends that all of the patient’s medications, including prescription and over-the-counter medications and dietary supplements, be brought to the phone to allow the pharmacist to record each medication and supplement.

At the patient’s clinic for the next phase of transition care, within 24 to 48 hours of receiving the note, the CCC contacts the member. During this conversation, the care coordinator completes a review of systems, conducts a home safety evaluation, provides patient education, and assists in the coordination of outpatient follow-up recommendations. Included in this follow-up is a review to determine whether all referrals and orders, including any home health care, have been completed and any durable medical equipment has been delivered. The goals of this interaction have been compiled into one standard HealthConnect text that is used by every chronic care coordinator to provide uniformity and continuity of care. This formatted note, known as a Smart-Text, has been created for each follow-up contact provided by the chronic care coordinators. These notes are already set up with every question that needs to be asked, including reminders for the nurses and drop down menus for certain questions that have limited responses. These texts can be used to ensure that key health care, follow-up questions are asked—such as last Hgb or shortness of breath—which then can be modified for quality improvement work.

From Hospital to Home

KP hospitalists at the two core KPCO facilities have partnered with the CCC Department to identify key elements to be included in hospital discharge information. Included in these elements are not only comprehensive discharge plans but also salient and often-overlooked information such as where the patient was discharged to, with whom the patient was discharged, a telephone number where the patient may be reached in the next 48 hours, and the name of the hospital from which the patient was discharged. These hospital discharge notes are sent on the day of discharge to the individual clinic hospital follow-up pool. As soon as possible after the discharge note is received, the CCC contacts the patient or the authorized caregiver to review the same HealthConnect text (similar to standard text used for SNF discharges but with an added area for medication reconciliation, because these patients are not sent directly to the CPCC for medication reconciliation). The CCC then completes the review of systems, the home safety check, and an assessment of care-coordination needs. If the medication reconciliation is identified as overly complex, then the chronic care coordinator will consult with a CPCC clinical pharmacist for assistance in medication reconciliation. After the phone assessment is completed, the note, including a scheduled follow-up appointment for the majority of patients, is sent directly to the primary care physician.

II. Study Evaluation of Program

Medication Reconciliation

Although there have been a limited number of studies examining the effect of a medication-reconciliation process on the incidence of medication errors and of use of medical services after discharge from an acute-care facility, we found no reports on the effect of such a process in a managed-care setting. Thus, the CPCC collaborated with the KPCO Clinical Pharmacy Research Department to design an analysis to assess the effectiveness of the CPCC medication-reconciliation program in decreasing mortality rates, the number of ED visits, and the number of follow-up clinic...
visits after discharge from an SNF, compared with usual care. The analysis was a quasi-experimental controlled study. All male and female KPCO patients over the age of 18 years who were discharged from one of three KPCO-contracted SNFs between October 2003 and March 2004 were eligible for inclusion in our study. All phases of the study were reviewed and approved by the KPCO Institutional Review Board.

Patients with discharge summaries received by the CPCC within 48 hours of SNF discharge to primary care had medication reconciliation performed (CPCC group), whereas those whose discharge summaries were not received within 48 hours were sent to primary care to be given usual transition care services (Usual Care group). The primary objective of this study was to assess whether there were differences between the groups in the time to death during the 60 days after discharge; secondary objectives included an assessment of the relationship between each group and the rate of ambulatory visits and the risk of an ED visit during the 60 days after SNF discharge. Risk ratios, with 95% confidence intervals, were calculated between the groups, and adjustments were made for age, sex, chronic disease score (a risk-adjustment score indicating health status at the time of SNF admission), discharging SNF, and hospital-to-SNF primary discharge diagnosis.

Chronic Care Coordination Cost Analyses

In order to document the continuing benefits of the CCC program as a whole, the Institute for Health Research (formerly the Clinical Research Unit) funded a retrospective, data-only evaluation of patients who had already been discharged from the program. A 12-month pre-post analysis of utilization and resulting costs was performed for KPCO members who were enrolled in the program from January 2001 through September 2002 and who were not enrolled in other disease management programs. Utilization and associated costs were measured 12 months prior to a patient’s enrollment in the CCC program and 12 months after enrollment. Costs were determined for outpatient visits, inpatient admissions, hospital outpatient and ED visits, professional services (durable medical equipment, ambulance, physician consults, non-KP provided radiology, oxygen therapy, etc), and home health visits.

All statistical analyses were performed using SAS version 9.1 (SAS Institute Inc, Cary, NC). A p-value ≤ 0.05 was considered significant. Differences in total health care costs for the 12-month period prior to CCC enrollment and the 12-month period following CCC enrollment were compared using a generalized linear model with a gamma distribution and log link function. The total cost model was adjusted for age, gender, and the number of days a patient could use medical services (this was typically 365 days but some patients died or disenrolled from KPCO during the 12-month post-enrollment period).

Results

Clinical Care Analysis

A total of 521 patients (113 and 408 in the CPCC and Usual Care groups, respectively) were included in the analysis. At baseline, the groups had equivalent characteristics. A review of medication-reconciliation records for intervention patients indicated that >90% of all discharge summaries contained at least one potential drug-related problem including duplicative drugs, omitted therapy, and medication contraindications. After SNF discharge, patients who were transitioned by CPCC clinical pharmacists were: 1) 78% less likely to die; 2) 29% less likely to need an ED visit; 3) 17% more likely to follow-up with primary care clinicians (Figure 1).

Chronic Care Coordination Cost Analyses

There was a mean pre-post decrease in total costs per patient of $9974 over the 12-month post-enrollment period for CCC patients.
This generation will outlive any of its predecessors but will do so with a multitude of chronic conditions.

who were not enrolled in another disease management program (30% of the total CCC patient sample were enrolled in at least one other disease management program). Patients significantly increased their pharmacy utilization and costs after their CCC enrollment but this was offset by significant decreases in post-enrollment inpatient (the primary cost driver) and professional service costs.

CCC patients enrolled in 2001, 2002, and 2003 had significantly lower post-enrollment total costs for each of those years suggesting that any time-dependent effect was minimal. The primary cost driver again was a significant decrease in post-enrollment inpatient costs.

When total costs were examined for the six-month period starting 12 months before their enrollment compared to a six-month period that began six months after their CCC enrollment, the total, annualized cost savings per patient was $5276. Looking at costs further out from (before and after) a patient’s enrollment in the program was an attempt to remove some of the effects of regression to the mean that could occur due to a patient having high costs just prior to their entry into the CCC program (a sentinel event that prompted program enrollment) and then those costs dropping following program enrollment. Regression to the mean is the increased probability of extreme values moving toward their mean value rather than to become even more extreme.

Discussion

Our results indicate that identification of unintended medication discrepancies and potential drug-related problems through the medication-reconciliation process can improve patient safety and quality of care. An additional value of the CPCC program, compared with usual care, may have been an enrichment of the discharged patient’s awareness of his or her medication regimen, discharge orders, and potential medication adverse effects. The clinical pharmacist’s speaking directly with patients or their caregivers in the home may have helped patients and caregivers retain more information because the environment was less stressful and thus more conducive to concentration on the counseling provided.

A pre-post analysis of the utilization and costs prior to and after enrollment in the CCC program showed a costs savings of $5276 when adjusting for the possible effects of regression to the mean. Although not all of the savings can reliably be attributed to the program because of design limitations, the saving occurred despite some increases in costs associated with increased patient compliance with health care recommendations.

With the aging of the large baby boomer generation, a crisis in health care is at hand. This generation will outlive any of its predecessors but will do so with a multitude of chronic conditions. A conservative estimate of the annualized savings would be to use the $5276 per patient savings. For 763 patients (the number of patients enrolled in 2003) this equals an annualized savings of $4,025,588. Although systemwide, physicians and nurse practitioners have been educated in evidence-based guidelines for treating these complex chronic conditions and improving outcomes and quality of life, the urgent questions that health care professionals face center on: with what resources and at what cost will such care be provided? There is no single, simple answer to these questions, but the necessary multifaceted approach will have to address both cost containment and quality of care. Opportunities to tackle these components occur at key transitions in care such as those identified here. For improving outcomes among patients with chronic conditions, this transition care project establishes pathways to target.

The use of an EMR provides the means to generate consistent, effective, thorough, and timely communication. The introduction of nearly seamless handoffs, as defined within these programs, would not have been possible without this contiguous form of communication. Additionally, providing the right information to the right person at the right time is an absolute necessity for an efficient process. Ideal communication avoids frustrating redundancy for the patient and clinician without losing critical content. This is established through the electronic transfer of information, making paper charts and phone calls between clinicians nearly obsolete. Patient care will only continue to become more complicated as improved medications and strategies for care become prevalent. Although patients are becoming more informed and involved in their care, they will require ongoing education and coaching to become effective advocates for themselves. This will require a trusting partnership with their health care team as well as a multidisciplinary approach to case management. This transition care project is only the beginning of the handoffs and collaboration possible between multiple specialty programs and a patient’s primary care physician. With continued investigation and improvement,
more streamlining and enhancement of the population approach to managing care for patients with complex conditions will address the health care crisis of an ever-enlarging patient population.

Acknowledgment

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

References


The Law of Life

Change is the law of life and those who look only to the past or present are certain to miss the future.

— John F Kennedy, 1917-1963, 35th President of the United States
Penicilloyl-Polylysine Stability and Clinical Use Over Time

By Eric Macy, MD
CK Lin, PhD
Bruce Goldberg, MD, PhD

Abstract

Background: The major penicillin skin test reagent, penicilloyl-polylysine, has not been commercially available since October 2004. The minimal concentration of penicilloyl-polylysine necessary for safe penicillin skin testing has not been determined.

Methods: Penicillin skin testing was performed on 596 individuals between October 2004 and October 2006 using out-of-date commercially produced penicilloyl-polylysine as part of a complete panel of reagents. The concentration of active penicilloyl-polylysine was measured. Outcomes were compared with those for 921 individuals tested between October 2002 and September 2004 using in-date commercially produced penicilloyl-polylysine.

Results: There was no significant difference in the fraction of patients who had positive skin test results using in-date (5.1%) versus out-of-date (4.7%) penicilloyl-polylysine. There were four mild but no serious adverse reactions in the patients tested with the outdated reagent who were then challenged with oral penicillin class antibiotics.

Conclusion: Penicillin skin testing can be safely done using penicilloyl-polylysine down to a concentration of 4.29 × 10⁻⁵ M.

Penicillin skin testing using a complete panel of reagents is useful for evaluating individuals with a history of adverse reaction to penicillin-class antibiotics. The minimal concentration of penicilloyl-polylysine necessary for safe penicillin skin testing has not been determined.

Penicilloyl-polylysine, also known as benzylpenicilloyl-polylysine and commercially known as Pre-Pen (HollisterStier, Spokane, WA), was available as an FDA-approved penicillin skin test material in the US and other parts of the world from July 1974 to September 2000 and again from November 2001 to September 2004. There have been large studies dating back to the 1960s using benzylpenicilloyl-polylysine as a safe and effective reagent to evaluate penicillin allergy and commercial versions of this material have been reported on since the 1970s.¹,² The current lack of a commercial source for penicilloyl-polylysine has almost completely stopped penicillin allergy skin testing.

We have had an active penicillin allergy skin testing program at the Kaiser Permanente (KP) San Diego Medical Center since the mid-1990s. We typically test 300 to 500 individuals per year. Because of a lack of a commercial source of penicilloyl-polylysine and the availability of outdated Pre-Pen, we studied the clinical use of outdated Pre-Pen in patients with a history of penicillin allergy.

The United States Pharmacopoeia defines benzylpenicilloyl-polylysine injection as having a molar concentration of the benzylpenicilloyl moiety (C₁₆H₁₉N₂O₅S) of not less than 5.4 × 10⁻⁵ M and not more than 7.0 × 10⁻⁵ M as determined by mercuric chloride titration.³ Data are sparse on the clinical use of penicilloyl-polylysine at concentrations lower than 6.0 × 10⁻⁵ M, the nominal concentration of commercial Pre-Pen.

Methods

This project was reviewed and approved by the Southern California KP Health Care Program Institutional Review Board.

Between October 2004 and October 2006, we penicillin skin tested 596 individuals, using outdated Pre-Pen as the only major determinant reagent as part of a complete panel of penicillin skin test reagents, including penicilloate, penilloate, penicillin, and amoxicillin, as previously described.⁴ Most of the tested individuals were referred to the Allergy Department for routine penicillin skin testing in advance of need.

Several of the individuals tested...
had syphilis. If the penicillin skin test results were negative, the patients with syphilis were given a 500-mg oral penicillin challenge and observed for one hour before giving their first intramuscular injection of sustained-release penicillin. They were also observed for 30 minutes after the penicillin injection. There were no adverse events noted in the individuals treated for syphilis.

All of the other individuals with negative skin test results were given a 250-mg oral amoxicillin challenge and were observed for one hour.

The concentration of penicilloyl-polylysine over the duration of the study was determined by mercuric chloride titration.

**Results**

The skin test results in the 596 individuals tested with the outdated Pre-Pen were compared with the results of skin tests done on the 921 individuals tested between October 2002 and September 2004 with non-outdated Pre-Pen as a part of a complete panel of penicillin skin-testing reagents. Of the 921 pre-September 2004 study subjects, 46 had been previously reported on in a study of skin testing in pregnant women with group B strep colonization and 120 were reported on in a study of penicillin skin testing in hospitalized patients.

Table 1 shows the demographic characteristics of the study populations and the skin test results and adverse reactions associated with penicillin skin testing and penicillin-class antibiotic challenge in individuals with negative penicillin skin test results. Three of the reactions associated with the skin test itself occurring in skin test positive individuals were treated with epinephrine and antihistamines; one in an individual with positive results was treated with just antihistamines; one in an individual with positive results was just observed; and the four reactions occurring in individuals with negative results were just observed. A tryptase sample was obtained in one individual having a reaction to the skin test who was treated with epinephrine; the results were negative. Two of the oral-challenge reactions were itch without rash within one hour of dosing, and those study subjects were just observed; one was a delayed-onset rash at 24 hours, and that study subject was also just observed; and the final reaction was a delayed-onset rash at 24 hours, and that study subject was treated with oral antihistamine.

Table 2 shows the decline in the concentration of the benzylpenicilloyl moiety in the Pre-Pen during the two years of the study.

**Table 1. Patient demographics and skin test outcomes**

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Number</td>
<td>921</td>
<td>596</td>
</tr>
<tr>
<td>Female (%)</td>
<td>648 (70.4)</td>
<td>385 (64.6)</td>
</tr>
<tr>
<td>Age (years ± SD)</td>
<td>56.2 ± 59.9</td>
<td>54.2 ± 63.7</td>
</tr>
<tr>
<td>Time since reaction (years ± SD)</td>
<td>25.6 ± 18.7</td>
<td>25.2 ± 20.0</td>
</tr>
<tr>
<td>Skin test results positive (%)</td>
<td>47 (5.1)</td>
<td>28 (4.7)</td>
</tr>
<tr>
<td>Testing reactions (in study subjects with positive results; in study subjects with negative results)</td>
<td>3 (1; 2)</td>
<td>6 (4; 2)</td>
</tr>
<tr>
<td>Challenge reactions (within one hour; delayed)</td>
<td>Not done</td>
<td>4 (2; 2)</td>
</tr>
</tbody>
</table>

**Table 2. Pre-Pen concentration after expiration**

<table>
<thead>
<tr>
<th>Date of assay</th>
<th>Months after expiration</th>
<th>Concentration</th>
<th>Percentage of original concentration</th>
</tr>
</thead>
<tbody>
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**Conclusion**

Penicillin skin testing can be safely performed using penicilloylpolylysine at a concentration down to 4.29 x 10⁻⁵ M. We currently are using self-produced penicilloylpolylysine at a concentration of 6.0 x 10⁻⁵ M as a part of a complete panel of reagents and giving an amoxicillin 250-mg or penicillin 500-mg oral challenge to all negative individuals.

**Acknowledgment**

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

**References**

Introducing Narrative Practices in a Locked, Inpatient Psychiatric Unit

By Lewis Mehl-Madrona, MD, PhD

Abstract

Introduction: Narrative approaches to psychotherapy are becoming more prevalent throughout the world. We wondered if a narrative-oriented psychotherapy group on a locked, inpatient unit, where most of the patients were present involuntarily, could be useful. The goal would be to help involuntary patients develop a coherent story about how they got to the hospital and what happened that led to their being admitted and link that to a story about what they would do after discharge that would prevent their returning to hospital in the next year.

Methods: A daily, one-hour narrative group was implemented on one of three locked adult units in a psychiatric hospital. Quality-improvement procedures were already in place for assessing outcomes by unit using the BASIS-32 (32-item Behavior and Symptom Identification Scale). Unit outcomes were compared for the four quarters before the group was started and then four months after the group had been ongoing.

Results: The unit on which the narrative group was implemented had a mean overall improvement in BASIS-32 scores of 2.8 units, compared with 1.0 unit for the other locked units combined. The results were statistically significant at the \( p < 0.0001 \) level. No differences were found between units for the four quarters prior to implementation of the intervention, and no other changes occurred during the quarter in which the group was conducted. Qualitative descriptions of the leaders’ experiences are included in this report.

Conclusions: A daily, one-hour narrative group can make a difference in a locked inpatient unit, presumably by creating cognitive structure for patients in how to understand what has happened to them. Further research is indicated in a randomized, controlled-trial format.

Introduction

I wanted to explore the possibility of incorporating narrative ideas into a conventional locked psychiatric unit in the southwestern United States. Narrative approaches emphasize a storied understanding of people’s behavior rather than a categorical understanding such as conventional diagnoses provide. It seemed a worthy challenge to start a group that would involve patients who mostly had multiple repeated involuntary admissions to construct new frameworks for understanding their experiences and their recovery. In a narrative approach, current and future behavior is understood as following logically from the plot of the stories in which the person lives. Such understanding facilitates the construction of alternate stories, which leads to different and more desirable outcomes.

Howe wrote that no one belief system could reveal the entire truth. A story can capture multiple belief systems in ways that can lead to constructive behavior change. White stated that people experience problems because they are restrained in some way from taking a course that would ameliorate their distress. This is referred to as “negative explanation.” The population for which this group was designed was steeped in deterministic explanations of defective genes and chemical imbalances. Having alternate explanations that could empower them to make personal changes to prevent undesirable future outcomes could be helpful.

O’Neill and Stockell opened the way for therapists to apply narrative methods to nonfamily groups. When people in their groups discovered that they could challenge the subjugating story about themselves as defective, however minimally, they begin to develop an alternative knowledge, or a reauthored account, of their lives. Standard approaches, particularly in the field of cognitive behavioral therapy and serious mental illness, typically do not make reference to such techniques or constructions of therapy. If psychotherapists incorporate notions of subjugation into our work, then, as Mullaly suggested, we can attempt to use transformational knowledge to change society from one that creates and perpetuates poverty, inequality, and humiliation to one more consistent with values of humanism and egalitarianism.
Methods

Setting
The setting was a locked inpatient psychiatric unit in a hospital in the southwestern United States. The county funded the care of all patients (the majority) who were involuntarily admitted to the hospital on a petition for assessment as to whether they were dangerous to themselves or to others or were persistently and gravely disabled. Almost all patients were indigent and receiving public assistance in one form or another. I took over a group that had been a psychoeducational group provided by social workers. Because the average patient stayed 12 days (the median was six), each week would probably have to begin and end a whole sequence of groups, especially because the majority of patients were admitted on Friday, Saturday, or Sunday. The maximum size of the unit was 18 patients, and the sizes of groups ranged from 2 people to 14, with seemingly random fluctuations. The three locked units in the hospital were viewed as equivalent. Admissions were assigned to each unit in an manner that maintained equal census. Two psychiatrists were assigned to each unit. A fourth geriatric locked unit existed but did not contribute data to this project. Because patients were involuntarily admitted, the institution’s ethics board determined that they could not give consent for participation in research. Therefore, the only acceptable way to study this population was to build on a pre-existing quality-improvement project in which assessments were made at admission and discharge without patient identity. Although we could know to which unit patients were assigned, we could not know which patients attended the group and which did not. Therefore, we had to assess the impact of running the group on the aggregate outcome data for units as a whole rather than on individuals attending the group versus individuals not attending the group. This prevented the use of some statistical procedures and weakened power to detect an effect. Nevertheless, it would be significant to show that the replacement of a psychoeducational group by a narrative therapy group had an impact on aggregate outcomes for the unit as a whole, compared with the other two units that continued to offer the psychoeducational group.

Design and Development of the Group
I built on Vassallo’s design for a narrative group for the seriously mentally ill, which was an outpatient group meeting every two weeks with referred nonpsychotic patients. Unlike Vassalo’s design, however, this study included acutely psychotic patients as well as others in crisis, and the group met daily. This choice is supported by research indicating that such patients could do well with group therapy approaches.\textsuperscript{6,9,10–27} Yalom\textsuperscript{27} traced the bias against group work for psychotic individuals to the psychodynamic perspective in which the leader was largely silent, provoking anxiety among the members. I implemented the concept of Coupland et al\textsuperscript{18} that group facilitators should “suspend disbelief” about the utterances of psychotic people because they may have truly remarkable stories to tell. All utterances of members were respected and deemed worthy of consideration, regardless of how delusional or psychotic from conventional perspectives.

I used Anthony’s model of recovery,\textsuperscript{29} in which people can improve without professional help and professionals do not necessarily hold the key to getting better. Rather, the people themselves do. This concept was introduced in the group because most patients had had repeat admissions and did not seem to be getting better despite episodic professional help.

Anthony believed that a common denominator of recovery was the presence of people who believe in and stand by the person in need of recovery. The idea that they needed a community if they wanted to stop being readmitted to hospitals was introduced to the patients in the group.

Anthony believed that people who have or are recovering from mental illness are sources of knowledge about the recovery process and that these people can be helpful to others who are recovering. This idea was conveyed to people in the groups and it was emphasized that they could be helpful to each other and could learn from and inspire one another, even after discharge.

Previous groups on the unit had been psychoeducational groups in which people learned the importance of taking their medication. The group under study relied more on Reid’s interactional model,\textsuperscript{30} in which group members help each other. The group emphasized members’ actually recognizing that they had areas of competency. They could do that through observations of each others’ descriptions of stories about successes and could be asked to produce their own stories of successes that challenged the dominant story of their defectiveness. In keeping with Northern’s model,\textsuperscript{31} I emphasized an atmosphere of experimentation and flexibility.

The group design aimed to challenge the usual group model in which people talked about their deficiencies, focusing instead on the stories they brought to the hospital about how they got there and on what stories they

In a narrative approach, current and future behavior is understood as following logically from the plot of the stories in which the person lives.\textsuperscript{3}
might prefer to tell (about how they avoided a situation in which they could have been admitted to the hospital). The variety of people present in the group was presented as representing a diversity of perspectives from which each person could learn. The group aimed to help people reconnect with their own knowledge and strengths. In keeping with White and Epston’s descriptions, the group was meant to be an environment to facilitate the generation of new life descriptions so that largely powerless people could feel some small sense of agency or control over their lives.

The group was meant to communicate to its members White’s idea of problems developing an identity of their own, which then exerts influence on individuals, couples, families, and communities. The group was meant to introduce to this population White’s concept of externalizing and separating from the problem so that the degree of its influence over the person could decrease. The group aimed to help people separate themselves from problems and see problems as things that affect them, things against which they can take action, rather than seeing themselves as the problem.

The leaders planned to provide as much structure as necessary to keep the group flowing and to prevent loss of attention, very different from the typical psychoanalytic group.

The purposes for the group included the following:

1. To invite people who were involuntarily admitted with potentially serious conditions to inform others about their experience in a way that honored them as people and gave them a different experience
2. To place usually marginalized people in the role of providing guidance to one another in distinction to their usually experienced subjugated position of being given guidance and being told what to do
3. To help people discover alternative stories to the one leading to their hospital admission and consider how to live one of these stories to avoid future hospitalizations
4. To assist people to be more clear about when it is optimal for them to ask for help
5. To assist people in developing alternate, preferred stories that they could aspire to live that would bring them to a different life situation within a year from discharge. These stories would showcase previously hidden strengths and resources and would compete with the story they had been living of chronic disability and rehospitalizations.

The group was conducted by a social worker and a family physician/psychiatrist. It lasted one hour each day. Discussions about group content and process occurred only within the group at the time that issues emerged or in the final five to ten minutes of the group, with participants as active members of those discussions. All mental health technicians, activities therapists, nurses, and other physicians were invited to attend. Usually only one other person attended (besides the leaders), most commonly a mental health technician, and often because they were assigned to be within arm’s length of a patient attending the group. All patients on the unit were strongly encouraged to attend, including psychotic patients, patients in acute distress, and patients going through withdrawal.

The group was conceived as a daily venture in introducing narrative concepts to the staff. Initially, all mental health technicians were going to be required to attend to learn narrative practices. The social work staff desired to attend, as did the activities therapists. In actuality, the mental health technicians did not attend, except when they were assigned to provide one-to-one staffing for a patient who did attend the group. Only one of the social workers regularly attended, along with intermittently both of the activities therapists, who then augmented the group by creating continuity from what was discussed in the group to what was done in their activity group.

**Typical Group Flow**

The group aimed to create a different experience from what the patients usually encountered in the hospital. (For examples of the patients’ experiences, please see sidebar: People’s Stories.) We began by asking people to tell the story of how they were admitted to the hospital. Almost everyone could relate to this idea. Some people told simple stories, such as “the police brought me here.” Occasionally the group could extend this further and find out what had led the police to bring them to the hospital. Some identified people in their lives who might have called the police. Others could identify situations that had arisen that resulted in the police being called. Others called the police themselves, saying that they were suicidal or were thinking of hurting someone else. Many came for drug- and alcohol-related problems, becoming depressed and sometimes suicidal in relation to alcohol use or becoming psychotic in relation to use of amphetamines, cocaine, or other drugs. Some people could identify defining moments in which they took the first drink or smoked crack cocaine or crystal methamphetamine.

Next we asked people about other possible stories: What could have happened differently? We asked people to identify pivotal moments in which a differ-
Introducing Narrative Practices in a Locked, Inpatient Psychiatric Unit

Outcome Measure

The outcome measure was the BASIS-32 (32-item Behavior and Symptom Identification Scale), a patient self-report rating scale of symptom and problem difficulty, used primarily to assess treatment outcomes. It was already being used on admission for all patients in the hospital and was repeated before discharge. Having a hospitalwide outcome measure in place was helpful. Improvement was ascertained by comparing scores at admission with scores at discharge. The five domains measured by the BASIS-32 are psychosis, daily living/role functioning skills, relation to self/others, impulsive addictive behavior, and depression. Multiple confirmations of acceptable reliability and validity for the BASIS-32 have been conducted. A recent representative field test at 27 treatment sites across the United States assessed a total of 2656 inpatients and 3222 outpatients. Test-retest and internal consistency reliability were acceptable. Tests of construct and discriminant validity supported the instrument’s ability to differentiate groups expected to differ in mental health status and its correlation with other measures of mental health.

Results

Demographics

The mean age of patients responding to the quality-improvement scale for our hospital was 36, with 34% being female and 62% being white. Sixty-six percent had education beyond high school. The average length of stay was 12.4 days, with 72.2% involuntary admissions. The most frequent diagnosis was schizophrenia (27.2%), followed by depressive disorders (26.6%), bipolar disorder (22.4%), other psychotic disorders (6.6%), and substance-related disorders (6.6%).

BASIS Scores

The average change in patient-reported functioning on the BASIS-32 for all patients before the group began was 0.3; in patient-reported depression/anxiety, it was 0.5. The average change in psychiatric symptoms on the Brief Psychiatric Rating Scale was 5.1; on anxiety/depression rated symptoms, 1.8; and in overall functioning on the global assessment of functioning scale, 16.7. For the BASIS-32, on a standardized -4 to +4 scale for change from admission to discharge, where positive means improvement, the hospital as a whole showed a score of 1.0. The percent overall reporting satisfaction as excellent was 33.6%.

Outcomes

First I compared the unit’s BASIS-32 scores with those of the other two adult locked inpatient units. No statistically significant differences were found in BASIS-32 change scores for admission to discharge for each the four quarters (12 months) prior to the start of the intervention. The last quarter was a baseline-monitoring period in which I spoke to the staff about the intervention and did trainings and presentations but did not begin.

Next, I compared changes in the total BASIS-32 scores for the whole hospital from admission to discharge.
for the quarter preceding the start of the group to the quarter during which the group was ongoing. The difference scores were normally distributed and met the required assumptions for a two-sample t-test with unequal variance. The mean discharge score for the hospital as a whole was 22.4 (SD, 8.4; 95% confidence interval [95 CI], 19.75–25.05) and for the unit was 18.4 (SD, 12.0; 95 CI, 13.92–22.88). The difference between discharge scores was -4.0. The comparison of discharge scores was not statistically significant ($t = -1.566; p = 0.124$), whereas the comparison of the admission to discharge differences reached borderline significance for two-tailed tests ($p = 0.06$) and was statistically significant for the one-tailed test ($p < 0.05$), which is justifiable if it is believed that participation could not make people worse.

Finally, I compared the unit’s results with those of the other two units for the quarter in which the intervention was taking place (knowing that there had been no statistically significant differences between units for the previous four quarters; Table 1). My group had a mean overall improvement in BASIS-32 scores of 2.8 units, compared with 1.0 units for the other two units. The results were statistically significant at the $p < 0.0001$ level. Naturally these results must be interpreted with caution because there might have been other reasons why our unit performed better than the other three units.

Because this study actually had only 34.7% power to detect a statistically significant difference, the obtained $p$ values are more impressive than they would initially seem (using the sampsi ['sample size'] command of Stata version 8.2 [StataCorp, College Station, Texas]). Eighty percent power would have required 106 people for the baseline and the same number of responders during the time in which the group was taking place. Subject sample size could be further reduced by including only people who actually attended the group, though this was not our original research question, or through the use of matched pairs.

### Discussion

Throughout the three months of the group, people presented episodes in which they had challenged the prevailing story of them as defective and inferior. Virtually everyone could find a time when they had behaved differently from the expected story.

People readily identified with telling the story of how they came to be in the hospital. Most could tell at least one different story that would have prevented their coming to the hospital. Many had stories that illustrated times when they were successful or doing well. Harder was the idea of making up a story that they would like to tell if we ran into each other on the street one year later. This idea of a preferred story was more difficult. It appeared that this population was not encouraged in general to use their imagination and to fantasize alternate possibilities to the life they were leading. It was hard for them to imagine that their lives could be anything but inferior. They believed that they would always be disabled, should adjust to this reality, accept their Social Security disability income, and settle into the life of the chronically mentally ill. This appeared to be a terribly lonely, isolated, unfulfilling life. It was no surprise that many of them resisted the adjustment to this life by running away from their group home or other placement, by refusing to take medication, and by otherwise resisting those who regulated their lives.

In the group, we were able at times to validate the meaning and purpose behind their resistance and their efforts to overthrow their label even as the group talked about the ways in which that resistance had not been successful in keeping them out of the hospital and to explore other, more potentially successful stories.

The idea of externalization was largely too difficult for group members to grasp over the course of one week, given their many years of involvement with the mental health system of learning and with a story of defectiveness. More than 70% of group patients had concomitant problems with substance misuse, and sometimes the group was able to talk about the use of substances as a

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BASIS-32 = 32-item Behavior and Symptom Identification Scale.
Satterthwaite’s degrees of freedom: 47.5489; $t = 5.2537; p < 0.0001$. 

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The group tried not to define people as “mentally ill” but rather as people whose stories had resulted in hospitalization.
means of reducing the misery, loneliness, and isolation of their conditions. They, like their physicians, were looking for the “magic bullet.” Many felt betrayed by conventional psychiatry’s promise of medications that would make them feel fine. They did not feel fine when taking medication. This led to a search for drugs that would work, including methamphetamine (the apparent drug of choice in our area of the Southwest), cocaine, marijuana, heroin, and alcohol. Group members were clear about the usefulness of these substances in either anesthetizing themselves or in giving them a brief respite of pleasure in the face of a life of pain. For so many of our patients, their lives were miserable, and prescription medications could not be expected to offset the problems of powerlessness, abuse, threat, homelessness, isolation, and the biases of class and poverty.

We followed the ideas of the narrative model as much as possible in an effort to:
1. Emphasize personal agency for group members
2. Have the discussions about the group and about its members within the group for everyone to hear and join
3. Attempt to externalize the problems that had been defined as intrinsic or inseparable from the people having those problems.

Though we hoped to teach skills to mental health technicians for interacting with patients, no evidence emerged that this had happened. It appeared that interaction with patients was not actually a cultural value of the hospital. Typically mental health technicians read magazines, did puzzles, read newspapers, or otherwise occupied themselves when assigned one-to-one with patients. When supervising patients in the day room, they typically used the television or put on movies. This did not change as a result of the group.

The group leader found that he reported the most powerful effects, in that patients who had previously been puzzling to him began to emerge as more complete, complex people. In his previous role as inpatient psychiatrist, he had felt that his relationships with patients were mostly scripted by their expectations for how to behave with him and how he should behave with them. The group provided an opportunity for nonscripted behavior because many of the patients had other psychiatrists and had no need to cajole or influence him in any way. He found himself appreciating talents and resources for these patients much more than he had in his limited role as psychiatrist.

Virtually no effects on nursing staff members or other physicians were found.

### People’s Stories

The largest impact of our group was on the leaders. The group members came alive as interesting and resourceful people instead of as the labels usually foisted on them (“drug addict,” “alcoholic,” “burned-out schizophrenic”).

1. One woman, who was being considered for admission to the state hospital because her illness was thought to be so severe, told amazing stories of her skills at managing junkyard dogs. She was always brought along on trips to steal metal and other parts from junkyards because of these skills. She explained in detail the culinary preferences of the different species of dogs that guard junkyards. She told how she calmed a guard dog and made it lie down so that she could scratch its belly. The social worker asked her if there was one food that one should always take to the junkyard, and she answered, “Peanut butter.” Her skills were most impressive, though her take of the raid seemed less than commensurate with her considerable skill of getting her compatriots safely to their goal. As an example of the week’s progress, on the first day she wouldn’t articulate how she got to the hospital. She said very little on Monday. On Tuesday, she was able to talk about the ambulance appearing at her apartment and bringing her to the hospital; she was not sure why it had. Wednesday was when she told the junkyard dog story. On Thursday, she was able to talk about how she might do better if she reached out to others and made friends instead of waiting for criminals to come to her for help stealing auto parts from junkyards as her only means of social contact. On Friday, she told a story of how she would like to tell group members in a year that she had made friends and that they came to check on her when it had been too long since she had come out of her apartment. The group helped her to explore how she might reach out to others to find friends.

2. Another man, labeled a hopeless heroin addict, told a story of having been clean and sober three years when he found Christianity and was living a Christian lifestyle. He had spent 22 of the past 25 years in prison and in and out of parole and probation, but for three years he had functioned very well. We learned that his downfall came when he started working away from home (and the support system of his church) with Mexican laborers on a roof project. Their habit was to drink beers after work. One day he acquiesced and joined them, and that evening of drinking led to a return to heroin use one week later. He believed that his downfall came when he left his daily church meetings to work in a city two hours away that required his staying in a motel surrounded by beer-drinking laborers. This helped the group form a story of recovery that might prevent that. On the second day, he was able to envision alternate stories: he could have stayed home; he could have gone to Alcoholics Anonymous in the new town; he could have found other things to do at night than drink. On the third day, he told the group several stories of times when he had relapsed and had gotten back on track. People questioned him carefully about how he did that; others in the group struggled with sobriety. On the fourth day, he named his alternatives and joined the group in an exercise of following each of three of them for a month. He decided from that exercise that going back to work with the laborers was a bad idea. The group supported most his plan of being a caretaker for a local church, which gave him a place to live and a small stipend. On Friday he told a story about meeting me one year later and proudly telling about staying clean and sober and working a whole year for the church, joining in Bible study, making friends who did not drink, and putting his past behind him.

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Continued from previous page.

3. Another woman, labeled as having hopeless borderline personality disorder, was enraged by the injustice of being taken to court to be ordered into treatment. She told her story in the group of being compliant with all of her treatment programs but being made worse by whatever medication she was given. She did not believe that she needed medication. When she was not taking medication, she worked at managing a convenience store and supported herself and her family. The medication made her sleep all day long. A story emerged of what appeared to be chronic misdiagnosis. The group helped her rehearse her story and eventually she presented it in group to her psychiatrist on the day before her court hearing. He was so impressed that he dropped the court proceedings and discharged her. On her first day, she was too angry to talk. On her second day, she ranted about the injustices done to her. On her third day, she told the group about her success at managing a convenience store and how proud she was when she brought home a paycheck. On the fourth day, she talked about wanting to go back to work at the convenience store and wanting to confront her psychiatrist about what she thought was a misdiagnosis and wrongly prescribed medication. We asked him to join the group on the fifth day. He did, and she told her story. After he left, she told us a story about being at the cash register one year later when one of us came to get gas and how proud she was about working and supporting her family so well.

4. Another man was admitted for being psychotic. When he told his story in group, all the members became convinced that he was indeed dangerous, but not because he was psychotic. Rather, he seemed to enjoy hurting other people. Though his story was unappealing to the leaders and all the other group members, we helped him rehearse it and also tell it to his psychiatrist, who became convinced that the man was just dangerous and not psychotic. This man was promptly discharged. He provided an example of one person’s preferred story being so different from everyone else’s preference that acute discomfort arose, yet we found a way to be nonjudgmental in letting him tell his story and organizing it in such a way as to present it to his physician. This man came to only the first three group sessions. On the first day, he told a story about a drug deal gone bad and how he decided to be suicidal so that the dealers he had ripped off would not kill him. On the second day, he told the group an alternate story of how he could have ambushed them and killed them first. On the third day, he told us a story about murdering someone and getting off with a plea of self-defense. This was the story that led the group to beg for his discharge.

The bias in the group was that everyone can find some sense of personal agency, however small. This served as a beginning for more personal agency and for more empowerment. Externalization was used to counter the idea that “I am bad and there is nothing I can do.” If we see problems as problems instead of people as problems, change is more possible. We maintained a valueless response about all possible solutions, focusing on following the story to learn the consequences of that solution and then deciding whether a particular story was a good one. In the beginning, the facilitator had to change the topic every ten minutes or so to keep the participants engaged; later in the program, more sustained attention was possible. It seemed that people learned how to engage in a process that was new to them. We were also engaged in collaborative topic-building and creating shared experience. We generally believed that patients’ efforts, and not therapists’ interventions, produced therapeutic change.

However important the relationship is, patients do the work, even with poor therapists.

Those patients who attended the group tended to come every day. They described the group as a welcome relief from the boredom of the unit. Some enjoyed hearing one another’s stories. We had no way to obtain follow-up data from people after discharge. One member commented that the group had helped people to see that they had a more normal side. Members felt easy and comfortable in the group. As a group member said, “There was no pressure and no judgment.”

Most significant and rarely reported is how the group changed the leaders’ experience. We felt more meaning and purpose at work. Our work was often a meaningless experience because we spent most of the time documenting people’s histories with lengthy dictations and had little time to actually spend in dialogue with people except for the standardized questions that everyone had to be asked. The group provided a context from which to view the stories of patients’ lives and to hear success stories and stories that could never come to light within the context of conventional psychiatry. Each of us looked forward to the group as a break from our usual routine. So many of our patients, who were repeaters, had no services or resources in the community and had to be discharged to essentially nothing. Others were lost in the substance misuse story and came to the hospital to dry out or detox or just for a break from drug use. Others were homeless and had learned to come to the hospital and say they were suicidal when things got too hard on the street. Because 72% of the study population was in the hospital involuntarily, it represented the most severe of the seriously mentally ill population. The ability of this group to participate in narrative practices, even while coming off drugs or being psychotic, was amazing and was a testimony to the power of story in people’s lives.

The group tried not to define people as “mentally ill” but rather as people whose stories had resulted in hospitalization. We asked the question of how their stories could change to avoid hospitalization. Group leaders tried to introduce the idea of the importance of other people and community—in essence, to have an audience to support the story one would prefer to live.

We found that participation in the group for staff members encouraged them to “come down to earth” more. They found us having more direct and genuinely curious conversations with patients that were not couched in the usual power differential of staff versus patients. No one had to be at the group.
People could leave at any moment. The criterion for staying was to want to stay. The staff members who did occasionally attend were amazed at the hidden richness of peoples’ lives.

Participants did tell us how important it was to have staff (including physicians) who could listen and not discount the patient’s knowledge. They did not like physicians who claimed to know more about them than they did or who discounted the side effects that they experienced from medications. They wished more physicians and nurses would have attended the group to see them from a different vantage and to hear their stories. They complained about how little time the physicians actually spent with them and how little some of the physicians seemed to care.

We were amazed at how naïve these patients were about psychosocial interventions of any kind. It appeared that they were mostly approached with case management and medications, and the idea of talking together and helping each other solve problems was largely ignored. Their attention span was short. Often, group leaders had to change topics every ten minutes on the first day of group (usually Monday) to keep people involved, but with increasing time in the group, attention spans increased. We did a few mindfulness exercises that could not be tolerated any more than five or ten minutes and seemed very strange to our participants, who nevertheless seemed to desperately need these techniques of stopping one’s thoughts and sitting calmly in the present.

We suggest that further study is warranted with increased sample size to have adequate power to demonstrate a statistically significant effect. This study serves to introduce the topic and gives some guidelines for calculating sample size. We suggest a future study that includes measures of how the group affects staff and patients who attend, with the opportunity for follow-up after group members leave the hospital.

Acknowledgment

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

References


Sacred Narrative

People need a sacred narrative. They must have a sense of larger purpose, in one form or another, however intellectualized. They will find a way to keep ancestral spirits alive.

— Edward O Wilson, PhD, b 1929, scholar and naturalist, Professor and Curator of Entomology at the Museum of Comparative Zoology at Harvard University
“Tulip Study”

oil on canvas
24“ x 12”

By Carol Nelson

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

More of her artwork can be viewed on her Web site: www.carolnelsonfineart.com and on her blog at www.carolnelsonfineart.blogspot.com.
Fetal Heart Rate Pattern Notification Guidelines and Suggested Management Algorithm for Intrapartum Electronic Fetal Heart Rate Monitoring

By Thomas Downs, MD
Evelyn Zlomke, RN, MPH

Abstract

Context: Numerous randomized controlled trials have demonstrated limited efficacy of intrapartum fetal heart rate monitoring in improving fetal outcome. A potential reason is the wide variability in clinical decision making seen with its use. Standardizing management of variant intrapartum fetal heart rate tracings may reduce this variability and lead to improvement in fetal outcome.

Objective: We sought to develop notification guidelines and a management algorithm for variant intrapartum fetal heart rate tracings that improve fetal outcome and do not increase the operative delivery rate.

Design: Outcomes for cases involving the use of our notification guidelines and management algorithm over six months (1181 deliveries) were compared with outcomes for historical control subjects (2247 deliveries).

Main outcome measures: The main outcome measures were Apgar scores <7 and the operative delivery rate.

Results: We found no change in fetal outcome or operative delivery rate.

Conclusion: Our notification guidelines and management algorithm are safe and do not increase the operative delivery rate. A large multicenter trial is needed to demonstrate improvement in fetal outcome.

Introduction

When it was introduced in the 1960s, the rationale for intrapartum electronic fetal heart rate (FHR) monitoring was that it serves as a screening test for asphyxia severe enough to cause neurologic damage or fetal death. Uncontrolled trials in the 1970s demonstrated a reduction of more than threefold in intrapartum fetal death with use of FHR monitoring. These positive results fueled clinical enthusiasm, allowing FHR monitoring to become common practice before it was critically evaluated. A number of randomized controlled trials followed in the 1970s and 1980s that failed to show significant benefit from FHR monitoring. The largest trial demonstrated a 55% reduction in transient neonatal seizures. However, there was no difference in the incidence of cerebral palsy at four-year follow-up evaluation. Along with questionable benefit, the randomized trials also demonstrated a two- to three-fold increase in the cesarean section rate.

A potential reason FHR monitoring has not been proved efficacious to this variability is the wide variability in clinical decision making with its use. In the mid-1990s, the National Institute of Child Health and Human Development (NICHD) convened a research-planning workshop to develop standardized and unambiguous definitions for FHR tracings. It produced a standardized terminology that was published in 1997 and eventually endorsed by both the American College of Obstetricians and Gynecologists (ACOG) and the Association of Women’s Health, Obstetric and Neonatal Nurses in 2005. The NICHD workshop also considered a management algorithm, but participants were unable to reach consensus.

We believe a standardized terminology alone is not sufficient to significantly reduce the variability in clinical decision making with use of FHR monitoring. We introduce the Kaiser Permanente (KP) Vallejo Medical Center FHR Tracing Notification Guidelines and Suggested Algorithm for the Management of Variant Intrapartum FHR Tracings. The goal of our notification guidelines and management algorithm is delivery in the presence of neonatal vigor, and without an increase in the operative delivery rate.

An umbilical arterial blood pH <7.0 has long been considered...
significant acidemia because it is associated with (but not predictive of) neurologic and other organ damage.\textsuperscript{15,16} We define significant acidemia as a pH <7.10. Although not associated with catastrophic outcomes, a pH between 7.0 and 7.1 is associated with costly and distressing morbidities requiring measures such as supplemental oxygen, intravenous lines, and admission to a neonatal intensive care nursery.\textsuperscript{11,17}

We define neonatal vigor as a five-minute Apgar score $\geq 7$, because a score $<7$ is associated with significant neonatal morbidity.\textsuperscript{18}

**Notification Guidelines and Management Algorithm**

The notification guidelines and management algorithm are designed to work in tandem in a multidisciplinary approach. It was our intent that they promote use of NICHD terminology and further communication within the obstetric (OB) team. They are color coded in a manner similar to the familiar traffic light: green for FHR tracings that require attention but not urgently (indicated here by a dotted line box), yellow for tracings that require urgent attention (dashed line and a light grey box), and red for tracings that require emergent attention (solid line and dark grey box).

They emphasize the significance of moderate FHR variability because it is strongly associated with a pH $>7.15$ or newborn vigor,\textsuperscript{19} and even with repetitive late or variable decelerations for one hour, its presence suggests a pH $>7.10$.\textsuperscript{20} They both include tables that detail conservative measures, which are standard maneuvers that improve fetal status depending on the clinical situation.\textsuperscript{13,21} The wording in the tables differs slightly because the notification guidelines are geared to promote SBAR. (Adapted from the military, SBAR stands for situation, background, assessment, and recommendation. It is succinct communication used between all members of the OB team when presenting patients. By allowing every member to make recommendations, SBAR flattens the labor and delivery (L&D) hierarchy, promoting the importance of multidisciplinary points of view and leading to greater patient safety.)

Finally, they are both designed to fit on a single sheet of 8.5"x11" paper and are laminated and posted at multiple areas in L&D.

The notification guidelines (Figure 1) are laid out with the presenting tracing on the left and the recommended time before notification on the right. There is no green-coded section (dotted line and box) as

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**Table:**

<table>
<thead>
<tr>
<th>Variable Decelerations</th>
<th>Conservative Measures</th>
<th>Late Decelerations - Minimal or Absent Variability-Tachycardia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change maternal position to improve FHR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decrease oxygen</td>
<td></td>
<td></td>
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<tr>
<td>Administer 100% oxygen</td>
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<td></td>
</tr>
<tr>
<td>Correct maternal hypoxemia with IV fluids and consider recommending vasopressors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consider recommending tachycardia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consider recommending antibiotics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Place patient on left side</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decrease intravenous fluids</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consider recommending tachycardia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consider recommending antibiotics</td>
<td></td>
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</tbody>
</table>

**Figure 1:** Fetal Heart Rate Tracing Notification Guidelines chart.

\textsuperscript{23}bpm = beats per minute; CNM = certified nurse midwife; MD = physician; FHR = fetal heart rate; FM = fetal movement; IV = intravenous fluids; RN = registered nurse; SBAR = situation, background, assessment, and recommendation.
We believe that encouraging the RN to make recommendations will foster communication and promote patient safety.

there is in the management algorithm because a complete listing of FHR tracings that do not require urgent provider (physician or certified nurse midwife [CNM]) notification would not be practical. The yellow-coded section (dashed line and light grey box) addresses tracings that require provider notification within 20 minutes. It includes tracings with decelerations or tachycardia because they are associated with fetal hypoxemia, which can progress to acidemia, and it includes tracings with minimal or absent variability because they are significantly associated with acidemia if they persist for more than an hour. As a general rule, FHR variability gradually diminishes over a period of 60 to 120 minutes in association with recurrent late or variable deceleration as significant fetal acidemia develops. The rapidity with which acidemia develops is influenced by the depth and length of the decelerations. We believe that 20 minutes is a reasonable interval before notification because it allows at least 40 minutes before the tracing is significantly associated with acidemia. However, the notification guidelines instruct the registered nurse (RN) to notify the provider before 20 minutes have passed if the evolution of the tracing suggests that acidemia is developing quickly.

For an FHR tracing that has minimal variability with no decelerations (and is not the initial 20 minutes of tracing), the notification guidelines instruct the RN to perform scalp stimulation or vibro-acoustic stimulation (VAS). A positive response to scalp stimulation or VAS is associated with a fetal pH >7.20,25 If there is no response or a second test is needed, the RN is instructed to notify the provider. Allowing the RN to perform a single test avoids notification for tracings secondary to the fetal sleep cycle.30

The red-coded section (solid line and dark grey box) of the notification guidelines addresses FHR tracings that require immediate provider notification. This includes a tracing with absent variability and recurrent decelerations, because it may be associated with significant acidemia; a prolonged deceleration >3 minutes, because notification at three minutes allows time for delivery within ten minutes (if necessary); and finally, loss of the FHR tracing so that a previously undetected deceleration can be recognized in a timely manner.

Along with calling for provider notification, the notification guidelines instruct the RN to institute simple conservative measures (change maternal position, discontinue oxytocin, administer oxygen, conduct a vaginal examination, administer fluids intravenously) and to recommend more interventional conservative measures (amnioinfusion or administration of terbutaline, vasopressors, or antibiotics) if deemed necessary. These are detailed in the table “Conservative Measures” in Figure 1. We believe that encouraging the RN to make recommendations will foster communication and promote patient safety. We also strongly encourage the use of SBAR.

The management algorithm (Figure 2) includes all three colors of the traffic light. The green-coded section (dotted line and box) addresses the management of a tracing showing marked or moderate variability with decelerations or tachycardia. Moderate variability is strongly associated with a nonacidemic fetus. However, because marked variability, decelerations, and tachycardia are associated with fetal hypoxemia, which may progress to acidemia, the algorithm suggests that the provider consider the initiation of conservative measures.

The yellow-coded section (dashed line and light grey box) addresses the management of a tracing with minimal or absent variability for 20 or more minutes. If the tracing has recurrent variable decelerations (<90 beats per minute) or recurrent late decelerations with minimal or absent variability for 60 or more minutes, the management algorithm instructs the provider to deliver the infant because such a tracing is associated with significant acidemia.

The table on the bottom right side of Figure 2 lists relatively common FHR tracings associated with significant acidemia. Such tracings should prompt the provider to proceed to delivery. If the tracing is not associated with significant acidemia, then the algorithm instructs the provider to initiate conservative measures and to assess fetal well-being with scalp stimulation or VAS. Fetal scalp blood sampling (for pH) has long been used to assess fetal well-being. However, scalp stimulation and VAS are easier to perform and have been shown to be reliable alternatives. Scalp stimulation or VAS should be performed every 20 minutes if there is no return of moderate variability. If the tracing persists with minimal or absent variability and there is no response to scalp stimulation or VAS for 60 minutes, the algorithm instructs the provider to deliver the infant because such a tracing is associated with significant acidemia.

The red-coded section (solid line and dark grey box) of the algorithm addresses the management of a prolonged deceleration <60 beats per minute (or <80 beats per minute if remote from delivery). At severely reduced heart rates, particularly <60 beats per minute, fetal cardiac conditions are considered to be ominous.
output cannot be sufficiently maintained, and acidemia can develop quickly. When there is cessation of oxygen delivery, it is likely that neuronal cell damage or death begins at approximately ten minutes. In patients with prolonged decelerations after uterine rupture, significant neonatal morbidity was avoided if delivery was accomplished within ten minutes. The red-coded section (solid line and dark grey box) of the algorithm is based on a goal of accomplishing delivery within ten minutes from the time the prolonged deceleration reaches its nadir. Fortunately, most prolonged decelerations resolve with little or no intervention; however, there are no reliable indicators that distinguish a transient deceleration from a bradycardia. The algorithm instructs the provider to prepare to move the patient to the operating room (OR) for delivery if the deceleration does not resolve by three minutes. If the deceleration has resolved after transport to the OR, the decision to deliver the infant should be reevaluated. The choice of three minutes as a threshold for moving the patient is based on recommendations by the KP National Risk Management Perinatal Patient Safety Transfer Project (PPSP).

**Methods**

The notification guidelines and management algorithm were approved by the Vallejo Medical Center PPSP committee. They were

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**Figure 2.** Kaiser Permanente Vallejo Medical Center suggested algorithm for the management of variant intrapartum fetal heart rate tracings ($\geq$ 32 weeks estimated gestational age) chart. This document is intended to assist the provider in the management of variant intrapartum fetal heart rate tracings.

*Color representations available from the authors upon request.*

bpm = beats per minute; decel = deceleration; FHR = fetal heart rate; IV = intravenous; min = minutes; VAS = vibro-acoustic stimulation.
introduced to all Vallejo medical and RN staff in November 2005 in a four-hour tutorial in combination with four training DVDs. The objective of the DVDs was to facilitate the adoption of NICHD terminology as the standard language for all KP facilities and assist in the development of collaborative practice agreements that will establish a more consistent exchange of information among OB team members. A “strip review” for all laboring patients was established at morning rounds in which the RN presents the patient to the OB team and describes the FHR tracing using NICHD terminology. (We have found the paper copy of the FHR tracing superior to the monitor screen for this purpose). The entire OB team then agrees on a management plan with the help of the management algorithm.

Data were obtained directly from the delivery logs from January 1, 2006 to June 30, 2006 (beginning approximately one month after introduction of the algorithm and guidelines) and from the same six-month period in 2005 and 2004. The mean monthly incidence of five-minute Apgar scores <7, cesarean section rate, and surgical vaginal delivery rate were calculated. A t-test was used to compare data. Statistical software used for analysis was Excel 2003 (Microsoft, Seattle, WA). All significance tests were two-tailed, with an α value of 0.05.

We conducted a survey of our staff. Providers and RNs were asked to answer “never,” “25%,” “50%,” “75%,” or “always” to the following four questions: 1) How often do you use the management algorithm? 2) Does the management algorithm support your decision making? 3) Does the management algorithm simplify your decision making? 4) How often have you observed the RNs using the notification guidelines? The RNs were asked to answer in a similar fashion the following four questions: 1) How often do you use the notification guidelines? 2) Do the notification guidelines support your decision making? 3) Do the notification guidelines simplify your decision making? 4) How often have you observed the doctors or CNMs using the management algorithm? All staff members were also asked their age, sex, and years of experience.

**Results**

We compared 1181 deliveries (from January 1, 2006 to June 30, 2006) to 2247 deliveries (from the same six-month period in 2005 and 2004). We found no difference in the rate of five-minute Apgar scores <7, cesarean section rate, or operative delivery rate after introduction of our notification guidelines and management algorithm.

The survey revealed several trends. Individual staff members tended to give the same answer at all four questions they were asked. Physicians with more than ten years of experience consistently answered all four questions with either “never” or “25%.” Physicians with less than ten years of experience tended to answer all four questions with either “50%” or “75%.” No physician answered “always.” CNMs tended to answer all four questions with either “50%” or “75%” no matter how many years of experience they had. RNs with more than ten years of experience tended to answer all four questions with either “50%” or “75%.” RNs with less than ten years of experience tended to answer all four questions with “75%” or “always.” No RN answered “never.” During the dates the trial was conducted, staff members were evenly divided, such that approximately 50% of the physician and CNM staff and 50% of the RN staff had more than ten years of experience, and 50% of each group had less than ten years of experience.

**Discussion**

Our trial has several obvious limitations. First of all, it was not randomized. However, we believe that a randomized trial would not be practical. As previously stated, our notification guidelines and management algorithm were introduced to our OB staff during a four-hour tutorial along with PPSP training DVDs that encourage the use of SBAR and NICHD terminology. These interventions, along with the “strip review” at morning rounds involving the entire OB team, promote and develop a collaborative practice style in an L&D unit. Randomizing individual members of the OB team to either use or not use these interventions would require dividing L&D into two isolated units. Randomizing patients alone would require providers to develop two different practice styles.

Our trial failed to assess an effect on the incidence of umbilical artery pH <7.10 because our facility does not currently have a reliable method of recording and tracking cord pH. We hope this will change in 2007 when the KP HealthConnect program is instituted at the Vallejo Medical Center.

Finally, our trial was limited by its relative small size. It had insufficient power to demonstrate a significant effect on the incidence of five-minute Apgar scores <7. Because the incidence is only in the 2.5th percentile at the Vallejo Medical Center and the incidence of umbilical artery pH <7.10 is only in the 2.5th percentile at tertiary centers, it would take a very large trial to demonstrate a significant effect on either. If we choose 0.05 as the type I error, 80% as the power, and 20% as the...
The future of FHR monitoring is uncertain.


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**Hope**

While there’s life, there’s hope.

― Terence, 190-158 BC, Roman comic dramatist
“Carefree Days”

oil on canvas
48” x 60”

By Ming Jing (Mike) Wang, MD

Dr Wang is an anesthesiologist at the Santa Clara Medical Center. He is a self-taught artist working with oil, acrylic, and water media. Dr Wang focuses his artistic work on human faces and figures, portraying people’s emotions in a realistic manner. This painting is part of a group of paintings inspired by the lives of Tibetans Dr Wang encountered in his recent travel to Tibet. More of Dr Wang’s work can be seen on his Web site: www.mwangmd.com.
A Decade of Experience with a Multiday Residential Communication Skills Intensive: Has the Outcome Been Worth the Investment?

By Terry Stein, MD

Abstract
Objective: To present three outcome measures from a multiday residential Communication Skills Intensive provided to 525 clinicians in a large health care organization over ten years. The Intensive includes 10-12 hours of videotaped role-play with actors, extensive feedback, and self-reflection.

Methods: The background, content, and format of the Intensive are described. Results of three outcome measures are presented: program evaluations, a one-time physician satisfaction survey, and longitudinal patient satisfaction scores.

Results: A sampling of evaluations from three programs (n = 73) showed mean scores of 4.83 (on a Likert scale of 1-5) in response to the item “I will incorporate the skills acquired at this program into my clinical practice” and 4.90 in response to the item “Overall, this training was valuable.” On a follow-up physician satisfaction survey, nearly all (99%) of the 70 respondents indicated that the course had helped to improve their communication skills with patients. Most (89%) also said that applying the techniques they learned had increased their own professional satisfaction. Patient satisfaction scores for cohorts of course participants showed consistent increases in the six months following the course compared to the six months prior. This improvement has been sustained for as long as seven years.

Conclusion: Physicians have highly valued their participation in the Communication Skills Intensive. The impact of attending the course has been noticed by their patients. Offering physicians the opportunity for in-depth learning to enhance their interpersonal skills is a worthwhile investment for a health care organization.

Introduction

Three typical scenarios:

“I must be missing something. I thought my patients liked me.”

Dr. M is a 32-year-old internist who completed his residency two years ago. He prides himself on his thoroughness even though he usually runs an hour behind and stays late most nights to finish his charting. Being so dedicated to his patients, Dr. M is shocked when his patient satisfaction scores are among the lowest in his department. His chief suggests that he attend the Communication Skills Intensive, a multiday residential program focusing on effective communication with patients. Though he questions the validity of his scores, he also feels angry—at his patients, at the organization, and at himself. He decides to enroll in the Intensive, cautiously hopeful that he will better understand his patients’ perceptions and find out how he can improve.

“I’m not very good at the touchy-feely stuff.”

Dr. B is a 51-year-old orthopedic surgeon who is regarded by his colleagues and his patients as having excellent technical skills. For most of his 18-year career, he has been rewarded for his successful surgical outcomes and high productivity. More recently, he has been told by his chief that he needs to improve his patient satisfaction scores and that too many of his patients file complaints saying that he is rushed, businesslike, and doesn’t listen. He wants to achieve scores that would more accurately reflect his competence and he doesn’t want to incur any financial penalty. Though he believes that he is “too old to change,” he signs up for the Intensive.

Terry Stein, MD, is an internist and Director, Clinician-Patient Communication for The Permanente Medical Group at the Regional Offices, Oakland, CA. E-mail: terry.stein@kp.org.
Interventions to enhance clinician-patient communication must be effective in an environment of greater time constraints, new technology, and shifting consumer expectations. The outcomes resulting from the Communication Skills Intensive showcase the power of physicians to change, demonstrate that patients notice the changes, and provide a snapshot view of how communicating differently can enhance morale.

**Methods**

**Background**

Since 1990, when the first regionwide educational program on clinician-patient communication was instituted,\(^1,2\) The Permanente Medical Group (TPMG) has shown strong commitment to enhancing the communication skills of its physicians. TPMG currently consists of more than 6000 physicians who serve over three million members of the Kaiser Foundation Health Plan in Northern California.

In 1994, the organization first distributed its MPS survey to Health Plan members after office visits. The MPS survey was developed and validated by survey experts within the organization. It includes a total of 25 questions, most of which address the patient's care experience: calling for an appointment, interacting with staff, seeing the health care professional, visiting lab and radiology, and filling a prescription. Physicians receive reports of their scores on the five questions that pertain to the patients' interactions with them. The questions ask patients to rate the quality of the physician's skills and abilities; their confidence in the care the physician provided; how well the physician listened and explained, involved them in decisions about their care, and showed familiarity with their medical history. Once distribution of individual scores became routine, questions arose as to how to assist physicians who scored below the mean calculated for their department. It was thought that existing one-day or lunchtime educational programs were not adequate to enable physicians to change the way they interacted with patients.

In 1995, the Board of Directors of TPMG approved the author's proposal to pilot a five-day residential program designed by the Bayer Institute for Healthcare Communication.\(^3\) The initial goal of the program was to improve the communication skills of physicians who fit any of four suggested criteria: low scores on the MPS survey, frequent patient complaints, medical-legal cases involving poor communication, and difficulty communicating with colleagues or staff. These criteria were meant to guide but not limit enrollment.

The three physicians described above represent many of the clinicians who have attended the Communication Skills Intensive in Northern California over the past ten years. Physicians in the first years of their career, like Dr M, can feel devastated when they receive low patient satisfaction scores. Seasoned physicians who get patient complaints like Dr B may feel defensive and skeptical. Other physicians seek to better handle difficult interactions or aim for general improvement in their interactions regardless of their patient satisfaction scores, like Dr S.

The Intensive is a 4- to 5-day residential clinician-patient communication program that includes videotaped role-play practice with actors. By working on customized scenarios with feedback from actors, faculty, and peers, participants in the Intensive gain insights about their interpersonal skills and learn strategies to communicate more effectively.

This article highlights the experience of 525 clinicians who attended the Communication Skills Intensive between 1996 and 2005. I describe the background, format, and content of the course and present three outcome measures: a brief summary of program evaluations, results of an online survey about the effect of the program on participants’ communication behaviors and professional satisfaction, and patient satisfaction results from the regional Member Patient Satisfaction survey (MPS) tracked up to seven years following a program.

The story of the Intensive addresses several important questions: Can physicians change their communication habits by attending communication skills training? If physicians change how they interact, are patients more satisfied? Is improvement in patient satisfaction temporary or sustained over time? How does participation in an intensive communication skills course affect physician satisfaction? Is training physicians to communicate more effectively worth the investment?
Table 1. Description of four-day intensive educational program for improving communication skills of physicians

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Agenda</th>
<th>Format</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant preparatory work</td>
<td>Speak with small-group faculty by phone; read two or three articles (provided); audiotape two patient visits; complete self-assessment checklist when reviewing taped visits; complete questionnaire about communication beliefs and style</td>
<td>Phone calls made one to two weeks before start of course: answer questions, address concerns, discuss taping, review personal nature of the course, ensure confidentiality; materials sent three to four weeks before start of course</td>
<td>Clarify expectations; identify participants who lack motivation or who might pose specific challenges; prompt thinking and self-reflection before start of program; record actual patient interactions</td>
</tr>
<tr>
<td>Day 1</td>
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<tr>
<td>Morning</td>
<td>Introductions and overview; Four Habits Model presentation; assess trigger videotapes</td>
<td>Large-group session: didactic, demonstrations, table work</td>
<td>Increase comfort and familiarity; present Four Habits Model as framework for practice sessions</td>
</tr>
<tr>
<td>Afternoon</td>
<td>Introductions, background; discuss preparatory-work questionnaires; review segments of audiotapes</td>
<td>Small-group sessions</td>
<td>Begin observing and coaching others; create safe environment for small-group work; identify individual strengths and areas for improvement</td>
</tr>
<tr>
<td>Evening</td>
<td>Read one or two articles; prepare list of goals</td>
<td>Individual</td>
<td>Clarify specific behavioral goals</td>
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<tr>
<td>Day 2</td>
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<tr>
<td>Morning</td>
<td>First video practice session in which actors portray typical (nonchallenging) patients</td>
<td>Small-group sessions in which actors rotate to different groups every 50 minutes</td>
<td>Practice current and new strategies to address goals; get feedback from actors, faculty, group; appreciate own strengths, clarify areas to improve</td>
</tr>
<tr>
<td>Afternoon</td>
<td>Challenging interactions—dynamics and strategies; dramatize role of personal history and culture in shaping communication behavior; complete worksheet on personal history</td>
<td>Didactic, demonstrations, table work; short play presented by actors; debrief using questions from worksheet</td>
<td>Deepen understanding of own contribution to difficult interactions; present model for handling conflict</td>
</tr>
<tr>
<td>Evening</td>
<td>Discuss personal history worksheet, meaning in work, self-care</td>
<td>Individual; small-group sessions</td>
<td>Connect life experiences to current communication habits and challenges; share own stories with others; enhance self-awareness</td>
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<tr>
<td>Day 3</td>
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<tr>
<td>Morning</td>
<td>Second video practice session in which actors portray scenarios requested by faculty or participants; summarize feedback</td>
<td>Small group sessions with actors rotating every 50 minutes</td>
<td>Practice current and new strategies for handling own “hot button” interactions; increase confidence in dealing with strong emotions</td>
</tr>
<tr>
<td>Afternoon</td>
<td>Health literacy presentation</td>
<td>Large-group session: didactic, interactive</td>
<td>Emphasize prevalence of low health literacy and importance of using understandable language</td>
</tr>
<tr>
<td>Evening</td>
<td>Individual meetings with small-group faculty</td>
<td>20-minute one-to-one check-in</td>
<td>Share individual perceptions; summarize progress</td>
</tr>
<tr>
<td>Day 4</td>
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<tr>
<td>Morning</td>
<td>Third video practice session in which actors portray scenarios requested by faculty or participants; summarize feedback Program evaluation, closing comments</td>
<td>Small-group sessions in which actors rotate to different groups every 35 minutes; list strengths and suggestions</td>
<td>Consolidate new skills; document feedback from self, faculty, peers; discuss additional clinician-patient communication resources</td>
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<tr>
<td>Afternoon</td>
<td></td>
<td>Large-group session; individual work</td>
<td>List two or three skills to emphasize when returning to patient care (copy kept to distribute at start of follow-up day)</td>
</tr>
</tbody>
</table>
Over time, as early participants spoke enthusiastically about the program with their colleagues, physicians enrolled who were motivated to improve though they did not fit the criteria. The majority of the physicians who have attended the program, however, enrolled because of lower-than-desired patient satisfaction scores. Nearly all of the 22 courses have been full and wait-listed.

**Program Description**

The Communication Skills Intensive was piloted in March 1996. Because the pilot program was well received, the Intensive was established as an ongoing program conducted two or three times per year, starting in September 1996. Initially, the five-day residential course was followed by the opportunity for individual coaching monthly for one year, but logistical constraints prevented continuation of this coaching as intended.

The faculty consists of carefully selected and trained physicians and psychologists. Faculty members receive training from the course directors on models for teaching clinician-patient communication as well as training for leading small groups, setting up practice sessions with the actors, coaching, and addressing resistance. For the first several years, the ratio of course faculty to participants was 2:4; more recently, it has become 1:4.

In Fall 2001, the residential part of the course was shortened to four days. The fifth day became a follow-up session conducted two to three months after completion of the residential program. The content and format of the four-day program are described in Table 1.

The design of the course attempts to reach both the minds and hearts of participants. Cognitive components of the program include a brief overview of the evidence about clinician-patient communication and its outcomes, description and demonstrations of a communication model—the course began to use the Four Habits Model (Figure 1)—and exploration of the dynamics of conflict and “hot buttons.” Strong emotions are often evoked during small-group discussions about personal history, culture, and meaning in one’s work. These exchanges illuminate the connection between life experience and communication styles. Detailed feedback from faculty, peers, and the actors during the small-group role-play sessions enables course participants to begin assimilating new communication behaviors.

Specific topics and methods of instruction in the large-group sessions have varied over time, although the structure and intent of the program have remained consistent. The overarching focus is on relationship-centered communication strategies that prove effective in the real world of a busy clinical practice.

The core constants of the program are:
- 10-12 hours of videotaped role-play with actors
- use of a communication framework or model as the foundation
- strong focus on handling difficult interactions
- structured self-reflection
- exploration of the link between personal history and current communication patterns
- high faculty to participant ratio
- a supportive, safe, and confidential environment
- interactive teaching methods
- reinforcement of learning after the course ends.

The follow-up day, two to three months after the residential program, includes: assessment of changes since the program (using copies of the goals written on Day 4), review of the Four Habits Model, two sessions of small-group role-play without actors, and a brief demonstration and didactic presentation on a new topic (such as cultural issues, telephone interactions, or using the computer in the examination room). Participants are expected to attend all five days.

The cost of the four-day residential program is approximately $3000 per participant. This amount covers room and board, materials, meeting costs, and a prorated contribution towards the expenses for the faculty and actors. Payment for each faculty member’s time is an additional $500-800 per day. Participants use their own educational leave or vacation time to attend. All other costs are covered by TPMG Physician Education and Development.

**Outcome Measures**

1. **Program evaluation:** At the conclusion of each program participants completed an evaluation with both quantitative and qualitative questions. The quantitative questions asked about the likelihood of incorporating the skills into their clinical practice and for their rating of the value of the overall program.

2. **Physician satisfaction:** In October 2005, an online survey was e-mailed to the 118 clinicians who attended a Communication Skills Intensive in 2004 or 2005 to assess the effects of the course on their communication behaviors and on their professional satisfaction. Physician satisfaction following the program had not been measured previously.

3. **Patient satisfaction:** Participants’ scores on the MPS survey have been tracked since 1998 (when a revised version of the original survey was implemented). To maintain confidentiality, cohorts were formed by aggregating the scores of
**Figure 1. The Four Habits Model.**

<table>
<thead>
<tr>
<th>HABIT</th>
<th>SKILLS</th>
<th>TECHNIQUES AND EXAMPLES</th>
<th>PAYOFF</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Invest in the Beginning</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Create rapport quickly</td>
<td>• Introduce self to everyone in the room</td>
<td>• Establishes a welcoming atmosphere</td>
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<tr>
<td></td>
<td>• Refer to patient by last name and Mr. or Ms. until a relationship has been established</td>
<td>• Allows faster access to real reason for visit</td>
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<tr>
<td></td>
<td>• Acknowledge wait</td>
<td>• Increases diagnostic accuracy</td>
<td></td>
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<tr>
<td></td>
<td>• Make a social comment or ask a non-medical question to put patient at ease</td>
<td>• Requires less work</td>
<td></td>
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<tr>
<td></td>
<td>• Convey knowledge of patient’s history by commenting on prior visit or problem</td>
<td>• Minimizes “Oh by the way…” at the end of visit</td>
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<tr>
<td></td>
<td>• Consider patient’s cultural background and use appropriate eye contact and body language</td>
<td>• Facilitates negotiating an agenda</td>
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<tr>
<td></td>
<td>• Start with open-ended questions: “What would you like help with today?”</td>
<td>• Decreases potential for conflict</td>
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<tr>
<td></td>
<td>• ‘I understand that you’re here for … Could you tell me more about that?’</td>
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<tr>
<td></td>
<td>• Speak directly with patient when using an interpreter</td>
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<tr>
<td></td>
<td>• Repeat concerns back to check understanding</td>
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<tr>
<td></td>
<td>• Let patient know what to expect: “How about if we start with talking more about…, then I’ll do an exam, and then we’ll go over possible tests/ways to treat this. Sound OK?”</td>
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<tr>
<td></td>
<td>• Prioritize when necessary: “Let’s make sure we talk about X and Y. It sounds like you also want to make sure we cover Z. If we can’t get to the other concerns, let’s…”</td>
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<tr>
<td><strong>Elicit the Patient’s Perspective</strong></td>
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<tr>
<td>Ask for the patient’s ideas</td>
<td>• Assess patient’s point of view: “What do you think might be causing your problem?”</td>
<td>• Respects diversity</td>
<td></td>
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<tr>
<td></td>
<td>• What worries or concerns you most about this problem?</td>
<td>• Uncovers hidden concerns and diagnostic clues</td>
<td></td>
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<tr>
<td></td>
<td>• What have you done to treat your illness so far?</td>
<td>• Reveals use of alternative treatments or requests for tests</td>
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<tr>
<td></td>
<td>• Ask about ideas from loved ones or from community</td>
<td>• Improves diagnosis of depression and anxiety</td>
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<tr>
<td></td>
<td>• Determine patient’s goal in seeking care: “How were you hoping I could help?”</td>
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<tr>
<td></td>
<td>• Check context: “How has the illness affected your daily activities/work/family?”</td>
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<tr>
<td><strong>Demonstrate Empathy</strong></td>
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<tr>
<td>Be open to the patient’s emotions</td>
<td>• Respond in a culturally appropriate manner to changes in body language and voice tone</td>
<td>• Adds depth and meaning</td>
<td></td>
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<tr>
<td>Make an empathic statement</td>
<td>• Look for opportunities to use brief empathic comments: “You seem really worried.”</td>
<td>• Builds trust, leading to better diagnostic information and outcomes</td>
<td></td>
</tr>
<tr>
<td>Convey empathy nonverbally</td>
<td>• Compliment patient on efforts to address problem</td>
<td>• Makes limit-setting or saying “no” easier</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Use a pause, touch, or facial expression</td>
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<tr>
<td><strong>Invest in the End</strong></td>
<td></td>
<td></td>
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<tr>
<td>Deliver diagnostic information</td>
<td>• Frame diagnosis in terms of patient’s original concerns</td>
<td>• Increases potential for collaboration</td>
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<tr>
<td>Provide education</td>
<td>• Explain rationale for tests and treatments</td>
<td>• Influences health outcomes</td>
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<tr>
<td></td>
<td>• Review possible side effects and expected course of recovery</td>
<td>• Improves adherence</td>
<td></td>
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<tr>
<td></td>
<td>• Discuss options that are consistent with patient’s lifestyle, cultural values and beliefs</td>
<td>• Reduces return calls and visits</td>
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<tr>
<td></td>
<td>• Provide resources (e.g., written materials) in patient’s preferred language when possible</td>
<td>• Encourages self care</td>
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<td></td>
<td>• Discuss treatment goals; express respect towards alternative healing practices</td>
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<tr>
<td></td>
<td>• Assess patient’s ability and motivation to carry out plan</td>
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<tr>
<td></td>
<td>• Explore barriers: “What do you think we could do to help overcome any problems you might have with the treatment plan?”</td>
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<tr>
<td></td>
<td>• Test comprehension by asking patient to repeat instructions</td>
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<tr>
<td></td>
<td>• Set limits respectfully: “I can understand how getting that test makes sense to you. From my point of view, since the results won’t help us diagnose or treat your symptoms, I suggest we consider this instead.”</td>
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<tr>
<td></td>
<td>• Summarize visit and review next steps</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Ask for additional questions: “What questions do you have?”</td>
<td></td>
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<tr>
<td></td>
<td>• Assess satisfaction: “Did you get what you needed?”</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Close visit in a positive way: “It’s been nice meeting you. Thanks for coming in.”</td>
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</table>
all of the clinician participants who attended the course each calendar year. These cohorts ranged in size from 37 to 60 clinicians each and totaled 322 clinicians for all cohorts combined.

**Results**

**Participants**

From 1996 through 2005, 525 TPMG clinicians attended the program (Table 2). These participants represented a broad spectrum of specialties, with 301 (57%) coming from primary care or medical subspecialties. Sixty (11%) were surgical subspecialists; 43 (8%) were hospitalists or emergency medicine specialists.

An equal number of participants had worked in TPMG for two years or less (140) as had worked for more than ten years (141) at the time they took the course. The largest percentage of participants ranged from 31 years to 40 years of age. Thirty percent, however, were over 50 years of age, and 15% had worked in the organization for over 16 years.

**Program Evaluations**

Data collected from evaluation forms completed at the conclusion of each program have consistently shown positive results. For example, using a five-point Likert scale (on which 1 = strongly disagree, and 5 = strongly agree), aggregate scores for three separate administrations of the course (n = 73) included a mean score of 4.83 in response to the survey item: “I will incorporate the skills acquired at this program into my clinical practice” and a mean score of 4.90 in response to the survey item “Overall, this training was valuable.”

**Physician Satisfaction Survey**

Of the 118 TPMG physicians who received the follow-up survey after attending the course in 2004 or 2005, 70 (60%) completed and returned the survey. Nearly all (99%) indicated that the course had helped to improve their communication skills with patients; 39% said the course had improved their skills “a lot.” When asked to describe what they were doing differently to communicate better with patients, respondents most commonly reported that they were using empathy, listening without interrupting, eliciting the patient’s perspective, and structuring the visit. Specific comments included the following: “I understand how to listen actively to my patients. I express empathy to my patients a lot more frequently, and it really makes them satisfied with my care. I now have the tools to think through and analyze when some visits or interactions don’t go well” and “[I now am] having a structure to the visit, emphasizing closure, [and] letting parents and patients do the talking without interruption.”

Most (88%) of the 70 respondents said that the course has had a positive impact on how patients respond to them during outpatient visits. Physicians noted that their patients more frequently expressed satisfaction with the visit, shared more information, and were less likely to escalate during potentially difficult interactions. One physician reported that patients seemed “much more engaged in the process, more welcomed into the process, happier with the outcome, and I am hearing from the primary care physicians that patients are conveying to them their greater satisfaction with my services.” Another physician noted that patients seemed “more appreciative and happier with the visits.”

| Table 2. Demographic characteristics of 525 clinicians participating in the Communication Skills Intensive |
|-----------------|-----------------|
| **Sex**         | **No. (%) of clinician** |
| Female          | 308 (59%)       |
| Male            | 216 (41%)       |
| Not recorded    | 1               |
| **Age (years)** |                 |
| 25-30           | 9 (2%)          |
| 31-40           | 179 (34%)       |
| 41-50           | 164 (31%)       |
| 51-60           | 90 (17%)        |
| Not recorded    | 83 (16%)        |
| **Tenure with TPMG (years)** |       |
| 0-2             | 140 (27%)       |
| 3-5             | 109 (21%)       |
| 6-10            | 70 (13%)        |
| 11-15           | 58 (11%)        |
| >15             | 83 (16%)        |
| Not recorded    | 65 (12%)        |
| **Specialty**   |                 |
| Primary care (internal medicine, pediatrics, Ob/Gyn) | 269 (51%) |
| Medical subspecialties (cardiology, nephrology, neurology, oncology, pulmonology, rheumatology) | 32 (6%) |
| Surgical subspecialties and anesthesiology (general surgery, urology, cardiovascular anesthesia, cardiovascular surgery, head and neck, neurosurgery, plastic surgery) | 60 (11%) |
| Emergency medicine or hospital-based | 43 (8%) |
| Dermatology     | 20 (4%)         |
| Occupational medicine | 17 (3%) |
| Ophthalmology or optometry | 14 (3%) |
| Psychiatry      | 17 (43%)        |
| Other (allergy, electrophysiology, home care, administration, nuclear medicine, rehabilitation, pain management, radiation oncology) | 21 (4%) |
| Not recorded    | 32 (6%)         |
Most (89%) also said that applying the techniques they learned has increased their own professional satisfaction. Many mentioned having greater confidence, feeling more appreciated, and having a stronger sense of connection with their patients. One physician reported, “I have much less stress with clearer boundaries. I generally leave work on time and leave work behind. I feel like I have more time in my day with more efficient visits/other means of communication. Members tell me that they feel heard and cared for. It’s becoming a better partnership.” Another physician wrote, “I just feel better about coming to work; it’s not a battle any more.”

**Patient Satisfaction Surveys**

The MPS survey includes five questions about the interaction with the physician or health care professional (HCP). Scores on the survey are reported as the percentage of patients who indicated responses of “very good” or “excellent” on the following items: Your MD/HCP’s skills and abilities, confidence in care MD/HCP provided to you, MD/HCP listened and explained, MD/HCP involved you in decisions about your care, MD/HCP familiar with your medical history. For each clinician, the combined scores for all five questions were averaged to generate the clinician’s overall mean score.

For each cohort of physicians who attended the Communication Skills Intensive in 1998 through 2004, Figure 2 compares the mean combined scores for all five questions as determined six months before the course began and six months after the course ended. Five of the seven cohorts achieved a statistically significant increase ($p < .05$), and scores for all cohorts showed improvement over time.

For the same span of years, Figure 3 compares the percentage change in the mean combined scores for all five questions for two sets of TPMG physicians: the cohorts in the present study (physicians who attended the Communication Intensive) and the population of all TPMG physicians for whom MPS scores were collected. The cohort scores for the course participants reflect improvement achieved in the six months after the course, compared with the six months before the course. Scores for the general population of TPMG physicians represent totals collected at the end of one year compared with scores collected at the end of the following year. (For example, the cohort of physicians attending the Communication Skills Intensive in 2001 improved their mean scores by 4.6% in the six months after the course, whereas the mean scores for TPMG physicians in the general TPMG population rose 1.1% from the end of 2001 to the end of 2002.) This comparison accounts for the regionwide changes occurring over each period of time and thereby approximates a control group of

![Figure 2: Member Patient Satisfaction Survey scores for cohorts of physicians six months before and six months after participating in Communication Skills Intensive course.](image-url)

$^p < .05$ (Reproduced and adapted with permission of the author and publisher from: Stein T, Frankel RM, Krupat E. Enhancing clinician communication skills in a large healthcare organization: A longitudinal case study. Patient Educ Couns 2005 Jul;58(1):4-12.)
physicians who did not receive the intervention. Service enhancements introduced throughout TPMG (such as increased access to appointments with members’ personal physicians and with specialists) contributed to a greater rate of improvement in survey scores between 2002 and 2004. Even during this period of regionwide increases in scores, our data show a pattern of substantially larger improvement for course participants.

For each cohort of participants in the Communication Skills Intensive, Figure 4 presents the longitudinal mean combined scores for all five questions over time (through 2005). The greatest increases in scores occurred during the year after the course ended and between 2002 and 2004, probably reflecting the improvement observed regionwide during the same period.

**Discussion**

Our results show that physicians can change their communication habits by attending an intensive communication skills training that includes videotaped role-play practice with actors and extensive self-reflection. The changes lead to improvement in patient satisfaction, most pronounced in the 6-12 months after completion of the course and sustained for as long as seven years. Most physicians who attended the course found value in the experience and indicated that they would incorporate the skills they learned into their practice. A sampling of recent course participants reported positive changes in their post-course communication behavior with patients and enhanced professional satisfaction.

Several studies have documented measurable changes in physicians’ communication behavior following communication skills training. After viewing videotapes of patient visits, Fallowfield et al.\(^6\) reported that expressions of empathy, use of open-ended questions, appropriate responses to patient cues, and psychosocial probing were more frequent among physicians who attended a three-day course than among a control group. Follow-up videotapes recorded one year later showed that all of these behaviors endured except expressions of empathy.\(^7\) Similarly, Levinson and Roter\(^8\) showed that compared with baseline (pre-intervention) behavior, physicians asked more open-ended questions, more frequently solicited patients’ opinions, and gave more biomedical and psychosocial information after attending a 2.5-day course on communication skills. Jenkins and Fallowfield\(^9\) also showed improvement in physicians’ attitudes and beliefs toward psychosocial issues and in their self-reported awareness of their own style of questioning patients. The changes in physicians’ attitude correlated with changes in their behavior.

A systematic review of previous interventions de-

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**Figure 3. Twelve-month change in Member Patient Satisfaction Survey scores for general population of TPMG physicians (“all TPMG”) compared with change in survey scores among physician cohorts attending the Communication Skills Intensive course (“CSI Cohorts”).**

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signed to enhance physicians’ communication skills in outpatient clinical settings identified eight studies that assessed patient satisfaction as an outcome of the intervention. (JK Rao, MD, personal communication, 2006) In five of the eight studies, practicing staff physicians were the recipients of the educational intervention; in the other three studies, the intervention was given to medical residents. One study showed a postintervention increase in patient satisfaction; seven studies failed to show a difference in outcomes between experimental and control groups. One of these studies also reported that visit-specific physician satisfaction was unchanged after oncologists attended a three-day training course on clinician-patient communication skills. Hulsman et al measured patient satisfaction after providing computerized feedback to a group of physicians on their communication skills. Despite showing an increase in the quality of communication behavior after the intervention, the authors did not find an increase in patient satisfaction.

The data from our outcome measures add to this field of inquiry because of the large sample size of physician participants and their patients, tracking that uses a visit- and physician-specific patient satisfaction survey, initial scores in a range sufficient to show subsequent improvement, and our longitudinal follow-up. Because we did not study the real-time communication practices of course participants, our ten-year experience with the Communication Skills Intensive cannot tell us how the intervention leads to changes. Our longitudinal data on patient satisfaction and our snapshot of physician perceptions support one possible sequence: changes in attitudes and behaviors can be inferred to result from communication training and thus subsequently to lead to improved patient and physician satisfaction. Comments on the physician survey as well as the continuity in the patient satisfaction scores over time together indicate that for many participants the new skills they integrated into their clinical practices following the Intensive took hold and became habitual.

Our data have several limitations in addition to the lack of a formal control group. Attempts to construct historical control groups using patient satisfaction scores from physicians matched by specialty, tenure, age, and facility were unsuccessful. It is possible that controlling for the effects of familiarity and/or for the predictable increase in scores during a new physician’s first three years of practice could have diminished or eliminated the improvement that we are attributing to attending the Intensive. Nonetheless, a strong level of reliability is suggested by two consistent patterns: substantial improvement in patient satisfaction as reported in the six months after the course ended, compared with satisfaction reported in the six months before the course began; and maintenance of this improvement over many years.

We were not able to track subsets of our yearly cohorts by their performance level on the MPS prior to enrollment. Designating participants in subsets would have given us a comparison of changes in patient satisfaction
At the Communication Skills Intensive

Dr M discovered that his quest to offer comprehensive care to each of his patients often resulted in his asserting his own agenda for the visit and not paying adequate attention to his patients’ questions and concerns. He found that using open-ended questions and planning the visit enabled him to hear about patients’ issues while still keeping a sense of control. He also learned how to slow down the pace of his speech, use simpler vocabulary, and log onto the computer only after taking a moment or two to create rapport with the patient. Dr M became better aware of how to use his strengths: his obvious caring and commitment to his patients, his strong nonverbal skills, and his natural empathy.

Dr B struggled to break out of his biomedical approach to patient interactions. He was reluctant to be “too touchy-feely” at first. Feedback from the actors enabled him to see that patients who are intimidated by his take-control style may not understand his explanations and have worse outcomes. He also was beginning to understand that competently responding to his patients’ emotions was actually part of his job. Once he took this feedback seriously, he was quickly able to explore new ways of interacting, even keeping his equanimity when an actor-patient burst into tears.

Dr S worked on some of the communication challenges unique to adolescent medicine. She learned new strategies for talking with anxious parents, discussing confidentiality with parents and teens, and giving bad news. She also developed a more effective way to collaborate with obese teenagers about diet and exercise.

for physicians with low versus average or high scores. Also, the absence of directly observed or recorded interactions of participants precludes correlation of their behavior with the patient satisfaction scores. Another limitation is that the survey results regarding physician perceptions and satisfaction represent only a subset of course participants at a single point in time.

Is training physicians to communicate more effectively worth the investment? Our experience with the Communication Skills Intensive signifies that the investment of time, energy, and dollars is highly worthwhile. Participants have told us that after the course they change the way they communicate with their patients—they create new habits (See box: At the Communication Skills Intensive). They change how they interact with patients because the new behaviors become self-fulfilling. Many participants have described recapturing meaning in their work by enhancing connection with their patients. Longitudinal MPS results demonstrate that these changes are noticed by patients. Also impacted by better communication are accuracy of medical diagnoses, patients’ adherence to prescribed treatment regimens, patients’ health outcomes, physicians’ medical-legal risk, and overall satisfaction of patients and physicians.19,24

Conclusion

Though numerous studies have shown that interactive (nondidactic) continuing medical education, such as the Intensive, can be effective in changing physician performance,25 our experience with the Communication Skills Intensive is the first time that such a large number of physicians have taken part in an organization-sponsored multiday residential clinician-communication program and then have been followed for so many years. The story of the Intensive tells us that when physicians are given an in-depth opportunity to explore their communication skills in a supportive and safe environment, physicians, patients, and health care organizations all benefit. ♥

Acknowledgments

The author would like to acknowledge Philip Bellman, MPH, and Janet Ban, BA, for technical assistance and Vaughn F Keller, MFT, EdD, for creating the original design of the course.

Editorial assistance was provided by the Medical Editing Service of The Permanente Medical Group Physician Education and Development Department.

References

2. Stein T, Frankel RM, Krupat E. Enhancing clinician communication skills in a large healthcare organization: a longitu-

- The majority of participants have been physicians, although nurse practitioners, psychologists, and optometrists have also attended.
- MPS surveys are mailed continuously throughout the year to a random sample of patients approximately two weeks after an outpatient visit. Results are formally reported twice a year for individual physicians. The goal is to receive at least 100 returned surveys per physician per year (standard deviation for N = 100 and a rating of 75 is ±8.5 points).

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Try

God doesn’t require us to succeed; he only requires that you try.

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

By Melodi Licht, RN, MSN
Jeffrey M Davis, MD, MPH
Allison Scripps, MS, RD, CDE
Juanita Cone, MD, MPH

Abstract

Chronic diseases drive significant health care utilization and costs in the US. Simultaneously, there is growing evidence that self-care and collaborative decision-making practices are linked to improvements in health-related outcomes and reduced health care costs. In April of 2005, Kaiser Permanente (KP) Georgia implemented a population care management service that included personal health coaching services to its 277,000 patients. KP Healthy Solutions (HS) provided the health coaching support, powered by analytics, to participants. Health coaches were available by telephone 24 hours a day, 7 days a week. HS users included patients with chronic conditions, those seeking to make healthy lifestyle changes, and patients with “preference sensitive” conditions who were considering treatment alternatives. Many of these services are provided in collaboration with HS’s strategic vendor, Health Dialog, a national leader in the disease management industry. Data from September 2005 to September 2006 indicates that HS increases both quality outcomes and overall patient satisfaction with KP and achieves cost reductions, all of which create a significant return on investment.

Introduction

Chronic diseases drive significant health care utilization and costs in the US. Nearly half the American population has at least one chronic condition; 50% of those have two or more. Their direct health care costs account for 78% of US total health care expenditures. There is growing evidence that self-care and collaborative decision-making practices are linked to improvements in health-related outcomes and reduced health care costs. The Southeast Permanente Medical Group (TSPMG) and Kaiser Foundation Health Plan senior leadership decided to pilot Healthy Solutions (HS) services within the regional care delivery system. HS is a special set of services—supported by predictive models that also use health coaches to extend medical care. By supporting both the primary care physician to manage—and the patient to self-manage—disease states and by facilitating appropriate lifestyle/behavior changes, improved quality of care outcomes were achieved. Through targeted outreach services—phone calls, interactive voice response, Web programs, and mailings—health coaches work personally with patients to become more self-reliant, to improve their health care, to enhance their satisfaction, and to stabilize medical cost trends.

There is an expanding body of literature on quality outcomes and medical costs savings attributed to disease management (DM) programs. Two recent systematic reviews encompassing 11 clinical trials and 44 studies found reduced hospitalizations and a positive return on investment, specifically for heart failure programs and programs for multiple disease conditions. Financial results were mixed for asthma and depression programs, but may have reduced costs when productivity outcomes were factored in. A third review of 102 studies, representing 11 chronic conditions, concluded that DM programs were associated with marked improvements in different processes and outcomes of care while financial outcomes were mixed.

An analysis of the national American health care system demonstrated a movement from condition-specific DM toward whole-person and collaborative decision-making.

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Kaiser Permanente (KP) Georgia leaders also recognized that HS was a meaningful response to requests from quality and cost-conscious employers for solutions to address their employees’ entire spectrum of health care needs—from healthy individuals who want to stay healthy to people with known risk factors and/or early stage disease, to patients with diagnosed chronic conditions. Before HS implementation, patients could only access self-care management and Shared Decision Making (Foundation for Informed Medical Decision Making; Boston, MA) services through in-person office visits, classroom instruction or mailed information. The HS outreach services offered flexible approaches to accommodate various schedules and learning styles of patients.

TSPMG viewed HS as a valuable extension of Permanente Medicine and aligned with their principles and practices of informed decision making and support of patient self-efficacy.

Methods
In April 2005, HS was implemented within KP Georgia’s 277,000 patient population—providing telephone access to personal health coaches 24 hours a day, 7 days a week—with special efforts to integrate health coaching into existing care-delivery systems, including the doctor office visit, nurse advice service, the centralized appointment center, referral departments, and KP HealthConnect (the comprehensive electronic health and medical record).

Patient Recruitment
On the basis of proprietary predictive analytics applied to monthly data feeds, health coaches called patients in three groups: 1) patients with chronic conditions and high risk of future costs; 2) patients with chronic conditions and significant gaps in their care; and 3) patients with preference-sensitive or high-impact conditions, such as back pain or joint pain. Using a Shared Decision-Making approach, health coaches helped participants articulate their personal preferences and values, as well as understand the risks and potential benefits of a variety of therapeutic alternatives.

Receiving unbiased information about treatment options prior to an office visit helped prepare participants for more focused and informed conversations with their physicians.

In addition, patients could self-refer to a health coach after learning about the program from health educators (who actively promoted HS in classes and one-on-one sessions), their personal physician, or from general awareness mailers, newsletter articles, and posters.

Using the electronic medical record, physicians in their office could refer to a health coach, or embed the toll-free, health-coaching number in their patients’ after-visit summaries.

Training
HS coaches were specially trained, registered nurses (augmented by respiratory therapists, pharmacists, and dieticians) with an average of 12 years of professional experience. The conceptual underpinnings of health coaching include Shared Decision-Making approaches, motivational interviewing, Prochaska’s Transtheoretical Model of Behavior Change, and information from the Healthwise Knowledgebase.

An important predictive component of determining a patient’s desire to take action was the health coach’s assessment of that member’s belief in the importance of the recommended change and his/her confidence to act. Upon establishing a member’s readiness for action, the health coach initiated tailored interventions and communication strategies to match the patient’s health issues.

Materials
Materials sent to patients after a health coaching session included: videos supporting collaborative decision making (produced by the

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**Table 1. KPHS Quality Results**

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<th>Table 1. KPHS Quality Results</th>
<th>Commercial (%)</th>
<th>Medicare (%)</th>
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<tbody>
<tr>
<td>ACEI/ARB-use and lipid testing rates among all patients with diabetes</td>
<td>76</td>
<td>78.3</td>
</tr>
<tr>
<td>Asthma-control medication use</td>
<td>90.6</td>
<td>92.7</td>
</tr>
<tr>
<td>Lipid-testing rates among patients with diabetes</td>
<td>77.9b</td>
<td>81.6b</td>
</tr>
<tr>
<td>Beta-blocker use among members with heart failure</td>
<td>72.6</td>
<td>81.6</td>
</tr>
<tr>
<td>HbA1c testing rates for patients with diabetes</td>
<td>80.3b</td>
<td>83.3b</td>
</tr>
<tr>
<td>Glycemic control among patients with diabetes with HbA1c ≤9%</td>
<td>73.4b</td>
<td>78.2b</td>
</tr>
</tbody>
</table>

* Kaiser Permanente Healthy Solutions

* p value < 0.5

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

Results

A 12-month evaluation of the HS program was conducted in three domains: clinical quality indicators, patient satisfaction, and financial return.

1. Quality

In the opportunity analysis, 11,743 Georgia patients were identified with a diagnosis of diabetes. For HbA1c control the numerator was patients with a value of 9% or less and the denominator was patients with diabetes with an HbA1c test value available. For lipid control, the numerator was patients with an LDL value of ≤130 mg/dL and the denominator was patients with diabetes and a lipid test value available. For the study period, September 2005 to September 2006, the differences in both the commercial and Medicare populations were statistically significant (p < .05) (Table 1).

2. Patient Satisfaction

Satisfaction during the first year was determined on the basis of an independent third-party survey. From a sample of 11,000 KP Georgia patients of which 5700 were chronic-condition users of KPHS, and 5300 were nonchronic-condition users of KPHS, we conducted 505 interviews: 254 chronic-condition users and 251 nonchronic-condition users (Table 2).

3. Financial

The KPHS chronic-condition savings were calculated during the first year using an adjusted historical control methodology: a baseline from 12-months preceding intervention; trended from nonchronic-condition (index) population; analysis performed at patient-month level; and savings calculated separately by service category (Table 3).

Discussion

The goal of HS’s health coaching was to “activate” patients to participate (through self-management) in their own health care by transferring information and skills to them and supporting their use of tools—health assessments and interactive Web programs—that benefit their health and health care.

In addition, through health coaching, patients learned how: 1) to collect and review current evidence-based information on their condition; 2) to prepare for doctor office visits, with an emphasis on preparing to discuss treatment options; 3) to review their options by assessing the facts and opinions they have gathered and to make a decision on the basis of their personal preferences and values; and 4) to translate their decisions into action.

The importance of these types of interventions was recently recognized in a report from the California HealthCare Foundation which concluded that self-management support improves health-related behaviors, and as a result, clinical outcomes.11

Data from the period from September 2005 to September 2006 indicate that HS increases both quality outcomes and overall patient satisfaction with KP. Data from the first year of the program show cost reductions, all of which create a significant return on investment. Several significant clinical parameters improved included: ACEI/ARB use and lipid-testing rates among patients with diabetes; asthma-control medication use; lipid-testing rates among patients with coronary heart disease; and beta-blocker use among patients with heart failure. A particularly noteworthy improvement occurred in glycemic control among patients with diabetes.

Delivery System Integration

More than 80% of coaching encounters, which complements other medical care activities, were with a patient’s identified health coach. Whereas a case manager may recommend a plan of action, or an advice nurse may direct a patient using algorithmic logic, a health coach is available around the clock to support personal decisions in creating an action plan. If a health coach became aware of a new symptom or an acute condition, s/he directly

<table>
<thead>
<tr>
<th>Table 2. KPHS satisfaction results and benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient satisfaction</td>
</tr>
<tr>
<td>Satisfied with assistance from health coaches</td>
</tr>
<tr>
<td>More positive about Kaiser Permanente Georgia in general</td>
</tr>
<tr>
<td>Patient-perceived benefits</td>
</tr>
<tr>
<td>Improved ability to talk with physician</td>
</tr>
<tr>
<td>Improved quality of care</td>
</tr>
<tr>
<td>Improved ability to self-manage health condition(s)</td>
</tr>
</tbody>
</table>

* Kaiser Permanente Healthy Solutions

<table>
<thead>
<tr>
<th>Table 3. KPHS financial benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total net savings per person per month for Health Plan’s entire population</td>
</tr>
</tbody>
</table>

* Kaiser Permanente Healthy Solutions

A particularly noteworthy improvement occurred in glycemic control among patients with diabetes.
linked the patient to a dedicated phone line, with the call center for advice or an appointment. Departments that the health coaches interact with most often—case management, pharmacy, nurse advice, and the call center—received extensive training to prepare them for interactions with the health coaches. As such, clinical operational processes were developed to ensure efficient continuity of care so that health coaches knew which case managers to contact about each patient, and health-coaching encounters were scanned into the electronic medical record so physicians could see which of their patients had received health coaching.

Supporting the Physician-Patient Relationship

HS is guided by the belief that Collaborative Decision Making is a process between health care providers and patients and leads to better outcomes. Health coaches are trained to support—not replace—the primary physician-patient relationship.

An important goal of chronic disease treatment is teaching patients to live well and maintain an enjoyable, independent life. The Healthwise Knowledgebase provides Kaiser Permanente members with health content on thousands of clinical conditions to help people make wise health decisions.

Acknowledgments

Special thanks and recognition to John Zetsche, Executive Director, Clinical Affairs; Debra Carlton, MD, Associate Medical Director, Clinical Affairs; Carolyn Kenny, President Kaiser Foundation Health Plan of Georgia; and Bruce Perry, MD, Medical Director, The Southeast Permanente Medical Group, for their pioneering work in bringing Kaiser Permanente Healthy Solutions to their membership and the Georgia marketplace.

References

**Abstract**

**Objective:** We studied antibiotic use prior to the onset of *Clostridium difficile* colitis (CDC) and time interval between onset of gastrointestinal symptoms and diagnosis for two historical time periods with separate comparisons for inpatients and outpatients to determine whether time to diagnosis had decreased and whether previous metronidazole use is associated with CDC.

**Method:** We performed a retrospective chart review of adult patients (those 18 years or older) with positive findings on *Clostridium difficile* (CD) stool toxin tests performed at a Kaiser Permanente Southern California medical center. Independent assessments were compared for 1997–1998 and for 2004 time periods. These assessments used similar enrollment and exclusion criteria. Study populations were evaluated for previous antibiotic use and to determine time from clinical presentation of symptoms to diagnosis of CDC during each of the time periods, with assessments made separately for inpatients and outpatients.

**Results:** Findings showed a reduction in the average time from symptom presentation to diagnosis among outpatients with CDC from 17 days in the first time period (1997–1998) to ten days during the second time period (2004). No significant difference in the average time from symptom presentation to diagnosis of CDC was evident among inpatients (5.33 days for 1997–1998 and 6.00 days for 2004). Multiple antibiotic use prior to diagnosis of CDC was evident among both outpatients and inpatients in this study. Metronidazole had been used prior to the onset of CDC in approximately 15% of cases.

**Conclusion:** The time from symptom onset to a CDC diagnosis decreased by seven days between the 1997–1998 and 2004 time periods among outpatients in this health care setting. Previous metronidazole use appeared to be associated with some cases of CDC.

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**Introduction**

*Clostridium difficile*-associated disease has been identified as an important cause of morbidity and mortality in the US. Most studies have focused on inpatients and health care–associated infections, or nosocomial infections. There have been previous outpatient studies of *Clostridium difficile* colitis (CDC), although recent outpatient studies have not included findings for inpatients. This study focused on previous antibiotic use and the time from onset of gastrointestinal (GI) symptoms to diagnosis, comparing time to diagnosis during two historical time periods among inpatients and outpatients. This study did not evaluate health care–associated infections, treatment for CDC, appropriateness of antibiotic usage before the onset of CDC, asymptomatic patients, or clinical recurrences of CDC.

**Methods**

Independent retrospective assessments were performed using data from 1997–1998 and 2004 time periods. Study entry criteria required positive stool *Clostridium difficile* (CD) toxin test results and antibiotic use during the one-month period prior to diagnosis.
The major risk factor for CDC is any previous antibiotic use, including metronidazole.\(^7,8\)

The Southern California Kaiser Permanente (KP) regional laboratory performed CD stool toxin tests assessed in this study. The laboratory supplied a list of all KP patients who were screened for CD toxins; the list also included patients with negative results. The study evaluated previous antibiotic history and classified study groups on the basis of the setting in which and the time at which they received exposure to antibiotics before CDC symptoms, as well as the setting in which each study subject first experienced CDC. Data collected included patient age, patient sex, antibiotics prescribed prior to CDC diagnosis, inpatient or outpatient status, time between antibiotics and GI symptoms, time between symptoms and evaluation appointment, and time between symptoms and CDC diagnosis.

Study subjects were divided into four clinical groups that included patients exposed to antibiotics as inpatients during the one month prior to positive findings on a CD stool test and whose disease was diagnosed when they were inpatients (In/In), patients exposed to antibiotics as outpatients whose disease was diagnosed when they were outpatients (Out/Out), patients exposed to antibiotics as inpatients whose disease was diagnosed when they were outpatients (In/Out), and patients exposed to antibiotics as outpatients whose disease was diagnosed when they were inpatients (Out/In). Exclusion criteria included recent residence in a skilled nursing facility and treatment provided by a non-KP health care provider. The primary reason for these two exclusions was the difficulty in obtaining accurate and complete data under those conditions. The studies were performed as pharmacy-student projects toward a Loma Linda School of Public Health master of public health degree. A physician advisor (Charles Salemi) provided supervision for the projects.

**Statistical Methods**

Categoric variables' frequencies were tabulated. An unpaired \(t\)-test was performed for the continuous variable of the interval between the onset of symptoms and diagnosis by positive results on a CD stool toxin test. A statistically significant \(p\) value of <.05 was selected.

**Data**

Table 1 shows the data from the two studies performed in 1997–1998. The initial study showed a 12-day interval from onset of symptoms to diagnosis of CDC when comparing inpatients to outpatients. This interval decreased to four days in the 2004 study (Table 2). The outpatient interval to diagnosis was 17 days in 1997–1998 and decreased to ten days in the 2004 study. The distribution of all of the cases of CDC is shown in Table 3. The only groups analyzed for this study were the In/In and Out/Out groups. The data comparing inpatients to outpatients were statistically significant at \(p < .05\) using unpaired \(t\)-test analysis. The data (Table 4) shows that metronidazole was given in approximately 15% of the cases prior to the onset of CDC. The total and results of medical center CD stool toxin tests from 1999 through 2004 are shown in Table 5. There was an increase in the total number of stool CD toxin tests ordered, but the percentage of positive test results varied by a nonsignificant amount over the time interval.

**Table 3. Total Clostridium difficile colitis cases**

<table>
<thead>
<tr>
<th>Group</th>
<th>No. of patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>In/In</td>
<td>77</td>
</tr>
<tr>
<td>Out/Out</td>
<td>54</td>
</tr>
<tr>
<td>In/Out</td>
<td>95</td>
</tr>
<tr>
<td>Out/In</td>
<td>50</td>
</tr>
</tbody>
</table>

**Discussion**

The major risk factor for CDC is any previous antibiotic use, including metronidazole.\(^7,8\) Our study documents that metronidazole was used before the onset of CDC in >14% of cases. This was unusual because an effective treatment regimen for CDC includes the use of metronidazole. Metronidazole resistance to CD has not been documented during the study period.\(^9\) Metronidazole can be used in conjunction with other antibiotics for treating selected infections or as a sole agent, and this difference could be a risk factor for CDC.

This study did not evaluate metronidazole prescription practices. For example, there have been changes in clinical indications for metronidazole use over the course of the study, particularly for empiric coverage.

---

**Table 1. 1997–1998 study data for In/In and Out/Out groups**

<table>
<thead>
<tr>
<th>Group</th>
<th>No. of patients</th>
<th>Interval (days) from symptoms to diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>In/In</td>
<td>39</td>
<td>5.33</td>
</tr>
<tr>
<td>Out/Out</td>
<td>26</td>
<td>17.24</td>
</tr>
</tbody>
</table>

\(t\)-test: \(p < .0001\).

**Table 2. 2004 study data for In/In and Out/Out groups**

<table>
<thead>
<tr>
<th>Groups</th>
<th>No. of patients</th>
<th>Interval (days) from symptoms to diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>In/In</td>
<td>38</td>
<td>6</td>
</tr>
<tr>
<td>Out/Out</td>
<td>28</td>
<td>10</td>
</tr>
</tbody>
</table>

\(t\)-test: \(p < .00001\).
for anaerobic organisms and for eradication of *Helicobacter pylori*. The clinically important issue is that health care providers might not consider the diagnostic possibility of CDC if metronidazole was previously used, especially as a sole antibiotic. The importance of this finding is to make providers aware that the prior use of metronidazole does not eliminate the possibility of CDC, a finding noted in other studies as well. We did not analyze other specific antibiotics in this study; reports in the published literature have examined other specific antibiotics and their association with CDC.

The results of the two studies showed that there was a significant decrease in the time interval to outpatient diagnosis of CDC, from approximately 17 days in 1997–1998 to 10 days in 2004. The inpatient interval did not significantly change between the two studies. The results of the 1997–1998 study were not presented or reported to the medical staff at our medical center. The improvement in CDC data may be attributable to increasing knowledge among health care providers of the clinical importance of CDC, increasing knowledge of the importance of previous antibiotic usage, and increased attention to patients’ access to health care services.

The difference in the time to CDC diagnosis between inpatients and outpatients may be attributed in part to the different level of care provided in the hospital. Inpatient care is rendered in a highly standardized environment, especially with regard to prescribed medication, with rigorous documentation of medication use being the norm. Detailed documentation of vital signs and health status, including the presence of diarrhea, are kept in the medical record as part of nursing notes and progress notes. The nursing service plays a critical role in providing this clinical information. In addition, there is the practice of empiric use of metronidazole at the onset of severe diarrhea and when a stool CD toxin test is ordered. We did not include this variable in the analysis of the data but suggest that it be considered in future studies of CDC.

Other patient-related factors can affect the timing of diagnosis and treatment of CDC. Patients may not report self-medication with antibiotics to their primary health care providers. Patient delay in seeking care should also be considered, because the onset of CDC symptoms may be attributed to other factors such as food poisoning rather than the GI symptoms being associated with previously taken antibiotics. Health care provider issues that could increase the time to diagnosis might include obtaining an incomplete history regarding previous antibiotic use, omission of specific stool CDC toxin tests, and lack of familiarity with the diagnosis of CDC in the outpatient setting.

Timeliness of access to outpatient medical services improved in our medical center between 1997 and 2004, for two possible reasons: 1) Significant national attention has been directed at patient access and availability of health care services, and there are now national benchmark standards for this area of health care; and 2) KP dedicated significant additional resources to improve access to and availability of health care to their patients between 1997 and 2004.

### Conclusion

The time to diagnosis of CDC decreased by seven days in the outpatient setting in a community-based medical center between the years of 1997 and 2004.

---

**Table 4. Metronidazole use before the onset of *Clostridium difficile* colitis for two study periods**

<table>
<thead>
<tr>
<th>Study</th>
<th>Total no. of patients</th>
<th>No. of patients taking metronidazole</th>
<th>Percentage of patients taking metronidazole</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997–1998</td>
<td>44</td>
<td>7</td>
<td>16</td>
</tr>
<tr>
<td>2004</td>
<td>173</td>
<td>25</td>
<td>15</td>
</tr>
</tbody>
</table>

**Table 5. Medical center *Clostridium difficile* stool toxin tests**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total no. of tests</th>
<th>No. of tests with positive results</th>
<th>Percentage of tests with positive results</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 1995–December 96</td>
<td>875</td>
<td>60</td>
<td>7</td>
</tr>
<tr>
<td>January 1997–December 1998</td>
<td>1864</td>
<td>197</td>
<td>11</td>
</tr>
<tr>
<td>1999</td>
<td>1340</td>
<td>120</td>
<td>9</td>
</tr>
<tr>
<td>2000</td>
<td>1518</td>
<td>150</td>
<td>10</td>
</tr>
<tr>
<td>2001</td>
<td>1781</td>
<td>220</td>
<td>12</td>
</tr>
<tr>
<td>2002</td>
<td>2490</td>
<td>366</td>
<td>15</td>
</tr>
<tr>
<td>2003</td>
<td>2939</td>
<td>410</td>
<td>14</td>
</tr>
<tr>
<td>2004</td>
<td>3119</td>
<td>395</td>
<td>13</td>
</tr>
</tbody>
</table>
possibly partly because of efforts to increase patient access to and availability of health care. Also, previous metronidazole usage can be associated with CDC.

Acknowledgment

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

References


Never an Accident

Quality is never an accident; it is always the result of high intention, sincere effort, intelligent direction and skillful execution; it represents the wise choice of many alternatives.

— Anonymous
Dr. Lee is a psychiatrist at the Redwood City Medical Center in Redwood City, CA. He has no formal art training, having started to “dabble” during his second year of medical school. He tries to visually conceptualize mood states in his artwork. This piece was painted during his last months in residency on a found piece of Plexiglas at a time when there were anticipated changes in his life and he wanted to capture things that seemed stable: the park, children playing, families conversing.
Which Chronic Obstructive Pulmonary Disease Patients Will Be Likely to Attend Consistently a Pulmonary Rehabilitation Program?

By Salwa E Hassanein, PhD, RN
Georgia L Narsavage, PhD, APRN, FAAN
Sherrie Dixon Williams, MD, MHS
Mary K Anthony, PhD, RN
Lisaann S Gittner, MSc

Abstract

Introduction: Chronic obstructive pulmonary disease (COPD) is the fourth leading cause of death in the United States, and millions of COPD patients are disabled and unable to work. Pulmonary rehabilitation (PR) programs are available to assist with disability, but it is not clear who is likely to consistently participate in them. The purpose of this study was to determine which participants were likely to consistently attend a PR program.

Methods: A retrospective medical record review was used to assess 104 community-dwelling adults with COPD who completed the PR program at a Midwest medical center between 2000 and 2005.

Sample: The sample consisted of 32 men and 72 women with a mean age of 59.9 years (±19.10 years), mean predicted one-second forced expiratory volume (FEV1) of 46.45% (SD = 20.1), mean percent forced vital capacity (FVC%) of 67.61 (SD = 16.61), mean FEV1/FVC% ratio of 51.15% (SD = 18.17), and mean residual volume (RV) of 150.66% (SD = 67.01).

Results: Contextual variables of current smoking (beta = -.36), male sex (beta = .19), not having emphysema (beta = -.27), and FVC% (beta = .32) were significant predictors of attendance at (a dose of) PR. The number of selected comorbidities significantly predicted the dose of PR (beta = -.20).

Conclusion: These findings support the ability to identify factors that predict attendance at a PR program. Nurses can assess patients at risk for lack of consistent PR attendance and implement interventions to improve attendance. Specifically, smoking cessation prior to or as an integral part of PR programs may improve attendance.

Introduction

According to the American Thoracic Society (ATS) and the European Respiratory Society, chronic obstructive pulmonary disease (COPD) is a “preventable and treatable disease state characterized by airflow limitation that is not fully reversible.” COPD is the fourth leading cause of death in the United States; the total estimated cost of COPD in 2002 was $32.1 billion. Millions of patients with COPD live for many years but are disabled and unable to work. Pulmonary rehabilitation (PR) programs can improve functional status and quality of life in these individuals. The ATS has identified the need to determine at initial assessment which patients with COPD are likely to improve with a PR program. The purpose of this study was to determine which participants were likely to attend a PR program consistently.

ATS statements emphasize that the level of disability and handicap, not the severity of physiologic impairment of the lungs, dictates the need for pulmonary rehabilitation. The economics of health care result in limited availability of PR programs, making it imperative to have selection criteria. Characteristics that may influence health-promoting behaviors and outcomes include demographics, individual patient characteristics, and lung disease characteristics. Relevant individual characteristics include smoking, nutritional status, level of education achieved, social support systems, and other psychosocial traits. Disease characteristics include severity of illness (percent of predicted one-second forced expiratory volume [FEV1%]), activity level, and type of disease. Severity of illness, measured in our study as the FEV1% and the residual volume (RV), is viewed as an indirect influence on outcomes in PR programs.
Methods
Study Subjects and Data
Appropriate institutional review board approvals were obtained. This study was a retrospective record analysis of 104 individuals (32 men and 72 women) with diagnosed chronic lung disease, chronic bronchitis, or emphysema who were participating in PR programs at a MidWest medical center. Other sources of data included pulmonary function test results and records of maximum ventilation per unit of time ($V_{max}$). Patient and disease factors studied included sex, baseline age, smoking status (current, former, or never), body mass index (BMI), level of education achieved (number of years), living status (alone or with someone), self-reported anxiety or depression, total number of five selected self-reported comorbidities, and predicted FEV$_1$% and FVC%.

Study Endpoint
The PR participation “dose” was defined as the number of sessions multiplied by the number of weeks attended (eg, 12 sessions multiplied by six weeks equals a PR dose of 72).

Statistical Analysis
Analysis was performed using the statistical software package SPSS for Windows, version 13 (SPSS, Chicago, IL). Descriptive statistics were obtained for each variable, and plots were made to ascertain the shapes of the distributions of the variables. Hierarchical multiple-regression models were used to predict the amount of the shared variance and effects of the predictor variables.

Results
Baseline Characteristics of the Sample
Table 1 provides a summary of the sample characteristics for the study subjects. The mean age was 60 years (range, 34–82 years), mean FEV$_1$% was 46%, and mean FVC% was 68%. All participants were unemployed or retired; this factor was eliminated from further analysis. Almost the entire sample (99%) used supplemental oxygen. The mean BMI was 30 kg/m$^2$, indicating that most study subjects were either overweight or obese. Smoking history averaged 42 pack-years (20 cigarettes per day per year). Not in the table are data showing that activities of daily living were substantially impaired (eg, 45% reported inability to walk a block, 52% inability to keep up with others the same age, and 53% inability to walk up a slight hill). The mean average of total activity was used in analysis. The mean number of total years of education was 10.1; 35% reported living alone, and 75% reported having depression.

Pulmonary Rehabilitation Program Participation
The mean number of program weeks attended was 6.8 (range, 1–8) and the mean number of sessions was 20.3 (range, 4–24); thus, the mean calculated dose for PR participation was 144.4 (range, 4–192).

Patient Characteristic Predictors
Table 2 shows the predictive patient characteristics. A three-step hierarchical multiple regression was used to examine the influence of selected predictors in specific orders. In model 1, age and sex were regressed on the dependent variable dose of participation in PR. Model 2 added the predictors of smoking status (current vs never) and BMI. Model 3 added severity of illness (FEV$_1$%, FVC%, RV%, and activity level) and type of disease characteristics (bronchitis and emphysema). The models accounted for 31% of the variance on the dose of participation. The final model was statistically significant (F = 5.70; p < 0.001); sex, current smoking, FVC% predicted, and a diagnosis of emphysema were statistically significant predictors of PR dose.

Predicting Resources and Barriers
Table 3 displays the results of multiple regressions used to predict the effect of education level and living status on PR participation. The second model of the

| Table 1. Demographic and clinical characteristics of study subjects (N = 104) |
|-------------------------|----------------|-------|------------------|
| Variable                | X (SD); Range N (%) |       |                 |
| Age (years)             | 59.9 (10.2); 34–82 |       |                 |
| Sex                     |                |       |                 |
| Female                  | 72 (69.2%)     |       |                 |
| Male                    | 32 (30.8%)     |       |                 |
| Smoking status          |                |       |                 |
| Current                 | 46 (44.2%)     |       |                 |
| Former                  | 43 (41.3%)     |       |                 |
| Never                   | 15 (14.4%)     |       |                 |
| Smoking history (pack-years*) | 41.7 (34.3); 0–200 |       |                 |
| Nutritional status (body mass index) | 30.2 (9.19); 16–59.5 |       |                 |
| Disease characteristics  |                |       |                 |
| Emphysema               | 85 (81.7%)     |       |                 |
| Bronchitis              | 88 (84.6%)     |       |                 |
| Disease severity        |                |       |                 |
| FEV$_1$%                | 46.45 (20.1); 15.0–97.0 |       |                 |
| FVC%                    | 67.61 (16.61); 30.0–107.0 |       |                 |
| FEV$_1$/FVC ratio %     | 51.15 (18.17); 21.00–92.0 |       |                 |
| RV%                     | 150.66 (67.01); 56–7.92 |       |                 |

* pack-years = 20 cigarettes per day per year

FEV$_1$% = percentage of predicted one-second forced expiratory volume; FVC% = percentage forced vital capacity; RV% = percentage residual volume.
analysis added the presence of anxiety, depression, and comorbidities. Only the number of comorbidities was statistically significant in predicting the dose of PR.

**Discussion**

Our study group’s composition of 32 men and 72 women was not congruent with the current worldwide prevalence of COPD in more males than females; it does parallel the higher initial enrollment of women in PR activities and programs. Also, more US women than men died from COPD since 2000.7 It is noteworthy that we found that men had better attendance at PR programs. It would be important to know why women did not have as large a PR dose. The pulmonary function test results and type of disease results could be indicators of health status, with healthier patients attending PR more frequently. Emphysema inversely predicted the dose of PR, indicating that patients without emphysema but with moderate COPD showed better adherence to PR attendance than those with more severe disease.

Smoking is the most common cause of COPD.7 A history of current or former smoking is the risk factor most often associated with developing COPD. Our study revealed that being a current smoker had an adverse effect on participation in PR programs, suggesting that participants who had not stopped smoking had lower doses of PR than those who had quit or had never smoked. This study strongly supports the principle that smoking cessation should be an integral part of PR programs.

We were surprised that none of the resource variables were statistically significant in predicting PR program attendance. We are not aware of comparable attempts to examine the influence of education, living status, and insurance coverage. Because patients’ self-reports of anxiety and depression when entering a rehabilitation program were the only data available on the records, the nonsignificant results may not be valid or of clinical value. PR programs need valid and reliable standardized measures of anxiety and depression to examine how they relate to outcomes. The finding in this study that the comorbidity score was related to lower participation seems plausible, because greater numbers of comorbidities would be a deterrent to completion of a PR program and would likely have a negative impact on physical functioning.4 Little research has been done to determine the optimal means of managing COPD with related comorbidities.9

In summary, the patients most likely to benefit from a PR program have these initial characteristics: male sex, not currently smoking, higher predicted FEV1%, and a diagnosis of emphysema alone. This study suggests that patient selection criteria should be as follows: 1) symptomatic chronic lung disease stabilized by standard therapy, 2) functional limitations from COPD that have

### Table 2. Summary of predictors of contextual factor and dose of PR

<table>
<thead>
<tr>
<th>Dose of PR</th>
<th>Predictors</th>
<th>Beta</th>
<th>R</th>
<th>R²</th>
<th>Adjusted R²</th>
<th>Model significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1</td>
<td>Age</td>
<td>0.22</td>
<td>0.32</td>
<td>0.10</td>
<td>0.09</td>
<td>F = 5.8</td>
</tr>
<tr>
<td></td>
<td>Sex (male)</td>
<td>0.18</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 2</td>
<td>Age</td>
<td>0.21</td>
<td>0.52</td>
<td>0.27</td>
<td>0.24</td>
<td>F = 9.4</td>
</tr>
<tr>
<td></td>
<td>Sex</td>
<td>0.17</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Current smoking</td>
<td>0.40</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>BMI</td>
<td>0.08</td>
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<tr>
<td>Model 3</td>
<td>Age</td>
<td>0.17</td>
<td>0.61</td>
<td>0.38</td>
<td>0.31</td>
<td>F = 5.7</td>
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<tr>
<td></td>
<td>Gender</td>
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<tr>
<td></td>
<td>Current smoking</td>
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<tr>
<td></td>
<td>BMI</td>
<td>0.03</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>FEV1%</td>
<td>0.26</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>FVC%</td>
<td>0.32</td>
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<td>Emphysema</td>
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<td></td>
<td>Bronchitis</td>
<td>0.03</td>
<td></td>
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</tbody>
</table>

- *p ≤ .05; ** p ≤ .01; *** p ≤ .001

BMI = body mass index; FEV1% = percentage of predicted one-second forced expiratory volume; FVC% = percentage forced vital capacity; PR = pulmonary rehabilitation; RV% = percentage residual volume.

Beta weights are the standardized regression coefficients used to create a predication equation of the standardized variable and represent the amount of beta weight of each variable to predict the dependent variable (the dose of PR).

R is the Pearson correlation coefficient between the predictors and actual scores of the dose of participation in PR.

R² is the squared multiple regression and represents the degree of variance accounting for the combinations of the predictors.

Adjusted (R²) is the unbiased estimate of R².

Model significance is the F test, which examines the degree to which the relationship between predictors and dose of participation in PR is linear. If the F test result is significant, then the relationship between predictors and dose of participation in PR is linear and therefore the model significantly predicts the dependent variable.
the potential to be decreased by exercise, 3) existence of few comorbid conditions, and 4) current nonsmoking status. There are no arbitrary lung function or age criteria. It has been recommended that certain patients with severe COPD should have specialized inpatient PR. Patients with disabling lung disease require individualized assessment of needs, individualized attention, and a PR program designed to meet realistic individualized goals. All potential participants should have an opportunity to complete smoking cessation prior to initial enrollment in PR or as an integral activity within the PR program.

Studying the combinations of factors that can affect attendance expands our knowledge about the potential for PR. Patient assessment can play a key point in assisting patients to be in the best condition to benefit from participation in PR programs. Screening and reviewing patients can also help the patient with COPD to set realistic individual and program goals. The evaluation process for PR programs should include assessment of impairment and disability and judicious enrollment of high-risk patients, with determination based on evidence as to who is most likely to benefit from PR.

There were limitations to our study. This study was completed over a two-year period to obtain an adequate sample size, resulting in potential historical bias, although there were no major changes in the PR program during the course of the study. Existing records are an economical source of information but limit researchers’ ability to apply validity and reliability testing to the selection of measures and limit data collection to study variables that have already been collected.

The research reported here was funded by a dissertation grant from the Midwest Nursing Research Society, Wheat Ridge, CO 80033-2840.

**Table 3. Summary of multiple regressions of predictors of resources and barriers on dose of PR**

<table>
<thead>
<tr>
<th>Dose of PR</th>
<th>Predictors</th>
<th>Beta</th>
<th>R</th>
<th>R²</th>
<th>Adjusted R²</th>
<th>Model significance</th>
</tr>
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<tr>
<td>Model 1</td>
<td>Education</td>
<td>.17</td>
<td>.17</td>
<td>.030</td>
<td>.011</td>
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<td>Living alone</td>
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<tr>
<td>Model 2</td>
<td>Education level</td>
<td>.18</td>
<td>.29</td>
<td>.089</td>
<td>.043</td>
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<tr>
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<td>Living alone</td>
<td>-0.55</td>
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<tr>
<td></td>
<td>Number of comorbidities</td>
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<td></td>
<td>Psychological barriers—anxiety</td>
<td>-0.031</td>
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<tr>
<td></td>
<td>Psychological barriers—depression</td>
<td>-0.068</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*1p ≤ .05
PR = pulmonary rehabilitation.
Beta weights are the standardized regression coefficients used to create a predication equation of the standardized variable and represent the amount of beta weight of each variable to predict the dependent variable (the dose of PR).
R is the Pearson correlation coefficient between the predictors and actual scores of the dose of participation in PR.
R² is the squared multiple regression and represents the degree of variance accounting for the combinations of the predictors.
Adjusted (R²) is the unbiased estimate of R².
Model significance is the F test, which examines the degree to which the relationship between predictors and dose of participation in PR is linear. If the F test result is significant, then the relationship between predictors and dose of participation in PR is linear and therefore the model significantly predicts the dependent variable.

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

**References**


Patients with disabling lung disease require individualized assessment of needs, individualized attention, and a PR program designed to meet realistic individualized goals.

The Permanente Journal/ Fall 2007/ Volume 11 No. 4
The Argument for Use of Epidural Steroid Injections in Management of Acute Radicular Pain

By James P Rathmell, MD

Overview

Low back pain is the fifth most common problem that leads patients to seek medical attention, comprising 2.8% of physician office visits in an analysis of the National Ambulatory Medical Care Survey data.\(^1\) The only more frequent problems were hypertension (5.5%), pregnancy care and complications (5.2%), general medical exams and well care (4.1%), and acute upper respiratory infections (3.3%). The majority of episodes of acute low back pain with or without radicular pain will resolve without specific treatment. Overall, 60% to 70% of those affected recover by six weeks and 80% to 90% recover by 12 weeks.\(^2\)

Epidural injection of steroids has been used to treat low back pain for many decades and now is in widespread use in many countries. There have been numerous randomized trials examining the efficacy of this approach. The rationale behind injecting glucocorticoid into the epidural space adjacent to the spinal nerve is that it will combat the inflammatory response associated with acute disc herniation and thus reduce pain.\(^3,4\) This inflammation can lead to direct neuronal activity, as well as swelling and mechanical compression of the nerve within the intervertebral foramen.

Systematic Reviews

Recent reviews of studies of epidural steroid injection have yielded contradictory results, although there was considerable overlap between the trials included in these reviews.\(^5,6\) Koes et al\(^5\) reviewed 12 randomized clinical trials on the efficacy of epidural steroid injections for low back pain and sciatica. Half of the trials reported positive outcomes; half reported negative outcomes. There were significant flaws in the design of most studies included in this analysis, although there appeared to be no relationship between the trials’ methodologic quality and their reported outcomes. Koes et al concluded that the efficacy of epidural injections had not yet been established.

Watts et al\(^6\) performed a meta-analysis of 11 placebo-controlled trials on the efficacy of injections in the treatment of sciatica (nine of the same trials were considered by Koes et al\(^5\)). The quality of the trials was generally good. A clinically relevant response to treatment was at least 75% reduction in pain. With respect to short-term pain relief (1–60 days), the pooled odds ratio (OR) (based on ten trials) was 2.61 (95% confidence interval [CI], 1.80–3.77); with respect to long-term pain relief (12 weeks to one year), the pooled OR (based on five trials) was 1.87 (95% CI, 1.31–2.68). Watts et al concluded that epidural steroid injections are effective in the management of sciatica.

In 1999, Nelemans et al\(^7\) performed another systematic review of randomized clinical trials on the efficacy of injection therapy. This review differed from the previous reviews because

- It was not restricted to epidural steroid injections; it also considered epidural injections with anesthetics and other injection sites, such as facet joint and local injections.
- There is an 80% to 90% probability that patients with low back pain will recover spontaneously within three months.\(^2\) The review by Nelemans et al was restricted to randomized clinical trials, which included patients with low back pain that had lasted longer than one month.

Twenty-one randomized trials, all involving patients with low back pain persisting more than one month, were included in this review. Eleven studies compared injection therapy with placebo injections. The methodologic quality of many studies was low. There were only three well-designed explanatory clinical trials: one concerning injections into the facet joints, with a short-term OR of 0.89 (95% CI, 0.65–1.21) and a long-term OR of 0.90 (95% CI, 0.69–1.17); one concerning epidural injections with a short-term OR of 0.94 (95% CI, 0.66–1.32); and one...
The Argument for Use of EpiduralSteroidInjections in Management of Acute Radicular Pain

Follow-up period (p = not significant). Within the six subcategories of explanatory studies, the pooled ORs with 95% CIs were facet joint, short-term: 0.89 (0.65–1.21); facet joint, long-term: 0.90 (0.69–1.17); epidural, short-term: 0.93 (0.79–1.09); epidural, long-term: 0.92 (0.76–1.11); local, short-term: 0.80 (0.40–1.59); and local, long-term: 0.79 (0.65–0.96).

Nelemans et al7 concluded that convincing evidence is lacking regarding the effects of injection therapies for low back pain, pointing to the need for more well-designed explanatory trials in this field.

All three systematic reviews are now significantly outdated, and the Cochrane Database review performed by Nelemans et al in 1999 was withdrawn in January 2005 because database staff members noted the need for an update. Where does that leave us? Is there new evidence that can help clarify the role of steroid injections in the treatment of back pain?

Newer Studies

Several more recent randomized, controlled trials have been performed that point to a limited role for epidural corticosteroid injections in reducing the duration of acute pain.

The efficacy of injections in the conservative management of sciatica was examined by Buchner et al.18 Thirty-six patients with lumbar radicular pain due to herniated nucleus pulposus were randomized to receive either epidural steroid injections or no injection. At two weeks after injection, those receiving injections had superior improvement in their ability to do a straight-leg raise. There were no differences in pain reduction or functional status at six weeks or six months after injection. The authors concluded that epidural steroid injections should be recommended only in the acute phase for the conservative management of lumbosciatic pain.

Wilson-MacDonald et al19 conducted a prospective randomized trial of epidural steroid injection compared with intramuscular steroid injection in 95 patients with pain due to lumbar nerve root compression. All patients had been categorized as potential candidates for surgical nerve root decompression before treatment. There was a significant early (at 35 days) reduction of pain in those receiving an injection but no difference in the longer-term effects (determined at a two-year follow-up examination). Eighteen percent of patients in the epidural group and 15% of those in the control group underwent surgical decompression during the two-year follow-up period (p = not significant).

In 2005, the WEST study, a large multicenter trial of epidural corticosteroid injections for sciatica, was reported.10 Two hundred twenty-eight patients with unilateral sciatica of 1 to 18 months' duration were randomized to receive either three epidural steroid injections or three interligamentous injections over a three-week period. At three weeks, those receiving epidural steroids demonstrated a significantly greater reduction in pain, but no difference between groups was seen from six to 52 weeks of follow-up monitoring. The authors concluded that epidural steroid injections afforded patients earlier relief of pain but no long-term decrease in pain or the need for surgery.

When earlier studies are reexamined, similar early reduction in pain can be seen despite the lack of long-term benefit from epidural steroid injections. Indeed, the much-cited trial performed by Carrette et al11 examined the effectiveness of epidural steroid injections as compared with saline for the treatment of acute radicular pain due to disc herniation and concluded that there were no long-term benefits of epidural steroid injection. In that randomized, controlled trial involving 158 patients, although there were no demonstrable differences between epidural steroid and placebo treatment groups at three months after injection, there was significantly earlier reduction in pain and decrease in sensory deficits (three weeks after treatment) in those receiving epidural steroid injections.

Injection route has also been much debated recently. The transforaminal approach to placing epidural steroids has been advocated as a means of delivering the steroid in high concentration directly to the inflammation site near the spinal nerve ...
studies did demonstrate more rapid resolution of pain in those who received epidural steroid injections versus those who did not. Thus, the role of epidural steroid injections in the conservative management of radicular pain is simply to facilitate earlier pain relief and return to full function.

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

References

Addendum
Since the preparation of this presentation in early 2006, several additional publications regarding epidural steroid injections have appeared. This article would not be complete without at least brief mention of two of these new articles. Earlier this year, Young et al1 published a comprehensive review of epidural steroid injections for treating spinal disease and concluded that “… lumbar epidural steroid injections are a reasonable nonsurgical option in select patients,” particularly for providing earlier resolution of pain in patients with lumbar radicular pain. Also this year, The American Academy of Neurology’s Technology Assessment Subcommittee published a focused assessment of the use of epidural steroid injections to treat radicular lumbosacral pain.2 This group concluded that, “… 1) epidural steroid injections may result in some improvement in radicular lumbosacral pain when assessed between two and six weeks following the injection, compared to control treatments (Level C, Class I–III evidence). The average magnitude of effect is small and generalizability of the observation is limited by the small number of studies, highly selected patient populations, few techniques and doses, and variable comparison treatments; 2) in general, epidural steroid injection for radicular lumbosacral pain does not impact average impairment of function, need for surgery, or provide long-term pain relief beyond three months.” Both of these new analyses support the conclusions reached in the analysis above done last year: the role for epidural steroid injections in the conservative management of radicular pain is simply to facilitate earlier pain relief and return to full function.

References
Introduction
When I began studying at Oregon Health Sciences University, I hoped to eventually practice medicine in underserved areas around the world. In my first weeks of medical school, a professor challenged my classmates and me to consider that, although less glamorous than traveling to exotic places, there are many “international” Americans who are underserved. With this challenge in mind, I applied my enthusiasm for diverse populations and traditional means of health care toward an assignment to interview a patient with the goal of learning how she and her family utilize health care in this country. I am honored to have interviewed an immigrant from Vietnam, Vicky, who has given me an opportunity to appreciate some of the challenges the US health care system presents to recent immigrants.

Ethnographic Interview
Vicky gave me permission to share her story. She was born in Vietnam in 1975. That year, her father, who had helped the US military during the Vietnam conflict, left Vietnam in a small boat to escape Communist persecution. The boat drifted toward Hong Kong, where he lived for five years before immigrating to Portland, Oregon. Three years later, he was able to sponsor his family’s immigration. Vicky, the youngest of six siblings, lives with her father, mother, two older brothers, a nephew, a niece, and her niece’s cat. Vicky’s four older sisters live with their husbands’ families. One of Vicky’s brothers-in-law is training to be a physician. Vicky is the youngest of her six siblings. She graduated from Portland State University with a degree in computer information systems and works part time for the City of Portland.

When I asked Vicky how she maintains her health, she revealed that she and most of her family members and friends of her family use allopathic medicine but supplement it with use of herbs and some Traditional Vietnamese Medicine (TVM). For example, Vicky’s mother uses allopathic and traditional methods to manage her diabetes, and her parent’s friends used allopathic medicine and acupuncture when recovering from strokes. Both of Vicky’s parents see allopathic physicians on a regular basis. Vicky sees an allopathic physician and feels comfortable having blood drawn and general tests performed at this physician’s office. She uses over-the-counter medications as well as green tea provided by her mother’s friends when she feels she is catching a cold. She also specifically mentioned using garlic and ham when she first notices cold symptoms to stop them from getting any worse.

Traditional Vietnamese Medicine
The traditional methods that Vicky’s family uses are based in TVM. Researching further, it was interesting to learn that historians believe that TVM, which is now very similar to Traditional Chinese Medicine (TCM), started independently of TCM and may have predated the Chinese conquest of northern Vietnam in the fourth century BCE. Over the next 1000 years of Chinese occupation, TVM and TCM are believed to have undergone mutual exchange in that TVM incorporated the theories of TCM and TCM incorporated many of the local Vietnamese medicines. In the 17th century, the term Đông Y began to be used to encompass all of the Eastern medical traditions and to distinguish them from the medical traditions of the Western colonizers. Currently, the practice of Đông Y depends on the observation of Qi, roughly “energy” that comes in numerous forms. Qi functions to provide movement, defend the body from pathologic factors, and support and promote growth and development. Levels of Qi can go up and down on the basis of lifestyle, diet, and work choices. Although Vicky and her family do not completely rely on TVM or TCM, elements from these systems are preserved in the manner that they care for themselves. A major

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theory underlying Dong Y is yin and yang. This theory describes the existence of and the importance for balance between opposite states. A manifestation of this theory, which is practiced by Vicky’s family, is that medicines prescribed by Western physicians that are considered “hot” will be balanced by taking “cool” herbs or foods.

Overall, it does not appear that Vicky or her family has difficulty accessing and using the medical system in the United States. This may be in part due to having a functional knowledge of English, health insurance through their employers, and a family member who is training to be a physician. It is not difficult to anticipate, however, what problems they might have if they had no health insurance or what problems immigrants may have who may be less proficient in English.

Minority Health Literacy

Proficiency in English is crucial for a patient to be health literate in the United States. The 2003 National Assessment of Adult Literacy demonstrated that 14% of the study population had below basic skills in prose (eg, brochures and instructional materials) and document (eg, forms, drug labels, and schedules) literacy. Twenty-two percent of the study population had below basic skills in quantitative (eg, balancing a checkbook and figuring a tip) literacy. Literacy in these areas are essential for patients to successfully navigate and utilize the US health care system. As defined in Healthy People 2010, health literacy is: “The degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions ... It requires a complex group of reading, listening, analytical, and decision-making skills, and the ability to apply these skills to health situations.”

Difficulty with language impacts the patient’s ability to give important historical information; the physician’s ability to understand and assimilate the information the patient is giving; and the nature of the patient-physician relationship. Ferguson and Candib found that minority patients, especially those not proficient in English, are “... less likely to engender empathic responses from physicians, less likely to establish rapport with physicians, less likely to receive sufficient information, and less likely to be encouraged to participate in medical decision making.”

Interpretation

Interpreters seem to be the obvious solution for the language barriers between physician and patient. Historically there have been debates as to who is ethically or legally responsible to provide interpreters: the physician or the patient and his/her family? The legal conflict has its origins in the Civil Rights Act of 1964 which states that “No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.”

The Department of Health and Human Services views inadequate interpretation services as a form of discrimination. However, few hospitals, whether or not they receive federal funding, have the resources to provide adequate interpretation for all languages necessary, and only a few states such as California, Illinois, Massachusetts, and Washington have established state regulations about interpreters. For financial and logistic reasons, many hospitals and clinics rely on telephone. The alternatives to interpreters are 1) to conduct the visit with the patient’s limited proficiency, 2) to have a family member or friend act as interpreter, or 3) to have a bilingual employee of the hospital (ie, an aide, nurse, custodian, or, if possible, another physician) act as interpreter. These are difficult options both for maintaining patient confidentiality and, if the interpreter is a family member or friend, working within the social and cultural rules of decision making and respect.

Communicating with a Physician

If a patient with limited English proficiency has difficulty communicating with their physician and does not feel they are receiving adequate care, it seems logical that the patient might rely more heavily on other culturally traditional forms of medicine to meet their health care needs. Ngo-Metzger, et al found that, literacy issues aside, when interviewing Asian Americans and Caucasians via random-digit dialing telephone interviews, Asian Americans were more likely to report that their physicians did not talk to them about lifestyle or mental health issues and that their physicians did not listen or involve them in decision-making processes as much as they would have liked. Although Asian Americans were significantly less likely to be very satisfied with their care, they were likely to trust their physicians and were significantly less likely to change physicians. Because these patients are less satisfied with their care, one might predict that they...
would supplement or change the treatments they are given to accord with what they believe to be appropriate or more beneficial while continuing to use the American health care system which is not meeting their needs.

Clinicians in any health care system may find it difficult to accept patients supplementing or changing treatments, especially if the patient is not likely to disclose the additions or changes. Nondisclosure may be because the patient does not think disclosure is necessary, because their language skills prevent them from disclosing, or because the clinician-patient relationship does not encourage full disclosure from the patient. Johnson et al, again using random-digit dialing telephone interviews, found that African Americans, Latinos, and Asian Americans were all significantly more likely to feel they would have received better care if they were a different race/ethnic group and that they were judged and treated unfairly or in a disrespectful manner by medical staff because of their race/ethnicity. Perhaps compounding the situation, patients may fear that if they tell an allopathic physician about their use of traditional practices, they may be told to stop using the traditional practices that they may believe are relieving their symptoms. Even Complementary and Alternative Medicine (CAM), what could be considered the “traditional” medicine in the US, is used for reasons that may be similar to those of recent immigrants and their families using the traditional medicine of their own cultures: to fill perceived gaps in health care. In a review of CAM research among patients with cancer, one study found that 73% of patients using CAM did so to feel hopeful, 77% used CAM to improve their quality of life, 44% used CAM for relief of symptoms, and 44% used CAM to achieve greater control in their medical care decisions.

Health literacy, traditional or CAM techniques, and difficulties in communication are issues encountered daily by most health practitioners in the US. As the population becomes more diverse, these issues will continue to grow. I think part of the difficulty in caring for minority groups in this country is that we have yet to figure out how to provide adequate health care for the “average” American. I do not believe we will be able to successfully care for patients with unique cultural and language needs until we can care for the majority of patients in this country in a respectful, economically feasible, sustainable manner.

My Future Role

With population growth, inflation of medical cost, and the impending catastrophe of the retirement of the baby-boomers, we cannot expect our current health care system to meet our needs without extreme political and social change. Considering the large scale of the issues such as national health care and health insurance coverage, health literacy, and cultural/ethnic specific health practices, I question how I see myself making a positive contribution. I see myself able to positively affect patients’ noneconomic needs in my own practice in the future. Specifically, I plan to do this by tailoring my practice to have access to interpretive services, to train or hire culturally competent office staff, and to make it a priority to openly discuss with all of my patients how they are complementary in the health care they receive from me or any other allopathic physician and what else I or my staff can do to meet their health care needs. In my preceptor’s practice, I do not see many non-Caucasian patients. I don’t have a lot of practice using interpreters to ask questions in a sensitive and respectful manner. My self-initiated discussions with Hmong students at my undergraduate institution and my interview with Vicky are experiences that have shaped how I relate to people of different racial, ethnic, social, religious, and economic backgrounds. I anticipate that improvements will always be necessary, but I hope to continue to have opportunities to improve my skills and ultimately to provide better care for my future patients. I also hope to use these interactions and forthcoming research to understand how patient’s interactions with office staff can be conducted in a more respectful manner and how we can act preemptively to reduce the likelihood that patients will feel bias or at a disadvantage.

I also feel physicians should accept the responsibility of apologizing to patients for the current state of medical care in the United States because physicians are the interface between patients and a system that is spiraling out of control. We need to apologize to our patients for failing to be better advocates for their interests in matters of state and federal legislation. It is my hope that with an apology from those representing the medical system will come eventual forgiveness from patients and ultimately a forging of a new system that will better meet the needs of all patients that seek care.

My interview with Vicky has made me more aware of and better able to appreciate and understand some of the health-related issues facing...
recent immigrants as well as many average Americans. I appreciate the opportunity to explore these issues and discuss new ideas. I look forward to participating in ongoing conversations about health literacy, traditional medicine practices, CAM, and reinventing the US health care system, and hope that these movements continue to gather momentum and ultimately generate positive change.

References
“Early Fall Maples”

photograph

By James P Rathmell, MD

Dr Rathmell is the Director of the Pain Center at Massachusetts General Hospital in Boston, MA. Dr Rathmell is an avid and lifelong photographer whose landscape and botanical images are available in a number of galleries in Northern New England. “Early Fall Maples” captures the start of the dramatic color changes in Vermont’s foliage that begin after the first frost and intensify for several weeks through late September each year before the leaves fall and the long winter begins.
Vignette
A patient presents with severe anal pain, lasting hours after each bowel movement. She notices some intermittent bleeding with defecation. She comes to the office with the presumed diagnosis of hemorrhoids. Are her symptoms consistent with hemorrhoidal disease, or does she have another disorder?

Introduction
Benign anorectal disorders are common and increasing in incidence. The decreasing intake in dietary fiber over the 20th century and into the 21st has contributed to a steady rise in preventable anorectal disorders. It is estimated that 20% of the American public has such benign conditions. Although hemorrhoids represent the most common benign anorectal disorder, anal pain is most often secondary to an acute or chronic anal fissure and not hemorrhoidal disease.

Pathophysiology and Presentation
An anal fissure is a tear or a cut in the anoderm (Figure 1). Constipation and passage of hard stools is often the cause of an anal fissure, although diarrhea can also contribute to its development. Most anal fissures are located in the midline and are posterior more frequently than anterior. Anterior fissures are seen more often in women. Most fissures heal spontaneously, but some persist. It is believed that the decreased blood flow to the midline portion of the anus contributes to a relatively ischemic milieu that becomes more profound secondary to the associated sphincter spasm noted in the majority of patients with anal fissure. The anal spasm is a defense mechanism to prevent further stretching of the anal canal and worsening of the tear. A vicious cycle ensues whereby the anal spasm exacerbates the ischemia and prevents the fissure from healing, which in turn sustains the anal spasm to prevent further tearing.

Once this cycle sets in, the likelihood of spontaneous healing decreases and the edges of the fissures become more fibrosed, leading to a chronic fissure. Some fissures can be minimally symptomatic, but most patients present with severe pain, bleeding, or itching. The pain can be localized to the anus but can radiate to the buttocks, upper posterior thighs, or lower back. Often the pain is triggered by a bowel movement, can last for hours, and can be severe. Bleeding is usually not significant. Most patients with fissures have a history of constipation.

<table>
<thead>
<tr>
<th>Table 1. Causes of anal pain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thrombosed external hemorrhoids</td>
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<td>Anal fissure</td>
</tr>
<tr>
<td>Anal abscess</td>
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<tr>
<td>Herpetic ulceration/other sexually transmitted diseases</td>
</tr>
<tr>
<td>Crohn’s ulceration and inflammation</td>
</tr>
<tr>
<td>Anal, rectal, or pelvic cancer</td>
</tr>
<tr>
<td>Lymphoma or leukemia</td>
</tr>
</tbody>
</table>

Evaluation
The diagnosis of anal fissure is often made on the basis of the patient’s medical history. Several anorectal disorders can present with severe anal pain; anal fissure is the most common cause of pain with or after defecation (Table 1). Anal examination can confirm the diagnosis at the initial visit but is often limited by the patient’s discomfort. The patient is usually examined in the prone position. A gentle spreading of the buttocks can reveal the fissure in some patients. If the patient is too apprehensive and in much discomfort, the examination should be aborted. The patient is treated for the presumed diagnosis of anal fissure and a complete examination is deferred to the next visit, usually three or four weeks later. If the fissure is not visualized, li-
Docaine 2% jelly is used to locally anesthetize the anal opening so that a gentle digital examination can be attempted. Anal spasm is often present. Posterior or anterior midline tenderness can be elicited with gentle palpation. If the patient tolerates the digital examination, then anoscopy can be performed. In addition to direct visualization of the fissure, the clinician may note a sentinel pile or tag just distal to the fissure and a hypertrophied anal papilla just proximal to it (Figure 1). The exposed white fibers of the internal sphincter muscle can be seen in the center of chronic fissures. The clinician should be ready to abort the examination at any time if the patient has severe pain. Under such circumstance, carrying out the examination causes needless suffering and often cannot be completed despite the perseverance of the examiner. If there are findings suspicious for other disorders, such as draining pus from anal opening, swelling and erythema of the perianal area, or a mass, then the patient should undergo an examination under anesthesia.

It is important to note that benign fissures are located in the posterior or anterior midline. Fissures located in the lateral quadrants are referred to as atypical fissures or ulcers and are often secondary to other conditions (Table 2). Atypical fissures can be multiple, deep, wide; have irregular margins; and may present with purulent drainage from the anus. Atypical fissures warrant a complete medical workup and often require an examination under anesthesia, with biopsies and cultures.

### Treatment Options

More than 90% of fissures heal spontaneously. Symptomatic fissures warrant treatment. Conservative management is the first line of therapy. Increasing dietary fiber and water intake should be coupled with fiber supplementation. Psyllium-based products are our preferred fiber supplement. For patients who cannot tolerate psyllium because of excess gas or bloating, other fiber products are available (Table 3). Ideally the adult diet should contain 25 to 35 g of fiber daily (Table 4).
In addition to increasing dietary fiber, patients should begin fiber supplementation once a day (ie, 6 g psyllium), and if that is tolerated, their dosage should be increased to twice a day within a week. Patients should drink at least two glasses of water or fluids each time they take a fiber supplement dose. A laxative, such as two tablespoons milk of magnesia once or twice a day, is added for patients with persistent constipation despite increased fiber intake. Stool softeners such as docusate can also be added to the fiber regimen. A sitz bath in warm water once or twice a day for ten minutes may offer some relief. Lidocaine 2% jelly is prescribed to reduce pain as needed before and after bowel movements. Steroid-based creams and hemorrhoidal ointments are usually not effective. Ointments such as nitroglycerin 0.2% to 0.3%, diltiazem 2%, and nifedipine 0.03% can heal symptomatic fissures; their reported success rate is between 30% and 70%. Most of these medications must be compounded as an ointment preparation by a pharmacy. Gel or liquid preparations are not as effective because of a shorter duration of action. Furthermore, they are cumbersome to use and do not adhere to the anal area as well as ointments do. Diltiazem 2%, applied three times daily and five minutes prior to a bowel movement, is our ointment of choice and has a higher rate of fissure healing than nitroglycerin does and can heal fissures that have been unsuccessfully treated with nitroglycerin. Headache is a common side effect with nitroglycerin, experienced by up to 50% of patients. About 10% of patients using diltiazem ointment will experience itching. Patients should wear a glove or a finger cot to apply the medication. The relaxation of sphincter tone induced by diltiazem, nitroglycerin, and nifedipine can relieve the pain within a few days, but complete healing may take up to two months. Patients should be reassessed at one month; if there is persistent fissure but decreased symptoms, the ointment should be continued for another month.

Patients in whom medical therapy fails may be candidates for surgical intervention. The timing of intervention depends on the initial response to conservative therapy and on symptom severity. Patients with severe anal pain can be offered surgical intervention if no improvement is seen within a week. Injection of botulinum toxin type A into the internal sphincter can lead to symptomatic relief and healing of some fissures. Overall, it is safe and rarely causes any degree of incontinence. The paralysis that it causes occurs within hours of injection, reaches its peak within a week, and can last between one and three months. However, in many patients the relief is temporary and long-term fissure recurrence is common, often making additional injections necessary. Furthermore, botulinum is expensive; the cost of 100 units is $558 at our institution. Because of these reasons, we do not offer injection as a sole treatment. However, for a subgroup of patients with fissures refractory to medical therapy who are at risk of incontinence or are reluctant to undergo the gold standard surgical treatment of lateral internal sphincterotomy (LIS), we have combined injection of botulinum with fissurectomy. Debridement of the fibrotic edges of a chronic fissure can stimulate healing when combined with fissurectomy. Typically we inject 60 to 80 units of botulinum toxin type A into the internal sphincter muscle; we have seen complete fissure resolution in many patients.

The most effective surgical treatment of chronic anal fissure is LIS (Figure 2). LIS can heal more than 90% of fissures refractory to medical therapy within eight
weeks and is associated with a very low recurrence rate of less than 10%.\(^7\) LIS involves cutting a small portion of the distal aspect of the internal sphincter muscle (Figure 2). The internal sphincter muscle contributes to baseline and resting continence. Spasm of this muscle results in severe anal pain and constricts blood flow to the fissure area. Releasing a portion of the muscle yields rapid symptomatic relief and heals the fissure. Overall, the procedure is safe and can be done under local anesthesia with intravenous sedation in most patients. The complication rate is low.\(^7,12–14\) A subgroup of patients may experience transient and temporary gas incontinence. In rare cases, the incontinence can be more severe or permanent. A careful evaluation of the patient’s baseline continence level is important before deciding on surgery. If the patient has any pre-existing degree of incontinence, it is best to consider injection of botulinum toxin type A with fissurectomy or, alternatively, a flap procedure to cover the fissure.

**Conclusion**

Anal fissure is the most common cause of severe anal pain and bleeding seen in the primary care setting, in urgent care and surgical clinics, and in Emergency Departments. Most fissures heal spontaneously, but conservative management with ointment and fiber supplementation will relieve the pain and promote healing of those that do not. Surgical intervention is reserved for patients in whom conservative treatment fails.

**Acknowledgment**

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

**References**


**Suggested Reading**

Katrina: Health Care System Recovery, Reform, and Renaissance

By Julie C Morial, MD, MPH

Universal Coverage

Two years after Hurricane Katrina made landfall and swept through southeastern coastal Louisiana and the metropolitan New Orleans area, a disturbing portrait of health care emerges. Established during Governor Huey Long’s administration in the 1930s, the Louisiana health care system today is considered to be expensive and inefficient. High rates of poverty and lack of financial resources were cited prior to Katrina to explain the alarming statistics that show Louisiana to be a high-spending and low-performing state.

With the destruction of much of the health care system in south Louisiana, there are a myriad of uncertainties when considering how to rebuild the infrastructure, how to protect the citizens, how to reestablish and perhaps reconfigure programs and services. The region’s recovery will be affected for years to come by the decisions made today.

Our political will and enthusiastic passion for the provision of universal coverage and primary, quality-driven care must supersede any ideological or political differences that have divided us in the past. My specific health care delivery recommendations to enact this universal coverage will follow a survey of Louisiana’s current demographic, health, and economic landscape.

Poverty and Health Disparity

According to the 2000 US Census, Louisiana is the poorest state in the nation with the largest percentage of residents with incomes below the Federal Poverty Level—$16,990 for a family of three—22% of Louisiana residents and 23% of New Orleans residents. Almost 50% of Louisiana residents live at or below twice the Federal Poverty Level.

Health disparities in Louisiana are a significant issue, with African...
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COMMENTARY

Americans and other people of color disproportionately affected by illness and disease. These include, in particular, cardiovascular disease, cancer, and diabetes, which are among the leading causes of death in Louisiana. There is a triple layer of disparity—higher risk, higher morbidity, and higher mortality rates. An African American has a 40% greater chance of cardiovascular death, and a significantly higher mortality rate for breast cancer, for example.3

Health Insurance

In face of this higher risk, some 21% of people in Louisiana are uninsured, possibly 25% (Dwayne Thomas, MD, personal communication, 2004 May)—that’s 900,000 residents—compared with a national average of 18% of the total population, compared with California at 15%. Another 20% of Louisiana residents have Medicaid insurance. Pre-Katrina there were 14% uninsured and 18% on Medicaid—a 9% current gap, for a total of 315,000 citizens who lack insurance.3

Some 95% of firms in Louisiana have 50 or fewer workers and as a result there are low rates of employer-sponsored coverage. These small business jobs are tied to tourism, hospitality and service sectors; for example hotel/motel workers, tour guides, musicians, and restaurant workers including cooks (Figure 1).5,6

In 2004, 62% of children resided with single parents whose average total family income was $30,112—compared with 43% of all children in the US living with single parents whose average total family income was $51,187. This is compounded by the highest fertility rates among single women nationally—70% of births in New Orleans and 47% of births in Louisiana are to unmarried females compared with 29% of births occurring to unmarried or single women nationally.7,8

Health Status

Louisiana is ranked 49th in the United States for overall health status.

Several health indicators include: teen birth rate, 44th; infant mortality rate, 47th; and low birth weight, 49th; with infant mortality rates for African Americans at 14.1% in Louisiana, and for New Orleans 10.4% per 1000 live births—twice the rate for white infants.8,9

Louisiana has the fourth highest cardiovascular disease rate in the United States, with cardiovascular disease the leading cause of death in Louisiana accounting for 40% of all deaths. Diabetes, an associated condition, is present in approximately 7% of adults in Louisiana. Among African Americans this rate...
of diabetes is 10.9%, and among Latinos it is 7.9%. African Americans represent some 66% of those with HIV compared with a national rate of 42%.2,9

These statistics are further compounded by Louisiana’s lack of access to primary health care—according to Business Week, Louisiana is ranked 33rd in the US for access to health care.10

**Health System**

Prior to August 29, 2005, New Orleans had four hospital beds per 1000 population—compared with a national average 2.8 beds—with nine acute care hospitals in Orleans Parish, and seven acute care hospitals in Jefferson Parish. Acute hospitalization is largely primary care for the citizens of Louisiana.2

In this two-tiered system, health care is the responsibility of the state, not local entities, which runs the safety net system through ten state hospitals.

Medical Center of Louisiana at New Orleans (Charity and University Hospitals) comprises 50% of all ambulatory and hospital visits. Three hundred-fifty ambulatory clinics fulfill state mandates that all residents have access to health care services. Charity, one of the busiest Emergency Departments in the US11 is the hub of this system and the only Level 1 trauma center on the Gulf Coast. It is also the dominant provider in New Orleans for substance abuse, psychiatric, and HIV/AIDS care. The population dependent on this system of care was 75% African American with incomes of $20,000 or less. In addition, 83% of inpatient care, and 88% of outpatient care, is uncompensated.8

**Eye Of The Storm**

This is the crux of the problem: historically there has been limited access to primary care and preventive services.

Two thirds of the evacuees interviewed in Houston in the aftermath of Katrina stated that they relied on a hospital or clinic as their source of care. Sixty-two percent stated they relied on the Charity system.12

In summary, pre-Katrina health care delivery was: high cost, uneven quality, centralized care, and uncoordinated care that was not primary care centered. A dual system of health care delivery—one system for the insured and another for the uninsured—doesn’t work and has significant detrimental consequences. These adverse consequences are that this dual system: reinforces an unbalanced financial structure; encourages excess capacity in the private sector; diverts needed resources from the public sector; decreases capacity in the public sector; and reduces health care quality for all Louisiana residents.2,11

**Universal Coverage**

The following goals should be priorities, in my opinion.

1. Build primary care and preventive care by increasing cost-effective alternatives to reduce use of emergency rooms. The “medical-home” concept with an expansion of community health centers and...
school-based health centers will promote primary and preventive care delivery. Access and quality should be a priority at these centers with the establishment of an urgent care system. These centers would also have a comprehensive disease management focus for chronic conditions.

2. These community health centers should also be centers of emergency preparedness for communities, with a specific mission to educate and inform specific geographic entities with an evacuation plan. That plan should include all citizens with a specific focus on children, the frail elderly and the developmentally disabled. Leaders would have ready access to information about each household—including the number of members, ages, and special-needs citizens. These units would serve as centers for assisting citizens in the evacuation process. These geographic units would also be coordinated with other community institutions such as schools and hospitals in the region. Implementation of a plan would be dependent on conducting training scenarios. Each of these centers would also serve as the integral hub for mental health and behavioral health services.

3. Create public and private partnerships to pursue opportunities to promote health information technology, to facilitate a Web-based, electronic medical record system and transparency in health care information to review costs and quality. Reimbursement systems would be established for providers and hospitals that meet key quality standards and performance measures. Centers of excellence in medical education, research and tertiary, highly specialized health care delivery should be incorporated in these partnerships. Medical education should clearly be a priority with specific programs centered on primary care and preventative health initiatives and professions. All of the medical schools in the region, the dental school, and allied health professional schools in the state should establish loan forgiveness programs that favor service pay-back in medical homes, centers of emergency preparedness, mental health and behavioral health centers; service at centers in Louisiana given preference.

The time is ripe for us to embrace a model of universal coverage for ethical, systemic, business, and social reasons. Louisiana citizens and policymakers should argue for a social agenda for insuring all citizens by working to change the current system to make health care less expensive and more effective. There are many opportunities for us to collaborate with national policy leaders and the learnings of other states in formulating Louisiana’s health insurance connector.

Our political will and enthusiastic passion for the provision of universal coverage and primary and home-based, quality-driven care has to supersede any ideological or political differences that have divided us in the past. Our future as a functional community is dependent on our cooperation.

* CEO, Medical Center of Louisiana, New Orleans, LA.

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2. New Orleans public health conditions [testimony on the Internet], CQ Congressional testimony: Committee on House Energy and Commerce

Flood waters outside of the Superdome.
Hope is important because it can make the present moment less difficult to bear.
If we believe that tomorrow will be better, we can bear a hardship today.

— Thich Nhat Hanh, b 1926, Vietnamese monk, activist, and writer
Continuing Medical Education and Maintenance of Certification: Essential Links

By Eric S Holmboe, MD
Christine Cassel, MD

Background

Few question the need for physicians to engage in continuous learning throughout their professional career. Knowledge and technological advances are expanding at a breathtaking pace, as is the evolution of new skills and attitudes required for the physician to just “keep up.” For example, major breakthroughs in our understanding of genetics are already beginning to change how physicians make therapeutic decisions with individual patients.1 The introduction of quality improvement science since the 1980s is changing how physicians manage groups of patients.2,3 More importantly, quality improvement requires physicians to systematically examine their practice performance.

To assist physicians with lifelong learning, institutions and organizations have created continuing medical education (CME) programs. Traditionally, such programs involve didactic learning experiences such as grand rounds and lectures by experts at either the local institution or at a regional or national conference. Whereas physician satisfaction with this traditional form of CME is often high, research has repeatedly demonstrated these more “passive” learning activities are ineffective in helping physicians to change their practice.5 Traditional CME seldom involved reflection by the physician on their real learning needs.

Against the backdrop of this changing landscape is the recognition that many physicians struggle to keep current and engage in meaningful lifelong learning. First, many physicians are no longer active in their local hospital’s educational programs and committee activities.9 Second, Choudhry and colleagues reported in their systematic review that, on average, physicians’ knowledge and skill declines over time.6 Third, many physicians are not terribly accurate in self-assessment of their knowledge and skills.7 The inability to accurately self-assess creates substantial challenges for physicians to determine what their true learning needs are.7 This is the “perfect storm”: the predominant form of CME, the didactic-based experience, is ineffective in changing behavior; on average, physicians’ knowledge and skills decline over time; and physicians’ ability to perform self-assessment accurately is suspect. Where does this leave the profession? What does effective CME actually look like?

Effective CME

At a minimum, planners of CME activities need to understand and embrace adult learning principles. Two basic principles are: 1) The activity must have high relevance to what the physician actually does. Although there is nothing inherently wrong with learning about an interesting subject for the simple joy of learning, physicians should recognize that such activities often do not translate into meaningful changes in their clinical practice. 2) The CME activity needs to be interactive, not passive. This means the participating physician must have the opportunity to work and manipulate the subject material. For example, a recent systematic review by the Cochrane Collaboration concluded that workshops using interactive formats can lead to moderately large changes in physician practice.9 However, workshops require a significant amount of planning and logistical support, are hard to perform more than a few times during the course of a year, and often reach only limited numbers of participants.

As a result, there is substantial interest in developing meaningful self-directed learning and assessment activities physicians can do on their own time and that incorporate quality improvement and change. This suggests that health care organizations should look for methods to facilitate ongoing CME activities that can be embedded into the...
work of busy practicing physicians. Certification boards are one group of organizations that have embraced the importance of flexible, real time interactive self-assessment for more effective CME.

The certification boards recognized that their maintenance of certification (MOC) program could be an effective approach for helping physicians “keep up” and improve their practices. The American Board of Internal Medicine’s (ABIM) MOC program has evolved rapidly over the last six years. A substantial portion of the MOC program involves interactive self-assessment that promotes professional development and provides CME credit hours.

We’ll start with a description of the ABIM MOC program, followed by results of early research about the impact of the program. We’ll end by describing how current CME activities in the Kaiser Permanente (KP) system can interface with MOC.

**The ABIM MOC Program**

The MOC program consists of four components and is specifically designed to provide assessment for all six competencies of the American Board of Medical Specialties (ABMS)—Accreditation Council for Graduate Medical Education (ACGME) (Table 1). First, physicians must possess an unrestricted license. Second, physicians must pass a secure exam of knowledge once every ten years. The other two components are called self-assessment for lifelong learning, focused on medical knowledge, and evaluation of performance in practice.

**Lifelong Learning in Practice**

The lifelong learning component can be accomplished through several pathways. The ABIM provides a number of Web-based modules in specific content areas that help physicians self-assess medical knowledge. These modules consist of 25 to 60 multiple-choice questions based on a clinical vignette that are designed to help physicians learn new knowledge and skills. These are “open-book” modules; physicians are encouraged to use educational resources in completing the module. All ABIM modules have CME credits available upon completion. Over the course of the next two years, the ABIM is developing annual update modules consisting of 25 questions for general medicine and all subspecialties. ABIM diplomates can also use a number of approved, society-developed knowledge modules to meet this requirement, such as the American College of Physicians Medical Knowledge Self Assessment Program (MKKSAP) program and a number of subspecialty society medical-knowledge products.

A new project involves the competencies of medical knowledge and practice-based learning and improvement; seeking answers to clinical questions that arise in the context of patient care. Previous studies have demonstrated that approximately two thirds of the clinical questions a physician encounters, and for which they do not know the answer but that could potentially impact the patient’s care, go unanswered. The ABIM is developing a new type of Web-based module that facilitates the systematic collection of clinical questions, using the framework of evidence-based practice to help the physician structure the question and subsequently search efficiently for an answer. This module builds on the work of others using a Web-

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<thead>
<tr>
<th>Table 1. The general competencies</th>
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<tbody>
<tr>
<td><strong>General competency</strong></td>
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<tr>
<td>Patient care</td>
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<tr>
<td>Medical knowledge</td>
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<tr>
<td>Professionalism</td>
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<td>Interpersonal skills and communication</td>
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<tr>
<td>Practice-based learning and improvement</td>
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<td>Systems-based practice</td>
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Table 2. American Board of Internal Medicine available practice improvement modules (PIM)

<table>
<thead>
<tr>
<th>PIMs containing or using:</th>
<th>Module title</th>
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<tbody>
<tr>
<td>Medical record audit, patient survey, practice systems survey</td>
<td>Asthma, Care of the Vulnerable Elderly, Clinical Preventive Services, Diabetes, Preventive Cardiology</td>
</tr>
<tr>
<td>Medical record audit and practice systems survey (20 points):</td>
<td>Colonoscopy, Hepatitis C, HIV, Osteoporosis</td>
</tr>
<tr>
<td>Patient survey and practice systems survey (20 points):</td>
<td>Communication—Primary Care, Communication—Subspecialists</td>
</tr>
<tr>
<td>Peer survey and practice systems survey (20 points):</td>
<td>Communication with Referring Physicians</td>
</tr>
<tr>
<td>External audit data and practice systems survey (20 points):</td>
<td>Self-directed, Hospital-based Care</td>
</tr>
</tbody>
</table>

*These PIMs allow physicians to use data they receive from other agents such as health plans, state quality improvement organizations, hospital, etc.

Evaluation of Performance in Practice: Practice Improvement Modules

The practice improvement modules (PIMs) are Web-based tools designed with important adult learning principles in mind. PIMs are highly interactive, involving the physician in active review and reflection about their practice. Completion of a PIM involves collecting data from medical record audit, patient surveys and a questionnaire of the practice’s microsystem, reflecting on the performance measures in a practice quality report, developing and implementing an improvement plan, and finally reporting the impact of a rapid cycle test of change. Figure 1 shows the PIM framework. This framework is based on the cycle of change methodology for quality improvement. The available PIMs and their make-up are shown in Table 2.

Because the PIMs are all about the physician’s own practice, PIMs are highly relevant to what the physician actually does in their daily work. However, interactivity and relevance do not necessarily ensure the experience has value to the physician or facilitates change in their practice. Recognizing the need to investigate the impact of the PIMs, the ABIM has embarked on an operational research effort to study the effectiveness of the PIMs in physician practices.

Early Research with the PIMs

One of the first studies involved a small sample of sixteen practicing physicians in Connecticut who volunteered to use the Diabetes PIM to assess and implement a quality improvement intervention in their practice. The physicians identified areas for improvement in multiple processes of care through the medical record audit and patient surveys. A significant proportion of the physicians found the patient surveys provided valuable feedback that patients wanted more information about their medications and diabetes. The physicians also valued the comprehensive, high-quality performance data from the audit.

A recent analysis of the first 179 completers of the Preventive Cardiology PIM (PC-PIM) confirmed several findings found in the original diabetes pilot study. First, the PC-PIM performed well as a self-administered tool for assessment of the quality of practice using performance measures and obtaining feedback from patients. Second, the act of self-assessment and performing practice quality improvement was novel for most physicians; most had not previously had a personal experience in quality improvement. Third, the patient survey provided
new insights for the physicians on how their practice communicated with patients.

However, both of these early studies highlighted several challenges in helping physicians change practice through a Web-based tool. First, most of the physicians did not involve other members of the office. Too often physicians used the “work-harder” approach. Second, physicians often struggled on how to redesign office work processes necessary for effective and sustainable quality improvement. Third, the majority of physicians had little prior experience with implementing change before using the PIM.

The results of these two early PIM studies demonstrate the clear need to continue to redesign CME activities to help physicians acquire the knowledge and skills needed to collect evidence of performance in practice, to learn from it, and to use it to improve practice. The ABIM is continually learning from these early experiences with the Web-based PIMs to improve the educational and self-assessment process. Future work will focus on the ABIM’s Self-Directed PIM that allow physicians to use external data, similar to that provided by KP to its physicians.

**MOC and CME at Kaiser Permanente**

Permanente physicians have a unique advantage in their approach to CME and in its links to MOC. As members of an integrated multispecialty group, Permanente physicians have access to CME programs that are organized by the Permanente Medical Groups. In these, they can bring up-to-date methods to physicians based not only on specialty society topics, but on clinical conditions that might affect patients cared for by multiple specialists within the group. Since Kaiser Permanente (KP) offers many CME activities internally, physicians may not have to travel as extensively and lose time away from home and work in order to keep up to date. Now that MOC programs for all 24 ABMS specialties cite reference to ABMS, this activity also gains one credit towards maintaining board certification in one’s specialty. Specialty certification requires active and unrestricted licensure, demonstrated involvement in self-evaluation of medical knowledge and performance in practice, and passing a secure examination. The self-evaluation of both knowledge and practice performance are enhanced for Permanente physicians. First, they are enhanced because KP is an organization in which data about performance, attention to population-based care, and allowance for physicians to participate in continuing education have always been core to the organization’s identity. Components, such as the Care Management Institute, which examines evidenced-based approaches to current guidelines for care in a wide range of conditions, contribute to the rich and high-quality resources that KP physicians can draw on. In addition, with KP HealthConnect, Permanente physicians now have the ability to get feedback about the quality of clinical care that they provide in a wide range of conditions. This kind of data is directly applicable to MOC for interns through the ABIM Practice Improvement Modules (PIMs). Data for common conditions such as Diabetes, Asthma, and HIV can be directly entered into the ABIM Web-based template. Other data related to other conditions can be entered through the “Self-Directed PIM” and credit obtained for MOC. Both Northern California and Southern California are participating in evaluation of an established quality program initiative by the American Board of Internal Medicine in which a program that engages in measurement and active engagement of individual physicians in improvement plans awards credit on the basis of attestation from leaders that the physician has been engaged in such activities.

The challenge ahead for all physicians in the United States is to understand the denominator of the patients they are serving … this is population-based medicine …
Decide

The indispensable first step to getting the things you want out of life is this: decide what you want.

— Ben Stein, b 1944, Emmy Award-winning American actor, lawyer, law professor, comedian, and White House speechwriter
Editor Introduction

Pediatrician, writer, editor, and health policy expert Fitzhugh Mullan, MD, is perhaps best known as the founding editor of (and contributor to) the popular column “Narrative Matters” in the influential health policy journal *Health Affairs*. For many readers of the journal, the column—which features first-person narratives, or stories, that illuminate often-complex health policy issues—is the first thing to turn to when cracking open a new edition.

When not writing or editing, Dr Mullan is the Murdock Head Professor of Medicine and Health Policy at the George Washington University School of Public Health and a Clinical Professor of Pediatrics at the George Washington University School of Medicine. He is also a member of the medical staff at the Upper Cardozo Community Health Center in Washington, DC.

Following graduation from Harvard University and the University of Chicago Medical School (1968) and an internship at the Jacobi and Lincoln Hospitals in the Bronx, New York, Dr Mullan began a distinguished medical, academic, and administrative career. It has included serving as Director of the National Health Service Corps in Washington, DC; Scholar-in-Residence at the Institute of Medicine; senior medical officer at the National Institutes of Health; Director of the Bureau of Health Professions; and, in 1991, promotion to the rank of Assistant Surgeon General (Rear Admiral). In 1996, he retired from the Public Health Service and joined the staff of *Health Affairs*, where he continues to edit the “Narrative Matters” section.


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Narrative

Jon Stewart (JS): You’ve been involved in health policy and politics right from the beginning of your career. How did you come upon this very personal, narrative approach as a way to discuss something as abstract and academic as health policy?

Fitzhugh Mullan, MD (FM): The first time I thought about it in any conscious way was when I joined the editorial staff of *Health Affairs* in the latter part of the 1990s and conceived of a column devoted to narrative writing, what we now call the “policy narrative.” I realized then that much of what I had written over a number of years was policy narrative, even if I hadn’t planned to do it. In my second book, especially, *Vital Signs: A Young Doctor’s Struggle with Cancer*, I was writing about medicine from the other end of the stethoscope, coming from a very personal perspective. So I was a practitioner of the policy narrative long before I’d ever used that word.

A Story of Uncoordinated Care

JS: You wrote a wonderful piece in *Health Affairs* about the death of your father that spoke very eloquently to the issue of uncoordinated care. Can you recap that story and tell us how you came to write it?

FM: Going through what turned out to be a terminal experience with my dad was kind of an eye opener to me in that I lived through some of the concerns that many have expressed about the inefficiency and nonsensical nature of our health care system. It was a meet-your-worst-nightmare experience.

To recap: at age 91, frail but in reasonable shape, my father had gone downhill the previous few years. He had both gallbladder disease and probably a chronically inflamed appendix. He had a superb primary care internist for many years who had retired a couple years before. The new guy wasn’t terribly diligent and he particularly didn’t like hospital practice, so he had no interest in admitting or...
in following my dad. His surgeon admitted him, and he spent about two months in the hospital. Because he was old and had multisystem disease, the surgeon asked for a cardiac consult and a pulmonary consult before surgery and a GI consult because it was a GI problem. After the surgery, because of confusion and poor mental status recovery, he had to see a psychiatrist and a neurologist. He picked up an endocrinologist along the way. He had six or seven different internal medicine subspecialists following him, without any coordination, without a general internist in sight. They were all very cordial and fairly diligent, but they didn't talk much to each other, and the notes, which I followed, were legible or not, depending on the doctor.

Fortunately, nothing went way off track. My dad did not do very well. He went to a nursing home where he was cared very efficiently by general internists and a nurse practitioner, and he died some months later. But the failure of coordination, and the large Medicare bills that piled up with these various subspecialists doing diligent but kind of “smokestack” work, each in their own chimney, was a graphic demonstration of what I think is a major ailment in our system, which is gross inefficiency. That needs to be addressed, and I believe a managed care system with full coordination of care and prudent use of resources would have been far better. Actually, I'm a great fan of Kaiser Permanente (KP) but I think about how we could have an American system that “smelled and tasted American” and worked for the nation, and it would look a lot like KP.

The final word was that my father, as a psychiatrist, had become very involved in medical ethics, particularly as it relates to equity and access to services. And he handled it in a very straightforward way, which is the hallmark of abuse, which you mention? At Congress, people have always offered stories to influence other people. But how do you handle the issue of abuse, which you mention? At Health Affairs, we've handled it in a very straightforward way, which is the review process. Stories that are submitted to the “Narrative Matters” column are vetted by the editors first, and if they're deemed in the ballpark, they're then sent out to at least three readers who are chosen because of some knowledge in the field, whether it's aging or pediatric policy or whatever. We also send it to someone who is an established writer and can critique it from that point of view.

Now, reviewing is not the world's most scientific process, as we all know. But it achieves a couple things: If people feel that something is way out of town in terms of reality, we at least point it out, and then we can decline the story. And we get a lot of judicious commentary on how to make it stronger or more accurate that we can feed back to the author.

**Storytelling and Medicine**

*JL:* A number of physicians these days are discovering, or rediscovering, the relationship between storytelling and medicine. Because relationships are really at the...
heart of both stories and medical encounters.

**FM:** The medical history, in a sense, is a story. We’ve developed it in a fairly formulated way so it’s not a wandering history; it’s a systematic information-retrieval process, but it is basically asking the patient’s story. I think that’s terribly important for forming a relationship. In pediatrics, and particularly where I practice, a clinic that sees mostly new immigrants, the stories are rich. Sometimes they’re hard to get at because of linguistic problems. I speak passable Spanish, but I’m aware that I miss the nuances from not being fluent. People come with incredible stories of upheaval very often. I find that young residents blow by the social history—you know, did your grandmother have hypertension? They miss the point that this is relationship building, and that knowing that the grandma had hypertension contributes a tiny bit, but knowing that these folks arrived two months ago from a war zone begins to tell the doctor a lot about the patient. And the patient, in the vast majority of cases, is impressed that the doctor cares enough to find out about their story, and that’s what builds relationship. I find that very meaningful, and not just on an external level, but in the sense of what their challenges are going to be medically and socially, which I’m going to be involved with. So, I think stories are the essence of good medical practice. I worry that many docs, and certainly many of my trainees, need to be pushed to appreciate the richness of that.

**JS:** We’re talking about the use of story and the value of storytelling in two different realms: one in clinical practice and one in promoting health policy. There are obvious differences there. Do you think that in the clinical arena, for instance, that medical schools should require, or at least encourage, students to take a course in narrative writing?

**FM:** Funny you should ask, because I’ve begun teaching a course for medical and public health students here at George Washington. It’s been terrifically rewarding. I’m in the middle of the first time doing it, so this is a work in progress. I took three essays from the Narrative Matters column that probe the issue of racism in medicine through the narrative format, and the group just went wild. I’ve become converted to the notion that the use of teaching narrative—reading and writing narratives—is a good way to teach social medicine, because you can do it for a lot of different issues, like racism, children’s issues, death and dying, sexuality. So the short answer is yes, I think we ought to teach narrative on a much more regularized basis in medical school.

**JS:** Maybe we should teach it in policy schools, too. Abraham Verghese, MD, who wrote that nice introduction to your book, makes the comment that he writes in order to understand what he’s thinking. That would be particularly useful for policymakers, don’t you think?

**FM:** I know Abe and he’s much more soulful than I am. I’m more—oh I don’t know—mechanical or strategic. What I do find, though, is that I come back to my stories and they help me interpret my life, at least in retrospect. My own story is framed by the stories I’ve told, because I remember them, whereas other stuff I don’t remember. Abe feels something and wants to explore it and gets into it, whereas I sort of see the story, tell it, and think about it afterwards.

### Health Care Reform

**JS:** You’ve been around the national health policy world long enough to have a valuable perspective on the current prospects for some sort of meaningful health care reform. I believe you were involved in the health reform proposals over a decade ago and, of course, nothing happened at that time for a variety of reasons. Do you have any reason for optimism today?

**FM:** I’d like to say yes, but I guess I’m—what is it?—once burned a victim; twice burned a fool. I have been saying for years, well, the next election I’m sure we’ll have a system of national health insurance with universal coverage. But we’re still lacking political leadership. The problem is that the solutions are highly political because they involve about one sixth of our economy, and one person’s reform is another person’s lunch bucket getting trashed.

I think it’s going to take two things: One is political leadership from somebody who is as determined as the Clintons in the early 1990s, but more strategic and more cunning than they were. It’s got to be leadership that knocks heads and appeals to the civic sense or the communitarian sense of the nation. The second is that it will depend on how desperate the situation gets. In other words, the worse it gets—the more the middle class is affected by the erosion of coverage—the larger the constituency for change and the more tolerant of compromise people are going to be.

**JS:** Thank you.

### Reference

The Importance of Graduate Medical Education for Permanente Physicians, Kaiser Permanente, and American Medicine

By Scott Rasgon, MD, Senior Editor

Introduction

In this tribute, the voices of Kaiser Permanente (KP) Graduate Medical Education (GME) leaders highlight the rich history of resident education in KP, its importance to Permanente physicians and the organization, and its current and future impact on American medicine. Managed care organizations have often been criticized for not participating in GME—financially and with scholars. Most of these organizations are not vertically integrated medical care systems like KP, and their competitive bargaining with hospitals has had an unfortunate negative effect on GME. However, KP has a six-decade experience of independent residency training programs. In an interview, Benjamin Chu, MD, KP Southern California Regional President, shares a comparative view of American medicine and KP on the basis of his years of work with GME at New York University School of Medicine; program leaders Bruce Blumberg, MD, and Marc Klau, MD, review GME in Northern and Southern California, respectively; program leaders Thomas Tom, MD, and Peter Chee, MD, outline the UCLA-KP connection; Jimmy Hara, MD, with Sandra May Gonzales, PhD, delineates the required competencies for residents; and, with Walter Coppenrath, MD, describes a Community Service Program. Twenty-year perspectives are shared by two physicians who were residents in the KP system: one, Barry Rasgon, MD, who trained at the Oakland Medical Center and stayed on to become the Director of Research at the Oakland Medical Center Head and Neck Residents Training Program; and another, Richard Schwartz, MD, who left the KP system to become the Medical Director of the North Shore Medical Group and Associate Professor of Clinical Medicine at Stony Brook University Hospital, where he has also served as Chief of General Medicine. Albert Palitz, MD, reminisces about the teachers who helped him to find the direction of his life. Finally, Barry Rasgon, MD, and Janell Rasgon, RT, share a story of a third world residency experience in Guatemala.

An Interview with Benjamin Chu, MD
From an External Perspective:
A New President’s View of Kaiser Permanente Graduate Medical Education

Prior to joining Kaiser Permanente (KP) Southern California (KPSC) two years ago, Dr Chu was Associate Dean for Clinical Affairs at the New York University (NYU) School of Medicine and NYU Medical Center where he developed a Graduate Medical Education (GME) consortium among affiliate hospitals—Bellevue, New York Veterans Affairs Medical Center, Lenox Hill, Gouverneur, and NYU Downtown. He then became Senior Associate Dean at Columbia University College of Physicians and Surgeons for the Harlem Hospital Affiliation, and also served as a 12-year member of the New York State Council for GME.

What were your principle contributions to GME?

In New York until recently, “residents” who lived in the hospital would work as many as 100 hours of the 168 hours in a week. Some would work every other night; some every third night. In the early 1980s, I thought residents were required to work too many hours, without enough time for their personal lives, for rest, or for medical education. When I joined the Bell Commission of the New York State Department of Health, I supported a strong focus on resident hours and supervision. Our recommendations—considered bold and controversial in 1986—were to limit residents’ hospital schedules to 80 hours a week with adequate time for rest between assignments, and to mandate proper attending supervision. It wasn’t until 1989 that New York State adopted and implemented those rules; other states followed voluntarily, but the Accreditation Council for Graduate Medical Education (ACGME) did not officially adopt the 80-hour rules until 2001.

It is hard to believe that controversy continued until then. I am proud of those recommendations.
What is your opinion of the direction of GME?

I am disappointed with the lack of balance between primary care and specialty training. Specialty training is definitely needed because American medicine is still 70% specialty oriented; however, I hope we can shore up primary care training in the near future. Furthermore, I am a strong proponent of residents spending more clinical time in outpatient settings. And that’s what KP offers physician residents, because both settings are integral to our system. This is our greatest value to GME.

Now that you have been with KPSC for two years, what differences have you observed or experienced?

In Southern California we have the “Permanente Online Interactive Network Tool” (POINT)—a Web-enabled and data-driven suite of products that support organizational goals and objectives. This allows residents to understand the larger context of their patient panels. This continuity of patient care involves a longer-term commitment to keep people healthy, different from many resident specialists who only treat people for an episode of care.

Another major difference at KPSC is the financing for GME. In California, there is no real financial incentive for the program. In New York, a huge proportion of the hospitals’ revenue base is tied to GME—the more residents you have, the more add-ons to your Diagnostic-Related Group. In KP we subsidize our GME costs through our Community Benefit Program. Resident education is a commitment to education and physician development, and not an economically driven mission.

Can you explain how KP’s database capabilities enhance GME?

KPSC has a clinical database on 3.2 million members—no other health care provider has data for that many people. A typical American physician, in an average year, might have 2000 people under his or her care. They recommend a course of therapy and, if they are committed to continuity, might follow-up on patients for a week or two. However, only seeing someone three or four times a year, physicians don’t usually know how many of those patients have had mammograms, Pap smears, or colonoscopies. You can’t consider patients’ long-term health without tracking their primary preventive services, along with management of their chronic diseases. With our systems, we not only provide primary and preventive services, we also have the ability to track our patients. Having access to such a large population database is an important tool in determining the ultimate benefit of an intervention.

If, for example, a resident were to practice in a modular outpatient setting with 15,000 patients and seven to ten physicians, the resident can accurately see how many diabetics there are, how many have had HbA1c measurements, how well their diabetes and blood pressure is controlled. From that database, because our technology integrates database information and a team redirects system resources, residents learn new approaches to achieving better health outcomes for our patients. KP can offer a wonderful setting to learn, shape, and practice evidence-based, outcome-oriented 21st-century medical practice.

How specifically does KP’s technology system advance the practice of evidence-based medicine for residents?

The KP system, called HealthConnect, not only gives residents a broad perspective, they can be more analytic about delivering the highest level of health to a certain population. Without this advanced-technology tool, the American GME curriculum is highly dependent on which patients come in for medical care, who is hospitalized, and what the attendings know. In each case they must determine the evidence and recommendations, and neither resident nor attending has time to search the world literature for each patient. Having KP HealthConnect readily accessible, residents have a powerful tool—with much of the evidence embedded in the system, coupled with decision support and Web-based search tools.

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How does research fit into GME training?

By tracking millions of people over time, it is possible for physicians to observe the differential effects of their interventions, for example, ethnic variations in response to therapies, or differences related to gender. Much of the early heart disease research was conducted on men. Physicians and investigators did not fully understand the natural course of the disease in women, how women presented with the illness, and their responses to therapies. With our population databases, answers to these questions can be obtained through carefully designed...
research studies. Residents should be actively engaged in population-based health-services research to best improve their clinical practice.

Would you like to say something in conclusion?

KP should become more involved in GME. Training residents in our standards for medical practice, we can play a major role in transforming health care in America. As important, bringing young doctors with energy and openness to new ideas into our system for their GME forces KP to remain at the cutting edge of health care delivery. There are wonderful benefits all around.

Six ACGME Competencies

The six ACGME competencies are:

1. **Patient care** that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health

2. **Medical knowledge** about established and evolving biomedical, clinical, and cognate (e.g., epidemiologic and social-behavioral) sciences and the application of this knowledge to patient care

3. **Interpersonal communication skills** that result in effective information exchange and that team with patients, their families, and other health professionals

4. **Professionalism**, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population

5. **Practice-based learning and improvement** that involves investigation and evaluation of patient care and appraisal; assimilation of scientific evidence; and improvements in patient care

6. **Systems-based practice**, as manifested by actions that demonstrate awareness of and responsiveness to the larger context and system of health care and the ability to effectively call upon system resources to provide care that is of optimal value.

The Programs

Required Residency Competencies

By Jimmy H Hara, MD, FAAFP; Sandra May Gonzales, PhD

Why is GME at KP important to American medicine and resident training?

ACGME requires all residents in all programs nationwide to demonstrate six competencies upon completion of training (see Sidebar: Six ACGME Competencies). All of the KP residency programs are accredited by the ACGME.

KP residents have a unique opportunity to learn these competencies in a vertically integrated health care system, in particular because of five major KP capabilities, several elucidated by Dr Chu:

- The Member Appraisal of Physician/Provider Service (MAPPS)
- Population care management (PCM) and chronic disease management (CDM) programs, tracking systems, and data
- The Kaiser Immunization Tracking System (KITS)
- HealthConnect—electronic health and medical record
- Permanente Online Interactive Network Tool
- Regional Clinical Guidelines

Most programs across the nation have difficulty providing and measuring one particular competency—“Practice-based learning and improvement”—which is achievable in KP through: PCM, CDM and KITS. In addition, evidence of improvement in MAPPS satisfies “Interpersonal communication skills” and “Professionalism,” and also qualifies as evidence of “Practice-based learning and improvement.” The competency of “Systems-based practice” is satisfied through the informatics and population tracking systems available through the PCM, CDM, MAPPS, and HealthConnect and POINT.

This is a great contribution we can offer American medicine.

Two California Programs

GME leaders and program directors, Bruce Blumberg, MD, Northern California and Marc Klau, MD, Southern California, review the Northern and Southern California GME programs describing their history, current state, community outreach, impact on American medicine—specifically in California— and future directions.

The Permanente Medical Group in Northern California

By Bruce Blumberg, MD

Sidney Garfield, MD, the founding physician of the Permanente Medical Groups, made this statement in 1952: “… a medical plan worthy of perpetuation, in addition to being economically sound, must provide teaching and training to stimulate high quality of care and research to contribute to medicine of the future.”

Always the visionary, he may have had a more practical motive in his stated support for GME programs. In an era when the relentless attacks of organized medicine hampered The Permanente Medical Group (TPMG) in recruiting and retaining physicians, the KP residency programs served as a lifeline of much-needed staff physicians.
As our reputation flourished and recruitment successes blossomed, graduates of KP residencies have made an important contribution to our staff ranks. The grounding of trainees in the fundamentals of Permanente Medicine virtually ensures a cultural fit, and those who graduate to a Permanente staff position usually spend their entire careers in our program.

Our GME mission—articulated in the Northern California KP policy and procedure manual—is: “Kaiser Permanente, a leader in the delivery of quality medical care, has been committed to GME for over 55 years. Our goal is to provide organized educational programs in a scholarly and supportive, integrated, managed-care environment, facilitating the ethical, professional and personal development of the resident, while ensuring safe and appropriate care for patients.”

Two milestones of success occurred in 2006—the Oakland Medical Center’s internal medicine residency celebrated its 60th anniversary and the San Francisco Medical Center’s internal medicine program marked its 50th anniversary. Two additional landmarks occurred in Spring 2007—the Oakland obstetrics/gynecology (Ob/Gyn) and pediatric residencies respectively reached 60 and 50 years old.

Northern California funds 200 residency positions per year. Another 150 positions are funded in affiliated programs, primarily at academic partner institutions: Stanford University, University of California (UC), San Francisco, and UC Davis. These rotating positions ensure that 800 to 1000 physician trainees spend time in a Northern California KP facility in any given year. The sponsored programs include internal medicine and Ob/Gyn at Oakland, San Francisco and Santa Clara facilities; pediatric, and head and neck surgery, at Oakland; and two consortium programs—emergency medicine (EM) (cosponsored with Stanford University) at Santa Clara, and podiatry at Santa Clara, Hayward/Fremont, Oakland/San Francisco/Walnut Creek, and Vallejo/Santa Rosa/San Rafael.

KP Northern California physician trainees account for 5% of all resident physicians in the state, with the most prominent impact in EM and Ob/Gyn, 10% and 13.5% respectively.

Thirty percent of KP residents make a career in TPMG after graduation and 15% of TPMG staff physicians received some part of their residency training in a KP-sponsored residency. An even larger group of TPMG physicians rotated through a KP facility as a resident, in an affiliated program. Of all TPMG physicians practicing in the Sacramento Valley, 30 to 50% rotated through a KP facility during residency at UC Davis. Familiarity with residents allows the medical group to identify and select the best-performing graduates, who in turn have become 250 of the current TPMG physician leaders—25 occupy senior leadership positions, including directors of the TPMG Board, and Associate Executive Directors.

Beyond contributions to the medical workforce, residency programs provide other major benefits to KP: the opportunity to teach is a source of great professional satisfaction for faculty—600 TPMG physicians hold faculty appointments at one of the three Northern California medical schools. To the extent that “the best way to learn is to teach,” faculty assert that teaching responsibilities keep them at the cutting edge of their specialty practice. A significant number of staff physicians at our major teaching hospitals were attracted to TPMG careers by the opportunity to teach in a setting that did not require a “publish or perish” mentality. Increasingly, residency programs have incorporated opportunities for student research. Residents have presented their work at regional and national professional meetings, and in peer-reviewed publications, bringing recognition and credit to KP GME programs and the organization.

With residency programs an important element of Community Benefit activities, KP improves the community’s health. Specifically, our residencies have fostered long-term professional relationships with safety-net providers, including school health clinics, women’s health clinics, and providers of care to minorities and other underserved populations.

An educational setting within a superb, health care delivery system is one distinct advantage of the KP GME programs, and, along with the availability of a large population of patients followed longitudinally through all aspects of the continuum of care, distinguishes KP from virtually all academic settings. This exposure to population management, evidence-based care, and team-based chronic care constitutes the cornerstones of Permanente Medicine, preparing leaders of 21st-century medicine.

KP’s depth of physician leadership and influence in public health policy ensure that KP will continue to play an important role in directing American medicine’s GME.
Southern California Permanente Medical Group
By Marc Klau, MD

Why does GME still matter? A surgeon walks into the operating room and learns a resident will operate with him/her today and knows that the difficult case will take one or two hours longer, and there will be 50% more "heartburn" because of the complexity of the case. Over in family medicine, the attending for the day supervises four residents, plus add-on patients, and the time for a breather at lunch disappears. So, why do we want four residents, plus add-on patients, and the time for in family medicine, the attending for the day supervises "heartburn" because of the complexity of the case. Over one or two hours longer, and there will be 50% more him/her today and knows that the difficult case will take

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residency program makes financial sense.

More than 50 years after revolutionary physicians founded Southern California Permanente Medical Group (SCPMG), physicians still practice their founders’ way of providing better quality medical care. Recent graduates of residencies, the founders recruited other young, visionary physicians. Once KP established a strong foundation, it was natural to develop residency and fellowship programs—the first at Los Angeles Medical Center (LAMC) in internal medicine, family medicine, pediatrics, general surgery, Ob/Gyn and urology.

Since then additional surgical and medical residencies and fellowships were added, including residencies in family medicine at Fontana, Woodland Hills, Orange County and Riverside. Currently, 264 residents participate in our independent programs, and 60 residents from affiliated programs. With the support of KP’s Community Service Program, and federal reimbursement for the cost of providing residencies and fellowships, the residency program makes financial sense.

To ultimately address the question of relevance, we have enlarged and refocused our prioritized purpose for resident training: 1) a community benefit that trains the doctors of tomorrow; 2) a community benefit that gives back to local communities through care to the underserved; 3) a source of physicians for SCPMG, especially difficult to recruit specialties; and 4) an enhancement of the KP image as a teaching center. To serve this fourfold purpose, we recruit the best medical students by offering competitive salaries, improve work-life in the context of an 80-hour week, improve training for personal development, and renew a focus on caring for the underserved. And, we offer the best of Permanente Medicine—evidence-based medicine with integration of services across the continuum in a caring environment. By clarifying our purpose and improving the overall experience for residents and attendings, we remain true to the vision of our founders, so that all attendings know that by working a little harder they are developing the next generation of physicians.

“In the end, it’s not the years in your life that count. It’s the life in your years.” (Abraham Lincoln.)

Program Affiliation
In December 1990, the Department of Internal Medicine at KP Los Angeles (KPLA) signed an affiliation agreement with the UC Los Angeles (UCLA) School of Medicine.

UCLA—KP Connection
By Thomas Tam, MD; Peter Chee, MD

Why would UCLA affiliate with KP? According to Jan Tillisch, MD, UCLA’s Education Vice Chair of Medicine, KP’s strength is in primary care medicine. This affiliation enables 72 third-year UCLA medical students (half of the third-year class) to rotate within the Internal Medicine Department at KPLA. UCLA medical students, mentored by enthusiastic role models, have exceptional learning opportunities from a large and diverse population of patients and experience KP’s comprehensive care delivered within well-functioning medical practices.

The success of this affiliation can be measured by various academic standards. KP offers fellowships in cardiology, gastroenterology, nephrology, interventional cardiology, and electrophysiology. Currently, there are 39 internal medicine house officers and 24 fellows. Since 2001, 100% of KP graduates have passed their board examinations, which places the internal medicine training program among the elite in the nation. These outstanding internal medicine residents and subspecialty fellows actively teach UCLA medical students. The AGME has awarded KP fellowships and general internal medicine training programs a five-year accreditation, bestowed on only the best. One hundred and five internal medicine faculty members hold UCLA academic appointments, a hallmark of teaching and clinical excellence. KP attendings participate in UCLA’s faculty development programs on quality, the patient care experience, and the latest advances in internal medicine.

According to Dr Tillisch, “For 16 years, UCLA students have favorably viewed your medicine clerkship rotations, which is more patient-centered and pragmatic care.” The UCLA affiliation is a distinguished milestone for KP physicians teaching the next generation of doctors.
The Importance of Graduate Medical Education for Permanente Physicians, Kaiser Permanente, and American Medicine

**Community Benefit**

In recognition of decades of community service provided by the KPLA family medicine residency program under his direction, Jimmy Hara, MD, Residency Program Director, was awarded the National KP David M Lawrence, MD, Community Service Award. As a result of this award, Dr Hara expanded the residency community service experience from the Los Angeles Free Clinic and Venice Family Clinic, to additional venues of the UCLA Salvation Army Homeless Shelters, the Asian Pacific Health Care Venture, and the UCLA Mobile Clinic.

**GME Programs and Community Service**

By Jimmy H Hara, MD, FAFP; Walter G Coppenrath, MD

The UCLA Mobile Clinic provides medical services to the homeless in West Hollywood. This volunteer service was begun by two UCLA medical students in 2000, Patricia Koh, MD, and Walter Coppenrath, MD, who matched into the KPLA Family Medicine Residency Program.

Under the direction of Raymond Baxter, PhD, Vice President for Community Benefit, and Winston F Wong, MD, Medical Director of Community Benefit, the KP National Program Office has a legacy of commitment to community service. The Community Benefit budget contributes funds to GME in support of four major focus areas: professional education (GME), vulnerable populations (Medi-Cal, community clinics and public hospitals), evidence-based medicine and research, and public advocacy. The Southern California KP GME programs qualify for funding in the professional education and service to vulnerable populations areas because of services provided at the Hollywood Sunset Free Clinic, the Asian Pacific Health Care Venture, the Los Angeles Free Clinic, and the Skid Row Collaborative Clinics.

**Twenty-Year Perspectives**

An important aspect of GME is the impact the training program has on the resident’s decision about where to continue the practice of medicine. Here are two views: a resident that stayed in the system in which he trained and a resident who left and integrated his learnings into another system.

**Train and Stay**

By Barry Rasgon, MD

In my last year of medical school at the University of Southern California (USC) in 1985, I strolled down a beautiful white sandy beach in Malibu, contemplating one of the biggest decisions of my life: where to do my Otolaryngology-Head and Neck Surgery (OHNS) residency training? Preparing to interview at six programs, mentally sorting the pros and cons, I pondered which one would best shape my clinical and surgical skills.

On the interview trail, many residents were content, though many were unhappy. I had heard about the OHNS program at KP Oakland Medical Center from two USC students—accepted there for the following year—who suggested I do a one-month externship, during which I was offered a position that I gratefully accepted.

The big question asked by many—why would I want to attend a program that is not university-based?—was answered by several revealing facts: the residents there were the happiest I had met anywhere; staff interaction was amicable; and the staff’s office doors were always open for residents with questions, or problems, or for a chat. Elsewhere, hierarchy was a barrier. Most important, during the first two years residents in the clinic and operating room at KP were exposed to all the complex and interesting surgical cases one would see at the university.

Training at KP Oakland was unique: the first two years were like an apprenticeship—residents were assigned to a different staff surgeon each month. When the staff surgeon was in clinic, the resident was in clinic; when the staff surgeon was in the operating room (OR), the resident was in the OR. This essentially set up a one-on-one learning situation engendering a strong foundation for both clinical and surgical skills. As residents developed, they were given more autonomy and responsibility, running their own clinics as Senior and Chief Residents, with more freedom in the OR. Staff surgeons were always available for questions or help.

Exposure, through rotations, to the diverse faculty at five different KP medical centers was, and remains today, a valuable feature of training at KP. Residents work one-on-one with 20 head-and-neck surgeons, trained at many university training programs across the country. The residents experience surgical techniques and “pearls” that faculty members have acquired. There are many ways to skin a cat, as you’ve heard, some ways better than others.

Clinical research, another strength of KP Oakland training, was integrated into the residency program by a required four-month period of protected research time, with the expectation to complete a research project every year during training, and to present at the Bay Area Residency Research Symposium—a competition between UC San Francisco, UC Davis, KP Oakland Medical Center, Stanford, and other West Coast Head and Neck Surgery Training Programs. Each
resident is assigned a staff supervisor to guide his/her research. Additional support through the Departments of Research, Medical Editing, and Audio Visual is also available—all located in Oakland. Since 1993, residents and staff of the OHNS program have given 128 presentations at regional, national, and international meetings—an average of 9 presentations per year—and published 66 articles in peer-review journals, and 10 book chapters—an average of 5 publications per year. Since 1999, residents have won 34 research awards at regional and national meetings.

When I graduated from residency at KP Oakland Medical Center, I was asked to continue as Director of Research for the Training Program where I continue as I write this tribute 21 years later.

**Train and Leave**

By Richard Schwarz, MD

I came to KP in the summer of 1981, to complete my final year of residency in internal medicine. The first two years had been spent at a university medical center, where the experience had been intense but the hands-on teaching sparse. On my first day at KP I made rounds, one-on-one, with an attending physician, a “real doctor” who actually practiced while—and what—he preached. That experience was repeated many times during the year, and I wound up staying two more years in KP’s nephrology fellowship program, during which I was schooled in an admirable approach to patient care.

I had wished to be taught by experienced, dedicated clinicians, professionals doing that which I planned to do with my life, rather than by professors for whom practice was a part-time sideline. At KP I found what had been lacking during medical school and during my first two years of residency, both of which took place at respected major medical centers. In my mentors at KP I encountered not only knowledgeable men and women, but true role models after whom I could fashion my own professional approach. These were physicians who made indelible marks on my development as a physician and as a person, for which I feel continued gratitude, especially Hock Yeoh, MD, who was and continues to be an advisor and guiding light for me. The qualities of the nursing and ancillary staffs remain unsurpassed in my experience.

It has been over 20 years since I left KP to return to the east as a busy internist and nephrologist, but the lessons I learned there have stood the test of time.

Many of the clinical and teaching skills that I have relied upon, and that have served me well in my career, were learned at KP; many of the principles currently sweeping the country, related to preventive medicine as well as early disease detection and management, have been tenets of Permanente Medicine for decades, and I have made them central to my practice too.

It gives me great pleasure to offer this heartfelt testimonial: the philosophy of the KP Health System, as well as the care and education available there, are models that the rest of the country would do well to emulate.

**Influencing the Future**

Most physicians in training find experienced physicians whom they admire, choose to emulate, and in particular who have a career-long guiding influence, often unknown to the mentor—like a teacher who is visited by a student 20 or 30 years later to learn that they have been the singular reason for the student’s life’s work!

**Remembering Mentors**

By Albert M Palitz, MD

On July 1, 1981, as a first-year medicine resident, I transferred from the Los Angeles County-USC Medical Center to KP’s LAMC, beginning a 25-year career practicing Permanente Medicine. At LAMC I observed a culture of collegiality, collaboration, and intellectual honesty that benefited patients, physicians, staff and the organization.

From my earliest days, I learned an important lesson: health care is a human relations business, and people are our most important resource. I first rotated on the Infectious Disease Service with Joel Ruskin, MD, and Sam Wilson, MD. They brought academic rigor and discipline to their consultations, setting a high standard for trainees and colleagues. I next rotated to the intensive care unit. I recall Tony Oppenheimer, MD, a pulmonologist/intensivist, sitting at the bedside, holding the hand of a dying patient, explaining to the family with extraordinary calm and sensitivity that death, though unavoidable, could come with comfort and dignity. On a later rotation, at the end of a long day, I recall discussing a pulmonary case with his colleague, Jim White, MD, whose waiting room was always filled with add-on patients. Jim was committed to seeing every patient who wanted to seeing him, no matter how many or how late.

Ed Butts, MD, surveyed dialysis units across the country, for the National Institutes of Health, before joining SCPMG. He then built the best dialysis unit in the country at LAMC. His colleague, Hoch Yeoh, MD, taught us to consume the medical literature “like...
a whale, which must take in thousands of gallons of seawater, to find a little algae.” We nicknamed him “Yoda” after the Star Wars’ Jedi master. I recall presenting a puzzling case of abdominal pain to Henry Carleton, MD, a nephrologist, who stopped me during my presentation and said, “Let’s go see that patient.” With his gentle guidance I diagnosed my first case of abdominal epilepsy.

To see endocrine consultations with Walter Lusk, MD, was to return to the days of William Osler, MD. Walter called his own patients from the waiting room. Before they entered the exam room, he was assessing their physical dimensions, attitude, energy, gait, and tone of voice, and checking their skin texture and grip strength with a handshake. With a few open-ended questions, and others of great specificity, and a focused physical exam, he arrived with uncanny accuracy, at a working diagnosis usually confirmed with a few lab tests or a scan. His colleague, Irv Ackerman, MD, the Chief of Medicine, left an academic career in Boston to join SCPMG, and the Housestaff revered him, as much for his warmth and good humor as his remarkable intellect.

There were internists—Herb Sklar, MD, Al Luck, MD, Mario Milch, MD, Ellen Masse, MD—who cared for enormous panels of devoted patients over long careers. They taught me that there are no substitutes for commitment, compassion, availability, consistency and dogged advocacy for your patients. I recall reviewing hematology

Third World Residency Experience

For an attending physician to bring a resident-in-training to another country of the world is the epitome of leaving the familiar for a learning adventure in the unfamiliar—together the physicians have a profound experience.

Resident Service in Guatemala

By Barry Rasgon, MD, Janell Rasgon, RT

Excitement stirs the air—today we embark on a memorable journey. Not a luxury vacation to the Bahamas or Hawaii, the group is taking the red eye to Guatemala. Several days before, many Guatemalans began a parallel journey on foot, often without shoes, and with children in hand to the same destination—Nuevo Progresso in the city of San Marcos. The US group consists of surgeons, anesthesiologists, nurses, surgical technologists, many from KP, volunteering time at Hospital de la Familia to provide medical care and surgery for the indigenous people.

On arrival, 50 boxes of donated medical supplies must be unloaded and checked in. Many medical team families also donated small stuffed animals to brighten the children’s postoperative course. After settling into our rooms, we head to the hospital to unpack boxes, check the inventory, and prepare for next day's surgeries. Hospital de la Familia includes three buildings: the first houses all the clinics on the bottom floor—the Eye, Surgery, Plastic Surgery, Ear, Nose, and Throat, and Ob/Gyn; the second and third floors are the living quarters for the visiting medical team (second floor) and the nurses (third floor). This area resembles a small inn. In the second building are the living quarters—kitchen, dining, and laundry—of the Guatemalan doctors and dentists. The third building consists of the OR—all three operating tables in same room—a small three-bed recovery room and a small inpatient area divided into three rooms—one each for children, men, and women. All inpatient beds are lined up along the walls to maximize space to house as many patients as possible.

Staff surgeons and residents rotate between the medical clinics—where they see 40 patients a day per service—and the OR—where they operate on six to ten patients per day per service. The exception was the ophthalmology team who saw 75 patients a day and operated on 25, performing 250 surgeries in a 10-day period. Twenty-five patients wearing sunglasses lined up outside after cataract surgery is a sight to behold. In the hospital pediatric ward parents sit and sleep on the floor, night after night, caring for their children. Some parents have little money and depend on the hospital for food. All survive on little or no sleep, in heat and humidity, without a change of clothes, making no complaints, only thankfulness. Each patient, even the children, enters the OR with a smile. I didn't realize how brave, cooperative, and trusting a child could be when facing unfamiliar people.

KP's Head and Neck surgical residents routinely journey to Guatemala each year with one staff surgeon, providing an excellent opportunity to experience third world medicine, and to treat patients, often with advanced disease. The residents speak about it as an invaluable experience, and often participate again in the future. Several general surgery and Ob/Gyn residents from KP have made the trip as well.

The reward for this hard work was not monetary, but friendships, teamwork, and knowing you may have changed an unfortunate someone’s life forever and feeling the heartfelt appreciation of the people of Nuevo Progresso.
slides with the brilliant Akimi Ching, MD, and thinking, “I’m not smart enough for this field.” Later, my wife and I named our second child in honor of Akimi. Her colleague, Jack Braunwald, MD, the Chief of the residency program, taught us to be thorough and patient and, most importantly, always be kind to patients and one another.

Three years later, in 1984, I joined the gastroenterology fellowship. My chief and mentor, Harold Frankl, MD, among the first Board-certified gastroenterologists in the country, was highly respected throughout the nation. His fellows, whenever confronted with a difficult clinical decision, would think, “What would Harold do?” Harold’s wife, Gloria Frankl, MD, a radiologist with an international reputation in mammography, taught my wife important lessons about balancing career and family. Fred Simmons, MD, made avid hepatologists out of us all.

Like trainees everywhere, I acquired knowledge, technical skill, and experience that helped me develop into a physician. But what I cherish most and remember most about my residency and fellowship at LAMC were the wonderful people—physicians and staff—and the collegial culture they created, which inspires me in my work to this day.

**Conclusion**

KP has had a long and distinguished commitment to GME. The changing face of GME in America has evolved so that much of what is expected of Permanente physicians is now reflected in the ACGME Core Values. KP continues to have the opportunity to make a significant positive contribution to American medicine through its GME programs because of its information technology programs, including the clinical database—a powerful tool for residents to use to view and assess the continuum of care—and HealthConnect, offering residents a broader perspective for analytic consideration; the unique opportunity to accomplish the ACGME competencies in a vertically integrated system; exposure to population care management, evidence-based care, and team-based chronic care in an integrated system; and the values of KP that are reflected in a community benefit program that offers residents the opportunity to learn as they serve their communities.

**References**


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**Learning**

One cannot teach a man anything. One can only enable him to learn from within himself.

—Galileo Galilei, 1564-1642, Italian physicist, mathematician, astronomer, and philosopher
Social Science Interventions in Medicine Produce Medical Science Outcomes

By Tom Janisse, MD, Editor-in-Chief

Giving a patient a templated instruction printout isn’t the best medical treatment after starting a medication. Far better is personal education, reinforced at home. This requires applying social science in medicine. Although many disciplines constitute social science, four are close associates of health care: psychology, education, anthropology, and sociology. Five of this issue’s Original Articles describe social science interventions that produce medical science outcomes.

Cognitive Psychology

In How Doctors Think, by Harvard physician Jerome Groopman, MD, he specifically draws his insights from cognitive psychology—the nature of thought and the behavior that results. Physicians’ pattern recognition is influenced by: availability—the reach for the most plausible explanation; commission bias—the need to do something rather than nothing; confirmation bias—selective use of information supporting what one expects to find; attribution—stereotypes that bias decision making; and diagnosis momentum—a diagnosis accepted as definitive despite contrary or incomplete data. Physicians’ attention to these psychologic processes will improve their medical science diagnostics, decision making, and ultimately, outcomes.

Education Sociology

The authors of Whole Person Health for the Whole Population: One-Year Evaluation of Health Coaching (page 41), implemented a process for a health coach to educate diabetic patients, in conjunction with their medical care. Through a series of phone conversations and self-assessment tools coaches probed patients’ understanding, preferences, readiness for change, and decision making. A change in patients’ behavior resulted in significant improvement in physiologic parameters, such as glycemic control. It’s not enough to expect a good outcome from just prescribing a drug and giving an instruction sheet; sometimes patients need to be coached.

The same principle applied, as described in A Multidisciplinary Approach to Transition Care: A Patient Safety Innovation Study (page 4), when nurses and pharmacists phoned patients at home to ensure that the same medications at the same dose were taken at home as in the hospital or skilled nursing facility. The conversations included a home safety check.

Education Psychology

In the article, Fetal Heart Rate Pattern Notification Guidelines and Suggested Management Algorithm for Intrapartum Electronic Fetal Heart Rate Monitoring (page 22), the proof of effectiveness of a practice guideline is not just knowledge of it or specialty-society endorsement, but day-to-day use through a management algorithm.

Eric Holmboe, MD, Vice-President, and Christine Cassel, MD, President, of the American Board of Internal Medicine, explain in their commentary, Continuing Medical Education and Maintenance of Certification: Essential Links (page 71), that physicians’ active self-assessment and the evaluation of their daily clinical behaviors are required learning to improve their practice.

Linguistic Anthropology

Unfolding a patient’s medical history—long recognized as the genesis of the medical diagnosis 90% of the time—requires not only the careful delineation of symptoms but also hearing the patient’s story of illness. Linguistic anthropology—the social science of human communication, verbal and nonverbal—seeks to understand the language and process used by people talking to each other. In her study, A Decade of Experience with a Multiday Residential Communication Skills Intensive: Has the Outcome Been Worth the Investment? (page 30), physician Terry Stein, MD, demonstrates the value of a “Four Habits” tool in an interactive group setting to improve physician-patient communication skills—which can enhance the physician’s ability to discover the diagnosis in the history 90% of the time. Improved communication builds relationship and trust—on which adherence to medical treatment is based. Medical science outcomes flow from human communication and relationships. And physicians’ satisfaction with their clinical practice improves. When physician learners grow knowledge, understanding, and new habits, physicians and patients benefit.

Social Psychology

In his study, Introducing Narrative Practices in a Locked, Inpatient Psychiatric Unit (page 12), Native American physician Lewis Mehl-Madrona, MD, prompts each patient in a group setting to construct a coherent story of what led to their admission, and then an alternative story to prevent readmission. Not only did patients report improved function and satisfaction with their inpatient treatment experience, but stories of positive outcomes emerged.

Conclusion

Social science interventions are necessary for medical science outcomes. Embracing their value in medical practice may enhance the effect.

Reference

He is driving on Church Avenue in the East Flatbush section of Brooklyn, New York during the busiest time of the day. It is late afternoon, rush hour to millions of Brooklynites heading home. He is one of several TapTap drivers, often uninsured individuals who have taken upon themselves the responsibility to answer the need for a quick and hopefully safe transportation for the hundreds of people trying to get home after exiting from various subway stations. They are heading to a place where the inhabitants look like they do, speak the same language, cook and eat food that reaffirms who they are after being with outsiders for most of their day. He also knows that the buses that carry them home never arrive promptly. And even if they do, they are often overcrowded with strangers standing closer to one another than they would like to be, especially after a long day’s work.

With these thoughts in mind, he is encouraged by the fact that he is performing a very important function. He knows that he does not have the license to do this and the police frequently stop his fellow TapTap drivers after their cars are filled with passengers. But no amount of summonses can stop these drivers from fulfilling their roles. Besides, it is good money. Why should the city make that money?

He has two children and a wife that he left almost four years ago in Cap-Haitien, a town in the north of Haiti. He works hard so that he can save enough money to bring them to America. The pictures of his children, a girl, age six, and the boy, age seven, are taped onto the dashboard of his car. He thinks of them throughout the day, but especially at night as he tries to sleep in the little apartment on Beverly Road, which he shares with several of his cousins from Trou-Du-Nord, a town Northeast of Cap-Haitien.

The furniture in his room includes a small television set on which he watches a Haitian news station, a radio and a rectangular table where he keeps an old Bible, forever opened to Psalm 23. In the shoebox next to the Bible is a photograph of his parents. A framed picture of his wife and children is placed next to his mattress. In the closet is the suit he wears every Sunday to attend the Catholic mass, a black pair of shoes, and one of the two pairs of jeans he owns. He is wearing the other pair along with some sneakers — Karochu, he calls them — that he had brought from a 99-cent store. Along with a few shirts and some undergarments, those are the only clothes that he has allowed himself to buy since he is so focused on sending every cent to his family. On weekends, he works as a waiter in a Haitian restaurant in Queens.

A few short blocks away on Nostrand Avenue is the barbershop he frequents even when he doesn’t have the need for a haircut. It is there that he is able to get the news behind the news from the experts on Haitian politics, the local patrons. His only major expense occurred last month after experiencing intolerable pain from an impacted wisdom tooth. Since he didn’t have any insurance to pay the dentist, he left with the understanding that he would make occasional payments until his bill was fully paid.

At night, when the mice allow him to sleep, he dreams of his Haiti Cheri, his darling Haiti. As he dreams, he feels the soothing sensations of her gentle breezes on his face and smells the aroma of fried fish being cooked on the white sandy beaches bounded by her beautiful clear blue sea. But he is only to be awakened in the early hours of the morning, needing to urinate and realizing that he is in a small room, alone in a foreign land wrestling with a strange language. The dream often evaporates before the taste of the salty fish leaves his mouth. Recently, he has been waking up more often than usual by the presence of an emptiness in his chest and tears under his eyelids. It is as if a hole was left in his chest where his heart should be.

More than once while lying on the mattress on the floor, he found himself wondering if in some way he wasn’t experiencing a folie or obsession, in hoping that he could do something more for his family while in New York than if he had stayed lacaye, back home. He wanted to remove them from the dead-end poverty that is the very fabric of their existence.

Pierre Richard Arty, MD, is the Deputy Executive Director of Behavioral Health Services at Kings County Hospital Center and Clinical Assistant Professor of Psychiatry at SUNY Downstate Medical Center in Brooklyn, NY. E-mail: soule62@aol.com.
the country for America, a country known for its opportunities. He left with tears in his eyes and a promise on his lips to reunite his family. On many nights while lying on his mattress, awake with his eyes closed, the whisper of a thought resonates inside his mind; that maybe he made a mistake.

In New York, he managed to get a driver’s license and learned the route of the B35 bus all along Church Avenue, even beyond Utica Avenue, where most of the people from the Caribbean live. Although the car he is driving is not his own, he has an agreement with the owner to return the car with a full tank of gas and a fifty dollar bill upon completion of each of his regular evening tours. After a couple of months, he even learned how to detect the undercover police cruisers and would purposefully avoid picking up passengers when he saw them from a distance. He grew up hearing the many stories of people who had “disappeared” while in the custody of the Haitian secret police, the macoutes. With his family’s future at stake, he had no desire to disappear in America in the hands of these uniformed white men. There was also word out on the streets that the mayor, the magistrat of the land, someone named Giuliani, wasn’t one to play with. He had already heard of what had happened to one unfortunate Haitian man named Louima who wound up in the hands of the police one night. He knew that he was taking a chance in doing what he did, but he couldn’t pass up this opportunity. The need was there and so was he.

This afternoon he seems to be having a bit more difficulty picking up passengers. Too often, some other TapTap driver is able to rush ahead of him and quickly pick up a potential passenger. This is not good he thinks. If he doesn’t begin to make some progress soon, he won’t be able to return the car with the fifty dollar borrowing fee. His right palm slams on the car horn several times. While feeling frustrated, he notices an odor that is slowly surrounding him like a fog on a warm summer night. At first, it is just a hint, the kind he often makes a mental note of as he drives pass the landfill on the Belt Parkway near Starrett City, but quickly forgets. As he continues to drive, the odor appears to be getting worse, filling up every crevice of his car. He looks outside at the pedestrians to see if anyone notices this pungent smell, but people seem to be occupied with their own personal matters. He decides to stop the car and check the backseat to see if any passengers had accidentally left some food in the back. Getting out of the car and making his inspection, he finds nothing out of the ordinary in the back. But getting out of the car doesn’t help either. The horrible odor is all around him and it is getting stronger. He gets back into the driver’s seat wondering if a sewer cover was left open somewhere nearby. And again, another TapTap driver passes him to pick up a passenger that he had visually claimed as his from half a block away. “Tonnere foutre!” “Damn!” he hears himself shout as his right fist punches the car horn.

While driving and now actively looking for potential passengers, he catches the reflection of his face in the rearview mirror. He is actively perspiring and the look of anger is clearly in his eyes. He tells himself that he has to calm down. As he takes another look at his face, trying to make it look calm, he notices his mouth and his mind takes him back to several weeks ago when he had visited the dentist. Slowly, the wall holding his mind begins to crack. For the first time in his life he seriously entertains a thought that a few days ago would not have made any sense, would even be comical, but now seems to explain everything: “could it be that … maybe … no that kind of thing can’t … YES! Of course! It’s my mouth … there’s something wrong with my mouth … my breath!”

The thought that his breath is the cause of this horrible stench that is getting progressively worse begins to eat at his mind, transforming it, hijacking and carrying it away to a dark and frightening place. Suddenly, the mental dam breaks and he sees the world differently, as if for the first time. The events of the past several hours take on a new meaning. “That’s why I haven’t gotten any passengers today,” he reasons to himself. It all makes sense. It is now perfectly clear to him that these people know what is going on but they are making believe that they don’t. “Why haven’t I noticed that before?” he wonders.

Somewhere in his mind, a remnant of rationalization tries to reason with him as he feels his blood pressure rising to his head, punching at his temples. These thoughts can’t be real he begins to think. “There must be another reason for this odor,” he thinks. His ears begin to hurt from the vibrations of his heartbeat pounding in his head, sounding louder than Haitian drums in the night. He begins to wonder if someone might have even placed a voodoo curse on him. As he continues to struggle with his inner demons, he is so lost in his thoughts that he doesn’t notice the light at the intersection that has just turned red. He is barely able to stop in time.

While impatiently waiting for the light, he notices one of the other TapTap drivers in the opposite lane picking up passengers. As he is
looking at the driver, his happen-
stance look turns into a wide-eyed
gaze as the man, who is busy watch-
ing the car in front of him, begins to
momentarily scratch his nose with
the tip of his pointer finger. That is all
the evidence that he needs to allow
the last vestiges of his sanity to burst
behind a flood of lunacy. By that
man’s incidental nose scratching, he
knows that the world is aware that the
horrible odor is coming from him. As
his breathing becomes louder, he is
certain that it is only a matter of time
before the police apprehend him for
this unforgivable crime and cause him
to disappear, never to see his family or
country again. The possibility of disapp-
pearing in a foreign country without
anyone knowing what happened was
worse than the language barrier that
held him at a distance from everyone
but fellow Haitians. “No” he thinks,
“It can’t end this way.”

When the light turns green, he
presses hard on the gas making the
tires scream, causing pedestrians to
look his way. He speeds off and
quickly cuts into the opposite lane
in order to pass the car ahead of
him. He gets back into his lane as
soon as he can and continues to
drive the car wildly, crossing an
intersection just as the red light
hears them yell at him. “Madman …
you gonna kill somebody,” someone else screams.

Coming to Nostrand Avenue, he
sees the light going from yellow to
red and he accelerates even more,
crossing the intersection just as the
light changes to red. His heart is
racing now and his hands begin
to tremble. He can feel his palms
becoming sweaty, soaking the
steering wheel with moisture. He
is constantly looking at his rearview
mirror, searching for anyone who
may be following him. He is now
heading towards the next intersec-
tion at New York Avenue and he
notices the pictures of his children
taped to the dashboard. “These are
the reasons why I came to this
country,” he thinks. “This is why I can’t
disappear. ‘Ede m Bondye miyu
fati je avek lavi sa a.’ “God help me,
I’m tired of this life,” he cries out as
tears begin to make their way down
his dark brown cheeks. He begins to
sob almost uncontrollably behind the
wheel of the car while driving faster
than he should on a city road. Sud-
denly, in the darkness of his mind a
memory begins to shine some light.
He remembers the hospital in the
neighborhood that is known even in
Haiti. He remembers stories of how
people would come right off the
airplane from John F Kennedy air-
port, head directly to Kings County
Hospital and receive treatment for
their illnesses. He had also heard the
patrons at the barbershop joke about
people who were treated at the “G”
building, where “moun fou,” crazy
people, are kept. “Maybe I am losing
my mind,” he thinks.

Reaching Albany and Church
Avenue, he quickly makes a left
turn, heading for where he heard
this “G” Building was located. The
tears flow freely now and he barely
recognizes the man that occasion-
ally glances at him in the rearview
mirror. At Clarkson and Albany
Avenue, he takes the red light,
nearing colliding with a woman in a
black Volvo. She curses at him as
he speeds off, only to stop at the
end of the block where a parking
space is waiting for him.

After parking the car and plac-
ing the keys in his pocket, he runs
across Albany Avenue into the
entrance of the psychiatric emer-
cy room. He then pushes the
doors open and heads straight for
the first person he sees in a white
hospital scrub. He grabs the nurse
forcefully by the arm and frantically
begins to yell, “Help me, help me,”
while crying uncontrollably and
frightening her. By this time, two
security officers who are posted at
the entrance of the emergency room
quickly approach this apparently
dangerous intruder. He notices their
approach and screams out, “annmwe,”
“help!” Thinking that these officers
are the New York City police, he tries
to evade them in a small and con-
ained emergency room, all the while
screaming “annmwe … annmwe!” This
only attracts more uniformed secu-
ritv officers into the now-established
mélée. As they try to talk to him, he
becomes more agitated. Even if they
were able to speak his language, it
would have been futile. At this point,
he believes that they are all a part of
a conspiracy to kidnap him and his
family will never hear from him again.
He makes a feeble attempt to fight
off the officers, which only results in
being restrained and carried into a
room, away from everyone. Now in
this confined place, he continues to
cry loudly in Creole, asking God for
giveness for many imagined sins.

Later, he is found on his knees in
a pool of tears when a Haitian psychia-
trist eventually comes to speak to
him. He is inconsolable and wishes
only to end his life since he is a fail-
ure and believes the world knows it.
The odor from his mouth is evidence
of that, he says. He agrees to let the
doctor give him some medication
more out of respect than with a hope
that it will make a difference in his
outcome. The doctor says that the
medication is for his nerves and soon
he feels the penetration of a small
needle in his right shoulder. In a few
moments, he begins to feel groggy,
then sleepy. His last thoughts before
falling asleep are of his wife and
children who are depending on him
to send money home. ◊
From Our Readers

Dear Editor,

Thank you for publishing the study in the Spring 2007 issue of The Permanente Journal, entitled “MyChart—A New Mode of Care Delivery: 2005 Personal Health Link Research Report.” This work adds to our growing knowledge and experience with secure messaging. I would like to offer a few points of clarification and a general comment about the findings.

1. Serrato et al note that the impact of secure e-mail messaging on outpatient visit and documented telephone call utilization is difficult to predict from this study because the members of the study population were older and sicker than members of the general population. As a rule, most members who use health care services are sicker and older than are members who do not. Therefore, the study population is more similar to our patient population than to our general membership.

2. The authors also identify that only a fraction of phone calls to primary care clinicians are documented in KP HealthConnect, making it difficult to identify the impact of secure e-mail messaging on telephone calls. In fact, the majority of, if not all, clinically relevant phone calls to primary care providers are documented.

3. I invite readers who are interested in the source study on office visit and telephone utilization to see our article in the American Journal of Managed Care (www.ajmc.com/files/articlefiles/AJMC_07julyZhou_418to424.pdf). Please note that the original funding for the utilization impact study and other studies described in The Permanente Journal and the American Journal of Managed Care was provided by Clinical Systems Planning and Consulting, Kaiser Permanente Program Offices.

In closing, I would like to underscore one of the findings described by Serrato et al: primary care clinicians encouraged their patients to use e-mail messaging to varying degrees. The 7%-10% reduction in utilization occurred even though 63% of clinicians were low-level adopters with fewer than 15 e-mail encounters a month. If more clinicians encouraged their patient panels to use secure e-mail messaging, even further reductions in office visit and documented telephone call rates might occur.

Yvonne Zhou, PhD
Consultant, KP-IT
Portland, OR

—Reply
Dr. Zhou,

Thank you for your letter and interest in our article. In response:

1. On page 20 of our article we wrote, “…current users of secure e-mail messaging are sicker than the general population; so their current experiences may not accurately predict visit substitution for the general population.”

The point is that healthier and nonchronically ill patients may not substitute e-mail messages for phone calls and office visits to the same extent as sicker or chronically ill members. For example, healthier patients who go long periods of time between contacting their doctor may be less inclined to use e-mail as a substitute for an office visit. Subsequently, their reasons for contacting their physicians are more likely to be about a new condition. The e-mail substitution rate for new conditions is probably lower than the e-mail substitution rate for continuing and chronic conditions. On the other hand, a younger population that frequently uses e-mail might occur.

2. We agree the majority of clinically relevant calls are documented.

3. In the Acknowledgments section of our article, we stated, “This work was partially funded by KP’s Internet Services Group and Clinical Systems Planning and Consulting.” At the time that our article was published in The Permanente Journal, Dr. Zhou’s article had not yet been published in the American Journal of Managed Care; so we referenced the internal KP report. Our article in The Permanente Journal article was not referenced, although some of our findings were cited, in the American Journal of Managed Care article.

Carl Serrato, PhD
Manager, National Market Research Department
Oakland, CA

Dear Editor,

My name is Dr Richard Sattilaro. My cousin, who was president of Methodist Hospital in Philadelphia, wrote a book Recall By Life [referenced in J Horowitz, M Tomita. The Macrobiotic Diet as treatment for cancer: review of the evidence. Perm J 2002 Fall;6(4):34-7]. He was diagnosed with metastatic cancer. In desperation he tried macrobiotics and had a remission. In his sincere enthusiasm he wrote the above book and appeared on several TV shows. His book has been proffered as a ‘bible’ to many cancer victims who have, as a consequence, forsaken traditional treatment.

His remission was short lived. He died from his cancer not very long after the book was published. Thousands of copies of his book are still “hawked” to make a buck. To repeat: he died from the same cancer he thought was “cured” by holistic medicine and/or macrobiotics.

You should make this clear on your Web site.

Richard F Sattilaro, MD

—Reply
Dr Sattilaro,

Thank you for your letter. We agree that this is important information for our readers. These situations are highly complex and causality is usually not clear; nonetheless readers deserve to know about new associated information.

Tom Janisse, MD
Editor-in-Chief
ABSTRACTS

With this issue, we include abstracts from the 2007 13th Annual HMO Research Network Conference held in Portland, Oregon, which focused on: “Building a National Research Model: The Future of HMO-Based Research.”

From: The Center for Health Research, Kaiser Permanente Northwest, City of Hope National Medical Center, Arizona State University College of Nursing & Healthcare Innovation, Southwest Borderlands, Kaiser Permanente Northern California, Portland State University, Southern Arizona Veterans Affairs Health Care System, and The University of Arizona

The greatest challenges reported by long-term colorectal cancer survivors with stomas.
Hornbrook MC, McMullen C, Grant M, Baldwin CM, Herrinton L, Ramirez M, Altschuler A, Mohler MJ, Krouse R.

Aims: To assess the greatest challenges faced by colorectal cancer (CRC) survivors in managing their stomas and living with their cancers over the past five to 20 years or more.

Background: The Institute of Medicine’s report on cancer survivorship called for more research on the long-term medical and behavioral implications of living as a cancer survivor, including the late effects of chemotherapy, radiotherapy, and surgical therapies. In this study, we examine the qualitative stories of CRC survivors who have received permanent ostomies for treatment of CRC. Many of them have also received radiotherapy and chemotherapy.

Methods: We surveyed all CRC survivors (at least five years postdiagnosis) with permanent stomas enrolled in Kaiser Permanente Northwest (KPNW) over the years 2000-2006 regarding their health-related quality of life. Patients were identified from tumor registries in Kaiser Permanente (KP) Hawaii, KP Northern California, and KPNW. Participants completed the City of Hope Colorectal Cancer Quality of Life Survey and also completed open-ended questions about their greatest challenges in coping with their stomas, problems with the location of their stomas, and problems with managing their pouches. We used qualitative research techniques to identify key themes in each area. The investigator team coded each test entry independently. We reviewed discrepant codes and revised the coding form. A second round of review of the coded text responses was conducted until consensus was reached on all themes mentioned by respondents.

Results: Essay responses included no problems and high levels of adaptation and functional abilities for patients with permanent stomas, problems with interference between pouch location and clothing, repeated infections of the stoma, problems with diarrhea and/or constipation, problems with diet selection and control, social phobia, sexual functioning, occupational functioning, and total disability.

Conclusions: Many high-functioning CRC survivors demonstrate cognitive and behavioral coping strategies that appear to be teachable skills to other CRC survivors. These can be employed with patients who recently have had stoma surgery or those who have more difficulties coping and adjusting to their change in body image, self-management requirements, and sexual needs.

From: Kaiser Permanente Southern California; Boston College, School of Social Work

Social network and risk of cognitive decline and dementia.
Crooks VC, Lubben J, Little D, Chiu V.

Background and Aims: Emerging evidence suggests that social support and social networks may have a positive impact on cognition and a protective effect against the development of dementia. This study examined the relation of social network and social support to the incidence of dementia.
METHODS: This prospective cohort study from 2001 through 2005 included 2249 women over 75 years of age from KP Southern California who were dementia-free in 2001 and had at least one additional follow-up interview. Cognitive status was assessed annually using a multistage classification approach that included the Telephone Interview for Cognitive Status—modified (TICSm), the Telephone Dementia Questionnaire (TDQ), and medical record review. Social support was assessed using the Lubben Social Network Scale (LSNS). We used the Cox proportional hazards model to estimate the hazard ratios (HR) for incident dementia, adjusting for age at entry, education, depression, and medical conditions.

RESULTS: Social network scores, frequency of contact and satisfaction with contact were associated with dementia risk. There were 260 incidence cases of dementia during follow-up. Compared to women with low social networks, hazard ratios for incident dementia for women with higher social networks were 0.62 (95% CI 0.39, 0.97) for three to six times weekly, and 0.58 (95% CI 0.38, 0.89) for daily contact. Satisfaction with amount of contact also reduced the risk of dementia with an adjusted HR of 0.61 (95% CI 0.43, 0.88).

CONCLUSION: This study provides additional evidence that strong social networks may have a protective effect on the cognitive function of older women.

From: Psychiatry, University of Massachusetts Medical School/ UMMHC, Worcester, MA, UMMHC/Clinton Hospital, Clinton, MA

Community screenings for depression and cognitive decline.
Shetlulukh TP, Murray P.

BACKGROUND: Community screening for depression and cognitive decline are used to identify those who may benefit from further interventions and direct them to appropriate sources of care. We studied effectiveness of community screenings in achieving the above-mentioned goals.

METHODS: Eighteen older adults were evaluated during Depression and Memory Screening Day offered by UMMHC/Clinton Hospital geriatric psychiatry program. Mini Mental Status Exam (MMSE) and Geriatric Depression Scale (GDS) were administered, clinical assessment performed by geriatric psychiatrist and appropriate referrals given. Telephone follow-up was done in an attempt to identify compliance with recommendations.

RESULTS: GDS scores and clinical evaluation indicated that 64% of subjects had no depression, 29% mild depression and 7% severe depression. Referrals to psychiatry outpatient clinic were made. Follow-up called revealed 60% of the referred subjects were not able to recall what was advised through only 20% had problems with recall on MMSE. Twenty percent vaguely remembered advice but didn't follow-up. Those displayed attention problems on MMSE. Only 20% scheduled appointment. Twenty-nine percent scored 30/30 on MMSE and clinical evaluation warranted no further intervention. Twenty-one percent got 30/30 but appropriate referrals were made because assessment findings required further exploration. Thirty-eight percent scored 28-29/30, 7%—23/30, 7%—14/30 and all were referred to memory clinic/outpatient psychiatry. On the follow-up, 50% didn’t recall what was advised though only 30% has problems with recall on MMSE. Thirty percent recalled that they were advised to see a doctor but 20% didn’t make an appointment, 10% intended to make to follow-up. Only 10% did actually make an appointment.

CONCLUSIONS: Community screenings effectively identify target population. Ways to improve compliance with recommended interventions need to be further explored.
The year was 1980, 27 years ago. I was in medical school, working hard to learn how to save lives. Though I didn’t know it, my sister was working much harder—to save her own life and keep from being killed by her fiancé.

At that time, I couldn’t make sense of the changes I saw in her. She left her university studies; she limited her time with friends and family; she became tenuous about her opinions and future goals. These didn’t fit with the smart, self-assured, talented person I grew up with. Although her fiancé seemed charming and confident, something made me uncomfortable. Why wouldn’t she be honest about what was going on, or better yet, simply assert herself and leave this guy?

As she remained in what seemed like a downward spiral, I felt discouraged, frustrated, annoyed, and then perplexed when she suddenly moved to a city hundreds of miles away. Just she and her fiancé—no job, no friends, no family—and she refused to get an answering machine so we could contact her.

I just didn’t get it. This is true for many of the people who know someone dealing with an abusive relationship. It’s difficult to recognize the tactic of isolation that is frequently used to break down an individual’s ability to access resources that could be helpful. It’s almost impossible to understand what it is like to live in an atmosphere of physical, sexual, and psychological abuse. And, though friends and family may sincerely want to say and do the right thing, they may unwittingly hurt more than they help.

Family and Friends’ Guide to Domestic Violence fills a much-needed gap in the literature about domestic violence. This insightful, highly readable book teaches family members and friends, and those in the helping professions, that domestic abuse is complicated and that escaping from abuse is never a simple act. Elaine Weiss, EdD, an established writer and educator whose other book is focused on the stories of women who successfully survived, now gently leads readers through the dark, often distressing realities of domestic violence. She addresses the issues that often stymie friends and relatives of victims: Why do abusers abuse? Why do victims put up with it? She helps differentiate a “bad relationship” from the pattern of purposeful power and control tactics that characterize an abusive relationship. She does an excellent job of elucidating the complexities of psychological abuse and tackling special problems such as dating violence. Most importantly, she tells readers what they can do to help. Simply put, they can listen, talk, and take action. Ms Weiss offers concrete suggestions for each of these.

What makes Family and Friends’ Guide remarkable is the author’s ability to strike a balance between compassion—for victims, for their children, for their relatives and friends—and pragmatism. This is not an “everyone can succeed if they just try hard enough” self-help book. The author is clear: escaping from an abusive relationship is complex and potentially dangerous. It takes time. If you are a friend or relative of a victim, providing support will not be easy. But the more friends and family know about domestic abuse, the better able they are to offer useful support.

My sister, like the majority of women dealing with domestic violence, found her way to safety, made a healthy home for her daughter, and developed a fulfilling career and caring community. She did it on her own, with tremendous courage, faith, and endurance that continues to inspire me. Now a quarter century later, Elaine Weiss has provided a valuable resource for family, friends, and health care providers. It should be included in health education libraries; it is an important resource to help physicians become more comfortable approaching this personally difficult clinical problem.™

Reference
Clinical Problem-Solving
Editors: Sanjay Saint MD, Jeffrey Drazen MD, Caren Solomon MD

Of the many medical books published each year, a respectable number are useful, but few can be said to be exciting. This is one of the exceptions. Clinical Problem Solving is highly recommended as an interesting and erudite book that is a pleasure to read. The book consists of particularly well-selected cases from the New England Journal of Medicine’s Clinical Problem-Solving feature. Real cases are used. Interposed commentary is periodically provided as further information becomes available, much as we would gather further information as a case progresses. The commentary is first-rate and the illustrations crisp and useful. Lastly, an overall discussion of the case is provided.

The book starts with a useful but unexciting chapter on probability in clinical thinking. Next, is a well thought-out chapter on clinical decision-making. But the real action starts on page 31 where patient histories start to be presented in progressive fashion to expert clinicians who share their reasoning with the reader as further history, physical findings, and laboratory studies become available. The result is intellectually exciting and the 22 cases are of a length that is ideal for bedtime reading.

The Reading Habit

I had just taken to reading,
I had just discovered the art
of leaving my body to sit impassive
in a crumpled up attitude in a chair or sofa,
while I wandered over the hills and far away
in novel company and new scenes …
My world began to expand very rapidly …
the reading habit had got me securely.

— HG Wells, 1866-1946, English author