The James A Vohs Award

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The Permanente Journal is always interested in considering artwork by Kaiser Permanente clinicians and employees. If you would like to submit art for consideration for the cover or interior of The Permanente Journal, please use the following guidelines:
Send us a high-quality color photograph of your art no smaller than 4”x5” and no larger than 8”x10”.
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Using Performance Reports to Build a Winning Team
—Lee Jacobs, MD, Associate Editor, Health Systems

As most regular readers of The Permanente Journal have come to understand, I am a strong advocate of team-based care. My belief is founded on the realization that care organized around high-performing teams is not only the best means of achieving high-quality patient care and service but, as many caregivers experience everyday, the team structure is the best blueprint for creating a highly satisfying work environment. It was with this bias that I read the commentary by Kristen Gregory, PhD, on Shame-Based Versus Pride-Based Reporting (page 4) and tested her premise using my experience (granted, not entirely evidence-based but very reproducible) as well as the literature (a wealth of scientific articles) on the cultural attributes of successful teams.

Dr. Gregory describes the options for focused performance reporting as a continuum from “shame-based” to “pride-based” with the underlying organizational culture, in part, determining which direction is emphasized. The stated risk of providing performance feedback too far toward the “shame” direction would have “debilitating effects on organizational self-image and motivation.” Dr. Gregory’s premise will catch your eye: “How an organization talks to itself about its performance reveals both the organization’s own self-image as well as the organization’s implicit models of individual motivation and incentive.” I think this is a very interesting premise that has relevance to all of us. Consider health care team development:

When I listen to successful teams describe why they do what they do, I hear several common themes that explain why they are high performers. All these teams have:

- a strong sense of mission—“We know what has to be done.”
- a strong sense of interdependency—“I trust my team members will be there for me.”
- a strong sense of patient-centered care—“The entire team, including the nursing staff, are empowered to do what it takes to take care of the patient.”

Most importantly, however, successful teams all have a strong team leader! The level of leadership of the local team leader makes everything else happen. Team members of most successful teams will attribute their success directly to the example of the leader (“s/he sees a lot of patients and never complains”), to how the leader encourages the team (“s/he tells me I am appreciated”), and to the leader’s relentless obsession with the mission (“s/he constantly reminds us that we are here to provide great patient care and service”).

This raises the key question: What type of performance reporting approach might team leaders adopt to motivate teams to continuously strive for improvement—whether the team is high performing or struggling? First of all, teams that have developed pride in their accomplishments, ie, teams with a high collective “self-esteem” and mutual appreciation—are the teams that keep getting better. This is the objective of performance feedback. To answer a question Dr. Gregory raises, Yes, I believe winning teams do have a healthier self-image than struggling teams. Confidence leads to success, which leads to more confidence. Those of us who are long-time New York Yankee haters have to admit that when the Yankees take the field, they expect to win. Their stats may not be the best, but they are confident and they will be surprised if they lose. That confidence exudes from high-performing health care teams, a reflection of the style of performance feedback and the frequent encouragement of the health care team leader: “We know our mission; we know what is expected of us; we know we can do it; here is where the reports say we stand with our performance; what can we do to keep improving; we know if we work together, we’ll be successful.”

Now that is “pride-based” reporting by a leader—or is it, in fact, balanced performance reporting that seems extreme because we are so used to reporting that focuses on negatives and deficiencies? As contrasted with the “pride-based” approach that encourages the team and drives performance improvement, another leader might have the same performance report but take the “shame-based” approach: “You are far from the top; you’re not getting any better; it says we just need to work harder; it’s not our fault; I don’t think

Shame: A painful emotion caused by consciousness of guilt, shortcoming, or impropriety.
Pride: A reasonable or justifiable self-respect.
Editors' comments

This is good data, so don't worry about changing today.” Demoralizing—for sure; effective in building a successful team? No way. Two leaders using exactly the same performance feedback report in two very different ways … and I expect, with two very different results.

I don't believe that Dr Gregory is suggesting that opportunities for improvement be ignored rather, she is talking about a balanced performance reporting approach that would create a culture to motivate individuals and teams to build on the pride they have in doing a great job caring for their patients and for each other. A team cannot be shamed into improving performance. The feedback needs to be informative and can be comparative, but must be encouraging and motivating. This is what will ultimately take performance to the next level.

In summary, it is the team leader's vision and clear communication of expectations, supported by effective and encouraging performance feedback as depicted by Dr Gregory, that will lead to continuous improvement in team performance while at the same time nourishing the optimal work environment we all desire.

Is this your experience? Do you have related stories to tell? Write to the Journal—we want to hear your opinion! ❖

References


A Reflection

Arrogance is the wayward twin of Confidence.

Arrogance is self-promoting and needy;
      Confidence is humble and secure.

      Arrogance is noisy yet weak;
      Confidence is quiet yet strong.

Arrogance tries to be interesting;
      Confidence seeks to be interested.

By John H Cochran, Jr, MD

JOHN H COCHRAN, JR, MD, is a Plastic and Reconstructive Surgeon and has been with KP for 11 years. Dr Cochran has been an EMD for CPMG for three years.
Shame-Based Versus Pride-Based Reporting

Abstract
The emphasis or tone of an organization’s performance reporting system can be described on a continuum from “shame-based” to “pride-based,” in which the former emphasizes areas of comparative weakness, and the latter emphasizes areas of accomplishment. Natural human proclivities (eg, bad news sells; criticism is easier and seen as more savvy and valuable) act to make shame-based reporting the more dominant form. Yet that form can have debilitating effects on organizational self-image and motivation, and can effect the disengagement of the audience from the reporting process. A balanced reporting style is portrayed as most organizationally healthy with acknowledgment that the maintenance of that style requires diligence to combat our individual and collective tendencies to evolve toward a more shame-based emphasis.

Introduction
How an organization talks to itself about its performance reveals both the organization’s own self-image as well as the organization’s implicit models of individual motivation and incentive. That is, if you consider what is emphasized in an organization’s reports and rhetoric about performance, you can divine a piece of its culture. In a simple sense, culture is to an organization as personality is to an individual. Culture is the shared or modal or dominant set of attitudes, values, and belief systems that shape how things are perceived and understood by the individuals of an organization. Because culture is an aggregation of individual beliefs, culture cannot be a monolithic construct; rather, culture is an everchanging function of the attitudes and values of the individuals who have voice within that organization.

Perceptions of the Care Experience
When I asked the members of the Care Experience Council (CEC) to evaluate the care experience provided in their own regions, the ratings from the CEC were not nearly as high as the ratings that Kaiser Permanente (KP) receives from its own patients and members. And the CEC are clear on the reasons for their relatively low ratings: “KP is inconsistent; the care experience is inconsistent; we are not superlative in all places all the time. This is a problem we must address if we are to ever achieve the KP Promise, which we clearly have not achieved today.” I have since replicated the same result with other leadership groups within KP Northern California; this perception of organizational performance deficits is not unique to the CEC.

When career choices are being made, in my view, the health care industry attracts perfectionists, and perfectionists are never satisfied with their own performance.

Beliefs Underlying Negative Reporting Paradigms
From what I have observed, there has been no organized grand plan behind performance report-
And, of course, if you believe that, in general, our performance is inconsistent and poor, then change is imperative. Your reports may tend to exaggerate weaknesses in the effort to create a burning platform as you attempt to direct people’s attention to the need for change.

All the above will drive toward performance reports that focus on, emphasize, and highlight performance deficits, inconsistencies, declines. A few performance stars will be highlighted in order to force the majority to see just how far below perfection they actually are. You will have myriad ways to showcase flaws, and your reports will read like any other newspaper. This is all quite normal. Not necessarily healthy, but normal. Bad news sells. Newspapers print the negative news. Management consultants, when hired, point out what is wrong. The critic is seen as discerning, intelligent, and thoughtful. Persons who point out positive aspects are cast as most probably defensive, unworldly, recalcitrant, or clueless.

There are so many forces driving toward negative reporting that it is only natural that a performance reporting system will evolve with a negative slant. The danger lies in its doing so thoughtlessly or unchecked.

The Motivational Effect of the Performance Reporting System on Organizational Psyche

The greatest danger is that we all may come to believe our own self-talk as actually representative of how our performance does compare with that of our competitors. And if we begin to believe this self-talk, then we may even convince ourselves that tremendous change and improvement are imperative. We will set difficult and challenging performance targets—aspirational rather than achievable targets, for we clearly need tremendous competitive repositioning if we are to remain viable. We will espouse approaches to reengineer, redesign, reorganize, tear apart, and rebuild our core structures and processes. Initiatives will be trotted out in an endless flow of “flavors of the month.” Many leaders will enjoy their 15 minutes of fame prior to being promoted off into oblivion.

Thank goodness our organizational foundation in partnership, capitated payments, nonprofit values, physician-managed care, centers of excellence, and integrated delivery and information systems is strong and robust enough to withstand the onslaught.

Of course, I exaggerate. A bit. To make a point. Performance reporting can be described on a continuum from “shame-based” to “pride-based,” where the caricature above is shame-based.

Pride-Based Reporting

Pride-based reporting, in contrast, is a system that highlights accomplishments, strengths, and improvements. Pride-based reporting highlights a recovery after a fall, stability despite debilitating circumstances, and movement in the desired direction. Of course, an optimal reporting system is balanced. Yet balance does not come naturally, thus not easily. The natural human and social tendencies drive toward shame-based reporting. Much as constant work is required to combat the forces of entropy so as to maintain order, so too is constant vigilance and effort required to combat the natural inclination toward shame-based reporting.

Yes, I think at KP our reporting systems are skewed and slanted toward a shame-based emphasis; moreover, I think this has been organizationally debilitating to our collective self-esteem.

What have we done to our collective conscious in the process of our continuous self-flagellation? When you ask a group of organizational leaders within KP whether they believe KP provides an excellent or very good care experience, perhaps 20% will say yes. Yet when you ask the same question of the members and patients who are the recipients of our care, 73% say that the care experience we provide is excellent or very good. Why the disparity? Because we have focused so much on our own flaws and shortcomings that those now dominate our sense of self.

But can we be an excellent organization if we have that self-image? Do real winners in business also have such an inferiority complex? Can we enact the KP Promise with our current mindset? Or are we just creating more eye-rolling cynicism and self-doubt by even espousing such a high aspiration for ourselves, given where we have convinced ourselves that we are in the total performance picture?

It is, in a way, easier to have an inferiority complex than it is to be confident. It is easier (and certainly rhetorically safer) to list the potential reasons for imagined or relative failure than it is to list the game plan to success. If you say you are going to fail and you do, then you were at least right, even prescient. If you actually succeed, then your humility becomes a part of your charm. If you say you are going to succeed and you fail, then you are both a failure as well as being a rather hubristic fool. People are more comfortable being prescient, humble, and safe.
In our organization, you will find many more people who agree with you when you criticize our performance. When you laud our performance, you are often the lone voice, and vigorous social pressures are exerted to silence the dissenter, to shoot the messenger. If you have the courage, I encourage you to try the social experiment of saying that our performance is laudable in a group of KP managers and then watch what happens.

**Credibility and Engagement**

There are two reasons to avoid shame-based reporting as the sole or dominant focus for a reporting system. One reason relates to the motivational effect the system has on our organizational psyche, which I have described above. The other relates to the credibility, and thus organizational acceptance, of the system itself.

A balanced reporting system is credible, emphasizes that there are multiple ways to “win,” and acknowledges the adversities in our external and internal environments that can make decline predictable and stability and recovery laudable. As such, a balanced system is one that engages the full audience.

A performance reporting system that emphasizes only a few winners and stars and that relegates the rest of the organization to the onerous position of simply “not measuring up” fosters disengagement. And not just from the performance reporting system but from the organizational strategies and imperatives that the reporting system is supposed to support. Disengagement manifests as cynicism; uninspired and superficial compliance with new programs and priorities; “gaming” the system, or figuring out how to look good on the numbers, and a whole complex of behaviors that we have labeled “whining,” that is, explaining in detail why we are not as good as Hawaii or Marin County and why we will never be as good. If the bar is set at a level that the jumpers perceive to be impossible, nobody will even try. Why bother?

At risk of carrying the organizational culture/individual personality metaphor too far, the psychological state looks like depression and brings with it a cynical lack of belief in organizational leaders and organizational direction, for our individual self-doubt is projected onto our leadership.

**Disengagement and its Undoing**

If your performance reporting swings too far off-center toward shame-based, the system begins to lose credibility, and the audience disengages. We know that we enjoy enviably high member loyalty and that we are a very successful health care organization with excellent quality outcomes. If our performance were really poor, then we clearly would not be able to stay in business. Yet we do stay in business, members write us thank-you letters and bring gifts to doctors and staff, and we are doing well. Of course, one can always improve, and just because we are doing well does not mean we are going to relax and stop trying to further perfect our performance. In fact, there is an entire literature in motivation that clarifies that positive feedback about performance is itself motivational and inspiring—that satisfied customers create satisfied employees, that the customer-employee satisfaction loop is a circular and continuous causal cycle rather than unidirectional.

If the performance reports and analyses are too far out of line with the perceived operational reality of the organization’s members, then the reports will be dismissed as invalid, useless, a waste of time. The intended audience will disengage. Above all else, any performance reporting system must keep people engaged if it is to be effective as a steering and calibration tool for performance.

There are clear signs when the audience begins to disengage. In KP, the word “invalid” is used to dismiss a report or an analysis. Although “validity” in a statistical sense has a precise definition of content, construct, predictive and concurrent statistical properties, “invalid” at KP simply and emphatically means, “I do not believe this report. It is poppycock. Make it go away.” Performance reporting functions need to aggressively listen to the reasons behind that word “invalid” if they are to understand what reports need to do and be to be accepted.

I have watched our organization in Northern California and what its constituents have asked for in reports. They want to be compared with their comparable peers. They want a level playing field in their competitions; they want “apples-to-apples” comparisons. This is all appropriate. PMPM costs cannot be compared without considering regional pay differentials, MD tenure, patient health, and scope of practice—to name a few factors. Yet even after all possible adjustments have been made, some people still will not engage. Given that nothing is ever exactly the same, this belief in incomparability, thus uniqueness has merit and must be honored. At this point, one needs to move away from comparisons with others and
embrace a reporting system “for the rest of us.”

Many among our intended audience will not engage with a report that portrays them as inadequate; ranks them in the lower third; or characterizes them as mediocre, average, or not significantly different from others. Such odious comparisons can be avoided if one leaves them off the page and focuses only on the entity in question. Clearly the best “apples-to-apples” comparison is the comparison of yourself to your own baseline over time. Barring schizophrenic breaks or nonseasonal mania (seasonal mania can be accommodated in reporting formats), such a comparison needs no correction or adjustment to be acceptable. And acceptance of the report as valid is fundamental to an effective reporting system.

Certainly some will be motivated by the race, by the challenge of being “number one” or “top third” or “high performer.” But the majority of our departments in Northern California, or our medical centers, or our regions are not in that position and cannot be because only one can be number one, and only one third can be in the top third. All still need to engage, but some will do better in a different kind of competition. To rely on rank order finishes, reaching the top, being as good as the best clearly engages the elite. But a country cannot rely on the Olympics as its only program to achieve national physical fitness among its citizens. The majority are not engaged, except as onlookers; and KP—or any organization, for that matter—cannot afford to leave its majority on the sidelines.

Conclusion

The performance reporting process needs to bring everyone into the fold. It needs to acknowledge performance stars who have high scores, stars who improve steadily, and those who pull themselves back up after a fall. It needs to be aware of and to acknowledge stars who maintain stability in the context of adversity, for that is also a difficult and laudable feat.

We need to aggressively search for, articulate, and emphasize our areas of strength and achievement if we are to build the sense of organizational pride and confidence that is required to achieve the excellent aspirations that we espouse. We cannot afford to relax back into the comfortable position of continual self-doubt and nitpicking criticism—of “yes …, but” reporting. “Yes, that was a nice improvement, but you still have fundamental problems with x, y, z.” As an organization, our energies need to be focused externally on the competition rather than engaged in internal finger pointing, blame casting, and excuse making within our ranks.

If we are to be an excellent organization, our self-talk must be pride-based. Yes, it is circular and self-reinforcing. We must think we can if we are going to try with confidence. And when we achieve the goals we set, that in itself inspires more confidence, and we continue. We cannot achieve the KP Promise if we continue to be exceptionally fluent, articulate, and forceful in describing our flaws and shortcomings while we are meek and hesitant when and if we mention our strengths and accomplishments.

“This above all—to thine own self be true, And it must follow as the night the day, Thou canst not then be false to any man.”

—Polonius to Laertes, Hamlet, Act I Scene 3, Lines 78-80

*The Care Experience Council (CEC) is an interregional group whose charter is to investigate and validate operational tactics and improvement practices related to member satisfaction with the care experience at Kaiser Permanente.

Reference

Letters to the Editor

The Permanente Journal,

Thank you so much for printing the moving letters ‘Dear Doctor’ and ‘Dreams From Childhood’ in your Winter (2002) edition. I must say, though, that I strongly disagree with your decision not to include the authors’ names.

The simple fact that neither author requested to be anonymous is a powerful statement to us as health care professionals and to society in general. Through tremendously courageous efforts, the two authors have jumped into the dark pool of emotional pain and have emerged with the insight that being an abuse survivor is nothing to be ashamed about. Secrets breed shame, and the more we, individually and as a society, talk about abuse, the less its targets will feel shame.

Equally important, and I’m sure the authors would agree, is that those who abused them were probably abused themselves. Ignoring or “protecting” this fact shows no compassion for their own pain and deep emotional wounds. Are we to have compassion only for the courageous authors who have walked the long path to forgiveness and to sweep under the rug (so they will go away) those who remain too afraid to begin the painful journey themselves?

I am not the survivor of abuse, but I do believe that physical ailments are a reflection of unhealed emotional wounds. I have experienced and been witness to the incredible power of forgiveness. It can’t be done anonymously.

Terry Woodard MD
Internal Medicine, Santa Rosa, CA

— Reply

As the prefatory comment to “Dear Doctor” reported, the Editorial Board spent much time debating the anonymity issue. A unanimous verdict was never reached, and all felt sadly constrained by our imperfect, litigious world. Not the least of the problems was our feeling that—in the court of public opinion—innocence is not always presumed. Despite the wish to see their names published, the authors readily agreed to remain anonymous.

Editor

Dr Klatsky,

I have just finished reading “Dear Doctor” (Winter 2002). Thank you for printing this moving story. Although not a victim of such abuse myself, my mother unfortunately was such a victim. This account greatly helps in understanding not only her issues but also those of my patients. I am so proud to be a member of the Kaiser family where, even with our warts, we can still be unabashed humanists. Indeed, I feel fortunate to be alive!

Thanks,
Gary G Huffaker, MD
Ophthalmology, Riverside, CA

Dr Felitti,

I think your research and recent article are invaluable. After reading your article in The Permanente Journal, I feel my treatment approach with patients has been validated. For years I’ve believed that the self-destructive habits of adults (smoking, alcohol abuse, street drug use, overeating, etc) must somehow be related to a need to self-medicate or self-soothe for some conscious or unconscious childhood trauma. When I talk to my patients about these issues (the habits), I usually point out that the habit is often the manifestation of an emotional issue. I frequently don’t direct the patient toward education (usually, they don’t need to be “educated” about healthy behaviors); nor do I lecture them about self-control and proper behavior. Instead, I mention that if they ever seriously want to tackle the issue of their unhealthy habit, they should consider counseling. My patients will initially react with surprise, asking, “Why are you saying this to me?!” But I must say that, almost universally, they end up agreeing with me and leave my office with what is perhaps a more appropriate tool/approach to use to improve their health.

Susan Twining, NP
Occupational Medicine, Sacramento, CA
Dear Dr Janisse,

Thank you for a superb Winter 2002 edition of *The Permanente Journal*! It is an outstanding work of journalism covering the depth, breadth, and scope of the art and science of medicine with some truly fine pieces. There are some very thought-provoking, informative, and useful articles—the content of which I find to be highly relevant. In addition, I appreciate that *The Permanente Journal* provides a format which showcases the many and varied artistic talents of our physicians and providers. I feel very proud to be part of an organization of people with such a high level of skill, knowledge, talent, and integrity—but most of all, of commitment to the highest quality of care for our patients!

Sincerely,
Carol Ball, PA-C
Dept of Preventive Medicine, San Diego, CA

*The Permanente Journal*,

Several years ago, I proposed to *Plastic and Reconstructive Surgery* a new section called “Three-Year Follow Up.”¹ My idea was that each author who has an article published would write a one- to three-paragraph follow-up statement on his or her subsequent experience that would be published three years after the original article had appeared. If the author refused, that would be reported. This alleviates the problem readers have with techniques that may have, months or years after article publication, developed problems or been superceded by better techniques.

I am now proposing that *The Permanente Journal* adopt a similar program of follow-up. I’m certain that TPJ readers would appreciate this extra step in keeping them up to date. I thought it was a good suggestion for that journal then, and I think it’s a good suggestion for *TPJ* now.

John H Cochran, Jr, MD
Executive Medical Director, Denver, CO


— Reply

We agree with Dr Cochran and are implementing a process to periodically contact authors of past articles and request follow-up. The first of these follow-ups, on Fibromyalgia, appears in this issue on page 38. At our Web site, original articles will be cross-linked with their follow-up articles and can be accessed online at www.kp.org/permanentejournal.

Editor

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Medical School

The training of the medical school gives a man his direction, points him the way, and furnishes him with a chart, fairly incomplete, for the voyage, but nothing more.

*Sir William Osler, 1849-1919, physician*
From Northern California: Integrating primary medical care with addiction treatment: a randomized controlled trial


CONTEXT: The prevalence of medical disorders is high among substance abuse patients, yet medical services are seldom provided in coordination with substance abuse treatment.

OBJECTIVE: To examine differences in treatment outcomes and costs between integrated and independent models of medical and substance abuse care as well as the effect of integrated care in a subgroup of patients with substance abuse-related medical conditions (SAMCs).

DESIGN: Randomized controlled trial conducted between April 1997 and December 1998.

SETTING AND PATIENTS: Adult men and women (n = 592) who were admitted to a large health maintenance organization chemical dependency program in Sacramento, CA.

INTERVENTIONS: Patients were randomly assigned to receive treatment through an integrated model, in which primary health care was included within the addiction treatment program (n = 285), or an independent treatment-as-usual model, in which primary care and substance abuse treatment were provided separately (n = 307). Both programs were group based and lasted eight weeks, with ten months of aftercare available.

MAIN OUTCOME MEASURES: Abstinence outcomes, treatment utilization, and costs six months after randomization.

RESULTS: Both groups showed improvement on all drug and alcohol measures. Overall, there were no differences in total abstinence rates between the integrated care and independent care groups (68% vs 65%, p = .18). For patients without SAMCs, there were also no differences in abstinence rates (integrated care, 66% vs independent care, 73%, p = .23) and there was a slight but nonsignificant trend of higher costs for the integrated care group ($367.96 vs $324.09, p = .19). However, patients with SAMCs (n = 341) were more likely to be abstinent in the integrated care group than the independent care group (69% vs 55%, p = .006; odds ratio [OR], 1.90; 95% confidence interval [CI], 1.22-2.97). This was true for both those with medical (OR, 3.38; 95% CI, 1.68-6.80) and psychiatric (OR, 2.10; 95% CI, 1.04-4.25) SAMCs. Patients with SAMCs had a slight but nonsignificant trend of higher costs in the integrated care group ($470.81 vs $427.95, p = .14). The incremental cost-effectiveness ratio per additional abstinent patient with an SAMC in the integrated care group was $1581.

CONCLUSIONS: Individuals with SAMCs benefitted from integrated medical and substance abuse treatment, and such an approach can be cost-effective. These findings are relevant given the high prevalence and cost of medical conditions among substance abuse patients, new developments in medications for addiction, and recent legislation on parity of substance abuse with other medical benefits.

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From Southern California: Childhood abuse, household dysfunction, and the risk of attempted suicide throughout the lifespan: findings from the Adverse Childhood Experiences Study


CONTEXT: Suicide is a leading cause of death in the United States, but identifying persons at risk is difficult. Thus, the US Surgeon General has made suicide prevention a national priority. An expanding body of research suggests that childhood trauma and adverse experiences can lead to a variety of negative health outcomes, including attempted suicide among adolescents and adults.

OBJECTIVE: To examine the relationship between the risk of suicide attempts and adverse childhood experiences and the number of such experiences (adverse childhood experiences [ACE] score).

DESIGN, SETTING, AND PARTICIPANTS: A retrospective cohort study of 17,337 adult health maintenance organization members (54% female; mean [SD] age, 57 [15.3] years) who attended a primary care clinic in San Diego, CA, within a three-year period (1995-1997) and completed a survey about childhood abuse and household dysfunction, suicide attempts (including age at first attempt), and multiple other health-related issues.

MAIN OUTCOME MEASURE: Self-reported suicide attempts, compared by number of adverse childhood experiences, including emotional, physical, and sexual abuse; household substance abuse, mental illness, and incarceration; and parental domestic violence, separation, or divorce.

RESULTS: The lifetime prevalence of having at least one suicide attempt was 3.8%. Adverse childhood experiences in any category increased the risk of attempted suicide two- to five-fold. The ACE score had a strong, graded relationship to attempted suicide during childhood/adolescence and adulthood (p < .001). Compared with persons with no such experiences (prevalence of attempted suicide, 1.1%), the adjusted odds ratio of ever-attempting suicide among persons with seven or more experiences (35.2%) was 31.1 (95% confidence interval, 20.6-47.1). Adjustment for illicit drug use, depressed affect, and self-reported alcoholism reduced the strength of the relationship between the ACE score and suicide attempts, suggesting partial mediation of the adverse childhood experience-suicide attempt relationship by these factors. The population-attributable risk fractions for one
or more experiences were 67%, 64%, and 80% for lifetime, adult, and childhood/adolescent suicide attempts, respectively.

**CONCLUSIONS:** A powerful graded relationship exists between adverse childhood experiences and risk of attempted suicide throughout the lifespan. Alcoholism, depressed affect, and illicit drug use, which are strongly associated with such experiences, appear to partially mediate this relationship. Because estimates of the attributable risk fraction caused by these experiences were large, prevention of these experiences and the treatment of persons affected by them may lead to progress in suicide prevention.

**From the Northwest:**
The health and health behaviors of people who do not drink alcohol

**BACKGROUND:** Compared to abstention, moderate drinking has been linked to better health, and heavy and hazardous drinking to increased morbidity and mortality. Many studies have failed to account for heterogeneity in health and drinking history among nondrinkers, however. If former drinkers quit in response to ill health, this could increase the risk in the nondrinker category and underestimate the effects of alcohol if illnesses leading to abstention are alcohol-related. In addition, health behaviors may vary with drinking status, affecting health outcomes often attributed to drinking.

**METHODS:** Survey data were collected from a probability sample of a large health maintenance organization’s membership. Regression analyses assess the relationship between drinking status (adjusting for covariates), mental and physical health and functioning, and health behaviors.

**RESULTS:** Former drinkers and lifelong abstainers had worse health and functioning than current drinkers and, comparatively, former drinkers had worse health than lifelong abstainers. Former drinkers did not differ from light-to-moderate drinkers in regard to health behaviors (except for smoking), although lifelong abstainers and heavier drinkers were less likely to use preventive care or try to improve their health behaviors.

**CONCLUSIONS:** Consistent with hypotheses that former drinkers may stop drinking because of poor health, former drinkers were less healthy than current drinkers and had slightly worse health than lifelong abstainers, compared to light-to-moderate drinkers. Former drinkers did not appear to be at risk because of poorer health behaviors (except smoking), but lifelong abstainers and heavier drinkers might benefit from outreach designed to increase use of preventive care and improve health behaviors.


**From Colorado:**
Assessment of vulvovaginal complaints: accuracy of telephone triage and in-office diagnosis

**OBJECTIVE:** To examine the agreement between telephone and office management of vulvovaginal complaints and to assess the accuracy of diagnosis of vulvovaginitis.

**METHODS:** Prospective structured telephone nurse interviews of all patients with vulvovaginal complaints who called the Kaiser Permanente Telephone Call Center were conducted. Patients were appointed to a physician, nurse midwife, or physician’s assistant for office evaluation. Both groups (nurses and practitioners) made independent diagnosis and treatment decisions. Kappa coefficients were used to evaluate the interexaminer agreement between telephone nurses and practitioners, and practitioners and traditional diagnostic tests.

**RESULTS:** A total of 485 patients underwent telephone interviews, and 253 (52%) completed the study protocol. Kappa values showed poor agreement between nurses and practitioners for bacterial vaginosis (0.12), candidiasis (0.22), and trichomoniasis (0.05). Practitioners failed to accurately diagnose vaginitis when kappa values were analyzed. There was also poor agreement between telephone nurses and practitioners regarding the necessity of an office visit (0.14).

**CONCLUSION:** This prospective study challenges the notion that the telephone is an effective tool to diagnose and treat vulvovaginal complaints. Moreover, given the poor agreement between practitioners’ diagnoses and microbiologic and microscopic data, further study into optimal diagnosis of vulvovaginitis is needed.

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**From the Southeast:**
The relation of markers of inflammation to the development of glucose disorders in the elderly: the Cardiovascular Health Study

Several studies suggest that inflammation plays a role in the pathogenesis of some glucose disorders in adults. We tested this hypothesis in a longitudinal cohort study of older individuals who had normal fast-
Diabetes Association.


C-reactive protein (CRP), and factor VIIIc associated with the development of diabetes in elderly. Understanding the role of inflammatory markers in participants who had diabetes mellitus (n = 45) had higher median levels of CRP at baseline than those who remained normoglycemic. On multivariate analysis, those with elevated CRP levels (75th percentile [2.86 mg/L] vs 25th percentile [0.82 mg/L]) were 2.03 times (95% confidence intervals, 1.44-2.86) more likely to have diabetes on follow-up. Adjustment for confounders and other inflammatory markers did not appreciably change this finding. There was no relationship between the development of diabetes and other markers of inflammation. Inflammation, as measured by CRP levels, is associated with the development of diabetes in the elderly. Understanding the role of inflammation in the pathogenesis of glucose disorders in this age-group may lead to better classification and treatment of glucose disorders among them.


From Southern California: Survey of voiding dysfunction and urinary retention after anti-incontinence procedures


OBJECTIVE: To describe trends in the management of prolonged voiding dysfunction and urinary retention after anti-incontinence procedures.

METHODS: Physician members of the American Urogynecologic Society were queried by means of a two-page questionnaire regarding the management of prolonged voiding dysfunction and urinary retention after anti-incontinence procedures.

RESULTS: A total of 344 (42%) of 825 questionnaires were completed and returned. Of the 344 respondents, 61% identified themselves as urogynecologists, 50% worked in a university-affiliated practice, and 26% had been in practice for 11-20 years. Respondents rarely encountered prolonged urinary retention after anti-incontinence procedures. Among the respondents, 30% allowed three to six months for resumption of spontaneous voiding before performing surgical revision, and 90% performed multichannel urodynamic studies before surgical revision. However, 66% performed surgical revision transabdominally when urinary retention occurred after retropubic urethropexy, and 61-81% of respondents performed surgical revision transvaginally when urinary retention followed needle suspension, pubovaginal sling, or tension-free vaginal tape procedures. A total of 90-96% did not perform an anti-incontinence procedure concomitantly with surgical revision. The majority of respondents reported spontaneous voiding in greater than 80% of patients, and recurrent stress urinary incontinence in less than 10% of patients after surgical revision.

CONCLUSION: Although certain trends in the management of prolonged urinary retention after anti-incontinence procedures were identified, there was no clear consensus on the method of surgical revision used, nor the management of recurrent stress urinary incontinence after surgical revision. Randomized clinical trials are required to determine the optimal management of prolonged urinary retention after anti-incontinence procedures.

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From Northern California: The prevalence of clinically recognized obsessive-compulsive disorder in a large health maintenance organization


OBJECTIVE: Little is known about the prevalence of obsessive-compulsive disorder (OCD) as recognized in clinical settings. The authors report data on the prevalence of clinically recognized OCD in a large, integrated, group practice health maintenance organization (HMO).

METHODS: The authors examined the database of outpatient diagnoses for the 1.7 million people (age ≥65) in the San Francisco Bay Area and Sacramento who were continuously enrolled in Kaiser Permanente from May 1995 through April 1996. OCD diagnoses were confirmed by chart review.

RESULTS: The one-year prevalence of clinically recognized OCD was 84/100,000 (95% confidence interval: 80-89/100,000), or 0.084%. It varied among the 19 clinics within the HMO but was nowhere higher than 150/100,000. Prevalence was higher among women than among men but was higher among boys than among girls. Above age 65, OCD prevalence decreased markedly in both genders. Period prevalence rates increased by 60% as the length of the study period doubled from one to two years, more than would be expected for a chronic disease requiring regular care. About three-quarters of both children and adults with OCD had comorbid psychiatric diagnoses; major depression was common in both groups.

CONCLUSIONS: Although previously reported prevalences of 1%-3% from community studies may have included many transient or misclassified cases of OCD not requiring treatment, the very low prevalence of clinically
From Colorado:
The Colorado newborn hearing screening project, 1992-1999: on the threshold of effective population-based universal newborn hearing screening

Mebi AL, Thomson V. Pediatrics 2002 Jan;109(1):E7. Available at: www.pediatrics.org/cgi/content/full/109/1/e7

OBJECTIVE: Although previous studies have documented the feasibility and benefits of universal newborn hearing screening in selected hospitals, none have reviewed the effectiveness of regionally mandated participation of large numbers of hospitals with variable levels of motivation to succeed. The purpose of this study was to measure hospital participation and overall screening success in a statewide program for universal newborn hearing screening and to track improvements in program establishment and outpatient follow-up over time.

METHODS: Four Colorado hospitals began voluntarily performing hearing screening before hospital discharge on all newborns in 1992. By 1996, 26 Colorado hospitals were participating in universal newborn hearing screening. The publication of screening results from these early years served as a catalyst for legislation requiring increased hospital participation in establishing universal screening programs. Data systems were subsequently developed to improve statistical tracking and follow-up. Eight years' worth of cumulative study data as well as the results from calendar year 1999 (the year of greatest hospital participation) were reviewed for collective measures of successful screening and follow-up. Three hospitals did not initiate newborn hearing screening programs until after the study period ended in 1999. Of the 57 hospitals that were screening newborns in 1999, the chosen method of screening at 52 hospitals was automated auditory brainstem response testing; three hospitals used otacoustic emission testing, and the remaining two hospitals used two-stage screening. Hearing loss was defined as a threshold of 35 decibels or greater in one or both ears at the time of confirmatory testing.

RESULTS: During the full eight-year study period, 1992 to 1999, 148,240 newborns were screened. A total of 291 infants who were born during the study period received a diagnosis of congenital hearing loss. In this cohort of 291 children, the cumulative frequency of bilateral hearing loss was 71% (range: 48%-94% by calendar year), the frequency of sensorineural hearing loss was 82% (range: 67%-88%), and the frequency of one or more risk factors was 47% (range: 5%-61%). During calendar year 1999, a total of 63,590 births were recorded at 60 birthing hospitals in Colorado. The families of 203 (0.4%) of these newborns refused newborn hearing screening. Of the remaining 63,327 newborns, 87% (55,324 infants) were screened for hearing acuity before hospital discharge, a far greater percentage than the 19% of all newborns screened during the first five years of voluntary hospital participation, and approaching the American Academy of Pediatrics's recommendation of 95% of newborns completing hospital-based testing in a successful screening program. As a result of this statewide hearing screening program, congenital hearing loss was diagnosed in 86 Colorado newborns during 1999, representing an occurrence rate of approximately one affected child in every 650 newborns. In this group of 86 infants, 59 had bilateral sensorineural hearing loss, 17 had unilateral sensorineural hearing loss, four had bilateral conductive hearing loss, and six had unilateral conductive hearing loss. Mild hearing loss was present in six infants; moderate hearing loss was present in 42 infants, severe hearing loss was present in 33 infants, and profound hearing loss was present in the remaining five infants. Only 32 of the 86 affected newborns, in 1999, had one or more risk factors for hearing loss subsequently identified. After failing an initial hospital-based screening at one of the 57 participating hospitals in 1999, 2.3% of infants screened (1283 newborns) were referred for follow-up testing, easily exceeding the standard of <4% recommended by the American Academy of Pediatrics. Similarly, the false-positive rate of 2.2% during 1999 exceeded the recommended standard of <3%. Of the infants who failed their initial screening, 76% (978 infants) had documented follow-up testing to confirm or exclude congenital hearing loss, a percentage significantly improved from a follow-up rate of 48% during the first five years of screening, although not yet achieving the standard of 95% recommended by the American Academy of Pediatrics. Nine participating hospitals, however, were able to document appropriate follow-up for 95% or more of the infants who failed their initial screening tests. The median age of diagnosis of congenital hearing loss during 1999 was 2.1 months; 71% of affected infants were identified by three months of age (the recommended standard for age of diagnosis), and 92% of affected newborns were identified by five months of age. Measures of screening success were compared for large, mid-sized, and small hospitals. Increasing hospital size, as measured by the number of births per year, was associated with an increasing percentage of newborns who were successfully screened. It was notable that smaller hospital size was associated with increased referral rates for follow-up testing, whereas larger hospital size was associated with the highest recapture rate for follow-up testing.

CONCLUSIONS: Universal screening for congenital hearing loss is demonstrated to be feasible in a large regional effort of legislatively mandated participation. The success of such an endeavor is dependent on educational efforts for community professionals, commitment on the part of program planners, and data systems that more accurately track and recall infants who fail initial hospital-based screening.
Pain Management and Chronic Disease Self-Management Programs Win James A Vohs Awards

Kaiser Permanente Northwest (KPNW) has been named the single-region winner of the 2002 James A Vohs Award for Quality for its Pain Management Program, while the first multiple-region award has been given to the Chronic Disease Self-Management Program initiated by KP Northern California and implemented in the Southern California, Ohio, Colorado, Hawaii and Georgia Regions.

The Vohs Award is an annual programwide award recognizing exceptional local efforts to address challenging quality-of-care and service issues. Its goal is to highlight multidisciplinary improvements that are measurable and transferable to other areas within KP.

The winner of the single-region award, KPNW’s Pain Management Program, is an integrated, regionwide program of consultation, group visits, specialty care, and education to improve the quality of care for members in chronic pain.

“The Pain Management Program recognizes that no single therapy is effective for more than half of patients with chronic pain or all the time for any individual patient,” said Al Weiland, MD, President and Regional Medical Director, Northwest Permanente PC. “Our program relies on many different treatment approaches and the skills of physicians, nurses, social workers, pharmacists, physical therapists, and health educators.”

“The Pain Management Program is demonstrating a change in the way primary care is delivered,” added Marilee Donovan, RN, PhD, Manager/Clinical Nurse Specialist, Pain Management Clinic, Northwest Region. “Pain is now being diagnosed earlier, and patients are experiencing reduced suffering and enhanced quality of life.”

As the winner of the Vohs Award in the multiple-region category, the Chronic Disease Self-Management Program represents an innovative, multidisciplinary effort that significantly improves quality and cost outcomes for patients with mixed chronic diseases through participation in a seven-week lay-led course.

“What is unique about the project is that it focuses on mixed chronic illnesses, not just one illness, and that it primarily involves lay leaders helping patients learn to live with their conditions and cope day-to-day,” explained David Sobel, MD, Director, Patient Education and Health Promotion, Northern California Region. “The program takes advantage of the knowledge our members share with one another.”

The processes, tools, and techniques of the program have been successfully implemented in a standardized, sustainable way in multiple sites and regions. The process of program dissemination itself was evaluated both quantitatively and qualitatively as part of the award decision process.

“I believe this is a challenge to our organization—not just to be innovative in developing programs but to be innovative in the way we disseminate and grow and learn from each other on an ongoing basis,” added Dr. Sobel. “Our pride in Kaiser Permanente should transcend our local areas so that we can learn from one another.”

The James A Vohs Award for Quality is named for James A Vohs, who served as president, chief executive officer, and chairman of the Boards of Directors of Kaiser Foundation Health Plan & Hospitals between 1980 and 1991. In 1983, Vohs created the boards’ Committee on Quality of Care to firmly establish the strategic importance of quality for the program. The Kaiser Foundation Health Plan & Hospitals’ Boards of Directors established the award upon his retirement after a 40-year career with KP.

Vohs created the boards’ Committee on Quality of Care to firmly establish the strategic importance for the program.
Introduction

Chronic disease—the principal cause of disability and the major reason for seeking health care—accounts for over 70% of all health care expenditures. Although the aging population has contributed to these increases, the prevalence of chronic disease has risen in virtually every age group. Almost 75% of people aged 65 years and older have at least one chronic illness, and about 50% of people aged 65 years and older have two chronic illnesses. Although major advances have been made in medical and surgical care of chronic disease, there are great opportunities to enable patients to manage chronic diseases over the long term. For example, patients must cope with discomfort and disability and must follow treatment regimens regularly. In addition, patients must modify their behavior to minimize undesirable outcomes; adjust their social and work lives to accommodate their symptoms and functional limitations; and cope with the emotional consequences.

Although health professionals are primarily responsible for medical management of disease, patients are primarily responsible for day-to-day management of their illness. In one domain—living with a chronic disease—patients become the true experts. The highest-quality care for chronic conditions requires a strong, active partnership between informed health care professionals and active patients. However, two patients with the same disease and similar physical impairment may be very different in their ability to function, to enjoy life, and to partner with their physicians. Why? The difference often lies both in a patient’s attitude toward the disease and toward life and in the skills he or she uses for managing day-to-day challenges. Some of the skills and attitudes necessary to live a healthy life despite chronic medical conditions are best learned from other patients who have learned how to cope successfully.

Building on the experience and evaluation of the Arthritis Self-Management Program, the Stanford Center for Research in Patient Education and Kaiser Permanente began, in 1990, to develop the Chronic Disease Self-Management Program (CDSMP). The program consists of a group patient education course led by specially trained lay leaders. The program was initiated in Northern California, has been extended to multiple Kaiser Permanente (KP) regions, and is known in different regions by various names. Examples of these...
names include Healthy Living with Chronic Conditions; Healthier Living: Managing Ongoing Health Conditions; Living Well with Chronic Conditions; and Ways to Feel Better: A Self-Management Course for People with Chronic Health Conditions.

Development, implementation, and evaluation of the CDSMP were complex processes undertaken by a multidisciplinary, interregional team led by David S Sobel, MD, MPH, and coordinated interregionally by Mary Hobbs, MPH; in addition, each participating region had designated coordinators (Table 1). Physicians, nurses, health educators, volunteer coordinators, care managers, and Health Plan personnel have collaborated to review, implement, and recruit for this program.

**CDSMP Focus and Underlying Theory**

The program content concentrates on patients’ self-defined needs and self-management options for common problems and symptoms such as pain, fatigue, sleeping problems, anger, and depression—symptoms which extend across specific medical diagnoses. Patients learn skills to maximize their functioning and ability to carry out normal daily activities. Relaxation and imagery are both taught and practiced in the group sessions. Patients participating in the program also learn how to manage emotional and other changes brought about by illness, including anger, depression, uncertainty about the future, changed expectations and goals, and isolation.

Instead of providing solutions for problems, the sessions are highly interactive. Patients receive practice and feedback in decision-making and problem-solving skills. Similarly, the program focuses on increasing patients’ self-efficacy and confidence in their ability to manage their medical conditions. Patients also develop skills to enhance physician/patient partnership by monitoring and accurately reporting changes in their condition and by actively sharing concerns, questions, and treatment preferences. The content of the course has been published as a book, Living a Healthy Life with Chronic Conditions, which is used as a text for course participants.

CDSMP addresses core challenges and coping issues encountered by patients with specific chronic conditions (eg, arthritis, diabetes, heart disease, hypertension, and chronic obstructive pulmonary disease (COPD)). Although the program focuses on these general issues, patients are also encouraged to seek additional targeted information and skills related to their own medical conditions. The course prepares patients to collaborate with their health care professionals and with the health care system to improve health outcomes.

The program is based on self-efficacy theory and incorporates skill mastery, reinterpretation of symptoms, modeling, and social persuasion to enhance patients’ sense of personal efficacy. These techniques include guided mastery of skills through weekly “action planning” and feedback on progress; modeling of self-management behaviors and problem-solving strategies; and social persuasion through group support and guidance for individual self-management efforts. This process is documented in a detailed protocol published as Chronic Disease Self-Management Leader’s Manual.

**Program Methods Qualitative and Quantitative Measures**

The program was originally provided in seven (later revised to six) weekly sessions, each 2-1/2 hours in duration. No formal reinforcement, “booster session,” or intervention was given after the course concluded. Each course was attended by ten to 15 participants, including any family members who wished to attend. The course was taught by a pair of trained volunteer lay leaders or by a lay leader and a professional. Most leaders had one or more chronic diseases. Course content and methodology were developed on the basis of results of needs assessment, which relied on literature reviews as well as on information obtained from 11 patient focus groups.

The project included a self-evaluative component consisting of four studies: 1) a six-month randomized clinical trial, 2) a two-year longitudinal study, 3) a dissemination/replication study, and 4) a qualitative study of the implementation process.

**Six-Month Randomized Clinical Trial Methods**

This study compared treatment subjects with wait-list control subjects. Participants were 952 patients (about 50% of whom were KP members) aged at least 40 years who had physician-confirmed diagnosis of heart disease, lung disease, stroke, arthritis, or a combination of these conditions. Self-administered questionnaires were mailed to study participants to measure their health behavior, health status, and health service utilization. Self-reported utilization was validated.
by comparing responses with patients’ medical records and with computerized data sources for a subpopulation.6

Results

Results of this study are shown in Table 2. Compared with control subjects, treatment subjects showed improvement at six months in several measures: weekly minutes of exercise (p < .0003), frequency of cognitive symptom management (p < .0001), communication with physicians (p < .006), self-reported health status (p < .02), health distress (p < .001), fatigue (p < .003), disability (p < .002), and social/role activity limitations (p < .0007) (Table 2).

Patients who participated in the CDSMP also had fewer hospitalizations (p < .047) and spent, on average, 0.8 fewer nights in the hospital (p < .01). Assuming hospital cost of $1000 per day and program cost of about $70 per participant, savings in the first six months was approximately $750 per participant—more than ten times the cost of the intervention.

Longitudinal Study

Methods

This study7 provided long-term follow-up for the patients participating in the original, six-month randomized clinic trial by combining findings from two groups: subjects initially randomized to the CDSMP and the control group, who later received the CDSMP. Data were collected at four points: immediately before entering CDSMP, at six months, at one year, and at two years. Three categories of outcomes were assessed: health status, health services utili-

Table 2. Six-month change in health behaviors, health status, and health service utilization among 561 treatment and 391 control subjects participating in CDSMP

| Table 2. Six-month change in health behaviors, health status, and health service utilization among 561 treatment and 391 control subjects participating in CDSMP |
|-----------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
|                                   | Baseline Value                  | Change                          | Significance p’                  |
|                                   | Mean (SD) for treatment group   | Mean (SD) for control group     | Mean for treatment group (SD of Δ) | Mean for control group (SD of Δ) |
| Health behaviors                  |                                 |                                 |                                  |
| Stretching and strengthening exercise (minutes/week) | 40 (54) | 37 (54) | 13 (56.7) | 5 (54.6) | .005 |
| Aerobic exercise (minutes/week)   | 95 (97) | 93 (83) | 16 (94.5) | -2 (87.0) | .0003 |
| Cognitive symptom mgmt (0-5, 5 = best) | 1.3 (0.88) | 1.3 (0.94) | 0.38 (0.77) | .07 (0.73) | .0001 |
| Communication with physician (0-5, 5 = best) | 3.0 (1.2) | 3.0 (1.2) | 0.26 (0.98) | .11 (0.96) | .006 |
| Health status                     |                                 |                                 |                                  |
| Self-rated health (1-5, 1 = best) | 3.4 (0.88) | 3.3 (0.93) | -0.09 (0.72) | 0.02 (0.69) | .02 |
| Disability (0-3, 0 = best)        | 0.78 (0.59) | 0.85 (0.63) | -0.02 (0.52) | .03 (0.36) | .002 |
| Social/role activities limitations (0-1, 0 = better) | 1.8 (1.1) | 1.8 (1.1) | -0.07 (0.92) | .08 (0.87) | .0007 |
| Pain/physical discomfort (0-100, 0 = best) | 58 (22.6) | 59 (23.6) | -2.6 (19.4) | -2.2 (17.6) | .27 |
| Psychological well-being (0-5, 5 = best) | 5.4 (0.88) | 5.4 (0.98) | 0.09 (0.69) | 0.04 (0.67) | .10 |
| Energy/fatigue (0-5, 5 = best)    | 2.2 (1.1) | 2.2 (1.1) | 0.14 (0.79) | 0.02 (0.75) | .003 |
| Health distress (0-5, 0 = best)   | 2.4 (1.2) | 2.1 (1.2) | -0.04 (0.98) | -0.07 (0.97) | .001 |
| Shortness of breath (0-4, 0 = best) | 1.3 (1.1) | 1.4 (1.2) | 0.02 (0.87) | -0.02 (0.78) | .56 |
| Health service utilization        |                                 |                                 |                                  |
| No. of physician & ED visits in past six months | 6.1 (5.7) | 6.4 (6.1) | -0.77 (5.6) | -0.54 (6.3) | .11 |
| No. of hospital stays in past six months | 0.24 (0.69) | 0.30 (0.98) | -0.07 (0.69) | -0.05 (1.1) | .047 |
| No. of nights in hospital in past six months | 1.1 (4.1) | 1.0 (4.1) | -0.28 (5.2) | 0.56 (7.0) | .01 |

* Analysis of covariance on six-month posttest scores controlling for treatment status, age, sex, education, marital status, and baseline status; two-tailed p values.

Adapted and reproduced by permission of the publishers (www.lww.com) and author from: Lorig KR, Sobel DS, Stewart AL, et al. Evidence suggesting that a chronic disease self-management program can improve health status while reducing hospitalization: a randomized trial. Med Care 1999 Jan;37(1):5-14.5
lization, and perceived self-efficacy to manage different aspects of health and functioning. All data were collected from previously tested, self-administered questionnaires that had been mailed to CDSMP participants.

**Results**

Results of the two-year longitudinal study are shown in Table 3. Compared with their baseline status, participants showed significant reduction in health distress (p < .001), showed increases in perceived self-efficacy, and made fewer visits to physicians and emergency departments (p < .006 at one year, p < .036 at two years). Self-rated health status and energy/fatigue levels were also marginally improved at the second-year assessment. Increase in disability was observed at one year and is comparable with increases in disability observed in similar older, chronically ill populations. Of particular note is the evidence that CDSMP participants—who had a mean 2.2 chronic medical conditions and increased disability—did not show deterioration in any other health state variables, as would be expected during a two-year period. Nor did CDSMP participants have statistically significant increases in number of hospitalizations or days in the hospital. Despite worsening of participants’ physical disability during the first year, they maintained or improved all other aspects of their health status and reduced their utilization of outpatient health services. In addition, their activity levels and role functions did not decline.

Each year, participants made fewer visits to emergency departments and physicians despite increased disability. The total reduction over two years was approximately 2.5 visits per participant. For cost estimates,

| Table 3. Change in health services utilization, health status, and self-efficacy in 683 CDSMP participants at one year from baseline and in 533 CDSMP participants at two years from baseline |
|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
|                                  | Mean value (SD) among 683 patients | Significance | Mean value (SD) among 533 patients | Significance |
|                                  | At baseline | At one year | Change |                          | At baseline | At two years | Change |                          |
| No. of physician and ED visits in past six months | 5.86 (5.80) | 5.17 (5.26) | -0.689 (6.51) | .006 | 5.65 (5.33) | 5.09 (5.17) | -0.564 (6.22) | .036 |
| No. of times hospitalized in past six months | 0.205 (.615) | 0.194 (.745) | -0.012 (.914) | .737 | 0.215 (.643) | 0.250 (.956) | 0.034 (1.03) | .45 |
| No. of days in hospital in past six months | 0.984 (3.69) | 0.874 (3.15) | -0.111 (4.69) | .535 | 1.05 (4.14) | 1.31 (5.61) | .256 (6.67) | .377 |
| Self-rated health status (1-5, 1 = best) | 3.35 (3.875) | 3.29 (3.901) | -0.031 (3.725) | .268 | 3.28 (3.870) | 3.22 (3.956) | -0.060 (3.761) | .068 |
| Disability level (0-3, 0 = best) | 0.810 (.591) | 0.845 (.659) | 0.035 (.412) | .025 | 0.803 (.592) | 0.826 (.656) | 0.026 (.443) | .178 |
| Social/role activities limitations (0-4, 0 = best) | 1.75 (1.07) | 1.75 (1.13) | 0.0002 (1.986) | .995 | 1.72 (1.07) | 1.69 (1.20) | -0.031 (1.12) | .516 |
| Energy/fatigue (0-5, 5 = best) | 2.19 (1.08) | 2.24 (1.10) | 0.045 (8.46) | .165 | 2.20 (1.08) | 2.28 (1.09) | 0.077 (9.12) | .054 |
| Health distress (0-5, 0 = best) | 2.06 (1.18) | 1.85 (1.14) | -0.199 (3.997) | .0001 | 2.04 (1.15) | 1.75 (1.15) | -0.290 (1.02) | .0001 |
| Self-efficacy in managing chronic disease (1-10, 10 = best) | 6.03 (2.08) | 6.32 (2.12) | 0.310 (1.67) | .0001 | 6.03 (2.10) | 6.25 (2.21) | 0.270 (1.78) | .009 |

ED = emergency department.

*p* Matched-pair t test for significance of change from baseline to one year.

*Matched-pair t test for significance of change from baseline to two years.

Self-efficacy questions were distributed to 433 patients in the one-year group and to 299 patients in the two-year group.

we assumed that no eliminated visits were emergency department visits (which are costlier than physician office visits) and that the cost for an outpatient visit was $80. Thus, through reduced number of outpatient visits at least $200 in savings was realized per participant. In actuality, savings were probably greater because our analysis assumed that without the CDSMP, visit rates would have remained unchanged. Evidence from other studies of patients with chronic medical conditions indicates that the visit rate would not decrease but instead would probably increase by a mean of 2.5 visits per participant.

Participants in this study—who served as control subjects in the six-month study—had a mean 0.34 more hospital days during the six-month control period, whereas patients who received the self-management program had a mean of 0.15 fewer days in the hospital; total difference was thus a mean of -0.49 days during the six months of the original study. Assuming that a day of hospitalization costs $1000, the reduction in hospitalization saved about $490 in medical utilization per participant compared with baseline costs of medical utilization. Number of days in the hospital remained below baseline levels during the second six months of this study and were not substantially increased at two years when compared with baseline levels. Stated in conservative terms, the two-year cost savings resulting from reduced number of hospital days and outpatient visits was about $690 per participant (i.e., $490 in hospitalization savings and $200 in outpatient visit savings). The CDSMP costs between $70 and $200 per participant, depending on economies of scale. Therefore, actual two-year savings per participant were between $490 and $620.

**Dissemination/Replication Study**

This study, supported by the Garfield Memorial Fund, was designed to evaluate if the successful CDSMP could be replicated and disseminated nationwide throughout KP facilities.

**Methods**

In 1997, 11 KP regions were invited to attend a master trainer program for implementing the CDSMP. Nine KP regions participated in a training designed to teach the CDSMP, to teach others how to teach the program, and to show how to administer the program in individual KP regions. Six KP regions (and Group Health Cooperative of Puget Sound) subsequently implemented the program in a cohort study that used a pre/post design and previously validated self-administered questionnaires. In 1998, 68 CDSMP programs were offered for 703 study participants. Attendance was high: a mean of 5.3 of 7 sessions were attended by each participant. The course was taught either by two lay leaders (42% of sessions); by one lay and one professional leader (43% of sessions); or by two professional leaders (15% of sessions). No clinically significant differences in participant outcomes were seen on basis of type of session leader.

**Results**

Table 4 presents results of this study. At one year, participants in the program had substantial improvement in health behaviors (exercise, cognitive symptom management, and communication with physicians), self-efficacy, and health status (fatigue, shortness of breath, pain, role function, depression, and health distress) and had a mean of 0.1 fewer visits to the emergency department (p < .05). Participants showed a trend toward fewer outpatient visits to physicians (0.4 fewer, p = 0.19) and toward fewer days in hospital (0.5 fewer, p = 0.12). Reduction in number of days of hospitalization in the treatment group was greater than in the six-month randomized trial, and the trend toward fewer days of hospitalization occurred while secular trends showed increasing length of stay.

During the one-year period, study participants had a mean 0.97 fewer hospital days and 0.2 fewer emergency department visits. Assuming $1000 as the mean cost per hospital day and $100 for the mean cost of an emergency department visit, savings of $990 per participant would be expected in the first year. Estimating the cost of the intervention within the KP system at approximately $200 per participant (including administration, recruitment, and some use of professional group leaders), savings for the 489 subjects who completed the study were nearly $400,000—a 1:4 cost-to-savings ratio.

The magnitude of improvement of subjects in the replication study was greater for most health status and utilization measures than in the first (six-month) randomized trial.

**Qualitative Study of Implementation**

As part of the replication and dissemination study of CDSMP, successful dissemination of CDSMP innovations were studied qualitatively.

**Methods**

This study used interviews and questionnaires completed by lay leaders, trainers, site coordin-
tors, and regional health education directors. The data were analyzed thematically to identify the most common issues influencing implementation.

Criteria were established to determine if sites had successfully implemented the program. These criteria included availability of master trainers, availability of leaders, effective participant recruitment mechanism, effective leader recruitment mechanism, designated CDSMP coordinator with allotted time to manage the program, ongoing funding mechanism, ongoing plan for training new leaders, evidence of courses scheduled for the coming year, courses given at least twice per year, satisfied leaders, and satisfied participants.

**Results**

Dissemination and implementation of the program was not always easy or successful. Some KP regions and sites elected not to participate or to delay implementation primarily as a result of competing priorities and lack of local staff and funding. Staff turnover, change in leadership, and even the loss of entire KP regions compromised implementation. The variable success of implementing and sustaining the program has provided a valuable opportunity to better understand the process of program dissemination. Preliminary analysis has identified some possible key dissemination factors: degree of leadership buy-in and support; adequacy of program infrastructure (staff time designated, selection of program champions, creation of a mechanism to manage staff turnover, and provision of resources for interregional coordination); individual commitment and passion for the program; critical mass of master trainers and lay leaders; and a successful mechanism for recruiting program participants.

After the initial decision was made to implement the program, inadequately supportive infrastructure (eg, excessive staff turnover and insufficient funding) and inadequate participant recruitment were major barriers to sustaining the program as well as involvement of lay leaders. Relying on physician referrals as the primary source of patient recruitment for the course did not appear to be successful. Community outreach, including direct mail recruitment to patients identified from disease registries and medical utilization data sources, appeared to be the most effective way to drive recruitment and the program itself. Recruitment was somewhat hampered by the program’s “generic” focus (as distinguished from a disease-specific focus) and by competition with other disease-specific patient education programs. Both these factors created confusion in the minds of physicians and patients as to the program’s role. At many sites, lack of support for lay leaders also hindered implementation.

This analysis of the qualitative

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**Table 4. Results of dissemination/repliication study: change in health status, health care utilization, health behaviors, and self-efficacy at one year in 489 CDSMP participants**

<table>
<thead>
<tr>
<th></th>
<th>Mean value at baseline</th>
<th>Mean change</th>
<th>Probabilitya</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Health status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disability (0-3, 0 = best)</td>
<td>0.4</td>
<td>0.0</td>
<td>0.77</td>
</tr>
<tr>
<td>Health distress (0-5, 0 = best)</td>
<td>2.3</td>
<td>-0.3</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Social/role activity limitation (0-4, 0 = best)</td>
<td>2.0</td>
<td>-0.2</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Illness intrusiveness (1-7, 1 = best)</td>
<td>3.3</td>
<td>-0.2</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Fatigue (1-10, 1 = best)</td>
<td>5.8</td>
<td>-0.3</td>
<td>0.002</td>
</tr>
<tr>
<td>Shortness of breath (1-10, 1 = better)</td>
<td>3.3</td>
<td>-0.3</td>
<td>0.003</td>
</tr>
<tr>
<td>Pain (1-10, 1 = best)</td>
<td>5.2</td>
<td>-0.3</td>
<td>0.03</td>
</tr>
<tr>
<td>Self-rated health status (1-5, 1 = best)</td>
<td>3.3</td>
<td>0.04</td>
<td>0.2</td>
</tr>
<tr>
<td>Depression (0-3, 0 = best)</td>
<td>1.3</td>
<td>-0.1</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td><strong>Health care utilization</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. of physician visits in past six months</td>
<td>5.5</td>
<td>-0.4</td>
<td>0.19</td>
</tr>
<tr>
<td>No. of ED visits in past six months</td>
<td>0.4</td>
<td>-0.1</td>
<td>0.05</td>
</tr>
<tr>
<td>No. of times hospitalized in past six months</td>
<td>0.2</td>
<td>-0.1</td>
<td>0.14</td>
</tr>
<tr>
<td>No. of days in hospital in past six months</td>
<td>1.2</td>
<td>-0.5</td>
<td>0.12</td>
</tr>
<tr>
<td><strong>Behaviors</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aerobic exercise (minutes/week)</td>
<td>87</td>
<td>13</td>
<td>0.01</td>
</tr>
<tr>
<td>Range-of-motion exercise (minutes/week)</td>
<td>55</td>
<td>9</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Cognitive symptom management (0-3, 3 = best)</td>
<td>1.3</td>
<td>0.4</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Communication with physician</td>
<td>2.9</td>
<td>0.2</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Self-efficacy (1-10, 10 = best)</td>
<td>5.2</td>
<td>0.5</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

ED = emergency department.

a Calculated from matched-pair t tests testing whether mean change could have been zero.

data is preliminary. We expect to prepare a full article—including recommendations for supporting program dissemination—in 2002.

Discussion

The CDSMP represents an established, innovative, multiregional, multidisciplinary effort which, for more than a decade, has been substantially improving quality and cost outcomes for patients with mixed chronic disease. The project has been objectively documented by results of three studies: a randomized six-month trial, a two-year longitudinal follow-up study, and a replication study involving wide-spread dissemination of the program throughout KP. The CDSMP has been integrated into patient care and involves each Health Plan member as a partner in improving the quality and effectiveness of care for major chronic conditions. Thus far, four research papers on the CDSMP have been accepted for publication in peer-reviewed health care journals.

Results of this project showed:

- Health Plan members with chronic illness can be trained to give other members structured educational support for behavioral change.
- These educational interventions can improve health behaviors, quality of life, functional status, and health care utilization/costs in patients with mixed chronic illness.
- CDSMP processes, tools, and techniques can be replicated and successfully disseminated in other KP sites and regions.
- The process of disseminating project results can be studied to better understand how to improve programwide sharing, adoption, and implementation of proven innovations.

Although developing a program may be difficult, implementing and sustaining it are often even more challenging. The program, processes, tools, and techniques of this program have been successfully implemented in a standardized, sustainable way at multiple sites and regions throughout KP. Qualitative analysis provided data on plans to sustain and expand the program. In the course of developing CDSMP, many tools were produced to support ongoing implementation and dissemination. These tools included standardized training programs, master trainer and lay leader training manuals, a site coordinator’s manual, course materials and accompanying book, publicity materials, as well as videotapes for marketing, participant recruitment, and physician orientation (available upon request). In addition, periodic site-coordinator conference calls and an online Internet discussion group provided opportunities for staff to share successes, to jointly solve problems, and to plan ongoing modifications of the program.

Although patient education classes for chronic conditions are common, the CDSMP has several innovative and distinguishing features:

- CDSMP targets a heterogeneous group of patients with mixed chronic conditions. The program focuses on enhancing self-efficacy and self-management skills in patients affected with various chronic conditions. Because CDSMP addresses the needs of patients with any chronic illness, the program has potential use and value for most Health Plan members over the age of 50 years.

- CDSMP uses trained lay or peer leaders who have day-to-day experience in living with chronic conditions. These lay leaders are a cost-effective resource who can effectively model and facilitate peer learning. Although many health care improvements primarily involve change in professional staff practices, this innovation involved KP members as partners in providing support and educational services. The program transforms the view of members as solely consumers of health care resources into providers of health care.

- Improved behavior, health status, and health care utilization/costs for CDSMP participants have been shown in a randomized clinical trial, in a two-year longitudinal follow-up study, and in a replication study—all of which have been accepted for publication in peer-reviewed health care journals.

- CDSMP has been widely disseminated throughout several KP regions. At some sites, the program has been successfully integrated into care paths and care delivery for patients with chronic illness. CDSMP has been recognized and designated as a “successful practice” by the KP Care Management Institute (CMI) to further encourage programwide implementation.

The program is the result of a productive, ongoing collaboration of KP with the Stanford Center for Research in Patient Education for more than a decade. Ongoing collaboration with community organizations has also allowed community-based partnerships to dissemi-
clinical contributions

Although many health care improvements primarily involve change in professional staff practices, this innovation involved KP members as partners in providing support and educational services.

nate the program. KP and CalPERS, with the support of KP California Division Health Plan Major Accounts Marketing are promoting the program to working and retired members across California. KP, with support of the Direct Community Benefit Investment (DCBI) Program, is partnering with senior centers, faith-based organizations, and a consortium of community clinics to train leaders and offer the program to the larger community.

This fruitful collaboration supports a larger community effort to serve uninsured as well as hard-to-reach members. Such partnerships provide a valuable model for sharing KP quality improvements with the wider community. At the same time, these collaborative activities provide a rich learning opportunity for KP with regard to effective community-based health education strategies.

KP is also collaborating on development of an Internet-based, online version of the CDSMP which promises to provide access for members with chronic illness who might not otherwise be able to participate in face-to-face groups. We hope to comparatively evaluate the Internet and face-to-face versions in terms of health impact, cost effectiveness, and accessibility. The Chronic Disease Self-Management Program is innovative, health and cost-effective, robust, and replicable. Leaders, administrators, and managers should encourage participation of this program in their medical centers and communities. Physicians and staff should encourage members with chronic conditions to participate in this proven patient education program.

Acknowledgments

The authors acknowledge the assistance of the Stanford University Center for Research and Patient Education and the Kaiser Permanente regional health education directors, regional project coordinators, site coordinators, trainers and leaders. Further information is available on the Web site: www.stanford.edu/group/perc/.

Program development and evaluation was supported by the University of California Tobacco-Related Disease Research Program and Agency for Health Care Policy and Research (AHCPR) and the Garfield Memorial Fund.

The original studies reviewed here were approved by the Institutional Committee for the Protection of Human Subjects in Research at each sponsoring institution, and informed consent was obtained.

References


The Doctor Inside the Patient

Each patient carries his own doctor inside him. They come to us not knowing that truth. We are at our best when we give the doctor who resides inside each patient the chance to go to work.

Albert Schweitzer, 1875-1965, Missionary surgeon, philanthropist and 1952 Nobel Peace Prize winner
“Vanessa”  
_by Don Wissusik, MA, MS_

The artist, Don Wissusik, MA, MS, completed this graphite drawing when he was a young art student. Mr Wissusik has always challenged himself to take a blank piece of paper and use it to express emotions and feelings that are not easy to place into words.
Background: Recognizing the Need to Integrate Pain Management

One of the most common reasons for visiting a health care practitioner is to obtain relief from pain. The Joint Commission on the Accreditation of Healthcare Organizations (JCAHO) reported that 50 million Americans are partially or totally disabled by chronic pain. Among those living in extended care facilities, incidence of serious pain is reported at 45% to 80%. On the basis of national data, Kaiser Permanente Northwest (KPNW) estimated, in 1995, that at least 5% of its adult Health Plan members were experiencing moderate to severe chronic pain (Bill Towery, MBA, MPP, personal communication, October, 1995). This level of pain was experienced by an estimated 9% of Kaiser Permanente (KP) San Diego members as reported by Bill McCarberg, MD (personal communication, July 24, 1999). In 1992, Group Health Cooperative of Puget Sound reported that although the cost of pain care per patient was lower than for other chronic conditions, total annual costs were greater. And although direct costs of pain treatment are estimated at $100 billion annually, only one in four patients receives effective treatment. In June 2001, a California jury awarded a $1.5 million settlement to a family whose terminally ill patriarch was discharged to hospice with his pain rated as 10 on a scale of 1 to 10—a score of 10 indicating the most pain. Responding to increasing evidence of morbidity from unrelieved pain, the Robert Wood Johnson Foundation, in 1997, awarded the University of Wisconsin School of Medicine a grant to collaborate with JCAHO to develop what became the 2001 Pain Standards, which declare that every patient with pain has a right to have appropriate assessment and management of this pain.

Charged with identifying, managing, and continuously improving clinical processes and outcomes of five of the top ten most resource-intensive medical conditions, the KPNW Clinical Quality Planning Committee (CQPC), in 1993, discovered that no systematic management strategy existed for many painful conditions—especially arthritis, abdominal complaints, back and neck trauma. An anesthesiology clinic offered anesthetic blocks to a small group of patients, and primary care practitioners did the best they could with the rest of members; however, pain management nationwide lacked both coordination and knowledge of scientific advances, and access to available resources was difficult. Regionally, diagnosis and treatment were impeded by practitioners’ beliefs that chronic pain is a psychiatric condition with little or no organic basis; that psychological testing can distinguish between real pain and imaginary pain; that most patients with chronic pain are simply addicts seeking drugs; and that treating chronic pain with opiates is illegal.

By 1994, the external environment was changing. Clinical appreciation of neuroplasticity challenged psychological explanations for chronic pain. Evidence linked unrelieved acute pain with morbidity, including development of chronic pain. Professional organizations such as the American Pain Society were drafting guidelines for the appropriate treatment of pain. Washington State1 and Oregon2 were considering passage of legislation permitting physician-assisted suicide for patients who requested it in response to their intractable pain. Focus groups of KP members (assembled to advise KPNW how to improve access to medical care) identified inadequate services for pain relief as a problem. Internal audit of telephone advice calls and data collected as part of the Kaiser Sunnyside Medical Center (KSMC) pain management improvement efforts showed that poor pain relief was common.

Developing a KPNW Pain Management Program: Origins and Evolution

In response to this problem of inadequately treated pain, the CQPC began to envision an evidence-based process for managing chronic pain at the primary care level, and, in 1995, the KPNW Regional Operations Group chartered the Integrated Pain Management Project. Objectives of this project were to decrease suffering, to reduce variation in practice, to improve functioning, to increase customer satisfaction, to support primary care practitioners, and to produce cost savings. To accomplish these goals for the population with pain would mean changing the system of care delivery and not just treating individual patients.

To design an evidence-based program, original members of the pain project team surveyed 126 KPNW practitioners and administrators, evaluated 387 peer-reviewed articles, and interviewed 30 national health care leaders, including KP colleagues in Northern California, San Diego, Texas, and Colorado. Into its design the team incorporated guidelines of the American Pain Society and of the Agency for 

By Marilee Donovan, RN, PhD
Paul O Jacobs, MD
Martha Blake, MBA
Table 1. KPNW Integrated Pain Management Program members

<table>
<thead>
<tr>
<th>Contact Persons: Marilee Donovan, RN, PhD; Paul Jacobs, MD</th>
</tr>
</thead>
</table>

### Pain Program Design Team
- Marilee Donovan, RN, PhD; Barbara Dow, PhD; Kitty Evers, MD; Nick Sootch, RN; Paul Jacobs, MD; Karen Gabriel; Steve Mandleblatt, MD; Karen Sharpe, RPh

### Trauma Steering Committee
- James Loch, MD; William Woejski, MD; Martha Blake, MBA; Carla Johnson, RN; Adrianne Feldstein, MD; Bill Tower; Meg Munger, CRNR

### Behavioral Emotional Committee
- *Martha Blake, MBA; James E Brodacker, MD, Jonathan Brown, PhD; *Mama Plaherty-Robb; *Robert McQuirk, PhD; Laurentia Young, MD

### Clinical Quality Planning Committee
- *Mitch Greenlick, PhD; Tom Syltebo, MD; Richard Bills, MD; *Martha Blake, MBA; Jonathan Brown, PhD; Jim Dameron; Pegguy McClure, MBA; Susan Pozdena; Matt Stiefel, MPA; William Woejski, MD

### Health Education
- Hope Sasek; Joy Gray; Mary Lockhart, PhD; John Crawford, MPH

### KSMC
- Stephen Bankhuber, MD; John Culp, RPh; Sandy Herrera; *Lynea Mclallister, MN, NP; Kathleen Wegener

### Sponsors and Champions
- Ailde Chase, RN; Bhawar Singh, MD; Beth Christianison; Eileen Brown, RN; Jan Fitcher, RN; Judith Gilbertson, RN; Thomas Harburg, MD; Joe Davis, MD; Sharon Higgin, MD; Bummy Ebingen, RN; Ron Potts, MD; Jesse Gamez; Tom Syltebo, MD; Jennifer Houten, RN; Peggy McClure, MBA; Carla Johnson, RN; Paul Wallace, MD; Ken Terhaar

### Original Pain Team Project Members
- Longview MOB: (Pilot Site), Donna Wolter, RPh; Lex Tenney, MSW; Ruby Poon, RN; Sharon Haggstrom, RN; Keith Glasser, MSPT; Alain Machtelinck, RPh
- Beaverton MOB: Gene Boschee, RPh; Laurie Davis, MSW; Gonul Jones; Julie Rettig, RN; Mary Lou Strong, RPh; Rob Wong, RPh
- Cascade Park MOB: Monica Kleier, MSW; Lois Neel, RPT; Fred Turner, RPh; Jeniece Wynne, RN
- Division MOB: Mimi Lein, MSW; Cindy Smart, RPh
- East Interstate MOB: Martina Fetter, RN; Patricia Perry, RPh; Christine Quigley
- Rockwood MOB: Jacqueline Gray, RN; Cindy Kirkpatrick, LCSW; Rob McDole, RPh; Dennis Hemmer, RPh
- Salmon Creek MOB: Margaret Carey, RN; Marilee Donovan, RN, PhD; Tom Ernst, RPh; Jim Finlayson, RPh; David Henriksen, RN; Susan Kiley, MBA, LMT
- Skyline MOB: LouAnn Thorsness, RPh; Bill Sullivan, RPT; Sue Kruger, RN; Judith Gilbertson, RN; Robinette Fitzsimmons, MSW
- Vancouver MOB: Bruce Chavaller, RN; Monica Kleier, MSW; Mary Thompson, RN

### Health Systems
- Diane Taylor; Gay Sipes

**Notes:**
- *No longer at Kaiser Permanente.
- KSMC = Kaiser Sunnyside Medical Center; MOB = Medical Office Building.
- Data analysts: *Charlotte A Corelle, MBA; and Brian Bergequist, MA

Multidisciplinary pain management groups implementing the model were formed at two medical offices in 1996. In 1997, the model was expanded to seven medical offices and quadrupled its number of enrollees. In 1998, the nine-member multidisciplinary pain board assumed responsibility to oversee development of the model, to develop and disseminate best practices, to educate practitioners, and to adapt implementation strategies to the reality of limited medical office resources. By late 1999, resource constraints dictated a shift to a more centralized model with multidisciplinary pain management groups centered at one medical office in each primary care service area. A traveling team of experts coordinated care, and the anesthesia pain clinic merged with the pain management groups to form the KPNW Integrated Pain Management Program. The pain management program was designed to reflect the Permanente principles of evidence-based medicine and addresses KP regional goals for improving member satisfaction and reducing costs. The KPNW Pain Management Program enhances clinical service delivery by focusing on improving pain management for adult members with chronic or recurrent pain, which KPNW defines as occurring daily or recurring for six months or longer.

**Structure and Implementation of the KPNW Pain Management Program**

Many types of therapy can effectively treat pain, but no therapy is effective for more than half of those with chronic pain. The model featured: 1) multidisciplinary pain management groups offered in the primary care setting to assist primary care practitioners to apply evidence-based care; 2) education; 3) change in the processes of care to make it easier to do the right thing; 4) case management; and 5) methods to evaluate patient and system outcomes. The model was designed to change attitudes and beliefs about pain while effectively treating Health Plan members who are in pain and improving pain management for all adult Health Plan members in the region.

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clinical contributions

Pain is no longer routinely considered a manifestation of a psychiatric disorder or an expression of drug addiction but is instead addressed as a neuropathologic disease ...

Each day, members of the pain clinic’s multidisciplinary team answer more than 20 electronic or telephone inquiries that are directly related to individual patient needs.

- Current attitudes expressed by clinicians are generally more consistent with the science of pain pathology than in 1995. Pain is no longer routinely considered a manifestation of a psychiatric disorder or an expression of drug addiction but is instead addressed as a neuropathologic disease that can be modified by psychosocial variables and that can coexist in members who have problems of substance abuse.

- Recent Changes in the Program

KPNW has implemented specific clinical and operational changes as part of its pain management program:

- Since 1997, the multidisciplinary pain board has been the policymaking body for pain management in KPNW. In February 2000, the KPNW Pain Clinic also became a multidisciplinary care team. The referral process via the electronic medical record, EpicCare, reflects changes as part of its pain management approach. EpicCare allows clinicians to select any pain management option, such as chart review, consultation, assistance with development of a treatment plan, group visits, medication management, and anesthetic procedures.

- Communication systems allow primary care and specialty practitioners to “discuss” pain management issues related to a specific patient and to share information, findings, and recommendations in real time.

- Pain assessments are concise, comprehensive, and developed on the basis of reliable and valid instruments and are made available in a patient’s electronic record within a few days.

- Care is stratified to match complexity of the intervention to complexity of patient needs.

- Patient-specific consultations—currently numbering more than 20 per day—are available to clinicians face to face, by phone, or electronically.

- Electronic medical record tools improve access,
reduce variation, and facilitate evolving standards of care.

- Patient education materials and guidelines, collaboratively developed, address the continuum of care.

**Methods of Program Evaluation**

To evaluate the impact of the program, a study sample was chosen consisting of Health Plan members who attended at least four of the seven multidisciplinary group sessions (or received case management) and who were KPNW members continuously throughout the period beginning 12 months before the month of first appointment and ending 12 months later. As the program has evolved, the number of members included in the sample has dramatically increased from 26 (in the last half of 1996) to nearly 2000 (in the first half of 2001).

The pain management program was evaluated by using: 1) number of visits by program component, 2) preg and postgroup pain and interference with function questions from the Wisconsin Brief Pain Inventory, 3) two satisfaction questions adapted from Ware, 4) pre- and postutilization of outpatient visits excluding mental health and urgent care, 5) cost per hour of program components, 6) pharmacy prescriptions filled and cost of neurontin, and 7) admissions to the hospital in the year after treatment.

A standardized assessment was administered before an initial visit in any component of the program—group visits, team visits, or pain clinic. The assessment elicited information about pain, interference with function, depression, psychosocial variables, satisfaction, and data needed to evaluate previous therapy and to implement a more effective treatment plan. Six months after initial treatment in any component of the program, each patient received a follow-up survey. For this report, assessments conducted before and after participation in the group were compared. (Physician and team consultation results—which became available beginning with July 2001—were not analyzed for this study.) Patient identification, demographic, and utilization data from the end-user database were analyzed by staff from the consulting and analytical services department 12 months after patients received initial treatment in the pain management program. To monitor changes as the delivery system continued to learn, data were analyzed for six-month cohorts of patients who began treatment in either the first or second half of each year. During integration to the current service delivery configuration in the second half of 1999 and the first half of 2000, the program did not conduct post surveys. Each year, outcome data were peer-reviewed by the KPNW Pain Board, by the KPNW Clinical Strategies Integration Group, and by the KP Regional Operations Group.

**Program Quality Measures**

Originally, the pain management program tracked three pain variables, seven functional variables, two satisfaction variables, and six utilization variables. Number of emergency department (ED) visits was an excellent measure for KPNW members who have access to only one hospital (eg, in Salem, OR) but was not a reliable measure for members who have access to several EDs (eg, in Portland, OR). In addition, analysis of the first five years of data indicated that six of the original variables were sensitive enough to be used as measures of program quality, thereby precluding the need to monitor all original variables. These variables included pain now; interference with sleep; satisfaction with pain management efforts and effects; utilization of outpatient visits; and number of pharmacy prescriptions filled.

Where cost centers existed, budget actual figures were used for determining program costs; when cost centers did not exist for relevant personnel or nonlabor expenses, a consistent cost modeling process was employed.

**Statistical Analysis**

Linear and second-order regression analyses were used to test for trends. Two-tailed t tests were used to test for significance in three categories: pain, patient function, and medical utilization. Statistical significance was
set at 0.05. Whenever possible, trends and changes were compared with those for the general KPNW membership, other KP pain management programs, or national data. Changes similar to or better than those reported by major referral pain clinics were the most clinically significant.

**Results of Program Evaluation**

The mean score of reports of “Worst Pain in the Past Week” for patients in the first pain management groups was 8.78, considerably higher than the 6.5-7.6, using a similar instrument, reported by patients in other studies conducted by the authors.13,24,25

Although 16% of the members served by the multidisciplinary pain management groups were 65 years old, the program has admitted members as young as 18 years of age.

The pain management program has enabled KPNW to see more patients; reduce their suffering and enhance their quality of life; satisfy customers; improve pain management in primary care; decrease medical utilization; and manage costs. The KPNW Pain Management Program accomplished these results for $525 per patient per series of group visits, or $120 per pain clinic visit.

**Less Suffering and Enhanced Quality of Life**

Whereas in a 1995 survey of members with pain, 39% of respondents rated pain higher than 5 on a scale of 0 to 10,13 65.07% of those who entered the multidisciplinary groups reported pain scoring higher than 5. Six months after participating in the multidisciplinary groups, 55.9% of respondents reported pain scoring higher than 5; this decline was statistically significant at the 0.05 level (Figure 2a).

In 1995, 41.3% of members in pain reported pain that interfered with mood to a degree which members scored higher than 5 on a scale of 0 to 10 (Figure 2c).13 Of those admitted to multidisciplinary groups, 71% reported pain that interfered with mood to a degree which members scored higher than 5. Six months after participating in the group, 66% of respondents reported pain that interfered with mood to a degree which members scored higher than 5. The score change from before participation in the group was statistically significant at the 0.05 level (Figure 2c).

**Enhanced Customer Satisfaction**

As members became more knowledgeable about pain management, their pregroup satisfaction with efforts of the KPNW Pain Management Program decreased over time from 54% (in 1997) to 43% (in 2001) and to a low of 28% in the 1998...
groups (Figure 3). Pregroup satisfaction with the effects of treatment declined from 39% (in 1997) to 17% (in 2001) and to a low of 11% in 2000 (Figure 4). However, in each cohort since 1996, group participant satisfaction with efforts of the health care team to address pain rose 30+ points between admission to a group and the six-month survey after (Figure 3). Of KPNW members who completed a pain group series, 82% were satisfied or very satisfied.

Similarly, group participant satisfaction with effects of treatment increased between admission and six months after the survey. Since the first cohort of 1998, patients’ postsession satisfaction with the effects of treatment rose between 20% and 40% compared with presession satisfaction (Figure 4).

Practitioners who referred patients to the program, in 1997 and 1998, reported high levels of satisfaction. Primary practitioners said that they felt more comfortable acknowledging and treating pain since inception of the KPNW Pain Management Program. Since 1996, more than 240 different clinicians—three fourths of the primary care practitioners seeing members during this time—referred patients to pain management groups. Clinicians who referred once, referred repeatedly; some clinicians referred more than 20 patients.

Improved Pain Management in Primary Care

Sleep is essential to achieving effective pain management. During the six years of using this evaluation model, interference with sleep is the most sensitive measure of improved pain management. The 1995 Market Decisions Corporation survey of KPNW members with pain showed that 50.6% reported interference with sleep to a degree scored higher than 5, whereas the rate ranged from 60% to 80% of those who entered groups. Since 1996, each cohort has reported reduced interference with sleep after participating in the group sessions (Figure 5). With a regression coefficient of .6241, the declining trend even before group participation is not likely to be a matter of chance and may represent effects of better overall pain management in KPNW.

During the six years of using this evaluation model, interference with sleep is the most sensitive measure of improved pain management.

In the 1995 survey, 47% of respondents reported interference with enjoyment of life to a degree scoring higher than 5. Seven of the eight cohorts reported less interference with enjoyment of life after participating in group sessions. Linear regression for pregroup interference with enjoyment of life suggested that some process within KPNW before the pain groups began was acting on this variable ($R^2 = .4292$) (Figure 6).

When the program began in...
1996, 81% of those who enrolled in a group reported pain scoring higher than 5 at admission to the group. More recently, 65% of those appointed to a group reported pain scoring higher than 5 at admission to the group. Mean number of years a member had had pain at admission to a group decreased from 14.1 (in 1996) to 8.7 (in 2001). Overall, the incidence of these changes before entry into the pain program suggests that pain is being given more attention and that better pain management is occurring in primary care.

**Decreased Medical Utilization**

Analysis of 1997-1998 data in Salem, OR, showed a 43% reduction in ED visits for the 137 patients who participated in the series of group visits. Since January 1999, the pain management program has reduced external referral for pain management services (other than implants) by 80%.

Consistent with the KPNW Pain Board’s belief that patients with chronic pain who think it is discounted by clinicians often utilize medical services to identify the cause of pain or to prove to clinicians that the pain is real, our study results showed higher medical utilization by patients in pain than by most Health Plan members. Attending a pain group reduced medical utilization, although this measure was still higher than for the general population of members. Since 1996, 16.1% of KPNW patients participating in groups were admitted to the hospital within one year thereafter (Figure 7).

The general trend in the number of pharmacy prescriptions filled by members who eventually attended a group declined from a mean 71 prescriptions per year to 54 per year, a 31% reduction during a period in which Lande reported a 33% increase nationally and KPNW reported an 11% increase (Figure 8). The pain management program attributes the trend to education and mentoring, ie, to increase more effective pain management and to decrease use of polypharmacy.

Linear regression for pregroup utilization of outpatient visits predicted 75% of the variance in pregroup utilization, whereas R² for the regression line was 0.7498 (Figure 7).

Figure 5. Self-reported scores > 5 for pain-induced interference with sleep before and after participation in pain management group.

Figure 6. Self-reported scores > 5 for pain-induced interference with enjoyment of life before and after participation in pain management group.

Figure 7. Percentage of admissions to hospital within one year after treatment for pain among patients receiving standard care compared with percentage among patients treated in a multidisciplinary pain clinic and compared with KPNW participating in pain management groups.
of outpatient visits. This predicted figure strongly suggested that some process within KPNW (ie, that begun before creation of the pain groups) was acting to decrease medical utilization more than regional trends showed. In conjunction with our findings that patients had less pain and spent fewer years in pain, the utilization trend suggested greater recognition of pain as well as more effective treatment of pain throughout KPNW (Figure 9).

**Effectively Managed Costs**

With a regression coefficient of .9761, the second-order regression strongly suggested that after the July 2000 publication of the Pain Management Program Guideline for use of neurontin (assembled in collaboration with the KPNW Pharmacy and Therapeutics Committee), growth of neurontin use began to flatten (Figure 10).

The cost of the pain management program is presented for each year from 1996 through 2001. Groups were initially very expensive because of the cost of training ten teams. Costs per group per hour are lower now that there is only one trained team—$308 in 1996 vs $38 in 2001 (Figure 11).

**Discussion**

Since inception of its Integrated Pain Management Program, KPNW has pursued its twofold goal: to alleviate suffering of individual patients and to enhance ability of the region’s practitioners—and to do so as effectively as pain clinics charging ten times more. The cost per series of group visits ($525) and the cost per pain clinic visit ($120) were far less than the $5900 to $10,000 for an extended period of pain treatments reported for the 750 pain clinics surveyed in three studies.27-29 The KPNW Pain Management Program is recognized by JCAHO and the American Pain Society as a national leader. Five peer-reviewed articles have described aspects of the program.14,30-33 KPNW believes that its program is the most comprehensive pain management program in the managed care industry. The KPNW Pain Management Program features centralized coordination, decentralized delivery, multidisciplinary expertise, defined linkages to primary care, and data to describe performance across time. The team shares their learnings by communicating with other regions and by participating in the Care Management Institute Pain Workgroup.

Conceived as a multidisciplinary resource to the primary practitioner, the KPNW Pain Management Program brings the latest in pain management to many more patients earlier in their disease and at a lower cost than did the multidisciplinary pain clinics whose data were reported in peer-reviewed articles.27-29,30-33 Informal consultation and mentoring by multidisciplinary team members is pervasive. The success of these communications is reflected in changes in the primary care arena before members are referred to a pain group. The KPNW Pain Clinic group visits and case management are cost-effective methods of improving pain management because they are available in the primary care setting. More interventional, higher-cost forms of therapy are reserved for a later response instead of the first response.

By implementing the low-cost, early-intervention option of multidisciplinary group visits, KPNW has improved quality of care to its members in pain. Moreover, care of the entire population of KP Health Plan members has been enhanced by clinicians’ increased awareness of pain and by their enhanced ability to treat it effectively. Members with pain who do not attend a multidisciplinary group also benefit from the program’s guidelines as well as its educational and from communication systems implemented within primary and specialty care departments. Although KPNW has
no ongoing method for assessing members with pain who have not yet been admitted to its Pain Management Program, these members are assessed when they leave the general population of members to become enrolled as patients in the program. Thus, KPNW compares 1) members who attend four or more group sessions in a series, 2) members who are enrolled in the sessions but do not attend them, and 3) the general population of KPNW members. Examining the behaviors of these three groups has allowed inferences to be made about the impact of the program on individuals as well as on the larger population of members with pain.

Many of the findings reported here are consistent with those reported by other KP regions and in the literature. In 1996, when the pain management program began, the same percentage of group participants at KP San Diego as at KPNW (81%) assigned a score higher than 5 to their pain (Bill McCarberg, MD, personal communication, July 24, 1999). After patients at KP San Diego participated in a series of group visits, the number of ED visits made by these patients decreased 45%, and 77% of KP San Diego members who attended a group reported being either satisfied or very satisfied with efforts of the health care team (Bill McCarberg, MD, personal communication, July 24, 1999). Similar to the results of our study, two meta-analyses of multidisciplinary pain clinics reported that 17% to 18% of those treated in a multidisciplinary pain clinic vs 47% to 55% receiving standard care were admitted to a hospital within one year after treatment.

Study Limitations

The KPNW Pain Management Program acknowledges three kinds of confounding experiences: comorbidity of the pain population, attrition, and dynamics of change in the service delivery system. Factors associated with a risk of treatment failure include: lack of insight for change, cognitive deficits, lack of English language skills, psychosis, severe depression, history of substance abuse, or major psychiatric condition, such as borderline personality. Most pain programs, even those in managed care, exclude patients with any of these. Except for frank psychosis and age less than 18 years, the pain management program has no crite-
... as gratifying as the KPNW outcomes are, the unsolicited qualitative evaluations from patients who are no longer suffering speak the most eloquently to the quality of the KPNW Pain Management Program ...

Conclusions

Our KPNW Integrated Pain Management Program is transferable to other KP regions. This can be done by sharing learnings, processes, and outcomes at the quarterly pain management teleconference and the interregional meeting planned for Fall 2002. In addition, four KPNW experts participate actively in the Care Management Institute workgroup on chronic pain. Pain management program representatives have presented the KPNW model at the JCAHO Leadership Summits on Pain Management, Chicago and Los Angeles, 2001. The American Pain Society 19th Annual Scientific Meeting in 2000 and the American Association for the Cancer Pain in 2001 invited KPNW representatives to present the program as an example of how an HMO can enable pain management in the outpatient context and as an example of how to develop a program which meets the JCAHO pain standards.

Because KPNW has established its Pain Management Program, the region sees more patients, reduces suffering, satisfies customers, improves pain management in primary care, decreases utilization, manages costs, and achieves outcomes similar to programs costing ten to twenty times more. However, as gratifying as the KPNW outcomes are, the unsolicited qualitative evaluations from patients who are no longer suffering speak the most eloquently to the quality of the KPNW Pain Management Program:

the used guitar
I feel like the used guitar
I bought yesterday
my case is battered and worn
inside there is music.
— C. Jay Goodwin

During training in 1996-1997, when all team members were present for each visit, the series cost was $6000 plus $3000 administration. Centralization increased travel-related costs; the overall cost continues to be approximately $6000/series.

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References

Once upon a time there was a young man with a brand new cloak. He was very proud of it and strutted around in it with great joy. The north wind and the sun looked down upon him from the sky. The north wind said, “I bet I could blow that cloak off him.” The sun said, “I’ll give you a try and then I will try. We will see whose powers are more effective.” So the north wind blew and blew. The young man just pulled his cloak tighter and tighter. Then the sun said, “You have tried to chat with each other and be happy and friendly. The young man took off his cloak and laid it to icicles. Still the young man wears his cloak. Now it is my turn.” The sun began to warm the earth. The children came out of their houses and began to sing and play. The neighbors began to chat with each other and be happy and friendly. The young man took off his cloak and laid it on the fence and began to chat with friends. The warm sun with gentleness and kindness accomplished what the north wind could not do with all of his cold and might.

A Fable by Jean de la Fontaine, 1621-1695, French poet
What a Busy Primary Care Provider Wants to Know About Pain Management

By Paul O Jacobs, MD

Background

The field of pain management has seen dramatic change in the last decade. Our previous belief was that patients “learning to live with pain” and physicians not prescribing pain medication when pain was chronic equaled good medical practice. Advances in science are changing those long-held beliefs. Scientific knowledge about the complexity of chronic pain is at the basis for change in treatment recommendations. Such change has stimulated many pertinent questions for primary care providers. When should I use pain medications? How do I decide how strong an analgesic agent to prescribe? How long is it appropriate for patients to use these habit-forming agents? How do I know if my patient is addicted or abusing my prescriptions? These are but a few of the questions that I hear daily. Although I cannot offer a fail-safe and comprehensive set of answers for these questions, I can provide guidelines to consider and hope to shed some light upon these complex decisions.

Evaluation and Management

First of all, understand that pain is a subjective experience. We will never see our patient’s pain. Trusting our patient’s reports of pain is the place to start. In my view, we are only rarely purposely misled by our patients. Ask your patient to carefully consider how they would rate the pain on a 0 to 10 scale with 0 being “no pain” and 10 being “worst pain imaginable.” For pain that is graded between 2 and 5, non-steroidal anti-inflammatory agents (NSAIDs) or acetaminophen suffice. When pain is graded at 6-7, the pain is reaching a level where prescriptions are needed. Codeine, hydrocodone/acetaminophen, or oxycodone are the usual choices at this level of pain. When pain is clearly severe and labeled as 8-10 out of 10, these weaker opioids may not be strong enough. Oxycodone again is worth a try, and consideration of morphine-level agents becomes the most useful alternative. Placing a value on the pain itself is important, as is considering treating it even if it is not attached to a “serious” condition. Pain that is inadequately treated can initiate changes in the spinal cord and brain that form the foundation for chronic pain.

The next caveat about pain management has to do with the pain pattern. If the pain is intermittent, then analgesics that are short-acting can work well. If pain is a “24/7” type of condition, for which pain medications are used throughout every day, then long-acting or slow-release opioids are warranted and should be used in a time-contingent way rather than PRN. The choices for sustained-release agents are limited and include morphine, methadone, and fentanyl patches. Oxycodone in the form of OxyContin (Purdue Pharma LP, Norwalk, CT) is also a slow-release agent but has gained great notoriety because of its popularity “on the street,” so strict guidelines about its use are strongly recommended.

If the above “24/7,” sustained-release pain medications are prescribed on a long-term basis, most State Boards of Medical Examiners insist that an informed consent be placed in the medical record describing for the patient the side effects of these medications as well as their dose limitations, number of pills dispensed, and frequency of dispensing. The primary care physician who is in charge of the regimen is also named in this document. Periodic visits are recommended to assure that these medications are, in fact, helping pain to a substantial degree. Important measures of whether these medications are helping are questions that detect how well a person is functioning in life. If these medications are working, then patients should be able to tell us how they are improving their daily function because of this benefit.

Common Concerns

A common dilemma relates to concerns about possible abuse or addiction. Requests by members for more or stronger opioids trigger these concerns. Becoming familiar with some opioid physiology definitions is useful.

All people who use opioids daily become “dependent” upon them in that they will experience withdrawal or an “abstinence reaction” if they stop the agent without tapering off. Another aspect of opioid physiology is the tendency for the pain-relieving effects of these medications to lessen with time. This decrease in effectiveness is termed “tolerance” and is usually overcome by an increase in dosage of the opioid. When the benefit of the medication wanes, a patient may “seek” a higher dosage or more medica-
tion, action that may mimic the drug-seeking behavior that accompanies addiction. This “pseudoaddiction” therefore represents a bona fide pain patient’s attempts to achieve better pain control in the face of tolerance. When the dosage is increased, the pain is lessened, and requests for escalation of dosage stops. Addiction, in contrast, is a behavioral syndrome in which diversion of medications, illicit routes of administration, taking medications for their euphoric effect, and surreptitiously obtaining drugs from multiple providers are characteristic behaviors. Escalation of medication dosage does not lead to “better functioning” but results only in further requests for more drugs.

Unfortunately, many honest, reliable patients with chronic pain do not respond to opioid analgesic administration. This lack of effect is based on the complexity of opioid receptors and on many other factors. In such cases, increasing doses of potent analgesic agents does not lead to good pain control. When confronted with this situation, assistance from a pain management expert can help you and your patient. Perhaps the patient’s switching to an alternative medication is needed. One of the tenets of pain management is that if a person is not responsive to opioids, their dosage should be tapered off.

Summary

The primary focus of this discussion has been the role that opioid medications can contribute to chronic pain management. I would, however, not wish to leave you with the impression that pharmacologic treatment of chronic pain as an isolated intervention will result in good pain control in all cases. Because of the complexity of chronic pain, most serious chronic pain sufferers will need their psychosocial issues addressed as well. For this reason, chronic pain experts admonish us to approach chronic pain management with a combination of behavioral approaches to chronic pain coupled with the use of opioids based upon the guiding principles we have articulated.

Conclusion

In summary, the bottom line on use of opioid agents is 1) they must be helpful; and 2) if they are helpful, they will enable your patient to have a greater degree of function in their daily life activities.

References

1. Dworkin RH. Which individuals with acute pain are most likely to develop a chronic pain syndrome? Pain Forum 1997 Summer;6(2):127-36.

Suggested Reading

Martinez Waterfront
by Natalya Nicoloff, NP

Martinez is a small community on the Northern San Francisco Bay. The waterfront illustrates the contrast of decaying past and recent renewal.

More of Ms Nicoloff’s artwork can be seen on the cover.
Multidisciplinary Group Intervention for Fibromyalgia: A Study of Psychiatric Symptom and Functional Disability Outcomes

Abstract

Objective: To assess psychiatric symptoms and functional impairment in patients with fibromyalgia after they participated in a half-day group clinic administered by the rheumatology department at Kaiser Permanente in Colorado.

Methods: Questionnaires were given to 184 patients at the beginning of the group clinic and by telephone interview 11 to 23 months after completion of the group clinic. Questionnaires assessed demographics, psychiatric symptoms, functional impairment, work disability, and history of physical or emotional trauma and physical, emotional, or sexual abuse.

Results: Questionnaire responses indicated that patients had statistically significantly less anxiety (p = 0.002), depression (p < 0.001), panic (p = 0.029), pain (p = 0.003), restless sleep (p < 0.001), stiffness (p < 0.001), nervousness/tenseness (p < 0.001) after attending the group clinic. Number of missed workdays significantly decreased (p = 0.003), and patients’ ability to do their jobs was also significantly improved (p < 0.001). However, neither interference in five major life domains nor instrumental activities of daily living improved. Number of visits to primary and specialty care also decreased significantly (p < 0.005).

Conclusions: In fibromyalgia patients referred to a rheumatology department, a multidisciplinary group clinic intervention may effectively improve outcomes in both mental health and functional status. This group clinic model may also reduce medical utilization and associated costs.

Introduction

Fibromyalgia syndrome (FMS) is a chronic widespread pain syndrome often associated with fatigue, sleep disturbance, functional impairment, and psychiatric comorbidity.

We previously described psychiatric comorbidity and functional disability in 184 patients seen in the rheumatology department’s multidisciplinary group clinic at Kaiser Permanente (KP) Colorado from November 1998 through August 1999. Using an electronic questionnaire, we identified many patients with psychiatric disorders, including depressive illness, bipolar disorder, and general anxiety disorder as well as functional impairment severe enough to interfere with several major life domains. We also described the therapeutic interventions developed to address the needs documented by the questionnaire.

Methods

The 184 patients described previously were diagnosed with FMS by using established criteria, including a tender-point examination, and were referred to the rheumatology department. The group clinic intervention consisted of one four-hour session that included an overview of the diagnosis and treatment of FMS; behavioral guidelines for restorative sleep, relaxation, and exercise; and discussion of medication as well as of physical therapy treatment for fibromyalgia. A behavioral medicine specialist regularly attended the clinic and provided intervention or referral for mental health services as necessary.

A prospective observational (ie, outcomes) study design was used. Inclusion criteria were a confirmed diagnosis of FMS, attendance at the FMS group clinic from November 1998 through August 1999, and completion of the baseline assessments. The only exclusion criterion was refusal to complete the baseline questionnaire. Comprehensive convenience sampling was used; all available patients meeting the inclusion criteria were included. No control group was used; all study participants received the intervention. Telephone
follow-up data collection procedures were approved by the KP Northern California Institutional Review Board. Follow-up data were collected on 99 of the 184 patients (53.8%) via a telephone interview conducted by a research assistant during the period June 2000 through October 2000.

Variables collected at baseline included age and gender; employment and disability status; frequency of exercise; history of physical or emotional trauma and physical, emotional, or sexual abuse; medications used currently and in the past; and three validated self-reported measures of functional status and psychiatric disorders. These included the Illness Intrusiveness Ratings Scale, the Fibromyalgia Impact Questionnaire (FIQ), and the Quick PsychoDiagnostics Panel (QPD). The Illness Intrusiveness Scale measures the degree to which an illness interferes with major life domains such as work, recreation, and family and social relationships. The FIQ was designed to measure the impact of FMS on instrumental activities of daily living, e.g., shopping, meal preparation, walking several blocks, or driving a car; and the common symptoms associated with FMS, such as pain and fatigue. The QPD is an automated tool for diagnosing and assessing severity of several psychiatric disorders, including major depression, generalized anxiety disorder, and bipolar disorder. Baseline

### Table 1. Change in Fibromyalgia Impact Questionnaire (FIQ) items (n = 99)

<table>
<thead>
<tr>
<th>Changes in</th>
<th>Baseline mean</th>
<th>Follow-up mean</th>
<th>Absolute change</th>
<th>Relative change</th>
<th>(5%, 95%) quartiles</th>
<th>Wilcoxon signed rank p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>do shopping in last week</td>
<td>1.3</td>
<td>1.1</td>
<td>-0.2</td>
<td>-14.0%</td>
<td>(-2, 2)</td>
<td>0.064</td>
</tr>
<tr>
<td>do laundry in last week</td>
<td>1.0</td>
<td>0.9</td>
<td>-0.1</td>
<td>-11.1%</td>
<td>(-1, 1)</td>
<td>0.169</td>
</tr>
<tr>
<td>prepare meals in last week</td>
<td>1.1</td>
<td>1.0</td>
<td>-0.1</td>
<td>-10.1%</td>
<td>(-1, 1)</td>
<td>0.208</td>
</tr>
<tr>
<td>wash dishes in last week</td>
<td>1.1</td>
<td>1.0</td>
<td>-0.2</td>
<td>-13.5%</td>
<td>(-2, 2)</td>
<td>0.120</td>
</tr>
<tr>
<td>vacuum in last week</td>
<td>1.7</td>
<td>1.6</td>
<td>0.0</td>
<td>-2.0%</td>
<td>(-1, 2)</td>
<td>0.710</td>
</tr>
<tr>
<td>make beds in last week</td>
<td>1.2</td>
<td>1.2</td>
<td>0.0</td>
<td>0.6%</td>
<td>(-2, 1)</td>
<td>0.895</td>
</tr>
<tr>
<td>walk several blocks in last week</td>
<td>1.7</td>
<td>1.7</td>
<td>0.0</td>
<td>5.6%</td>
<td>(-2, 2)</td>
<td>0.411</td>
</tr>
<tr>
<td>visit friends and relatives in last week</td>
<td>1.3</td>
<td>1.2</td>
<td>-0.1</td>
<td>-5.8%</td>
<td>(-2, 2)</td>
<td>0.017</td>
</tr>
<tr>
<td>do yard work in last week</td>
<td>2.2</td>
<td>2.0</td>
<td>-0.2</td>
<td>-9.8%</td>
<td>(-2, 1)</td>
<td>0.017</td>
</tr>
<tr>
<td>drive car in last week</td>
<td>0.9</td>
<td>0.9</td>
<td>0.0</td>
<td>-3.7%</td>
<td>(-1, 1)</td>
<td>0.539</td>
</tr>
<tr>
<td>Number of:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>days felt good in last week</td>
<td>2.1</td>
<td>2.7</td>
<td>0.6</td>
<td>26.6%</td>
<td>(-3, 4)</td>
<td>0.017</td>
</tr>
<tr>
<td>nights restful sleep in last week</td>
<td>2.0</td>
<td>2.8</td>
<td>0.9</td>
<td>43.3%</td>
<td>(-3, 6)</td>
<td>0.009</td>
</tr>
<tr>
<td>days of missed work due to fibromyalgia symptoms in last week</td>
<td>1.3</td>
<td>0.7</td>
<td>-0.7</td>
<td>-49.2%</td>
<td>(-3, 2)</td>
<td>0.003</td>
</tr>
<tr>
<td>Amount:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>fibromyalgia interfered with ability to do job</td>
<td>5.3</td>
<td>2.1</td>
<td>-3.2</td>
<td>-59.5%</td>
<td>(-10, 4)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>of pain</td>
<td>7.0</td>
<td>5.9</td>
<td>-1.1</td>
<td>-15.0%</td>
<td>(-7, 4)</td>
<td>0.003</td>
</tr>
<tr>
<td>of tiredness</td>
<td>7.8</td>
<td>7.3</td>
<td>-0.6</td>
<td>-7.4%</td>
<td>(-6, 4)</td>
<td>0.022</td>
</tr>
<tr>
<td>of how rested felt in morning</td>
<td>7.8</td>
<td>7.0</td>
<td>-0.9</td>
<td>-10.9%</td>
<td>(-5, 4)</td>
<td>0.001</td>
</tr>
<tr>
<td>of stiffness</td>
<td>7.7</td>
<td>6.6</td>
<td>-1.1</td>
<td>-13.7%</td>
<td>(-7, 4)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>of tenseness/nervousness/ anxiety</td>
<td>7.1</td>
<td>5.8</td>
<td>-1.3</td>
<td>-18.1%</td>
<td>(-8, 4)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>of depression/feeling blue</td>
<td>5.6</td>
<td>4.6</td>
<td>-1.0</td>
<td>-17.6%</td>
<td>(-5, 4)</td>
<td>0.001</td>
</tr>
</tbody>
</table>

* for these 10 items, 0 = always, 3 = never
** significant at < 0.05
* for these 7 items, 0 = best, 10 = worst
** significant at < 0.001
questionnaires were administered via the POV Box, a handheld device, equipped with a liquid crystal display (LCD) screen displaying questions and a keypad with numeric and true/false buttons for entering responses.

With the exception of age, gender, and medication use, the same variables were collected at follow-up. Follow-up measures were obtained 11 to 23 months after the group clinic.

All statistical analyses were performed using SAS Version 8.0. Primary analyses involved assessing changes from baseline to follow-up on the Illness Intrusiveness Ratings Scale, the FIQ, and the QPD. Because the data were not normally distributed, the Wilcoxon signed rank test, the nonparametric test analogous to the paired t test, was used to assess change in these measures. A significance level (alpha) of 0.05 was used to analyze results shown in Tables 1-3. Because multiple tests were performed, a more conservative threshold for statistical significance (level of 0.01) also was used to analyze the results. All tests were two-tailed.

Results
To test for potential bias in the follow-up data, we conducted analyses comparing baseline measures for those who completed the follow-up interviews with baseline for those lost to follow-up. No statistically significant differences in the primary outcomes of psychiatric symptoms and functional status were observed, findings suggesting minimal bias in the data for patients who completed the follow-up assessment.

The pre- and postintervention means, absolute and relative changes or differences, confidence intervals, and p values for all primary endpoints are presented in Tables 1-3. Because the data were not normally distributed, the 5% and 95% quartiles are displayed in lieu of the 95% confidence intervals. The attached tables demonstrate improvement in outcomes achieved for several of the measures.

Statistically significant positive changes were seen in several of the FIQ items, even when using a significance level of 0.01. The number of days of work missed in the last week due to FMS averaged 0.7 fewer days, or 49% (p = 0.003). On a scale from 0 to 10, FMS interfered 3.2 points less, a 60% reduction, with patients’ ability to do their jobs (p < 0.001). On the same scale, pain averaged 15% lower at follow-up (p = 0.003); patients’ ratings on restfulness upon waking improved 11% (p = 0.001), stiffness decreased 16% (p < 0.001), symptoms of tenseness and nervousness decreased 19% (p < 0.001), and depression de-

### Table 2. Change in Quick PsychoDiagnostics Panel (QPD) items (n = 99)

<table>
<thead>
<tr>
<th>Change in</th>
<th>Baseline mean</th>
<th>Follow-up mean</th>
<th>Absolute change</th>
<th>Relative change</th>
<th>(5%, 95%) quartiles</th>
<th>Wilcoxon signed rank p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety score (10 = clinically significant)</td>
<td>14.0</td>
<td>12.1</td>
<td>-1.9</td>
<td>-13.6%</td>
<td>(-15, 9)</td>
<td>0.002 a</td>
</tr>
<tr>
<td>Depression score (10 = clinically significant)</td>
<td>12.4</td>
<td>10.2</td>
<td>-2.3</td>
<td>-18.2%</td>
<td>(-14, 8)</td>
<td>&lt;0.001 b</td>
</tr>
<tr>
<td>Panic disorder score (8 = clinically significant)</td>
<td>3.8</td>
<td>2.6</td>
<td>-1.3</td>
<td>-33.0%</td>
<td>(-16, 8)</td>
<td>0.029 a</td>
</tr>
</tbody>
</table>

a significant at < 0.05
b significant at < 0.001

### Table 3. Change in illness intrusiveness ratings subscales (n = 99)

<table>
<thead>
<tr>
<th>Change in</th>
<th>Baseline mean</th>
<th>Follow-up mean</th>
<th>Absolute change</th>
<th>Relative change</th>
<th>(5%, 95%) quartiles</th>
<th>Wilcoxon signed rank p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical well-being and diet*</td>
<td>4.3</td>
<td>4.3</td>
<td>0.0</td>
<td>-0.2%</td>
<td>(-3.5, 3.0)</td>
<td>0.845</td>
</tr>
<tr>
<td>Work and finances</td>
<td>4.5</td>
<td>4.6</td>
<td>0.1</td>
<td>1.1%</td>
<td>(-2.5, 3.0)</td>
<td>0.855</td>
</tr>
<tr>
<td>Marital, sexual, and family relations</td>
<td>4.0</td>
<td>3.7</td>
<td>-0.3</td>
<td>-8.2%</td>
<td>(-3.7, 2.3)</td>
<td>0.061</td>
</tr>
<tr>
<td>Recreation and social relations</td>
<td>4.4</td>
<td>4.1</td>
<td>-0.3</td>
<td>-7.0%</td>
<td>(-3.3, 2.0)</td>
<td>0.080</td>
</tr>
<tr>
<td>Other aspects of life</td>
<td>5.6</td>
<td>3.4</td>
<td>-2.2</td>
<td>-5.7%</td>
<td>(-2.3, 2.0)</td>
<td>0.224</td>
</tr>
</tbody>
</table>

*1 = not very much interference, 7 = very much interference
increased 14% (p = 0.001). None of the instrumental activities of daily living were significantly improved.

As assessed by the QPD (Table 2), statistically significant reductions were seen in symptoms of anxiety (1.9-point decrease, or 19%; p = 0.002); depression (2.3-point decrease, or 23%; p < 0.001); and panic disorder (1.3-point decrease, or 16%; p = 0.029). Interference in five major life domains, assessed by the Illness Intrusiveness Ratings Scale, was not improved at follow-up (Table 3).

Although no formal cost analysis was conducted, analysis was done of primary and selected medical specialty care (eg, family practice, internal medicine, neurology, neurosurgery, gastroenterology, physical medicine, and rheumatology) utilization changes from six months before the group clinic to six months after the group clinic. Results showed a reduction in mean visits from 4.4 to 3.5 (p ≤ 0.005) and a slight (though nonsignificant) increase in mental health visits (1.05 to 1.18).

Discussion

Baseline questionnaire results obtained from our sample of FMS patients showed a high prevalence of major depression and anxiety, significant functional disability, and a history of past physical or emotional trauma and physical, emotional, or sexual abuse. These findings are consistent with what has been reported in the literature.

The results of our follow-up assessment indicate that the FMS group clinic was associated with statistically significant improvement in symptoms of anxiety, depression, and panic as well as in pain, restful sleep, stiffness, nervousness, and tenseness. Days of work missed showed a statistically significant decrease, and patients' ability to do their jobs also showed statistically significant improvement. However, neither interference in five major life domains nor instrumental activities of daily living improved at follow-up.

Finally, a statistically significant decrease in primary and specialty care visits also was observed.

Several studies have evaluated educational and behavioral interventions in patients with fibromyalgia: Among them, a six-month group therapy program consisting of behavior modification, stress reduction techniques, and strategies to improve fitness conducted at the University of Oregon showed improvement in tender points and fibromyalgia impact questionnaire items. A study at the University of California at San Diego found improvement in depression scores, self-reported and observed pain behaviors, and myalgia scores in FMS patients as a result of behavioral and educational interventions. A 1.5-day interdisciplinary program conducted at the Mayo Clinic showed improvement in FIQ and Multidimensional Pain Inventory scores.

Limitations

Because all patients referred to the rheumatology department with a confirmed diagnosis of FMS were enrolled in the group clinic, the results are representative of the population of FMS patients referred for specialty care. However, these results may not be representative of the larger population of patients managed in primary care who have less severe FMS and who would probably be less functionally impaired and at less risk for psychiatric disorders than those referred to a rheumatologist.

Because we used a single-cohort, pre-post design, factors other than or in addition to the group clinic, such as spontaneous symptom remission, could have been associated with the improvement in patient out-

Practice Tips

Fibromyalgia, a widespread chronic pain syndrome, is associated with psychiatric symptoms, significant fatigue, and sleep disturbance, which interfere with activities of daily living including work and recreation.

Components of an effective group clinic for the treatment of fibromyalgia include education about diagnosis and treatment, discussion of guidelines for achieving restful sleep, guidelines for physical therapy treatment, guidelines for relaxation and stress management, overview of medications as well as an assessment of and prompt intervention for psychiatric comorbidity.

Upon follow-up improvement in psychiatric symptoms such as depression, anxiety, and panic, nervousness and tenseness, as well as functional parameters such as work ability and number of missed days was demonstrated in this group of patients. These patients are representative of fibromyalgia patients referred for specialty care.

This particular group of difficult-to-treat patients made significant progress while at the same time requiring fewer primary care and specialty visits. This is especially noteworthy in a patient population known for high care utilization.

Although we cannot definitely conclude that this improvement occurred as a result of this one time intervention the literature does not suggest improvement in fibromyalgia symptoms over time.
comes. However, fibromyalgia symptoms do not typically improve with time without some type of clinical intervention, an observation which suggests that the group clinic did contribute to the improved outcomes.

**Conclusion**

Our group clinic model for the routine care of FMS in the rheumatology department appeared to be associated with improved outcomes in functional status and psychiatric symptoms while showing improved utilization of primary and specialty care services. These findings suggest that the group clinic is a potentially cost-effective model for fibromyalgia care. Important future endeavors include further follow-up data, validation of our experience in other practice settings, and consideration of a more rigorous randomized controlled trial of FMS group intervention in the practice of rheumatology.

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**Acknowledgments**

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Scott Rosenberg, MS, of Point-of-View Survey Systems, Inc, provided programming assistance.

We acknowledge team members of the Departments of Rheumatology and Behavioral Health. Audrey Keller, MHA, of the Clinical Management Consulting Department provided assistance with analysis of medical and behavioral health utilization data.

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**References**

Evidence-Based Clinical Vignettes from the Care Management Institute: Alzheimer’s Disease and Dementia

Introduction

Alzheimer’s disease (AD), the most common form of dementia, is steadily becoming more common as the general population ages: Longer life spans—a result of medical advances—have translated into an increased prevalence of AD. In the United States, AD affects 3% to 5% of people aged 65 years or older and 15% to 40% of those aged 85 years or older.1,2 The Alzheimer’s Association estimates that more than four million Americans have the disease and that unless a cure is found, 14 million people will have it by 2050.3,4 Many people who are concerned about their loss of memory or function worry about the possibility of having AD or other types of dementia, and they seek advice and care from their physicians and the health care system.

Nationally, Kaiser Permanente (KP) serves more than 800,000 members aged 65 years or older and nearly 55,000 members who are aged 85 years or older. This statistic suggests that dementia affects an estimated 40,000 KP members, about 25,000 of whom are at least 85 years of age. In many patients with dementia, the disease has not been diagnosed. Although most cases of dementia are not curable, meticulous postdiagnostic medical management creates the possibility of treating cognitive, behavioral, and depressive symptoms. Such medical management can be coordinated with appropriate support services and thus improve caregiver and patient outcomes.5,6 Recognition of AD should therefore be given high priority so that patients and their caregivers can improve their quality of life.

Diagnosis and long-term management of AD and other forms of dementia are achieved most effectively by interdisciplinary health care teams in collaboration with community agencies and service providers. Indeed, success in the overall effort to provide high-quality care requires several key elements (Table 1).

As part of a series highlighting key aspects of guidelines and care programs from the Care Management Institute (CMI), this article presents an overview of the recently completed Dementia Guidelines7 and Dementia Care Program,8 resources which may be obtained by calling the CMI product line at 510-271-6426 or by visiting CMIproducts@kp.org. (These resources will also soon be available on the Permanente Knowledge Connection at http://pkc.kp.org.) The guidelines focus on three major areas of dementia: diagnosis, initial treatment, and postdiagnostic management, including education and support for patients and their caregivers.

Case Example

A 68-year-old retired high school teacher lived with his wife in an active retirement community. Since retiring three years previously, he had been doing volunteer work and had enrolled in...
the local university’s extension program. During the past six to eight months, he and his wife noticed that he was forgetting names and losing things. On several occasions, he had angry outbursts and accused his wife of hiding his wallet and car keys and of having an affair with a neighbor. He had lost interest in his hobby (building model planes) and seemed depressed. A week before being seen in the clinic, he became lost while driving home from the grocery store. This episode alarmed his wife, and she made an appointment for both of them with his primary care physician. He was healthy and usually drank two glasses of wine daily, and he took no medication. The patient and his wife were concerned that his forgetfulness and getting lost may not be “normal” aging. His vital signs, results of fundoscopic examination, and results of cardiac examination were normal. He had no carotid bruises or focal neurologic signs, and his gait was normal. He could draw a clock face with great difficulty, and when asked to set the time at “10 after 11,” he placed the hands of the clock in the wrong position. He scored 24 out of 30 on the Folstein Mini Mental Status Evaluation (MMSE) because he could not recall two of three objects; could not complete one component of a three-part directed task; and could not recall the current date, month, or year.

What is the patient’s diagnosis? How would you distinguish between dementia, depression, and delirium? What are your next steps? What do you tell your patient and his wife at this point? Where can you get help in evaluating and managing this patient?

What is Dementia?

Dementia is an acquired syndrome in which global intellectual abilities progressively deteriorate to the point of interfering with the affected person’s customary occupational, functional, and social performance. Changes characteristic of dementia may be generally categorized as cognitive, functional, or behavioral.

Dementia can result from a primary degenerative process (eg, AD) or from secondary causes, including toxic-metabolic, neoplastic, infectious, or traumatic processes; a depressive disorder; or increased intracranial pressure. The type of mental status alteration as well as the medical history and clinical presentation suggest the differential diagnosis and guide evaluation. Harrison’s Principles of Internal Medicine, 15th edition, lists almost 20 types of dementia—most of them relatively rare. Primary care providers are most likely to encounter Alzheimer’s disease; vascular dementia; dementia with presence of Lewy bodies or mixed vascular dementia and AD. Probable diagnosis is made clinically, whereas definitive diagnosis is made from brain biopsy at autopsy; however, exact clinical and pathologic correlation is not always possible. Table 2 displays some signs and symptoms typically associated with the early stages of various forms of dementia.

Screening and Case Identification

Regular cognitive screening of all older patients is neither necessary nor practical. However, cognitive screening should be considered for patients who display possible signs of cognitive impairment, such as difficulty following instructions, regularly confusing appointment times, and neglecting personal hygiene. Office staff can help identify these patients. Because dementia steadily becomes more common with increasing age, a reasonable ap...
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proach is to periodically use a short, sensitive, validated screening tool such as the clock-drawing test (CDT)\textsuperscript{13} or Mini-Cog (combination of the CDT and three-item recall)\textsuperscript{14} for patients aged 80 years or older. No evidence suggests how often this screening should be done, so clinical judgment must be used to determine required frequency in individual cases. Diagnostic evaluation is advisable for patients who fail a screening test and for patients who have a history of memory problems or who currently have memory problems (self-acknowledged or reported by an observer). Patients with dementia may behave in a socially appropriate manner at medical appointments yet have clinically significant cognitive loss. Attributing memory loss to “normal aging” is always inappropriate.

**Purpose and Components of the Diagnostic Evaluation**

Evaluation of cognitive impairment may reveal dementia, no dementia, or a potentially reversible condition masquerading as dementia. Most cases of cognitive impairment are irreversible.\textsuperscript{15,16} For patients and their caregivers, a diagnosis of dementia may explain a series of distressing events. Diagnosis also permits an opportunity to jointly develop a plan of care and action.

**Medical History**

The diagnostic process often requires several visits for obtaining medical history and for administering a clinical examination as well as laboratory, cognitive, and functional tests; in addition, neuroimaging might be useful to rule out reversible causes of cognitive and functional impairment. No single blood test or measure will quickly yield a definitive diagnosis. Diagnosing dementia can be complicated; therefore, in addition to the Dementia Guidelines and Dementia Care Program, CMI has produced a quick-reference tool (to be published in Spring 2002) to assist clinicians with diagnosis and management of dementia. Evaluation by a geriatrician, geropsychiatrist, or neurologist is indicated when the diagnosis is unclear, unusual, or complex.

A focused medical history includes detailed description of the patient’s chief complaint, past or current medical problems, medications, and family as well as social history. Time of onset and course of symptoms are helpful clues to diagnosis.\textsuperscript{17} Recently prescribed and highly anticholinergic medications should be considered as potentially contributory or causative factors. The medical history should be obtained from both the patient and a reliable third-party informant.

**Clinical Examination and Laboratory Tests**

Elements of the physical examination include evaluation of the patient’s appearance and behavior (ie, hygiene, affect, alertness, and ability to focus); determination of hypertension, carotid bruises, or irregular heartbeat; and identification of focal neurologic signs (eg, impaired gait or balance; rigidity; decreased muscle strength; bradykinesia; cogwheeling; resting tremor). Laboratory tests for dementia are listed in Table 3.\textsuperscript{9}

**Cognitive Testing**

Diagnostic evaluation for dementia should also include formal cognitive assessment. No single mental status test is clearly superior; and any widely studied
The CMI Dementia Guidelines recommend the Folstein MMSE because of its widespread use and ease of administration.

<table>
<thead>
<tr>
<th>Table 4. Common activities of daily living (ADL) and instrumental activities of daily living (IADL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADL</td>
</tr>
<tr>
<td>Bathing</td>
</tr>
<tr>
<td>Dressing</td>
</tr>
<tr>
<td>Eating</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

and delirium.\textsuperscript{20,22} Key points for detecting, diagnosing, and treating dementia are summarized in Table 7.

**Functional Testing**

If a family member or caregiver is present, functional status should be assessed using a tool such as the Functional Activities Questionnaire (FAQ),\textsuperscript{17} which assesses the patient’s ability to perform basic activities of daily living (ADL) and instrumental activities of daily living (IADL) (Table 4).

Depressed patients should receive psychotherapy or treatment with a selective serotonin reuptake inhibitor (SSRI) or heterocyclic antidepressant agent. Older, highly anticholinergic tertiary tricyclic antidepressant agents (eg, amitriptyline, imipramine, doxepin) should not be administered to older adults. Referral to specialty mental health or behavioral health services should be provided to patients who do not respond to treatment or whose clinicians cannot provide a diagnosis that distinguishes between depression and dementia.

**Neuroimaging**

Routine computed tomography (CT) scanning is not indicated for all patients with dementia. Noncontrast CT scanning is recommended for patients with suspected dementia who are younger than 65 years or who meet one of the following criteria:\textsuperscript{9}

- atypical presentation leading to unclear diagnosis;
- rapid, unexplained cognitive deterioration;
- unexplained focal neurologic signs or symptoms;
- urinary incontinence or gait ataxia early in the illness;
- clinical suspicion of undiagnosed cerebrovascular disease.

Contrast CT, positron emission tomography (PET), and single-photon emission computed tomography (SPECT) scanning are not recommended. For most patients with dementia treated in a primary care setting, magnetic resonance imaging (MRI) currently offers no advantage over CT scanning.

**Referral to Specialists**

Primary care practitioners should consider consultation with a specialist (geriatrician, neurologist, geropsychiatrist) if any of the following situations occur: the patient has cognitive loss and is younger than 60 years; the patient has complex presentation; basic clinical evaluation of the patient does not yield a clear diagnosis; assistance is required for case management; or the patient or the patient’s family strongly desires specialty care.
Other Components of Medical Care

Primary care clinicians are often called upon to manage problems associated with dementia and other clinical conditions not directly related to the dementing process. The most common dementia-related problems are behavioral changes (depression, apathy not caused by depression, wandering, insomnia, paranoia, and combativeness) and changes in function (incontinence, impaired gait and balance, falls, feeding issues). Treatable medical causes (e.g., pain, constipation, infection) and environmental triggers must be assessed and managed before drug treatment is initiated. In general, nonpharmacologic measures such as redirection, distraction, and structured activity should be tried before any medication is prescribed. The CMI Dementia Care Program manual lists strategies for nonpharmacologic management and indications for various medications.

Comment

Evaluation of Case Example

The patient described is probably experiencing cognitive loss and depression. Results of laboratory studies were normal. The patient was advised to discontinue use of alcohol, and a trial of 10 mg fluoxetine daily was initiated for depression. At follow-up, the

<table>
<thead>
<tr>
<th>Delirium</th>
<th>Depression</th>
<th>Dementia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abrupt, precise onset with identifiable date</td>
<td>Abrupt onset, often with previous history</td>
<td>Gradual onset that cannot be dated</td>
</tr>
<tr>
<td>Acute illness, generally lasting days to weeks but on occasion more than one month</td>
<td>Variable duration; often recurrent pattern that is time-limited</td>
<td>Long duration; progresses over years</td>
</tr>
<tr>
<td>Usually reversible, often completely</td>
<td>Can be managed or reversed</td>
<td>Generally reversible, often chronically progressive</td>
</tr>
<tr>
<td>Usually no psychiatric history but may have had episode of delirium before</td>
<td>Often previous psychiatric history (including undiagnosed depressive episodes)</td>
<td>Usually no psychiatric history</td>
</tr>
<tr>
<td>Disorientation early</td>
<td>Complains of poor concentration and forgetfulness</td>
<td>Sometimes unaware of memory loss; disorientation later in illness</td>
</tr>
<tr>
<td>Clouded, altered, changing level of consciousness</td>
<td>“I don’t know” answers</td>
<td>Near-miss answers</td>
</tr>
<tr>
<td>Variability from moment to moment, hour to hour, throughout the day</td>
<td>Fluctuating cognitive loss</td>
<td>Generally stable from day to day (although cognitive loss is progressive)</td>
</tr>
<tr>
<td>Both short- and long-term memory loss</td>
<td>Equal memory loss for recent and remote events</td>
<td>Memory loss greatest for recent events</td>
</tr>
<tr>
<td>Memory loss and abnormal thought processes predominate; not depressed</td>
<td>Depressed mood (if present) occurs first</td>
<td>Memory loss occurs first</td>
</tr>
<tr>
<td>Prominent physiologic changes</td>
<td>Less prominent physiologic changes, accompanied by increase or decrease in appetite</td>
<td>Less prominent physiologic changes</td>
</tr>
<tr>
<td>Strikingly short attention span</td>
<td>Attention span may be reduced; may not focus on questions</td>
<td>Attention span not usually reduced</td>
</tr>
<tr>
<td>Disturbed sleep-wake cycle with hour-to-hour variation</td>
<td>Disturbance in sleep (insomnia or hypersomnia) common, sleep-wake cycle variation not typical</td>
<td>Disturbed sleep-wake cycle with day-night reversal, not hour-to-hour variation</td>
</tr>
<tr>
<td>Marked psychomotor changes (hyperactive or hypoactive)</td>
<td>Psychomotor retardation or activation</td>
<td>Psychomotor changes characteristically occurring late in the illness (unless depression develops)</td>
</tr>
</tbody>
</table>


Table 6. Common clinical distinctions between delirium, dementia, and depression

Treatable medical causes ... and environmental triggers must be assessed and managed before drug treatment is initiated.
The patient's caregiver reported that the patient was adhering to the fluoxetine regimen without having clinically significant side effects. The patient’s depression seemed to have improved, but a second MMSE gave a score of 25/30. A daily regimen of 10 mg donepezil (an acetylcholinesterase inhibitor) was initiated.

Discussing the diagnosis of dementia with the patient and with the patient's family and caregivers requires sensitivity and skill.

Six weeks later, another MMSE was administered and yielded a lower score (24/30), but the patient’s wife reported that he was more engaged and less apathetic. The patient was tolerating medication and experienced no side effects. The clinician enrolled the patient in a program of coordinated senior care. The care coordinator and clinician worked together to help the patient and his wife understand his condition and what to expect over time. The clinician also suggested that the patient and his caregivers discuss advance directives, financial planning, and estate planning. Referral to community resources such as the Alzheimer's Association was discussed as well as the increased risks of the patient driving because of this diagnosis. The Alzheimer's Association provided the patient's wife with a support group and information about other support services such as adult day care and respite services that she may need in the future. She enrolled her husband in the Association’s “Safe Return” program and bought him an identification bracelet in case he were to wander and get lost. She also was referred to an attorney and to an accountant who helped her with legal and financial planning. Discussions for advance health care planning were initiated and included the couple's children.

Prevention and Treatment

Many people take—and some physicians recommend—medication and other preparations to “prevent” dementia. CMI’s evidence-based review did not find convincing clinical trials to support this recommendation.

Estrogen's effect on cognition is unclear. The reduced risk of cognitive decline associated with long-term estrogen use seen in some epidemiologic studies22 may be a benefit to consider when discussing the advantages and disadvantages of estrogen therapy in peri- and postmenopausal women, but the evidence is currently insufficient to support recommending estrogen specifically for preventing cognitive decline. A possible preventive effect of ibuprofen was recently reported,23 but nonsteroidal anti-inflammatory drugs carry a risk of clinically significant side effects and therefore should not be prescribed for prevention of AD in the absence of demonstrated benefit.9 Some literature24-26 suggests a relation between improved memory and use of gingko biloba by healthy adults; however, evidence is currently insufficient to support recommending use of gingko biloba to prevent AD or other forms of dementia. Evidence is also insufficient to support recommending use of vitamin E (alpha-tocopherol) or statins for this purpose.9

The brains of people with AD show deficient levels of acetylcholine. For some patients with mild to moderate AD, three currently available acetylcholinesterase inhibitors (donepezil, rivastigmine, and galantamine) have been well tolerated and are statistically more effective than placebo for improving performance on selected cognitive and functional tests.27 The magnitude of benefit appears to be modest and is not constant, and many patients show no benefit. No head-to-head comparisons of these agents have been pub-

<table>
<thead>
<tr>
<th>Table 7. Key points for detecting, diagnosing, and treating dementia</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Screening for dementia is indicated in patients with signs or symptoms of cognitive impairment.</td>
</tr>
<tr>
<td>• Intermittent screening for dementia in patients aged 80 years or older should be considered.</td>
</tr>
<tr>
<td>• Evaluation of dementia includes assessment for delirium, depression, and other secondary causes of cognitive decline.</td>
</tr>
<tr>
<td>• Use of cholinesterase inhibitors may be considered for patients with mild forms of Alzheimer's disease but will only slow the progression of disease by about six months.</td>
</tr>
<tr>
<td>• Team-oriented treatment of patients with dementia includes care managers and community resources.</td>
</tr>
<tr>
<td>• Treatment for dementia should focus on patient and caregiver function; on quality of life; and on referral for assistance with health care, financial, and estate planning.</td>
</tr>
<tr>
<td>• Screening for dementia is indicated in patients with signs or symptoms of cognitive impairment.</td>
</tr>
</tbody>
</table>
lished. These agents appear to slow progression of AD by about six months but do not stop this progression. If use of the medication is stopped, any effect is quickly lost. Gastrointestinal side effects are common. These agents are appropriate for use only in patients with mild to moderate AD; evidence is currently insufficient to support use of these agents by patients with mild cognitive impairment (MCI), severe AD, dementia with presence of Lewy bodies, or vascular dementia.

**Communicating the Diagnosis**

Discussing the diagnosis of dementia with the patient and with the patient's family and caregivers re-

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**Table 8. Care Management Institute Alzheimer’s Disease and Dementia Group**

<table>
<thead>
<tr>
<th>Contact Person—Project Team</th>
<th>Dementia Workgroup</th>
</tr>
</thead>
<tbody>
<tr>
<td>Richard D. Della Penna, MD</td>
<td></td>
</tr>
<tr>
<td>Kate Heumann, MPP</td>
<td></td>
</tr>
<tr>
<td>Glenn Gade, MD</td>
<td></td>
</tr>
<tr>
<td>Ingrid Venohr, PhD, RN</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Richard D. Della Penna, MD</td>
<td></td>
</tr>
<tr>
<td>Mary Ann Dzurec, PharmD</td>
<td></td>
</tr>
<tr>
<td>Robin Fine, MPH</td>
<td></td>
</tr>
<tr>
<td>Glenn Gade, MD</td>
<td></td>
</tr>
<tr>
<td>Kathy Grieser, MD</td>
<td></td>
</tr>
<tr>
<td>Kris Haight, RNC, MN</td>
<td></td>
</tr>
<tr>
<td>Lynn Hodge, MSN, RN, CS</td>
<td></td>
</tr>
<tr>
<td>Terry Hoppe, BS</td>
<td></td>
</tr>
<tr>
<td>Nancy Kingston, MPH, CHES</td>
<td></td>
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Clinical contributions require sensitivity and skill. The news can be both a source of relief and an explanation of what has been occurring. The news can also be very frightening. Clinicians should ask patients and families about their preferences for discussing this information (eg, who should be present during discussions, what kind of information can be shared). The clinician should avoid the tendency to provide excessive information when the family has diminished capacity to absorb this information (a situation that occurs often). This time is for listening; answering questions; giving reassurance of ongoing support; and, if appropriate, inquiring about feelings, cultural beliefs, and spirituality. Follow-up appointments should be scheduled to address questions and concerns, to monitor symptoms and function, and to discuss ways to improve quality of life for patients and their caregivers.

Challenges After the Diagnosis

Comprehensive care for people with AD and other forms of dementia requires support and resources found in some health care systems and in most communities. Some KP regions and service areas have dementia care specialists (usually nurses and social workers) or geriatric nurse care managers who can help to manage these patients. Linking patients and caregivers to additional resources, including links to community agencies (eg, the Alzheimer’s Association, Area Agencies on Aging), is important; caregiver support services; sources of caregiver education; and resources to assist with legal, financial, estate, and health care planning. Some states, including California, mandate reporting any diagnosis of dementia to the Department of Health, which then notifies the Department of Motor Vehicles, which evaluates the appropriateness of allowing the patient to continue driving. Even if reporting is not required, people with dementia who plan to continue driving should be tested for their ability to do so safely.

Managing a demented patient’s other chronic conditions in the context of the patient’s cognitive impairment can be challenging. When developing a plan for care, clinicians must consider the patient’s dementia in relation to the patient’s ability to adhere to medication, diet, or exercise requirements. The constraints of primary care practice make it difficult for a physician to do everything alone. KP is developing and testing various collaborative care models for our patients with dementia. A recently completed research study conducted at six KP sites focused on implementing a model of dementia care that increased links to community resources for members with dementia and their caregivers. A telephone line providing a single point of contact was established for persons with dementia and their caregivers to call KP for information about dementia care services and programs. The care manager provided information, assistance, and referral to the local chapters of the Alzheimer’s Association, which then provided information about various educational and support programs. This service was highly valued by caregivers. Primary care physicians’ satisfaction with services available for patients with dementia improved during the course of the study.

Quality Measures

Most quality-of-care indicators for dementia are not easily captured unlike quality-of-care indicators for diseases that have clear diagnoses, are determined by well-defined tests, and are treated with medications that are routinely tracked in administrative databases. The CMI Dementia Care Program outlines measures that may be used at the local or regional level to assess quality of care for patients with this condition.

Conclusions

The aging of the general population, the associated increasing prevalence of dementia as patients age, and the complex needs of patients with dementia as well as their families’ needs all underscore the need for primary care physicians to be proficient in diagnosis and treatment of dementia. Effective diagnosis and management of dementia is becoming increasingly important for KP clinicians. Early diagnosis provides an opportunity for clinicians, patients, and caregivers to collaborate in setting goals for care and making decisions regarding care. Effective management of the medical and nonmedical needs of patients and their caregivers will help patients and their families to achieve a better quality of life in the face of complex, changing needs.

* The sites included Colorado, Sacramento, San Diego, San Francisco, Northwest, and Hawaii.
Acknowledgment

The authors thank the Care Management Institute Dementia Workgroup for assistance with the study (Table 8).

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Anna Marie Aguiar is a Physical Therapist Assistant at the Santa Clara Medical Center in Northern California. This watercolor was inspired by the simplicity of calla lilies. She contrasted their soft beauty with the hard, shiny surface of the copper vase. She enjoys painting flowers because they transcend everyday life.

More of Ms Aguiar’s artwork can be seen on page 57.
The following article is excerpted from the position paper, “Strengthening Self-Care, Self-Management, and Shared Decision-Making Practices Throughout Kaiser Permanente (KP).” The paper was written for use at an interregional symposium, in September 2001, on supporting member-centered care sponsored by the Care Management Institute and KP Online. Below is the executive summary. The three tables that follow summarize the key aspects of self-care, self-management, and shared decision making from the perspectives of the member (Table 1), the intervention (Table 2), and the delivery system (Table 3).

Executive Summary
Self care, chronic disease self-management, and shared decision making are key components in the next wave of innovation within KP and throughout the American health care system. The challenges we face, as outlined in the recent Institute of Medicine report, “Crossing the Quality Chasm: A New Health Care System for the 21st Century,” are immense. They include an outdated model of care, tumultuous but largely ineffective reform, the growing burden of chronic conditions, the difficulty of transforming clinical advances into improved health outcomes, and steadily rising health care expenditures. The traditionally passive role of the member is becoming a more active, involved one, fueled by a growing prevalence of chronic disease (with the associated need for a clinician-member partnership) and by increasing access to health information and decision support on the Internet.

Supporting the central role members play in providing care and making health decisions can help bridge the “quality chasm” and build an effective health care system for the 21st century. This involves more than patching together programs and processes; it represents a basic shift in our culture and systems of caregiving.

“Member-centered care” is an overarching theme and effective clinician-member communication a prerequisite.
Table 1. From the perspective of the member, self-care (SC), self-management (SM), and shared decision-making (SDM) practices should:

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<th>Practice</th>
<th>Description</th>
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<td>Be personalized to their unique needs</td>
<td>The tasks related to SC, SM &amp; SDM are unique for each person, depending on the individual characteristics of their symptoms, conditions, personal attributes, lifestyle, and the way these things change over time.³</td>
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<td>Address emotional and role issues</td>
<td>This is especially important when it significantly affects the condition or health decision. Numerous needs assessments have shown that individuals want and need help in dealing with negative emotions that can result from a chronic condition or health crisis. It is important to allow members to acknowledge these feelings and find solutions.¹</td>
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<td>Emphasize the active role of the member in managing the condition or decision within the context of a member-clinician partnership</td>
<td>Since it is impossible for the clinician to provide directions for every contingency, it is important to support the individual to exercise a high degree of independent decision making within the overall general guidance of the clinician.⁵</td>
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<td>Address comorbid conditions by prioritizing and coordinating self-management tasks</td>
<td>Nearly half of people dealing with chronic disease have more than one chronic condition to manage. Multiple clinical and self-management tasks often conflict, confuse, and overwhelm members to the point of resignation instead of engagement. Together, members and clinicians should target a limited number of problems, based both on medical significance and the member’s motivation and readiness to address them. These priorities should be communicated to all clinicians providing clinical care and self-management support so as to coordinate and leverage member information and energies.⁶</td>
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<td>Offer a continuum of training and support</td>
<td>Ideally, this would be a range of training and support services appropriate for the differing levels of motivation, ability and skills in self-care, self-management, and health decision making. This could occur as formal educational programs, role models and self-instruction, as well as informal mentoring and support. It could involve group or individual instruction based in the medical setting or at home, using online, telephone, or mail-based interventions.⁷</td>
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Table 2. From the perspective of the intervention, self-care, self-management, and shared decision-making practices should:

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<td>Provide information based on the member’s perceived needs</td>
<td>Focusing the content of the intervention means asking members directly what they need and want to know, and what are their commonly encountered problems. Asking should include the use of focus groups, surveys, and reviews of the literature.⁸</td>
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<td>Use the latest scientific evidence to determine clinical content and behavior change methodologies</td>
<td>As clinical management changes, so should the content of the intervention. In the past, diabetes self-management emphasized blood glucose control. Scientific evidence now indicates controlling lipid levels and reducing other heart disease risk factors may be of equal or even greater importance. Our diabetes self-management messages to members have been changed accordingly. In addition, more and better research is being conducted to determine the most successful methods to promote behavior change; incorporating these findings into our SC, SM, and SDM interventions likewise enhances their success.</td>
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<td>Be designed to build confidence and skill, rather than knowledge</td>
<td>Didactic information designed to increase the member’s knowledge should be presented only when necessary to build a new skill or facilitate a health decision.</td>
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<td>Provide opportunities to practice and receive feedback on new skills</td>
<td>This should include support for decision making and problem solving. This can be accomplished by trying out the new skills at home, a class, or the clinic, then sharing progress and receiving feedback from peers and/or a clinician.¹</td>
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<td>Offer approaches and information relevant to culturally diverse groups.</td>
<td>Since health-related behavior is deeply rooted in culture, it is important that we provide interventions that are based on the different ethnic and cultural groups that are increasingly contributing to the diversity of our membership.</td>
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There is growing scientific evidence that self-care, self-management, and shared decision-making practices are linked to improvements in health-related outcomes and reduced costs. General self-care manuals, such as the Kaiser Permanente Healthwise Handbook, are valued; they increase self-care skills and satisfaction and are likely to improve access. Self-management interventions for remarkably different chronic conditions, such as adult asthma, diabetes, coronary artery disease, and heart failure, all bring about better health status and habits—and in several cases, lower utilization and costs. While the evidence on shared decision-making programs is evolving, we can conclude that they improve knowledge of treatment options and consequences, reduce decisional conflict, and stimulate greater participation in health decisions. The impact on treatment varies considerably by

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<th>Table 3. From the perspective of the delivery system, self-care, self-management, and shared decision-making practices should:</th>
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<td><strong>Be an integrated, essential part of the delivery of clinical care</strong></td>
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<td><strong>Be reinforced by clinicians</strong></td>
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<td><strong>Include proactive and sustained follow-up</strong></td>
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<td><strong>Provide consistent messages from all sources of information</strong></td>
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<td><strong>Be available directly to members when and where they need them</strong></td>
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<td><strong>Be supported by related administrative structures and procedures</strong></td>
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<td><strong>Make use of multidisciplinary teams and not place undue burden on the physician or the exam room visit.</strong></td>
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the type of health decision, with the most positive effects correlated with programs for major health decisions affecting quality of life.

Innovative self-care, self-management, and shared decision-making programs based on the latest clinical and behavioral research and theory have already been tested and implemented throughout KP. Many have been successful. Others have faltered due to a lack of member participation or clinician support and inadequate administrative, logistic, or procedural systems. Considerable variation and duplication of effort exist. To accelerate progress and link efforts to further strengthen self-care, self-management, and shared decision-making practices, it is important to focus on a few strategic priorities.

References
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One Conversation at a Time

As we move into the next millennium, we must return to the core skill of our medical practice and focus on enhancing communication with patients, one conversation at a time, in order to achieve a high level of excellence throughout Kaiser Permanente.

Terry Stein, MD; Vivian Tong Nagy, PhD; Lee Jacobs, MD.
Caring for Patients One Conversation at a Time.
“Cloistered”  
by Anna Marie Aguiar

This watercolor was done from a photograph of the convent in Santa Clara. Ms Aguiar chose the subject because it represents a place of solitude and peace. More of Ms Aguiar’s artwork can be seen on page 52.
Normal Sex Development

The processes that result in a male or a female individual are:
1) sex determination, the genetic phenomenon that results in the sex genotype (the “constitutional” or “genetic” sex), and
2) sex differentiation, the process, governed by hormonal factors, that results in the phenotype sex (visible sex characteristics).

1. Sex Determination

The genetic sex of the embryo is determined by chromosomal pairing, which occurs upon meeting of sperm and ovum. The normal female inherits the chromosome pair XX; the normal male, the chromosome pair XY. All tissue cells of the female, at subsequent stages of development, are normally characterized by the presence of the XX chromosome pair; all tissue cells of the male contain the XY chromosome pair.

2. Sex Differentiation

Sex differentiation involves two groups of factors: a) gonadal and b) hormonal.

a. Fetal gonadal factors. The primordial gonad, according to Witschi,1 is sexually undifferentiated. It consists of a cortex and a medulla. In the female, the cortex develops into the ovaries, while the medulla degenerates. In the male, the cortex degenerates and the medulla develops into the testes.

b. Hormonal factors (fetal and maternal). The testis, after it has developed from the medulla of the primordial gonad, produces hormones that contribute to the differentiation of the male sex organs; the hormonal function of the fetal ovary is less well defined. The influence of the maternal hormones has been demonstrated by removing the gonads early in the fetal life of rabbits; all fetuses from which the gonads have been removed develop as females, with female secondary sex characteristics, presumably in response to the activity of the placental hormones.2 The testis of the male fetus is believed to produce hormones that counteract the maternal female hormones, to permit male sex differentiation.3

Aberrations from the normal path of sex development may occur at any of the three major periods implied by the above: the chromosomal pairing stage, the phase of

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**From a lecture to the Staff, June 11, 1959, Kaiser Foundation Hospital, Richmond, CA; reprinted in Kaiser Foundation Med Bul 1959 Oct-Dec; 7(4):251-4.**

**Sex differentiation involves two groups of factors: a) gonadal and b) hormonal.**

**EDGAR J SCHOEN, MD**, is senior consultant in pediatrics and director of regional perinatal screening in the genetics department for TPMG. He joined TPMG in 1954. At the time this original article was written, Dr Schoen was in the Department of Pediatrics and the Section of Endocrinology, Kaiser Foundation Hospital, Oakland, CA. E-mail: edgar.schoen@ncal.kiperm.org.

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EDGAR J SCHÖEN, MD, is senior consultant in pediatrics and director of regional perinatal screening in the genetics department for TPMG. He joined TPMG in 1954. At the time this original article was written, Dr Schoen was in the Department of Pediatrics and the Section of Endocrinology, Kaiser Foundation Hospital, Oakland, CA. E-mail: edgar.schoen@ncal.kiperm.org.
gonadal differentiation, or as a result of hormonal changes at any period of life.

Abnormal Sex Determination

The clinical test for determining chromosomal sex, developed in 1953 by Moore and Barr, made possible a new phase in the investigation of states characterized by abnormal sexual development. These workers observed that in normal female subjects, the cells of many tissues (not of gonadal tissue alone) contained a chromatin body which they believed to represent an XX chromosome. The tissue cells of normal male subjects which contain the XY chromosome, do not contain the chromatin body. Buccal mucosal cells are used most frequently for the clinical test of “chromosomal sex” based on this observation.

Chromosomal sexing has been used in the investigation of states characterized by intersexuality. When chromatin bodies were found, the individual was said to be of the “female chromosomal sex”; when none were present, of “male chromosomal sex.” Wilkins noted in 1954 that chromatin bodies were absent from the nuclei of a majority of a series of apparent females with ovarian agenesis (Turner’s syndrome), and considered these persons to be chromosomal males. In a majority of a group of patients with Klinefelter’s syndrome (hypogonadism, gynecomastia, azoospermia, eunuchoid body build, hypergonadotropism), chromatin bodies were found in the tissue cell nuclei, and the subjects were judged chromosomal females.

These observations led to new hypotheses of sex determination and sex differentiation. Witschi and his group expressed the opinion that this apparent “sex reversal” in persons with Klinefelter’s syndrome, in those with Turner’s syndrome, and in persons with

Commentary

by Edgar J Schoen, MD

As someone who has “been there, done that,” I have been following with interest the comments of today’s PMG physicians on the publications of their predecessors in the pioneering, though long defunct, Kaiser Foundation Medical Bulletin. I was particularly intrigued by a surgical article written by one of our founders, Cecil Cutting, 50 years ago and analyzed by my current Physician-in-Chief, Tom McDonald. Tom pointed out that he was born the month the article was written. Similar commentaries on other articles were written by current physicians who were anywhere from toilet training to kindergarten when their PMG ancestors were publishing in the Kaiser Foundation Hospitals journal. Art Klatsky, a Permanente Journal Editor, sensed a unique variation on this theme. How about a current PMG physician commenting on his own article written more than four decades ago? Although this approach is unusual from the standpoint of history, individual endurance, and longevity, it is highly unlikely that the commentator will find great fault with the original author. But here goes.

In 1959, when I wrote an article on sexual differentiation in the Kaiser Foundation Medical Bulletin, I was a 30-something Brooklyn wiseguy trained in Boston. Now, as a 70-something California wiseguy with a 48-year TPMG career, my viewpoint on the topic is not radically different than it was four decades earlier. The principles of sexual differentiation, just as with personal sexual function, remain the same—it’s just the details that have changed.

As I looked back at my old article, I was surprised at how much we knew about sexual differentiation in the late 1950s. There had been great advances in both genetics and endocrinology in the previous decade. We had a rough clinical test for chromosomal sex—the buccal smear for “sex chromatin.” A chromatin body in the buccal cells on the smear indicated more than one X sex chromosome. This was considered to be a “female sex chromatin” pattern—later amended to “chromatin-positive” when it was realized that men with Klinefelter’s syndrome had more than one X chromosome in addition to the Y. And women with XO Turner’s syndrome were chromatin-negative though obviously not males. This chromosomal confusion became a lot clearer early in 1959, when a practical technique was developed for viewing chromosomes directly. Up until that time, whether humans had 46 or 48 chromosomes

(Continued on page 60)
Commentary
(Continued from page 59)
was not known for sure. Not only did it become apparent that 46 chromosomes was normal but that there was a logical explanation for the discrepancies in chromatin bodies. This realization was best illustrated by a reported case of a patient with both Down syndrome and Klinefelter’s syndrome and with 48 chromosomes—an extra chromosome 21 for Down syndrome and an extra X chromosome courtesy of Klinefelter’s syndrome.

Some exciting things happened in the 1950s with hormones as well. It was known that for the first six weeks or so of fetal life, the gonads were undifferentiated, after which they developed into a testis or ovary with the testes secreting testosterone. This fetal testosterone was found to be essential for further male sexual development. Studies from France showed that if fetal gonads were removed before differentiating, all the fetuses developed as females. On the other hand, presence of fetal androgens in the first two months of gestation, as occurs in the adrenogenital syndrome as a result of an enzymatic block in steroid formation, leads to virilization of the female fetus and development of ambiguous genitalia (clitoral hypertrophy and formation of a urogenital sinus).

Well, that was then. How about now? What we’ve done is filled in some of the blanks in the sexual differentiation process. We know, for instance, that the change from the undifferentiated gonad to a testis or ovary with the testes secreting testosterone. This fetal testosterone was found to be essential for further male sexual development. Studies from France showed that if fetal gonads were removed before differentiating, all the fetuses developed as females. On the other hand, presence of fetal androgens in the first two months of gestation, as occurs in the adrenogenital syndrome as a result of an enzymatic block in steroid formation, leads to virilization of the female fetus and development of ambiguous genitalia (clitoral hypertrophy and formation of a urogenital sinus).

It was now learned that such cells normally contain 46 chromosomes, in 23 pairs ...

Moore,7 in 1959, reported his study of buccal mucosal smears from 3715 infants, 1804 of whom were female. Although the buccal smears of all of the female infants indicated chromosomal female sex, the tissue cells of five of the 1911 male infants contained chromatin bodies characteristic of the female. These five cases he considered to be instances of “sex reversal”, but recent work indicates that the chromatin bodies may not represent the normal female sex chromosome pair (XX), and that lack of chromatin bodies does not necessarily represent the normal male chromosome pair (XY). Ford, Jacobs, and their coworkers8,9 using techniques permitting direct visualization of chromosomes in human cells, demonstrated that the tissue cells of a patient with Klinefelter’s syndrome contained abnormal chromosomes in the grouping XXY, and that the tissue cells of a patient with Turner’s syndrome contained abnormal chromosomes in the distribution XO. In the light of these studies, the terms “chromosomal female” and “chromosomal male” were discarded by these and other investigators, and were replaced by the descriptive terms, chromatin positive and chromatin negative.

In addition, these workers found an important abnormality in the total number of chromosomes present in the tissue cells of the intersexes studied, and in patients with certain diseases, which appear to be connected with chromosomal abnormalities that were hitherto unsuspected. The observations were made possible by the technique developed by Ford, Jacobs, and Lajtha: marrow cells are grown in tissue cultures: hypotonic saline or citrate is added to expand the cell and to separate the chromosomes, and mitosis is stopped in the metaphase by means of colchicine. A “squash preparation” is made from the cell suspension, which has been stained by Feulgen’s method, and the chromosomes can then be counted and paired. Prior to the application of this technique, the normal human tissue cell was believed to contain 48 chromosomes. It was now learned that such cells normally contain 46 chromosomes, in 23 pairs; one of the pairs consists of sex chromosomes, an XX pair in the female and an XY pair in the male. The cells of persons with Klinefelter’s syndrome (which are chromatin positive) contained 47 chromosomes instead of the normal 46; they had three sex chromosomes (XXX) instead of the normal “chro-
The scientific advances continue at an accelerating rate in both genetics and endocrinology, but, from the clinical standpoint, management of disorders of sexual differentiation in 2002 would still be recognizable by a 1959 pediatric endocrinologist.
A Clinical Information System Research Landscape

By Dean F Sittig, PhD; Brian L Hazlehurst, PhD; Ted Palen, MD, PhD; John Hsu, MD; Holly Jimison, PhD; Mark C Hornbrook, PhD

Summary

Clinical information systems (CIS) could drive progress in health care in the 21st century. We must examine the organizational and social issues surrounding these systems to truly understand their potential use, benefit, and impact on health care delivery overall. After extensive review of the literature on CIS research, we produced a “CIS research landscape.” This landscape enabled us to examine and potentially improve delivery of health care services from the perspective of its major constituents (ie, patients and their families, clinicians, processes for delivering care, organizations, patient populations) by using the information captured in CIS. We then identified aspects of the care delivery system which need to be addressed to improve the quality of care delivered: the care must be safe, effective, patient-centered, timely, efficient, and equitable. In addition to the static picture of this research landscape, we needed to portray the research process and how it relates to operational aspects of health care delivery. The CIS research landscape that we describe should help researchers and research funders alike focus their time, effort, and money on important questions. The answers to these questions should in turn greatly improve the overall health care delivery process. In a subsequent article, we will describe how we used this research landscape in conjunction with the known operational, financial, technical, governmental, and social constraints of Kaiser Permanente (KP) to develop a specific CIS research agenda.

Background

Information technology could drive progress in health care in the 21st century. Although people have studied how to use technology to improve health care for over 50 years, there remains much to learn if we are to take full advantage of this potential. A recent Institute of Medicine report, Crossing the Quality Chasm: A New Health System for the 21st Century, identified the development and application of more sophisticated clinical information systems (CIS) as essential for health care. Vigorous research is needed on all aspects of CIS for health care for full leverage of state-of-the-art technology to deliver the highest-quality, lowest-cost patient care. A clinical information system is a collection of various information technology applications that provides a centralized repository of information related to patient care across distributed locations. By Dean F Sittig, PhD; Brian L Hazlehurst, PhD; Ted Palen, MD, PhD; John Hsu, MD; Holly Jimison, PhD; Mark C Hornbrook, PhD

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Aspects of CIS Research
Evaluating Functional Aspects of a CIS

Friedman and Wyatt identified five main aspects of interest in the study of CIS. They noted that, to be comprehensive, each system would be evaluated on each of the following aspects:

- Need for the system (ie, nature of the problems to be addressed and how frequently these problems occur);
- Development process (ie, the development team and its methodology);
- Intrinsic structure (ie, parts and functions of the system that can be observed or inspected without actually running the system, such as flow charts or mockups of the graphical user interface);
- Functionality (ie, system response time, accuracy, reliability, or ease of use);
- Impact (ie, how the system affects the health care providers, patients, processes, and organizations who use the system).

Results of Using a CIS: Identifying Progress

In the last 50 years, numerous research efforts have been designed to help investigators learn more about CIS and their effect on the health care delivery process. The following sections highlight several of the most important dependent variables that have been examined. Within each study area, research can span all functional aspects of a CIS. For example, researchers might be evaluating a new CIS feature to detect adverse drug events and thus improve quality of care in an intensive care unit, but they may illustrate in the process the need for a system to help clinicians order the appropriate antibiotic.

Clinical information systems are often touted for their potential ability to improve quality of health care. One way they improve care is by supporting clinicians in the decision-making process. The most widely used CIS function for this support is presenting patient-specific information in a legible, organized, and timely manner. Other CIS interventions that have been examined include allowing clinicians to:

- access the medical literature;
- ask clinical or administrative questions of aggregates of patient data;
- receive automatic warnings or suggestions when the patient’s data satisfy certain logical rules;
- receive critiques when proposing therapies or ordering diagnostic tests;
- access guidelines for standards of care;
- analyze tradeoffs and the likelihood of alternative outcomes (decision analysis), and
- receive lists of differential diagnoses.

Related to quality of health care, safety of the systems and their underlying software has recently become an important topic. Studies have examined patient safety, especially as it relates to errors of omission and commission made by clinicians or the entire health care system. In a seminal study, McDonald found that physicians prompted by computer were more likely to respond to various clinical events for common conditions routinely managed or caused by medications. He concluded that these oversights were due more to “man’s limitations as a data processor rather than to correctable human deficiencies.” In cost-related evaluations, many investigators have examined whether a CIS can affect health care resource utilization. For example, Tierney et al looked at how a physician’s direct entering of patient orders affects the charges assessed the patient during an inpatient stay. Evans et al showed that a complex clinical decision support system integrated with a comprehensive electronic patient record could both improve quality of care and reduce its costs. Time efficiency of clinical computers has been investigated from the standpoint of the effect of a CIS on the time required to perform certain clinical tasks. Investigators have also examined whether a CIS can improve various patient-focused, time-related measures, including outpatient clinic waiting time, time to receive appropriate treatment, and hospital length of stay. Research has also examined various issues surrounding clinicians and providers. Satisfaction of patients with their clinicians and the care they receive as well as satisfaction of clinicians with their work environment is a major concern. Adoption of CIS as a routine component of the process of delivering patient care has received considerable attention. The historical patterns of technology implemented in health care have been investigated to try to understand the technologic and sociologic factors that create barriers or facilitate the pro-

[CIS] improve care is by supporting clinicians in the decision-making process.
By providing direct access to relevant clinical information at the time and place it is needed, a CIS can have a positive effect on both patient and provider education.

The CIS Research Process: Asking Specific Questions

Given this CIS research background, a CIS clearly is much more than simple installation of a computer system within a healthcare institution. CIS represents a major change in the way healthcare is delivered. Although the list of potential research questions related to CIS design, development, and implementation is lengthy, reviewing a small group of examples is useful. The next 13 generic research questions are followed by a specific sample question that could be asked and answered with appropriate CIS functionality by a group of experienced CIS researchers.

1. Does the system work as designed?
   Are the alerts and reminders generated for a specific patient correct and “of use” to the clinician?

2. What is the impact of various system enhancements or modifications?
   Does the new patient summary display screen help clinicians quickly understand the patient's past medical conditions and treatment and allow more meaningful discussion of the current reason for the visit?

3. Is the system used as anticipated?
   After implementation of a physician order entry (POE) system, the percentage of orders entered by physicians could be examined.

4. Does the system produce the desired results?
   Does the new POE system actually reduce occurrence of adverse drug events?

5. Does the system work better than the procedures it replaced?
   Does the new clinical laboratory alerting system reduce the time patients spend in a critically abnormal physiologic state compared with the previous telephone notification system?

6. Is the system cost-effective?
   Does the increased time clinicians spend entering data during the patient visit lead to efficiency or improvement in quality within the overall health care system and thus justify its continued use of this practice?

7. How well have individuals been trained to use the system?
   What percentage of clinicians can successfully perform a series of tasks required to manage a simulated patient encounter?

8. What is the anticipated long-term impact on how departments interact?
   When routine drug/drug-interaction checking is moved out of the pharmacy and onto the clinician’s desktop machine, what is the impact on the pharmacy department’s morale and productivity?

9. What are the long-term effects on the delivery of medical care?
   Does provision of regular health maintenance reminders to clinicians at the point of care improve the long-term health outcomes of chronically ill patients?

10. Will the system have an impact on management of the organization?
    Does incorporation of real-time reminders about the current drug formulary decrease variability in prescribing behavior and thus reduce costs of managing the organization?

11. To what extent does impact depend on the practice setting?
    Can the same data entry and review screens be used by both primary care and specialty care clinicians?

12. Can we establish a performance baseline against which future CIS enhancement can be compared?
    Can such regularly collected clinical or administrative data be used to measure impact of future CIS enhancement? And are there additional data items that, if recorded, would present a different picture?
13. Does the increasing complexity of modern medicine and the CIS required to implement it help or hinder clinicians and their patients? And how does use of the CIS affect the patient-provider relationship?

The CIS Landscape

Our goal was to map the CIS research landscape so that organizational and science goals could be realized through the funding and conduct of actual CIS research. This landscape would, in theory, encompass all relevant projects. To visualize this landscape, we needed to describe the relevant research by classifying projects along important dimensions of the landscape.

A CIS potentially touches and affects all aspects of the health care delivery system. Therefore, a research agenda should address the key components of any potential system and the way that these components interact in the course of care delivery. We thus began by considering an abstract model of health care delivery that made explicit these key components and the interaction among them.

Key Participants in the Health Care Delivery System

The most important participants in the health care delivery system are the patients and their families who receive the care and the clinicians (physicians, nurses, and members of the allied health professions) who provide the care. In addition, we identified the interaction between these two sets of participants, which we termed the “processes” of delivering the care. These processes describe or control the way care is delivered. We also recognized that the organizations (hospitals, integrated delivery networks, health maintenance organizations, insurance companies, and government agencies) supporting the providers are key participants in the overall system. Considering entire populations of patients as a single participant is also often valuable. Finally, we identified the data, information, and knowledge that the CIS must record, store, and display for all of the other participants.

Table 1. Grid of potential relationships and sample research questions

<table>
<thead>
<tr>
<th>Safe</th>
<th>Patients and families</th>
<th>Process of health care</th>
<th>Health care providers</th>
<th>Health care organizations</th>
<th>Patient populations</th>
<th>Clinical knowledge</th>
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<tbody>
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<td></td>
<td>Can we develop systems to promote a safe and healthy lifestyle?</td>
<td>Can CIS enhance delivery of preventive services?</td>
<td>Can we develop systems to improve safety of the care we deliver?</td>
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<td>Effective</td>
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<td>Can we develop systems to warn providers about life-threatening events?</td>
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<td>Patient-centered</td>
<td>Will patients benefit from Internet access to their health record?</td>
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<td>Timely</td>
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<td>Can we develop systems to warn providers about life-threatening events?</td>
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<td>Efficient</td>
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<td>How should on-line decision support fit provider workflow?</td>
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<td>Equitable</td>
<td>Can we measure patient health to help decide on spending?</td>
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The table column headings name participants in the health care delivery system, and the row headings name potential areas for improvement in the health care delivery system.
Key Need for Improvement in Health Care

Once we had identified the key participants involved in the health care delivery system, we began to identify key aspects of the care delivery system that require improvement. We decided to use the six areas targeted for improvement from the Institute of Medicine’s recent report on improving quality of the health care delivery system, ie, that it be safe, effective, patient-centered, timely, efficient, and equitable. Table 1 combines these six areas for improvement with the key participants involved in the health care delivery system to create the CIS research landscape. Sample research questions that could be pursued within each of the intersecting boxes are shown. (The succeeding article in this series will explore each of these research areas in detail.)

Good research operates on the basis of carefully building knowledge across time and eventually enters the everyday operations of a health care system. Therefore, we wanted to portray the actual research process—an iterative cycle of knowledge acquisition and application building (Figure 1)—and its relation to operational aspects of health care delivery. In most instances, this relation is slow and iterative. Moreover, good research can take place anywhere in the research cycle, and a specific researcher may choose to enter the CIS research process at any point in the cycle; thus, the focus of particular research questions in a specific research area can change depending on the research stage within the research process. Good research can take the form of basic research—which focuses on how processes work—or applied research—which focuses on using these processes to implement change (Figure 1).

Summary

The scientific fields associated with design, development, implementation, and evaluation of CIS have made tremendous progress to date. Although various aspects of these systems have been successfully incorporated into the routine health care delivery processes, much remains to be discovered, implemented, and tested. The CIS research landscape we have described should help researchers and research funders alike focus their time, effort, and money on important research questions. The answers to these questions should, in turn, significantly improve the overall health care delivery process. In the succeeding article, we will describe how we used this research landscape in conjunction with the known operational, financial, technical, governmental, and social constraints present within KP to develop a specific CIS research agenda. ❗

References

3. President’s Information Technology Advisory Committee. Panel on


Vague Forms of Speech

Vague forms of speech have so long passed for mysteries of science; and hard words mistaken for deep learning, that it will not be easy to persuade either those who speak or those who hear them, that they are but a hindrance to knowledge.

*John Locke, 1632-1704, 17th century Oxford scholar, philosopher, medical researcher and physician*
"Be Sun Smart"
by Judith Schiffner, MD

Judith Schiffner, MD, is a Dermatologist at the Fremont Medical Offices in Northern California. An amateur photographer, she likes to take photographs during her travels. While strolling along the beach in Vancouver, British Columbia, Canada, she took this photograph. As a dermatologist, she was impressed with the Canadian public education policies regarding sun protection.
Many physicians and patients would like to have more time together for their appointments. Unfortunately, given the volume of patients to be seen and the need to improve access, this scenario is not likely to happen. Here are some tips (based on actual physicians’ experience and feedback from patients) that can improve the quality of interactions with patients and can assist in managing the patients’ perceptions of their time with their physician.

<table>
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<tr>
<th>DO …</th>
<th>DO NOT …</th>
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<td>Review the chart before you enter the exam room so you are prepared for the visit.</td>
<td>… waste time during the visit to flip through the patient’s chart.</td>
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<td>Apologize for keeping the patient waiting (if appropriate) when you enter the room. This action demonstrates respect for their time.</td>
<td>… complain to patients about how busy you are or that other patients, departments, or staff caused you to run late.</td>
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<td>Sit when you go into the exam room, at least for the first couple of minutes while you’re building rapport and getting the patient’s history.</td>
<td>… remain standing throughout the appointment. Standing gives the impression that you are not interested enough or willing to take the time to listen to the patient.</td>
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<td>Build rapport by jotting down a personal note from each visit that you can ask about at the next visit (eg, “How was your vacation to Hawaii?” or “How was your daughter’s wedding?”).</td>
<td>… jump right into the medical reason for the visit without taking a minute to connect with the patient on a personal basis.</td>
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<td>Plan the visit with patients at the beginning. Ask them what they want to discuss with you today—first identify all the issues, then prioritize which ones can be addressed during this visit and which ones might need to be discussed at a future visit.</td>
<td>… focus on the first issue that the patient brings up—there could be more important issues from a clinical perspective that you might have little time to address. Do not say things like, “We only have five minutes left.” This statement makes the patient feel rushed.</td>
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<td>Summarize and empathize throughout the visit. This strategy demonstrates to patients that you have heard and understood them, and it may prevent them from rambling.</td>
<td>… cut them off abruptly or listen without responding; sometimes patients ramble to make a point. Most people just want to be heard and understood.</td>
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<td>Summarize instructions at the end of the visit; ask patients to recap what they’ve heard to be sure that they understand what they need to do. This recap can cut down on unnecessary phone messages after the visit.</td>
<td>… assume that the patient understands or is committed to taking the next steps.</td>
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<td>Confirm with the patient that their goals for this visit were met; if not, try to work out a compromise.</td>
<td>… assume the patient is satisfied. If their goals have been met, they will be satisfied with the time spent together—even if it is brief.</td>
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<td>Ask if there are any additional questions and answer them before you leave the room. (Do not do this with your hand on the doorknob!) This closing can also reduce the number of follow-up phone messages.</td>
<td>… tell patients that you’re running late, that their time is up, or anything else referring to time. Do not give the impression that you’re too rushed or too busy for them. Patients already know you’re busy!</td>
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<td>Start on time whenever possible!</td>
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“People may forget how fast you did a job, but they will remember how well you did it.”
—Anonymous

Clinician-Patient Communication Intranet site: http://kpnet.kp.org/cpc/
Innovative KP Research in Clinician-Patient Communication: Deepening our Understanding of the Clinician-Patient Relationship

What happens inside the examination room after the door shuts is less a mystery than it used to be. Educational programs in clinician-patient communication now bring people together to discuss strategies for brief medical visits and to practice skills for handling a difficult interaction. Patient survey results inform individual clinicians on how their patients perceive them. In some regions, specially trained communication coaches are available to observe their colleagues and to provide feedback on their interaction with patients.

But do these educational programs and services work? How can we deepen our understanding of the complex relationship between clinician and patient? What contribution can Kaiser Permanente (KP) make to the growing but still limited evidence base for the interpersonal aspects of health care delivery?

To address these and other questions, the Garfield Memorial Fund launched, in July 2000, the Clinician-Patient Communication Research Initiative (CPCRI). The CPCRI team (see sidebar) began its work by interviewing 40 clinicians, educators, leaders, and administrators across KP to determine priority research topics. On the basis of the results of the interviews, the subsequent Request for Applications was sent out in June 2001 across the organization, soliciting proposals on clinician-patient communication in five key areas: technology, end-of-life care, physician satisfaction, best practices, and patient safety.

Through comprehensive review of the 39 preliminary proposals received, the CPCRI team, in collaboration with the Garfield Memorial Fund Board, selected four innovative research studies for funding (Table 1). These studies explore interventions in technology, physician education in end-of-life communication, and best practices in clinician-patient communication. Each study incorporates the Four Habits Model, a communication framework developed by Dr Terry Stein and Dr Richard Frankel.1 Led by a team of investigators from various KP entities (TPMG, SCPMG, KPHI, KPNW, CMI, KP Online, Permanente Federation), the projects include the KP regions of Northern California, Southern California, Northwest, and Hawaii. Results of these projects will be available mid to late 2003.

Summary of Projects

Communication at the End of Life: Using the Four Habits Model to Engage Patients and Family in a Collaborative Relationship

Investigators: Cecilia Runkle, PhD (TPMG), Elizabeth Wu (SCPMG), Edward C Wang, MD (SCPMG)

Many clinicians receive little or no training in medical school on end-of-life conversations. Research within KP and in other settings has demonstrated important problems in the interpersonal care of terminally ill patients. To address this area, we designed an educational program that focuses on communication skills in discussing advanced care planning, shifting focus to palliative care, handling clinician grief, managing anger in family members, and understanding the role that culture plays in communication.

From January through December 2002, 200 oncologists, internal medicine physicians, hospital medicine specialists, and other clinicians who work with patients who have chronic diseases will attend this program in a series of three classes or a one-day intensive format. Study...
participants will be surveyed at the conclusion of the workshop and three months after about the effect of the course on their knowledge and attitudes. In addition, selected family members of patients who have died and had received care from the study participants will be asked to participate in a qualitative interview about their experience with the clinician during and after the death of their loved one. The results of this study will be used to understand how training experiences can affect precursors to clinician behavior change.

Best Practices in MD-Patient Communication: Identification of Behaviors Associated with Patient and Physician Satisfaction

Investigators: Tom Janisse, MD (KPNW), Karen Tallman, PhD (Permanente Federation), John Hsu,

Table 1. Garfield Memorial Fund—Clinician-Patient Communication Research Initiative (CPCRI) funded proposals

<table>
<thead>
<tr>
<th>Project title</th>
<th>Region</th>
<th>Kaiser Permanente investigators</th>
<th>Description</th>
<th>Methods</th>
<th>Measurable outcomes</th>
<th>Project dates</th>
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<td>Communication at the End of Life: Using the Four Habits Model to Engage Patients and Family in a Collaborative Relationship</td>
<td>KPNC</td>
<td>• Cecilia Runkle, PhD (TPMG)</td>
<td>This study will evaluate a 6- to 8-hour skill-based workshop for clinicians to determine if it can change the knowledge and attitudes of clinicians in having end-of-life conversations with patients and family members.</td>
<td>Sample Size: 200 study participants</td>
<td>• Knowledge and attitude of clinicians with regard to end-of-life discussions</td>
<td>January 2002–October 2003</td>
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<td></td>
<td>KPSC</td>
<td>• Elizabeth Wu, (SCPMG)</td>
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<td>Evaluation Techniques: • Pre-post surveys</td>
<td>• Number of completed advance directives</td>
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<td></td>
<td></td>
<td>• Edward Wang, MD (SCPMG)</td>
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<td>• Qualitative interviews with family members</td>
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<td>• Tom Janisse, MD (KPNW)</td>
<td>This study will identify communication practices of physicians who are at three discrete levels of patient satisfaction (high, medium, and low) by videotaping and analyzing clinic visits. Videotapes will be reviewed with each patient after their visit and the patient’s comments recorded. Physician review of videotapes will also be recorded.</td>
<td>Sample Size: 50-60 physicians</td>
<td>• Correlation between physician’s patient satisfaction classification and physician demeanor in the videotaped visits</td>
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<td>• John Hsu, MD (TPMG)</td>
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<td>Evaluation Techniques: • Analysis of videotaped visits based on Four Habits Model Checklist</td>
<td>• Duration and quality of communication in visits</td>
<td>March 2002–March 2003</td>
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<td></td>
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<td>• Geoff Galbraith, MD (KPHI)</td>
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<td>• Patient postvisit interviews</td>
<td>• Correlation between patient perception and physician perception of visit</td>
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<td>• Tom Godfrey, MD (SCPMG)</td>
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<td>• Physician focus groups</td>
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<td>• Pre-post surveys with physicians</td>
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The INTERACTION Study: Information Technology Ramifications for Communication

Sample Size: 400 patient visits Evaluation Techniques: • Analysis of videotaped visits and exam room computer screens • Physician pre-post surveys • Patient pre-post surveys

Quality, type and duration of communication between patients and primary care clinicians before, just after, and six months after installing exam room computers

May 2001–May 2002

Patients and Clinicians Online: KP Online/Care Management Institute Joint Study

Sample Size: 200 participants in intervention group and 200 participants in control group at four pilot sites Evaluation Techniques: • Participant focus groups • Pre-post survey

Patient perception of clinician-patient communication • Health behavior changes • Self-rated general health status of patients • Pre-post HbA1c, LDL levels

The critical role of physician-patient interaction in determining patient satisfaction is a consistent finding in KP and in health care generally. Patient perceptions of quality tend to focus on interpersonal aspects of care. The top correlates of patient satisfaction, in both patient satisfaction studies and Consumer Assessment of Health Plan Survey (CAHPS) results, are the provider’s interest and attention, shared decision-making, listening, and ability to explain.

Yet we have little information as to how highly rated physicians within KP demonstrate these skills during an actual visit. This observational study will record and analyze the communication practices of physicians stratified by three patient satisfaction levels—low, medium, and high.

From March 2002 to March 2003, 50 to 60 Southern California Permanente Medical Group (SCPMG) and Kaiser Permanente of Hawaii (KPHI) physicians will each have three to four patient visits videotaped. The videotapes will be analyzed according to the Four Habits Model coding scheme. Videotapes will also be reviewed with each patient after the visit, and the patient’s comments will be recorded. Separately, the physicians will review the tapes with a communication specialist and comment on the visit. The communication specialist will provide to the physician constructive feedback about the visit.

Other evaluation methods include correlating patient and physician perceptions of the visits, analyzing the duration and quality of the communication in the visits, and conducting physician focus groups to discuss communication practices. The information collected will inform future clinician educational programs on communication skills.

The INTERACTION Study: Information Technology Ramifications for Communication

Investigators: John Hsu, MD (TPMG), Holly Jimison, PhD (KPNW), Nan Robertson, RPh (KPNW), Robert Tull, PhD (TPMG)

Introduction of computers into the outpatient setting has the potential to influence the interaction between patients and clinicians and to lead to improvement in quality, productivity, and satisfaction. To measure these benefits (and potential threats), the first step is to develop an understanding of the impact of the computer on the content of clinician-patient communication during an office visit.

The goal of this proposal is to determine the effect of computers in the medical examination room on the topics, duration, and quality of communication between patients and their primary care clinicians at the KP Rockwood Medical Office in Portland, OR. This longitudinal, qualitative study employs a quasi-experimental pre-post design that uses a combination of videotaping and surveys at three points in time: preimplementation, early postimplementation, and late postimplementation.

From May 2001 through May 2002, this study will videotape and evaluate 400 patient visits with 13 recruited physicians coded according to the Four Habits coding scheme. Other evaluation methods include physician and patient pre-post surveys. This study evaluates change in clinician-patient examination room communication during introduction of a clinical information system, informs ongoing efforts to improve clinician communication and patient satisfaction, and serves as the basis for proposed future externally funded studies.

Patients and Clinicians Online: KP Online/Care Management Institute Joint Study

Investigators: June Forkner-Dunn, RN, PhD (KP Online), Jim Bellows, PhD Candidate (Care Management Institute), Kate Christensen, MD (KP Online)

Increased use of the Internet has added a new dimension to the clinician-patient relationship by giving patients and their clinicians the opportunity to improve patients’ participation in managing their care and thereby possibly improving health outcomes. Increased Internet use also offers to patients the unique opportunity of regularly accessing online support and information from others experiencing the same condition.

This study will explore whether online discussion groups for diabetic patients, using the Four Habits Model, improve participants’ perception of clinician-patient communication, promote positive change in health-condition-specific behaviors, and increase member and clinician satisfaction. Specifically, this study will compare potential behavior change of participants with that of nonparticipants, identify factors associated with successful online groups, and determine whether participants find private online discussions of value in a managed care setting.

The study will be conducted from January 2002 through June 2003 at four sites (Oakland, Fontana, Riverside, and Northwest). Four hundred members with diabetes will be randomized into intervention groups and control groups that will have access only
to the public KP Online Web site. Each intervention group will participate in a private discussion group moderated by two local clinicians and will have access to other resources in addition to those available on the public KP Online Web site. Evaluation techniques include Web site usage review and content analysis, participant focus groups, pre-post surveys, and HbA1c and LDL level determination before and after. Evaluation measures include patient perception of clinician-patient communication, health and behavior changes, and self-rated general health status of patients.

**Summary**

The Garfield Memorial Fund’s Clinician-Patient Communication Research Initiative has launched four innovative studies. Each of these multiregional projects will contribute toward our own evidence base about communication skills in clinical care. This first phase of the CPCRI also expands the KP community of researchers in clinician-patient communication, setting the stage for partnerships with other health care organizations, academic institutions, and foundations with similar interests. Most important, these research studies promote KP’s commitment to delivering health care with a personal touch.

For more information about the studies or the CPCRI, please contact Sue Hee Sung at 510-891-3807 or Dr Terry Stein at 510-625-3019.

**Acknowledgments**

The projects are supported in whole or in part by the Kaiser Permanente Garfield Memorial National Research Fund Clinician-Patient Communication Research Initiative (CPCRI).

The study descriptions were adapted from proposals written by the Principal Investigators.

**References**


**Our Highest Accomplishments**

Transport of the mails, transport of the human voice, transport of flickering pictures—in this century, as in others, our highest accomplishments still have the single aim of bringing men together.

*Wind, Sand, and Stars, Antoine de Saint-Exupéry, 1900-1944, pioneer aviator, poet and novelist*
I am a survivor of a medical complication that should have killed me. My account thanks those medical care providers at all levels who helped me to heal. I have been in the valley of the shadow of death, and found it an evil place without comfort. My memories may help medical personnel, because I have been where few of them have had to go.

I was a scholar, living at the age of 61 in my apartment with my cat and research materials. My background was in world travel and cultural anthropology. My relatives were my brother, who had medical Power of Attorney, and two married daughters. I lived in a small academic town and received medical care from the local HMO. For exercise, I took long walks and swam. I felt very healthy for my age, except for annoying bowels (constant constipation and sudden bouts of diarrhea). Nobody knew that I had diverticulitis.

Late one night in July, I felt a sudden intense pain in my lower left abdomen. Within two minutes, I felt so faint that I dialed 911: “I know this sounds crazy, but I think my bowels have exploded. Please rush an ambulance. I may faint, but the door is unlocked, so come in.” Ten minutes later, after I had strapped my purse to my body and looked at my frightened cat, the medics rushed in. Sirens blared as they put me on a gurney and placed a mask over my face. That is all I remember.

While my family raced to my bedside in an ICU nearby, believing I would die at any moment, and while a team of dedicated surgeons struggled to save me despite the E. coli flooding through my system, I felt and knew nothing.

I was in Barcelona, building a bizarre cathedral of glass shards. My daughters were propping me up so I could add more shards. I could not stay upright. Glass, cutting, danger …

My family gave me the last rites, but I did not die.

Surgeons gave me a colostomy and intubation to help me breathe despite damaged lungs. My family gave me the last rites, but I did not die. My brother refused to permit the withdrawal of life support, because he believes there is always hope.

I was in India in a hospital bed. My brother was in the next room, but I had no voice with which to call him. An evil medic lowered a large meat hook just over my head with a pulley system. He warned me that if I made a sound, he would let it down to rip open my face …

I was in a coma for five weeks, wandering in the valley of the shadow of death. My mind knew only that I was in a hospital, fighting for my life. I had a series of horrible death dreams, morphine-induced hallucinations.

I was in a Native American burial mound. Two large bodies were buried beside me, one male and one female. My body was buried but my head was clear. I did not dare to cry out for rescue because someone might bury my head. I lay still and silent …

I was in a Native American burial mound. Two large bodies were buried beside me, one male and one female. My body was buried but my head was clear. I did not dare to cry out for rescue because someone might bury my head. I lay still and silent …

I was in Kenya with a large group of Mau Mau. They were holding the genitals and other body parts of their enemies in their hands and celebrating. My surgeon was among them. He opened his hand and extended it toward me so that I could see that it contained genitals he had amputated. I played dead, afraid to breathe, so that he would not mutilate me …

I was lost in a vast wilderness where hills were in sunlight and valleys were in darkness. Those gloomy valleys terrified me. My face wrinkled, and my hair whitened within minutes …

I was in the darkest recesses of the valley of the shadow of death. A funeral chariot drawn by black horses kept circling in front of me. My daughters, in black mourning attire, were driving the chariot. They held up torches that emitted streams of poisonous vapor. As the vapor passed by me, I could not avoid breathing it. I sank into a dreamless, endless sleep …

SHELLEY SEWALL, PhD, traveled and lived in Asia and Europe during her youth as part of a diplomatic family. She has degrees in Cultural Anthropology and Humanities.
Nothing happened for a long time. One day I woke up in a nursing home. White curtains were draped around my bed. I had no voice and could not get up. One of my daughters sat near my feet. I have never been so glad to see anyone. I asked, in a hoarse whisper, how she found me. She said that I had been in a coma for five weeks and that family members had been taking turns sitting beside me. The other daughter had adopted my cat and would arrive tomorrow. I whispered to her to hold my hand. Her strong hand literally pulled me back into the world of the living.

I learned how to navigate the HMO care system and found a primary care physician who takes time to listen.

I learned that I had a colostomy, a large bedsore, and dyslexia. I had lost so much weight and strength that I could not even rise to a sitting position. Therapy at that nursing home was inadequate. My daughter transferred me to an excellent nursing home, where I learned transfers: how to swing my legs over the side of my bed and pull up onto a walker, how to transfer from walker to wheelchair or from walker to raised toilet seat. It was a great day when the urinary catheter finally was removed. I remember small acts of kindness that mean so much to a bedridden patient: the CNA who washed my matted hair, the CNA who gave me a sponge bath, and later, the CNA who gave me a sitting bath and clipped my toenails.

My daughter visited me several times a week and walked behind me up and down the hallway, a harness in her right hand propping me up as I moved slowly with a walker, a wheelchair in her left hand in case I tired. Once a day, a physical therapist took me for a walk until it became easy to use a walker. One day, my daughter and I walked out into the sunlight, down a step, and went home.

My daughter cared for me until I was able to move into my own apartment. I was able to live independently with the help of Senior Services that sent me Meals on Wheels, a weekly housekeeper, a Senior Companion, and the use of the Lift. I learned how to navigate the HMO care system and found a primary care physician who takes time to listen. I found surgeons who know me as an individual, not just as a medical chart. My bowels were reconnected, and I walk well.

I no longer have temporary amnesia, and my voice is clear. I do a little teaching and am finding my public voice again. Four years after my devastating illness, I'm getting my life back. It took compassionate medical care, deep family love, loyal friends, and available Senior Services to help me.

Each of my daughters has a baby boy. I could have died and missed knowing my grandchildren. Life is very beautiful. Cling to it, no matter what you must endure.

Mind Makes the Body

It is the mind that makes the body rich.

Taming of the Shrew, Act IV, Sc. 3, William Shakespeare, 16th century English poet and playwright
Announcements

Upcoming Events:

**2002 Neonatal Medicine Symposium**
Thursday, June 20, 2002
Paradise Pier Hotel, Anaheim, CA

**2002 Physical Medicine Symposium**
Friday & Saturday, June 21-22, 2002
Laguna Cliffs Marriott, Dana Point, CA

**2002 Family Practice Symposium**
Friday, Saturday & Sunday, June 28-30, 2002
Four Seasons, Las Vegas, NV

**2002 Occupational Medicine Symposium**
Friday & Saturday, July 12-13, 2002
Newport Beach Marriott, Newport Beach, CA

**2002 Ophthalmology Symposium**
Saturday, July 13, 2002
Grand Californian Hotel, Anaheim, CA

**2002 Neurology Symposium**
Friday, August 2, 2002
Renaissance Hotel, Long Beach, CA

For more information or to receive a brochure, you may contact Physician Education at 626-564-5360. Or visit the Physician Education Web site at www.kaiserpermanente.org/locations/california/symposia/

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**Autumn Primary Care 2002:**
National Primary Care Conference
October 10-13, 2002
Disney’s Grand Californian Hotel, Anaheim, CA

For more information, contact Conference Coordinator at 510-625-6374

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**The Northwest Kaiser Permanente Cleft Palate Team in Portland, OR** is looking to connect with the directors/coordinators of sister Kaiser Permanente region Cleft Palate Teams. There is a wealth of information to be shared, including how the various areas are running their programs. Please contact Jeffrey M Israel, MD, NW team director at Jeffrey.Israel@kp.org or 503-571-3198.

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**Sixth Interregional Educational Symposium for Nurse Practitioners, Physician Assistants, Certified Nurse Midwives, and Nurse Anesthetists**
August 15-17, 2002
Hyatt Newporter, Newport Beach, CA

Over 50 clinical, professional, and legislative topics to be presented. For more information, call 626-564-3082

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Calling All Artists & Writers

**AUTHORS:** The editors of The Permanente Journal are planning an upcoming theme issue with a focus on Complementary and Alternative Medicine. We are interested in articles that focus on CAM from a clinical or health systems perspective.

If you are interested in contributing to The Permanente Journal see “Instructions for Authors” on page 84, or go to our Web site at: www.kp.org/permanentejournal. Our deadline for submissions for this theme issue is July 8, 2002.

**WE WANT TO HEAR FROM YOU:** Send all manuscripts and artwork samples to Managing Editor, The Permanente Journal, 500 NE Multnomah St, Suite 100, Portland, OR 97232. E-mail: permjournal@kpnw.org.

**ARTISTS:** Are you an “undercover” artist? Consider uncovering your talent and sharing it with your peers. The Permanente Journal is now accepting artwork submissions for future covers and text pages. Why not submit a sample of your work today?

Send us a high-quality color photograph of your artwork no smaller than 4”x5” and no larger than 8”x10”. Portrait orientation is preferred. Slides and digital images may also be submitted.
Announcements

3rd National KP Conference on HIV
“Many Faces—One Disease”
Swissôtel, Atlanta, Georgia

Thursday, October 10—Preconference tour of CDC
Friday, October 11—All day conference with evening reception
Saturday, October 12—Morning conference

For more information, contact our meeting planners:
Fagan and Crouse: e-mail lisa@faganandcrouse.com
or call 770-777-1115 or Sandra Gauthier, TSPMG 404-364-7046

The Lighter Side of Medicine

Cartoon submitted by Don Wissusik, MA, MS, a Clinical Supervisor in the Department of Addiction Medicine at Cascade Park Medical Center, Vancouver, WA.
What are you feeling, Doctor?  
Identifying and avoiding defensive patterns in the consultation 
by John Salinsky & Paul Sackin 
Review by Albert Ray, MD

This excellent book discusses the defense mechanisms that physicians use to cope when encountering their patients’ distress. Health professionals can modify these coping mechanisms and thus promote better medical outcomes for patients with little emotional pain for the health care practitioner. Often, our unease reflects the way we feel about a patient who is panicking. Keeping calm and allowing sufficient time to listen to the patient’s immediate account of a crisis can satisfy our patients without ruining our own health. Future arrangements for follow-up visits can then be planned on a mutually convenient basis.

Patients desire warmth, understanding, and empathy in their relationships with their doctors. In 1957, in The Doctor, His Patient and the Illness, Michael Balint wrote, “… why does it happen so often that, in spite of earnest efforts on both sides, the relationship between patient and doctor is unsatisfactory and even unhappy?” Doctors are trained from an early age to defend themselves against too much feeling and to instead develop a professional self. In providing effective health care, we must learn to transform this professional self into a personal self so that we can better help our patients and ourselves. The personal self can then flow into the professional self with renewed warmth and life.

A key learning for developing a successful, positive physician-patient relationship rests on the clinician’s ability to listen to the patient closely without interrupting the patient. Doctors often feel a need to order patients around; with better listening, physicians increase their self-reflection and decrease their professional rigidity.

The authors quote Ian McWhinney, who said in his 1999 lecture, The physician as healer: the legacy of Michael Balint, “listening is at the same time a skill, a state of mind and a way of being a physician …” This skill must be taught more effectively to health professionals during their training along with the knowledge that listening can sometimes lead to disturbing feelings in both doctor and patient. These feelings can actually help patients get better and help us practice better. Every failed encounter can be rescued, even at the last minute or after the patient has gone home.

In the book’s setting—the health care delivery system in England—extensive reference is made to the success of Balint Groups for health professionals. In these hour-long, weekly meetings (a format developed in the late 1950s by Michael Balint, a British psychoanalyst), physicians discuss problem cases with their colleagues in depth. However, the authors’ recommendations can be applied to health care practitioners in any country. After reading this insightful book, clinicians will have acquired improved ability to listen to patients; better awareness of the feelings which arise in us while we listen to patients; willingness to stop interrupting and issuing commands to patients; enhanced sensitivity that will help us to accept our patients’ feelings and understand how they arouse emotions in us; and ability to rescue an ineffective consultation by recognizing and responding to specific warning signs.

References
whatever happened to daddy's little girl?
the impact of fatherlessness on black women
by jonetta rose barras
review by paul jimenez

“truth! truth; truth! truth,” tolled the bell (or is it “told the bell?”) as its chorus echoed and reechoed from mountainside to mountainside across the valleys and plains of psychological insight. and the ring of truth, distinct and distinguishable, is to be found in the book whatever happened to daddy’s little girl? the impact of fatherlessness on black women. the author has brought rays of light to the subconscious and magnum doses of warmth to help break up the submerged portion of that iceberg.

the book’s theme, and the problem it delineates, is fatherless daughters—specifically as it relates to african-american women. but it would be remiss to exclude the book from any type of study relating to the effects of parental deprivation (eg, fatherless sons, motherless daughters, motherless sons). with the huge increase of single-parent, nuclear families in this country, this condition merits urgent attention before it becomes an epidemic, if it isn’t already. with many characteristics of a disease, this dis-ease of fatherlessness is intergenerational. mom passes the values and attitudes that define the condition to her daughter, who in turn wills it to her daughter—something like a family heirloom.

the source of this particular disease is the absence of the child’s father. the reason for the absence, at least initially, does not matter. it could be the father’s death; the parents divorcing; a workaholic father; or a father who is so emotionally withdrawn that he doesn’t display any care, attention, or affection toward his daughter. she, in her undeveloped reasoning, interprets this absence as rejection or abandonment and wonders why she was so singularly expelled from her father’s life and denied his gifts. the best answer that her immaturity can come up with is that she is not worthy of her father’s attention, or that she is in some manner defective or unlovable, or that she is deficient in some quality her father admires. she blames herself and promptly proceeds to hide the pain. burying the pain and at the same time wishing to earn her father’s attention (but not having the vaguest idea of how to do this), she compromises her integrity, her sense of worth, and her self-esteem—in other words, her very sense of self.

the pain, which is the consequence concomitant with the sense of loss, becomes the prime mover (though subconsciously) of her existence—of her need to survive. this pain—sometimes sensed as a void—defines, colors, and controls virtually every facet of her life—from the attitude she projects onto people, to how she interprets her life events and experiences.

the fatherless daughter might react with aggression or suspicion to a neutral or even a positive remark. everything becomes tainted with the potential of another loss, more pain, and a greater void—something that fatherless daughters try to minimize. the author says, “they sing a fatherless song.” i’ll play on a word and say they do “a-void-dance.”

the book’s author identifies five characteristics of the fatherless woman syndrome. first, the “un” factor. the fatherless daughter feels unworthy and unlovable. and though she may have buried (denied) these feelings, her unconscious guides her into relationships and circumstances where these dormant feelings are awakened—to her surprise and anguish!

the second factor is the “triple fear” of rejection, abandonment, and commitment. rejection and abandonment we have touched on, but the fear of commitment is explained by once being so badly burned by commitment to her father, or father-surrogate,—she is reluctant to experiment with commitment again.

the third factor is sexual healing, which may range from promiscuity to abstinence, but the consistent element throughout is the lack of intimacy. in true intimacy, a person loses moment-

paul jimenez is a retired elementary school teacher, father of a daughter, and a kaiser foundation health plan member in san diego.
Somatic control. The fatherless daughter knows she has absolutely no control over her loss, so she embarks on an endeavor to control the relationships and circumstances in her life. This endeavor often gives rise to the fantasy that a baby will fill the void and resolve her sense of loss.

The author next describes the “over” factor. The fatherless daughter tries to survive by overachieving, overcompensating, oversaturating to the point of, and often crossing over into, addiction—not only the acknowledged addictions like alcohol, drugs, and food, but psychological ones like compulsions, obsessions, and “unfounded” fears.

The fifth and final factor the author calls “RAD,” which is her acronym for rage, anger, and depression. Rage, she states, is anger turned outward, and, depending on its attire (indignation or hatred), could be a power for positive, constructive achievement or negative, destructive violence. Depression is the result of anger turned inward.

There is a chapter of questions for fatherless daughters to ponder about how fatherlessness has affected their lives. There is also a chapter on “should dos” for the daughters to heal themselves and another such chapter for the fathers to help heal their daughters—and themselves, too.

The author concludes that whatever healing takes place, the healing will be in direct proportion to the individual’s maturity. Because the problem began when an immature child had to deal with a negative situation that was beyond her ability to reason out or accept as well as beyond her powers to affect or alter, she relegated the problem (pain) to her subconscious. This way, at least, she could survive consciously (physically), albeit superficially. Yet, though buried, the negative experience (like Poe’s “Tell-Tale Heart”) lived and breathed down there, swaddled in all the irrationality of her immature understanding, sporadically reminding her of its omnipotence and its need to be unearthed. Once that incident is brought to the light of her mature adult consciousness—the ability to reason and understand as well as the power to make and adhere to choices—her nemesis becomes somewhat controllable and manageable; it ceases to be an ambusher-in-the-dark.

I was swept up by the author’s power of persuasion. Every conclusion and explanation seemed rational and logical to me. I did not perceive any holes in the tapestry she wove. But I did wonder: Is this parental deprivation the Pandora’s box that unleashes all sorts of ills upon the world? Is this void what drives humans into addictions and health-risk behaviors? Are the roots of crime and inhumane behavior tied into the disease of parental deprivation? Is criminal activity merely the resolution to the problem of feeling unworthy and unlovable that is caused by incomplete and/or inadequate parenting? And if this supposition is not 100% true, is it 90% or 80% true?

Ancient religions and current social thought stress the sanctity of the family. But somehow that message has fallen on the barren soil of modern man’s materialistic heart. Unlike the clever bumper sticker that says: “Who should be responsible to the children? The answer is apparent” (a parent), the author makes the point that both parents should be involved in the rearing process. Perhaps in respelling “parents,” the meaning of the word would be better understood. If people saw the “pair” (two, together) in pair-ents instead of the “pare” (cut, trim away) of pare-lents, a positive, subliminal message might be communicated.
I wonder how many of us even know of Michael Swango, MD. Or, for that matter, have we heard of Dr Harold Shipman or of Gerald Barnbaum? Even though this is not a new book, I suggest it makes for great reading, both as a thriller based on a true story and even moreso as a scathing indictment of medicine and the processes we are all involved in. The mishaps, reluctance to tell on a colleague, the ignoring of suspicious behavior, all tell a humbling, suspenseful, but not altogether rare story of how a serial murderer who also happens to be a doctor can get away, literally, with murder.

In his book, Stewart does a masterful job of detailing the life of Swango from his days as an eccentric medical student at the Southern Illinois University School of Medicine in the early ’80s, where he is alleged to have earned the nickname of “Double-O Swango (Licensed to Kill)” after he happened to be conveniently close to several elderly patients who mysteriously succumbed despite being on the road to recovery. Although rumors flew, nothing more was done. This then led to stints as a resident in multiple specialties in Ohio, New York, and South Dakota with unusual deaths among his patients. It is significant that despite clear suspicions, investigations went nowhere because it was considered inconceivable that a physician could deliberately kill. In particular, suspicions raised by nonphysician personnel such as a student nurse received superficial review because, I suspect in part, it came from a nonphysician. His habit of moving around in different specialties always followed by stories of premature deaths raised no suspicions among those who hired him in subsequent residencies, a searing indictment of the credentialling system in many of our prestigious hospitals. When Swango deemed it appropriate to leave the United States because of increasing questions, he settled in Zimbabwe and continued his swath of death, culminating in an allegation of close to 40 murders in almost 20 years.

What went wrong? To start with, Swango had charisma and charm and was able to smoothly talk his way out of situations. His case is a particularly egregious example of what happens when we ignore suspicious behavior. The medical administrators who hired or investigated him displayed incredible naivete, were quick to close ranks and jump to conclusions exonerating Swango, performed incredibly superficial investigations, and in general came very close to obstruction of justice in the Ohio University case, where Swango was quickly cleared and passed on to other institutions. It is of interest that many of those involved remain at the pinnacle of American medicine. This lack of a systematic process to investigate and an unseemly haste to direct him elsewhere does not enhance the reputation of medicine. One does need to be fully aware of the potential for abuse, particularly if accusations are inaccurate, but the lack of a suitable system to check Swango’s continued ability to practice is what draws attention to us from legislatures nationwide.

Swango was imprisoned for an earlier attempt to poison fellow paramedics and was subsequently, after his return to the US, sentenced to prison for fraud—gaining admission to a residency under false pretenses—and upon release in July 2000 pleaded guilty to murder and is currently safely in federal prison. One needs to read this fascinating book to discover all the multiple clues strewn throughout his life. One episode in particular stands out: Upon seeing a TV story of a security guard killing 21 people in a...
McDonald’s in California, he remarked to friends that “Everytime I think of a good idea, someone else beats me to it.”

Dr Harold Shipman is an English physician who was convicted in 1998 of killing 15 women, considered charming and respected in his town but whose practice had about 300 more deaths than would be expected in his type of practice. That and an allegation that he tried to forge a patient’s will leaving him everything tripped him up. Gerald Barnbaum is no physician but rather a former pharmacist who was able to charm his way onto the medical staffs of multiple hospitals despite being imprisoned multiple times for practicing medicine without a license in California over a period of 20 years. What does that say about our system of credentialling?

In the end, we are all responsible for making the practice of medicine as safe as possible. This includes an excellent credentialling process, incentives to establish a process for adequately investigating and disciplining physicians while maintaining due process, the overcoming of a rush to close ranks when questions about physicians are raised (especially by nonphysicians) and lastly, the ability to withstand charm.

In Great Books

I am eternally grateful … for my knack of finding in great books … reason enough to feel honored to be alive, no matter what else may be going on.

_Timequake, Kurt Vonnegut, Jr, 20th century American novelist_
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The Permanente Journal
500 NE Multnomah St, Suite 100
Portland, OR 97232
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Types of Papers

There is no required length, although concise, readable, and practical articles within the ranges listed are preferred. Emphasize information that clinicians can use in their practice, that gives them regional and national perspective, and that integrates “Permanente Medicine” into the largest scope of health care delivery.

Notes About Specific Sections

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

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

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

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

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

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

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

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

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

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

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

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**Section A.**

Article 1. **Chronic Disease Self-Management Program: From Development to Dissemination.** *(page 15)*
Which of the following is true of the outcomes from evaluation of the Chronic Disease Self-Management Program?

- a. Improves health distress
- b. Increases reported minutes of aerobic exercise
- c. Decreases social/role activity limitation
- d. Reduces days in hospital
- e. All of the above

Which of the following is not true of the Chronic Disease Self-Management Program?

- a. Led by lay leaders or combination of lay and professional leaders
- b. Leaders prescribe specific behavior change for patients
- c. Patients learn specific skills common to managing a variety of chronic conditions
- d. There is a very detailed, step-by-step protocol and leader's manual for each session
- e. The program has been replicated in several Kaiser Permanente regions

Article 2. **KPNW Integrated Pain Management Program.** *(page 24)*
The most effective therapy for management of chronic nonmalignant pain is:

- a. Behavioral therapies
- b. Case management
- c. Combination of therapies
- d. Member education

The KPNW Pain Management Program demonstrated improvement in the following areas (check all that apply):

- a. Pain intensity
- b. Provider satisfaction
- c. Return to work
- d. Satisfaction with care given

Article 3. **Multidisciplinary Group Intervention for Fibromyalgia: A Study of Psychiatric Symptom and Functional Disability Outcomes.** *(page 38)*
In this study, statistically significant improvements before and after the group clinic intervention were seen in the following parameters except:

- a. Anxiety, depression, and panic disorder scores
- b. Primary care and specialty care visits
- c. Activities of daily living
- d. Days missed from work and patients' ability to do their jobs
The following statements about fibromyalgia and the group clinic model are correct except:

a. Fibromyalgia is not associated with a high prevalence of psychiatric symptoms
b. Fibromyalgia is a chronic widespread pain syndrome
c. Even though this study is limited by lack of a control group, the literature on fibromyalgia does not suggest improvement in fibromyalgia symptoms over time without intervention
d. Other studies in the literature document improvement in psychiatric symptoms, pain scores, and fibromyalgia impact questionnaire items

Section C.
What change(s), if any, do you plan to make in your practice as a result of reading these articles? ____________________________________________
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Section B. Referring to the CME articles and the stated objectives, please check the box next to each statement as appropriate.

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

Section D. (Please print)

Name: ___________________________ E-mail Address: ___________________________
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The following statements about fibromyalgia and the group clinic model are correct except:

a. Fibromyalgia is not associated with a high prevalence of psychiatric symptoms
b. Fibromyalgia is a chronic widespread pain syndrome
c. Even though this study is limited by lack of a control group, the literature on fibromyalgia does not suggest improvement in fibromyalgia symptoms over time without intervention
d. Other studies in the literature document improvement in psychiatric symptoms, pain scores, and fibromyalgia impact questionnaire items

Article 4. Evidence-Based Clinical Vignettes from the Care Management Institute: Alzheimer's Disease and Dementia (page 43)

The Folstein Mini-Mental Status Examination:

a. Is superior to other cognitive screening tests
b. Is the most common and widespread clinical screening tool
c. Can be used to confirm a diagnosis of dementia
d. Is not dependent on educational background

Choose the statement that is correct:

a. Evaluation of dementia should always include an imaging study
b. Contrast CT scanning is preferred over noncontrast CT scanning in evaluating dementia in people under 65 years
c. TSH should be done as part of a basic dementia evaluation
d. MRI is preferred over CT
e. CXR should be done as part of the basic evaluation

The following statements about fibromyalgia and the group clinic model are correct except:

a. Fibromyalgia is not associated with a high prevalence of psychiatric symptoms
b. Fibromyalgia is a chronic widespread pain syndrome
c. Even though this study is limited by lack of a control group, the literature on fibromyalgia does not suggest improvement in fibromyalgia symptoms over time without intervention
d. Other studies in the literature document improvement in psychiatric symptoms, pain scores, and fibromyalgia impact questionnaire items

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