Editors’ Comments
2 Tom Janisse, MD; Lee Jacobs, MD

Permanente Abstracts
5 Abstracts of articles authored or coauthored by Permanente clinicians.

Original Research
13 Effect of “Time Famine” on Women’s Self-Care and Household Health Care. Nancy Vuckovic, PhD
   The author introduces her concept of “time famine” and ties together two elements of contemporary culture: time pressure and pill-taking. She finds evidence that one effect of time pressure is increased use of medicines.

21 Psychiatric Disorders and Functional Disability in Patients with Fibromyalgia. Arne Beck, PhD; George Breth, MD; Rob Hays, MD; Colleen Miller, RNP
   This study describes the prevalence of current psychiatric disorders and functional disability among a sample of patients attending a fibromyalgia group clinic in the Rheumatology Department at Kaiser Permanente Colorado.

Clinical Contributions
29 Management of Libido Problems in Menopause. Jeanne L. Leventhal, MD
   This article reviews the causes and treatment of the common decrease in sexual activity and satisfaction experienced by many menopausal women. Causes include physiologic changes, depression, decreased sexual functioning of the partner, and individual cultural or psychological factors. Treatment, which includes counseling and medications, needs to be individualized according to the specific identified etiologic factors.

35 Likelihood That a Woman Will Have No Major Risk Factors At the Time of First Myocardial Infarction or Stroke. Diana B. Petitti, MD; Stephen Sidney, MD; Charles P. Quesenberry, Jr, PhD; Arthur L. Klatsky, MD
   A substantial minority of women who experience a first heart attack or stroke do not have known major risk factors, as here documented from Kaiser Permanente hospitalization databases. Age differences in presence of individual risk factors were also noted, with smoking more prevalent in younger women and hypertension more prevalent in older women. The data have implications both for clinical evaluation of women with symptoms and with respect to screening needs for all women.

39 Kaiser Permanente Medicine 50 Years Ago: The Gynecological Cancer Detection Clinic. Wilson Footer, MD; Commentary by Steven A. Vasilev, MD, MBA
   The reprinted 56-year-old article by an early Kaiser Permanente physician shows that Permanente Medicine in the 1940s was clearly on the cutting edge of early diagnosis of gynecologic cancers. The described clinic was one of the few in operation at the time. Dr Vasilev’s accompanying current Commentary authoritatively reviews the history of this topic. He details major technological advances over the past half century as well as ongoing limitations. He points out the needs for more education and more universal application of this cornerstone of preventive medicine in women’s health.

Soul of the Healer
8 “Dream.” Mohamed Osman, MD
47 In the Shadow of Obesity—Part 1. Eric Blau, MD, FACP
56 Women in Medicine—A Living History. Kate Scannell, MD
59 “Life on Mars.” Mohamed Osman, MD
80 “Parental Respect.” Mohamed Osman, MD
Health Systems

60 Commentary: Women’s Health—It’s More Than Ob-Gyn. Jill M. Steinbruegge, MD

Dr. Jill Steinbruegge presents a must-read personal viewpoint on women’s health and concludes by presenting a challenge for the Permanente family in improving “the gender balance among our Permanente workforce and leadership.”

61 Commentary: Kaiser Permanente—Recognizing the Importance of Women. Rhoda Nussbaum, MD

This commentary by Dr. Rhoda Nussbaum—a Permanente physician from Northern California and a respected national leader in women’s health—provides an excellent introduction to the Health Systems’ articles on this subject.

62 Studies of Women’s Health Care: Selected Results. Rhoda Nussbaum, MD

Dr. Nussbaum reports on the studies that the Women’s Health Task Force in Northern California has undertaken to better understand the desires and underlying values of the women members in their region.

68 Proposed Care Management for Women with Estrogen Deficiency: Identification, Risk Stratification, and Treatment. Philip J. Tuso, MD, FACP

Dr. Philip Tuso from Southern California describes an information technology process for identifying women who have estrogen deficiency and assist in their management.

External Affairs

74 The Heart of a True Partnership: Dr Oliver Goldsmith Receives “Winning Spirit Award for Partnership.” Deidre S. Lind

With the support of The Southern California Permanente Medical Group (SCPMG) Medical Director, Oliver Goldsmith, MD, a Kaiser Permanente patient and physician teamed up to create a very successful program to improve the care of breast cancer patient. Dr Goldsmith was honored by WIN ABC, a national non-profit organization, with the Winning Spirit Award for Partnership.

76 We Have Come a Long Way: Women’s Health at the Turn of the Millennium. M. Jean Gilbert, PhD

M. Jean Gilbert, former Director of Cultural Competence for the Southern California Region, writes about women’s health care leading up to the new millennium. She discusses the possibilities for the coming decades, and she reviews Kaiser Permanente’s Women’s Healthcare Program.

82 Women’s Health and Federal Policy. Joanne L. Hustead, JD; Donald W. Parsons, MD

Don Parsons, MD, Permanente Federation’s Associate Executive Director of Health Policy and Joanne L. Hustead JD, Director of Legal and Public Policy at the National Partnership for Women and Families, discuss women’s health on the federal level. They look at past, present, and future legislation.

Book Reviews

84 Reviews of literature important to Permanente clinicians.

Announcements

89 Information on topics of interest for Permanente clinicians.

CME

95 Complete this form to receive Category 1 Credit.
Editors’ Comments

A Tribute to Women
Tom Janisse, Editor-in-Chief

You are holding the first of two Women’s Health issues; the second will be published in the Fall. There was such a large response to our call for articles that the Editorial Team decided to publish the best articles in two successive issues. As you read these research studies, programs, initiatives, and systems innovations, and view the paintings, photographs and other visuals, you will learn much that is transferable to all of your patients. We are privileged as an organization to have women so prominent and successful in the fields of clinical medicine, research and leadership to be able to present such exemplary knowledge, practice, and wisdom. This will be of great benefit to ourselves, our members, and our communities both local and national. Congratulations to the women we feature and to the women we serve.

Women’s Health Center

The concept of “Women’s Health” as a realizable future alternative to conventional health care for women exists only by understanding several key components and by achieving a new perspective. Primarily, enhanced care for women will not be achieved by erecting a new building to house a Women’s Health Center. Neither will it be achieved through an institutional icon; through advances in technology; through tertiary services; through expanded well-analyzed data sets; through singular or insular treatment approaches delivered by an impersonal scientist; or through advancements in traditional medical science. Clinicians will, however, be more sensitive to women and will exhibit enhanced communication and relationship skills.

In our process to describe the future, we must first ask women what they want and listen to them, before we mistakenly build a future on the basis of our current assumptions about them from a biomedical model. What women have suggested so far in focus groups of members, in meetings of clinicians, and in the recent literature looks and sounds alternative. A spectrum of approaches and activities are necessary from convenience to holism. Focus first on common needs and concerns. Deliver services close to home, in one place. Don’t make a woman drive all over town to each specialist’s office. Care should be multidisciplinary and delivered or coordinated as much as possible at one visit in a women’s health module. For example, just as two surgeons from different departments arrange their time to perform an operation and look into the belly together, two specialists could arrange a visit to look into a woman’s health concern together. In a variation of this scenario, some would even prefer a group setting with other women to socialize and exchange stories and advice. And it is important to remember that women’s health begins when they are young girls. Compartmentalizing their care within department boundaries is artificial and better serves providers of care than recipients.

Kaiser Permanente has been developing the “capability” of delivering advanced women’s health care for several years. This capability—a connected set of activities and competencies—resides in our integrated system and in people and processes. It represents a women’s health “center” that exists in many sites; through many services; in many relationships; and in the attitudes, perspectives, and interpersonal skills of many clinicians and ancillary providers. This will be a center “without walls” as exemplified by the personal health knowledge a registering medical assistant will have by accessing a woman’s electronic medical record in any facility.

The woman, as individual, will be “the center” of her health care. The center will not be a structure into which she seeks service. It will be a primary care center rather than a tertiary care center. A primary care doctor and team will lead the coordination of her care. She will not receive expert medical advice at the end of a long string of visits that have ignored psychological, social, behavioral, familial, or environmental factors. These will be assessed initially as “emotional vital signs” and be taken with the physical vital signs.

When clinicians recommend that geriatric women go to the local health club for exercise, we will recognize their loss of dizziness, improved balance, less painful knees, and normalizing blood sugar as advanced health care practice rather than an off-handed suggestion about which medical science doesn’t concern itself. We will recognize that the social encounter she had with several other elderly women was one of the most potent components in improving her physiology, because she learned that others have similar maladies and that they have overcome them with simple methods they taught her. As well, she will be versed in self-care through easily available education, materials, printed and electronic resources that are readily accessible, carefully researched, and reader-friendly.

Clinicians will consider alternative options and will recognize cultural diversity and preferences. Similarly, quick referral by her primary care physician to an acupuncturist for relief of chronic nasal congestion, or to a massage...
Women’s Health: Permanente Medicine
Lee Jacobs, MD, Associate Editor, Health Systems

I was reminded again at a recent Infectious Disease meeting of the global importance of women’s health.

The continued increasing AIDS incidence for women in the United States is striking. Especially alarming is the worldwide statistic that out of 16,000 new HIV infections each day in 1997, 40% were women. How about the fact that the cumulative number of children orphaned by AIDS worldwide is 11.2 million? How discouraging is it to see the continued high incidence of perinatal transmission of HIV from mother to infants in other countries when we know that with treatment it is preventable? We have documented evidence that breast-feeding increases the transmission of HIV to infants, but third-world mothers are placed in a Catch-22 since the death rate from diarrhea is so very high if they don’t breast-feed.

Certainly women’s health in the United States and around the world, especially related medical, social and ethical issues, deserve special attention. For that reason we are dedicating the next two issues of The Permanente Journal to this very important topic.

It is not just a popular topic-of-the-month. No, it is right at the core of Permanente Medicine as we are always seeking to better understand the evidence-based approach to the care of a population of people. Too often the women’s health focus in the community is based solely on economics. Such is not the case for Permanente.

In the Health Systems section of this edition, we present several articles on women’s health that are representative of the type of work that is taking place throughout Kaiser Permanente. Dr Jill Steinbruegge shares personal observations on women’s health and then presents the challenge to Permanente Medical Groups to address the gender gap in leadership. Dr Rhoda Nussbaum’s introductory commentary and her article summarizing the work of the Women’s Health Task Force in Northern California sets the agenda for the articles that follow. Dr Philip Tuso’s article on an estrogen replacement anchors this issue with articles on breast cancer and mobile mammography to follow in the second part of the series on women’s health issues which will appear in Fall 2000 edition of The Permanente Journal.

I hope you enjoy your reading of the work that your Permanente colleagues are doing. As always, we invite your articles and comments for future publication.

Coming in the next issue ...
Focus on Women’s Health—Part 2

- Uterine Artery Embolization for the Treatment of Uterine Fibroids
- Perimenopausal Mood Problems
- Sex Differences in Coronary Hospitalizations
- Mobile Mammography: Providing Service to the Hard-to-Reach Woman
- Improving Breast Care
- In the Shadow of Obesity—Part 2

... and more
Letters to the Editor

To the Editor.—I enjoyed reading the Spring 2000 issue of the Journal, especially the Editor's Comments. I would like to speak in more detail about another article on page 57 entitled “Emergency Contraception Research and Demonstration Project.” As a member of the Ethics Committee at Kaiser Permanente Santa Clara, I think a more accurate description of the effects of the hormones administered to the patients in the study is necessary. Attempts at contraception after intercourse with hormone therapy could potentially block the sperm’s passage through the cervix, prevent sperm migration to the ovum in the distal Fallopian tube, or prevent sperm capacitation (cleavage to and penetration of the ovum). Studies show that, at peak phase during ovulation, it takes an average of 90 seconds for the sperm to penetrate the cervix and another four to five minutes to reach the distal Fallopian tube with capacitation following a short time later. Due to the usual delay in taking emergency contraceptive pills (ECP) none of these potential effects would take place in a timely fashion. Use of the hormones would, however, increase the transport time of the embryo to the uterine cavity by reducing tubal motility and prevent implantation of the embryo into the uterine wall. Wyeth’s data on the estrogenic component of the ECPs do not demonstrate any convincing evidence that ECPs prevent ovulation in this situation. In spite of ACOG’s recent change in terminology, conception takes place at fertilization, usually in the distal tube, and not at implantation. I agree that ECPs will reduce the number of unplanned pregnancies from unprotected intercourse but what the patient has the right to know is that this is not a contraceptive but an abortifacient effect of ECPs. As with other medications, procedures, and treatments, the patient has a right to—and we have a legal and ethical obligation to—informed consent.

Dave Hammons, MD
Kaiser Permanente, Santa Clara, CA

In Reply.—Dr Hammons correctly describes the several mechanisms of action of hormonal EC. These mechanisms are described in the Provider Service Manual, in the patient information brochure, and in the Healthphone script developed by the Project.

The Provider Service Manual contained the following statement (p. 4) about these mechanisms of action:
“... since some people will consider interference with a fertilized, not yet implanted egg as an induced abortion, the potential mode of action must be made clear to all members who might elect this treatment.” (p. 4)

and the following recommendations to providers (p. 6) about counseling:
“Due to various definitions of pregnancy and abortion, the mode of action should be clearly explained to members as part of their decision-making process.” (p. 6)

In the patient brochure, the statement below follows the description of the mechanisms of action of ECPs:
“Because a fertilized egg may be prevented from growing by this treatment, ECPs are considered an abortion by some people. If you would not use a treatment that would interfere with an already fertilized egg, then ECPs may not be a good choice for you.”

Finally, providers who considered ECPs to be abortion were permitted to opt out of providing of ECPs. The EC Research and Demonstration Project was grounded in respect for differences in beliefs about abortion, and took seriously the obligation to provide information about ECPs that would permit informed decision-making.

Diana Petitti, MD
Kaiser Permanente, Pasadena, CA
An HMO Survey on Mass Customization of Healthcare Delivery for Women

A telephone survey of 1000 randomly selected women members of Kaiser Permanente examined preferences for care delivery. The majority of women under age 55 years (80%) were interested in scheduling evening or Saturday appointments, and half (50%) of them were willing to switch doctors for this option. Although most (57%) said that physician gender “did not matter,” women who preferred to see a female physician but were seeing a male were significantly less satisfied than women whose preferences were matched. Half (51%) of women were open to receiving health education in group classes. Information on when care is preferred, by whom, and in what setting sets the stage for mass customization strategies.

Unintended Pregnancy among Adult Women Exposed to Abuse or Household Dysfunction During Their Childhood

CONTEXT: Studies have identified childhood sexual and physical abuse as a risk factor for adolescent pregnancy but the relationship between exposure to childhood abuse and unintended pregnancy in adulthood has, to our knowledge, not been studied.

OBJECTIVE: To assess whether unintended pregnancy during adulthood is associated with exposure to psychological, physical, or sexual abuse or household dysfunction during childhood.

DESIGN AND SETTING: Analysis of data from the Adverse Childhood Experiences Study, a survey mailed to members of a large health maintenance organization who visited a clinic in San Diego, CA, between August and November 1995 and January and March 1996. The survey had a 63.4% response rate among the target population for this study.

PARTICIPANTS: A total of 1193 women aged 20 to 50 years whose first pregnancy occurred at or after age 20 years.

MAIN OUTCOME MEASURE: Risk of unintended first pregnancy by type of abuse (psychological, physical, or sexual abuse; peer sexual assault) and type of household dysfunction (physical abuse of mother by her partner; substance abuse by a household member; mental illness of a household member).

RESULTS: More than 45% of the women reported that their first pregnancy was unintended, and 65.8% reported exposure to two or more types of childhood abuse or household dysfunction. After adjustment for confounders (marital status at first pregnancy and age at first pregnancy), the strongest associations between childhood experiences and unintended first pregnancy included frequent psychological abuse (risk ratio [RR], 1.4; 95% confidence interval [CI], 1.2-1.6), frequent physical abuse of the mother by her partner (RR, 1.4; 95% CI, 1.1-1.7), and frequent physical abuse (RR, 1.5; 95% CI, 1.2-1.8). Women who experienced four or more types of abuse during their childhood were 1.5 times (95% CI, 1.2-1.8) more likely to have an unintended first pregnancy during adulthood than women who did not experience any abuse.

CONCLUSIONS: This study indicates that there may be a dose-response association between exposure to childhood abuse or household dysfunction and unintended first pregnancy in adulthood. Additional research is needed to fully understand the causal pathway of this association.


Osteoporosis: Risk Factor Prevalence and Drug and Densitometry Utilization

OBJECTIVE: To evaluate the prevalence of selected risk factors for postmenopausal osteoporosis, use of bone protective medications, and utilization of bone densitometry (DXA).

METHODS: Computerized records on demographics, medications dispensed, diagnostic/procedure summary lists, and radiology files for 33,662 women more than age 50 years who were current members of a health maintenance organization were merged and analyzed.

RESULTS: Overall, 4733 (14%) women had recently been dispensed one or more bone protective medications: estrogens conjugated, 4625 (13.7%); all other estrogens, 578 (2%); alendronate, 240 (1%); calcitonin, 499 (1%); etidronate disodium, 58 (1%); raloxifene, 82 (<1%); tamoxifen, 445 (1%). There were 14,668 (44%) who had one or more selected risk factors: current cigarette smoking, 7607 (23%); weight less than 125 lb, 3522 (11%); high-dose steroid use, 81 (<1%); on thyroid replacement, 3227 (9.6%); chronic renal failure, 221 (1%); vertebral fractures,
208 (<1%); fracture of pelvis, 88 (<1%); femoral neck fractures, 240 (1%); on antiseizure medication, 177 (<1%); and on benzodiazepam or lithium, 1145 (3%). Bone protective drug use was 17% in those with risk factors and 13% in those with none. Prior DXA was performed in 2.0% of those with risk factors and in 1% of those without risk factors.

**Conclusions:** In this population (probably not unlike other populations), despite high prevalence of osteoporosis risk factors, DXA screening utilization is low (<2%), as is use of bone protective medications (1%).


**Diagnosis of Symptomatic Postmenopausal Women by Traditional Chinese Medicine Practitioners**


**Objective:** To learn more about the way that practitioners of traditional Chinese medicine (TCM) diagnose women who have menopausal symptoms.

**Design:** We assembled a cohort of 23 postmenopausal women who had hot flushes and who were otherwise healthy. Each woman was examined independently by nine practitioners of TCM on the same day. Examination consisted of medical history and physical examination. Diagnoses were recorded and counted.

**Results:** The most frequent diagnosis made by the practitioners of TCM was kidney yin deficiency, which was the diagnosis made after 168 of 207 visits (81%); 23 women seen by nine TCM practitioners. Practitioners showed good agreement regarding presence of kidney yin deficiency: in 12 women (52%), this diagnosis was made by eight of nine practitioners; in 16 women (70%), seven of nine practitioners made this diagnosis; and in all 23 women (100%), at least five of nine practitioners made this diagnosis.

**Conclusions:** Practitioners of TCM who diagnose postmenopausal women with vasomotor symptoms are likely to make a diagnosis that includes kidney yin deficiency.

**Adverse Childhood Experiences and Smoking During Adolescence and Adulthood**


**Context:** In recent years, smoking among adolescents has increased and the decline of adult smoking has slowed to nearly a halt; new insights into tobacco dependency are needed to correct this situation. Long-term use of nicotine has been linked with self-medicating efforts to cope with negative emotional, neurobiological, and social effects of adverse childhood experiences.

**Objective:** To assess the relationship between adverse childhood experiences and five smoking behaviors.

**Design:** The ACE Study, a retrospective cohort survey including smoking and exposure to eight categories of adverse childhood experiences (emotional, physical, and sexual abuse; a battered mother; parental separation or divorce; and growing up with a substance-abusing, mentally ill, or incarcerated household member), conducted from August to November 1995 and January to March 1996.

**Setting:** A primary care clinic for adult members of a large health maintenance organization in San Diego, CA.

**Participants:** A total of 9215 adults (4958 women and 4257 men with mean [SD] ages of 55.3 [15.7] and 58.1 [14.5] years, respectively) who responded to a survey questionnaire, which was mailed to all patients one week after a clinic visit.

**Main Outcome Measures:** Smoking initiation by age 14 years or after age 18 years, and status as ever, current, or heavy smoker.

**Results:** At least one of eight categories of adverse childhood experiences was reported by 63% of respondents. After adjusting for age, sex, race, and education, each category showed an increased risk for each smoking behavior, and these risks were comparable for each category of adverse childhood experiences. Compared with those reporting no adverse childhood experiences, persons reporting five or more categories had substantially higher risks of early smoking initiation (odds ratio [OR], 5.4; 95% confidence interval [CI], 4.1-7.1), ever smoking (OR, 3.1; 95% CI, 2.6-3.8), current smoking (OR, 2.1; 95% CI, 1.6-2.7), and heavy smoking (OR, 2.8; 95% CI, 1.9-4.2). Each relationship between smoking behavior and the number of adverse childhood experiences was strong and graded (P < .001). For any given number of adverse childhood experiences, recent problems with depressed affect were more common among smokers than among nonsmokers.

**Conclusions:** Smoking was strongly associated with adverse childhood experiences. Primary prevention of adverse childhood experiences and improved treatment of exposed children could reduce smoking among both adolescents and adults.

Efficacy, Safety and Immunogenicity of Heptavalent Pneumococcal Conjugate Vaccine in Children. Northern California Kaiser Permanente Vaccine Study Center Group


Objective: To determine the efficacy, safety and immunogenicity of the heptavalent CRM197 pneumococcal conjugate vaccine against invasive disease caused by vaccine serotypes and to determine the effectiveness of this vaccine against clinical episodes of otitis media.

Methods: The Wyeth Lederle Heptavalent CRM197 (PCV) was given to infants at 2, 4, 6 and 12 to 15 months of age in a double-blind trial; 37,868 children were randomly assigned 1:1 to receive either the pneumococcal conjugate vaccine or meningococcus type C CRM197 conjugate. The primary study outcome was invasive disease caused by vaccine serotype. Other outcomes included overall impact on invasive disease regardless of serotype, effectiveness against clinical otitis media visits and episodes, impact against frequent and severe otitis media and ventilatory tube placement. In addition the serotype-specific efficacy against otitis media was estimated in an analysis of spontaneously draining ears.

Results: In the interim analysis in August 1998, 17 of the 17 cases of invasive disease caused by vaccine serotype in fully vaccinated children and five of five partially vaccinated cases occurred in the control group for a vaccine efficacy of 100%. Blinded case ascertainment was continued until April 1999. As of that time 40 fully vaccinated cases of invasive disease caused by vaccine serotype had been identified, all but one in controls for an efficacy of 97.4% (95% confidence interval, 82.7 to 99.9%), and 52 cases, all but three in controls in the intent-to-treat analysis for an efficacy of 93.9% (95% confidence interval, 79.6 to 98.5%). There was no evidence of any increase of disease caused by nonvaccine serotypes. Efficacy for otitis media against visits, episodes, frequent otitis and ventilatory tube placement was 8.9, 7.0, 9.3 and 20.1% with P < 0.04 for all. In the analysis of spontaneously draining ears, serotype-specific effectiveness was 66.7%.

Conclusion: This heptavalent pneumococcal conjugate appears to be highly effective in preventing invasive disease in young children and to have a significant impact on otitis media.

Neonatal Assisted Ventilation: Predictors, Frequency, and Duration in a Mature Managed Care Organization


Objective: Reference data are lacking on the frequency and duration of assisted ventilation in neonates. This information is essential for determining resource needs and planning clinical trials. As mortality becomes uncommon, ventilator utilization is increasingly used as a measure for assessing therapeutic effect and quality of care in intensive care medicine. Valid comparisons require adjustments for differences in a patient’s baseline risk for assisted ventilation and prolonged ventilator support. The aims of this study were to determine the frequency and length of ventilation (LOV) in preterm and term infants and to develop models for predicting the need for assisted ventilation and length of ventilator support.

Methods: We performed a retrospective, population-based cohort study of 77,576 inborn live births at six Northern California hospitals with level-three intensive care nurseries in a group-model managed care organization. The gestational age-specific frequency and duration of assisted ventilation among surviving infants was determined. Multivariable regression was performed to determine predictors for assisted ventilation and LOV.

Results: Of 77,576 inborn live births in the study, 11,199 required admission to the neonatal intensive care unit, and of these, 1928 survivors required ventilator support. The proportion of infants requiring assisted ventilation and the median LOV decreased markedly with increasing gestational age. In addition to gestational age, admission illness severity, five-minute Apgar scores, presence of anomalies, male sex, and white race were important predictors for the need for assisted ventilation. The ability of the models to predict need for ventilation was high, and significantly better than birth weight alone with an area under the receiver operating characteristic curve of .90 versus .70 for preterm infants, and .88 versus .50 for term infants. For preterm infants, gestational age, admission illness severity, oxygenation index, anomalies, and small-for-gestational age status were significant predictors but only accounted for 29% of the variance.
"Dream"
by Mohamed Osman, MD
An expression of a content, quasi happy face in a sleeping woman voyaging through space and time.
CONCLUSIONS. Considerable variation exists in the utilization of ventilator support among infants of closely related gestational age. In addition, a number of medical risk factors influence the need for, and length of, assisted ventilation. These models explain much of the variance in LOV among preterm infants but explain substantially less among term infants.


Newborn Circumcision Decreases Incidence and Costs of Urinary Tract Infections During the First Year of Life


OBJECTIVE: To assess the effect of newborn circumcision on the incidence and medical costs of urinary tract infection (UTI) during the first year of life for patients in a large health maintenance organization.

SETTING. Kaiser Permanente Medical Care Program of Northern California (KPNC).

PATIENTS. The population consisted of members of KPNC. The study group consisted of a cohort of 28,812 infants delivered during 1996 at KPNC hospitals; of the 14,893 male infants in the group, 9668 (64.9%) were circumcised. A second cohort of 20,587 infants born in 1997 and monitored for 12 months was analyzed to determine incidence rates.

DESIGN. Retrospective study of all infants consecutively delivered at 12 facilities.

OUTCOME MEASURES. Diagnosis of UTI was determined from the KPNC computerized database using the International Classification of Diseases, Ninth Revision code for inpatients and KPNC Outpatient Summary Clinical Record codes for outpatients. A sample of 52 patient charts was reviewed to confirm the International Classification of Diseases, Ninth Revision and KPNC Outpatient Summary Clinical Record codes and provide additional data.

RESULTS. Infants <1 year old who were born in 1996 had 446 UTIs (292 in females; 154 in males); 132 (86%) of the UTIs in males occurred in uncircumcised boys. The mean total cost of managing UTI was two times as high in males ($1111) as in females ($542). This higher total cost reflected the higher rate of hospital admission in uncircumcised males with UTIs (27.3%) compared with females (7.5%); mean age at hospitalization for UTI was 2.5 months old for uncircumcised boys and 6.5 months old for girls. In 1996, total cost of managing UTI in uncircumcised males ($155,628) was ten times higher than for circumcised males ($15,466) despite the fact that uncircumcised males made up only 35.1% of the male patient base in 1996, reflecting the more frequent occurrence of UTI in uncircumcised males (132 episodes) than in circumcised males (22 episodes) and the larger number of hospital admissions in uncircumcised males (38) than in circumcised males (four). The incidence of UTI in the first year of life was 1:47 (2.15%) in uncircumcised males, 1:455 (0.22%) in circumcised males, and 1:49 (2.05%) in females. The odds ratio of UTI in uncircumcised-circumcised males was 9.1:1.

CONCLUSIONS. Newborn circumcision results in a 9.1-fold decrease in incidence of UTI during the first year of life as well as markedly lower UTI-related medical costs and rate of hospital admissions. Newborn circumcision during the first year of life is, thus, a valuable preventive health measure, particularly in the first three months of life, when uncircumcised males are most likely to be hospitalized with severe UTI.

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The Highly Protective Effect of Newborn Circumcision Against Invasive Penile Cancer


OBJECTIVE: We determined the relation between newborn circumcision and both invasive penile cancer (IPC) and carcinoma in situ (CIS) among adult male members of a large health maintenance organization.

SUBJECTS AND METHODS: Circumcision status was ascertained by a combination of pathology reports, medical record review, and questionnaires for 213 adult male members of a large prepaid health plan who were diagnosed with IPC or CIS.

RESULTS: Of 89 men with IPC whose circumcision status was known, two (2.3%) had been circumcised as newborns, and 87 were not circumcised. Of 118 men with CIS whose circumcision status was known, 16 (15.7%) had been circumcised as newborns.

CONCLUSIONS: Our results confirm the highly protective effect of newborn circumcision against IPC and the less protective effect against CIS.


Optimizing Treatment of Dyslipidemia in Patients with Coronary Artery Disease in the Managed-Care Environment (the Rocky Mountain Kaiser Permanente Experience)


Rocky Mountain Kaiser Permanente has taken aggres-
sive steps to ensure optimal treatment of all modifiable cardiac risk factors, especially low-density lipoprotein (LDL) cholesterol, in patients with coronary artery disease. In this article, we are presenting (1) the basic rationale for our approach, (2) the critical steps translating philosophy into practice, and (3) justification for all health plans to pursue a similar course. The continuum of physician-directed disease management systems that have evolved in our region—one administered by cardiology nurses in the inpatient hospitalization period and the other by pharmacists in the long-term, outpatient setting—is then detailed. Although the relatively short duration that our comprehensive systems have been in place precludes any assessment of their impact on cardiac death, coronary artery disease events, or coronary artery disease procedure rates, the improvements in intermediate surrogate outcomes are promising. Virtually all surveyed patients participating in our management systems have been “very” or “extremely” satisfied with their experience. The LDL-cholesterol screening rate in the approximately 2500 participants in the programs to date has reached 97%. Of these patients, 84% have LDL cholesterol <130 mg/dL and 48% <100 mg/dL, and only 15% of those few with LDL cholesterol >130 mg/dL (2.5% overall) are currently not receiving lipid-lowering therapy. The proportions of patients on aspirin/antiplatelet and beta-blocker therapy after myocardial infarction are 97% and 92%, respectively. The lipid-screening and treatment rates, especially, represent significant improvement from our own baseline, and compare favorably with outcomes from other practice settings. In conclusion, health maintenance organizations have tremendous incentive and the unique opportunity and ability to develop systems to better manage large numbers of individuals with coronary artery disease.

Reprinted from the American Journal of Cardiology, Merenich JA; Lousberg TR; Brennan SH; Calonge NB. Optimizing treatment of dyslipidemia in patients with coronary artery disease in the managed-care environment (the Rocky Mountain Kaiser Permanente experience). 36A-42A, Copyright 2000, with permission from Excerpta Medica Inc.

**Predictors of Glycemic Control in Insulin-Using Adults with Type 2 Diabetes**


**Objective:** To determine the characteristics that influence glycemic control among insulin-using adults with type 2 diabetes.

**Research Design and Methods:** We studied all 1333 eligible members of a large not-for-profit health maintenance organization who responded to a 1997 survey. We tested associations among demographic, treatment, and psychometric variables with mean 1997 HbA1c values. The Problem Areas in Diabetes (PAID) instrument was used to assess the emotional effect of living with diabetes, and the Short Form 12 Physical Function Scale was used to assess the effect of physical limitations on daily activities. Based on differences between and within treatment groups, we built models to predict glycemic control for subgroups of subjects who were using insulin alone and those who were using insulin in combination with an oral hypoglycemic agent.

**Results:** Younger age, lower BMI, and increased emotional distress about diabetes (according to the PAID scale) were all significant predictors (P < 0.05) of worse glycemic control. However, except among individuals with an HbA1c level of >8.0 who were receiving combination therapy, only ~10% of the variance in glycemic control could be predicted by demographic, treatment, or psychometric characteristics.

**Conclusions:** Personal characteristics explain little of the variation in glycemic control in insulin-using adults with type 2 diabetes. Possible explanations are that the reduced complexity of control in type 2 diabetes makes the disease less sensitive to personal factors than control in type 1 diabetes, that health-related behavior is less driven by personal and environmental characteristics among older individuals, or that, in populations exposed to aggressive glycemic control with oral hypoglycemic agents and nurse care managers, personal differences become largely irrelevant.

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**The Treatment of Anxiety Disorders in a Primary Care HMO Setting**


Anxiety disorders are common, yet under diagnosed, in primary care settings. Many patients with anxiety and other psychiatric disorders do not seek care in mental health care settings. An integrated primary care/mental health model offers one approach to improving outcomes for patients with anxiety disorders. This model has been researched for the treatment of depression with positive results but has not been well studied for the treatment of anxiety disorders. We describe the results of care for a cohort of adult patients with Generalized Anxiety Disorder (GAD) and clinically significant anxiety sec-
The Cost-Effectiveness of Mind-Body Medicine Interventions


Evidence is mounting that addressing the psychosocial needs of patients makes economic and health sense. If there were a drug or surgical procedure that could reduce ambulatory care visits, decrease postsurgical length of stay, reduce c-section rates, or decrease death rates from cancer, this medical intervention would be widely accepted and utilized with little hesitation. The beliefs and biases that delay and retard the use of psychosocial interventions need to be challenged (Engel, 1977; Williamson et al, 1991). This brief review of mind-body interventions suggests that health care providers can ill afford to treat patients simply as disordered machines whose health can be restored with physical or chemical interventions alone. Indeed, a burgeoning interest in alternative and complementary medicine with a focus on non-drug, non-surgical interventions as well as the exploding field of lay literature and self-help groups suggests that many patients are ready, willing, and even demanding that mind-body health techniques be considered as part of health care (Friedman et al, 1997). While the health care system cannot be expected to address all the psychosocial needs of people, clinical intervention can be brought into better alignment with the emerging evidence on the health and cost-effectiveness of mind-body interventions. Mind-body medicine is not something separate or peripheral to the main tasks of medical care but should be an integral part of evidence-based, cost-effective, quality health care.

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Controlled Trials of CQI and Academic Detailing to Implement a Clinical Practice Guideline for Depression


BACKGROUND: The release of the Agency for Health Care Policy and Research (AHCPR)'s Guideline for the Detection and Treatment of Depression in Primary Care created an opportunity to evaluate under naturalistic conditions the effectiveness of two clinical practice guideline implementation methods: continuous quality improvement (CQI) and academic detailing. A study conducted in 1993-1994 at Kaiser Permanente Northwest Division, a large, not-for-profit prepaid group practice (group-model) HMO, tested the hypotheses that each method would increase the number of members receiving depression treatment and would relieve depressive symptoms.

METHODS: Two trials were conducted simultaneously among adult primary care physicians, physician assistants, and nurse practitioners, using the same guideline document, measurement methods, and one-year follow-up period. The academic detailing trial was randomized at the clinician level. CQI was assigned to one of the setting's two geographic areas. To account for intraclass correlation, both trials were evaluated using generalized equations analysis.

The Cost of Health Conditions in a Health Maintenance Organization


In this retrospective cohort analysis of all adults who were members of Kaiser Permanente, Northern California, between July 1995 and June 1996 (N = 2,076,303), the authors estimated the prevalence, average annual costs per person, and percentage of total direct medical expenditures attributable to each of 25 chronic and acute conditions. Ordinary least squares regression was used to adjust for age, gender, and comorbidities. The costs attributable to the 25 conditions accounted for 70 percent of the health maintenance organization's total direct medical expense for this age-group. Injury accounted for a higher proportion (11.5 percent) of expenditures than any other single condition. Three cardiovascular conditions—ischemic heart disease, hypertension, and congestive heart failure—together accounted for 17 percent of direct medical expense and separately accounted for 6.8 percent, 5.7 percent, and 4.0 percent, respectively. Renal failure ($22,636), colorectal cancer ($10,506), pneumonia ($9,499), and lung cancer ($8,612) were the most expensive conditions per person per year.

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**RESULTS**: Most of the CQI team’s recommendations were not implemented. Academic detailing increased treatment rates, but—in a cohort of patients with probable chronic depressive disorder—it failed to improve symptoms and reduced measures of overall functional status.

**CONCLUSIONS**: New organizational structures may be necessary before CQI teams and academic detailing can substantially change complex processes such as the primary care of depression. New research and treatment guidelines are needed to improve the management of persons with chronic or recurring major depressive disorder.


**Outcomes of the Kaiser Permanente Telehome Health Research Project**

**CONTEXT**: Level of acuity and number of referrals for home health care have been escalating exponentially. As referrals continue to increase, health care organizations are encouraged to find more effective methods for providing high-quality patient care with cost savings.

**OBJECTIVE**: To evaluate the use of remote video technology in the home health care setting as well as the quality, use, patient satisfaction, and cost savings from this technology.

**DESIGN**: Quasi-experimental study conducted from May 1996 to October 1997.

**SETTING**: Home health department in the Sacramento, CA, facility of a large health maintenance organization.

**PARTICIPANTS**: Newly referred patients diagnosed as having congestive heart failure, chronic obstructive pulmonary disease, cerebral vascular accident, cancer, diabetes, anxiety, or need for wound care were eligible for random assignment to intervention (n = 102) or control (n = 110) groups.

**INTERVENTION**: The control and intervention groups received routine home health care (home visits and telephone contact). The intervention group also had access to a remote video system that allowed nurses and patients to interact in real time. The video system included peripheral equipment for assessing cardiopulmonary status.

**MAIN OUTCOME MEASURES**: Three quality indicators (medication compliance, knowledge of disease, and ability for self-care); extent of use of services; degree of patient satisfaction as reported on a three-part scale; and direct and indirect costs of using the remote video technology.

**RESULTS**: No differences in the quality indicators, patient satisfaction, or use were seen. Although the average direct cost for home health services was $1830 in the intervention group and $1167 in the control group, the total mean costs of care, excluding home health care costs, were $1948 in the intervention group and $2674 in the control group.

**CONCLUSIONS**: Remote video technology in the home health care setting was shown to be effective, well received by patients, capable of maintaining quality of care, and to have the potential for cost savings. Patients seemed pleased with the equipment and the ability to access a home health care provider 24 hours a day. Remote technology has the potential to effect cost savings when used to substitute some in-person visits and can also improve access to home health care staff for patients and caregivers. This technology can thus be an asset for patients and providers.


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**A Simple Way**

Some say that art is a complicated way of saying very simple things, but we know that art is a simple way of saying very complex things.

Jean Cocteau, 1889-1963, French filmmaker, dramatist, poet and novelist
The experience of “time famine” in contemporary American culture affects women’s decisions about self-care and their use of pharmaceutical agents for self-medication. This paper examines the manner in which time demands shape women's interpretations of medicine efficacy and drive increases in medication use for themselves as well as for their children. Like other timesaving commodities, medicines appear to shift the time-power differential in favor of individuals, placing them in control of how time is spent. When there is “no time to be sick,” allopathic medicines become timesaving devices that enable women to fulfill responsibilities at work or at home while attending to sick children or while being ill themselves. Medicines are used to “beat the clock” by increasing women’s capacity to be productive.

Introduction

Lack of time is a plague of industrialized, prosperous societies. It manifests as the acceleration of activities in all facets of life and as a reorientation of time sense that places ever-increasing emphasis on the present and on the short-term future. This chronic shortage of time, which I refer to as “time famine,” is endemic in the contemporary United States. Americans are acutely aware of time pressures in their lives and have become preoccupied with time, its passage, and the lack of it.

Time as a Scarc Resource

In the United States, economic well-being and social status are linked to temporal notions of speed. Americans have long been characterized as a restless, hurried people driven toward achieving ever-increasing efficiency and progress.

By enabling people to engage in a wider range of activities, modern technology accelerates the pace at which people live. In turn, this more hectic pace acts as a catalyst for social changes that encourage Americans to believe that they should be engaged in productive activity every moment of the day. The vicious cycle is thus completed: The efficiency enabled by new products places new and greater pressure on consumers to become more efficient. Access to high-speed computers, e-mail, and fax machines means that lack of productivity can no longer be blamed on slow equipment or on the postal service. Pagers and cellular phones allow individuals to be contacted almost anywhere at any time, and fax machines and electronic mail discourage people from claiming that they “didn’t get the message in time.” Even for employees who do not have as much flexibility in how or where they do their work, changes in the marketplace have increased the demand for overtime labor; consequently, work time is increasingly being extended into personal time.

Time Famine

Time famine adversely affects quality of life not only by reducing leisure time but also by attacking physical health. By increasing the level of “stress” in people’s daily lives, scarcity of time has been implicated as a causal agent in acute and chronic illnesses, including gastric ulcers, headache, and even cancer. Studies of household health indicate that time shortage may negatively affect health when preventive health behaviors, such as adequate rest or proper nutrition and sanitation, are foregone. Less has been written about the ways in which time pressure or time allocation affects household response to illness. This paper examines how time famine in contemporary United States culture affects women’s decisions about self-care and about use of pharmaceutical agents for self-medication. In this respect, by altering the timing of professional care and the magnitude of self-treatment, time famine directly affects the frequency and severity of symptoms that ultimately prompt women to visit their physicians.

Qualitative Research Methodology

Forty households residing in and near a midsized city in the southwestern United States (Table 1) were studied for 18 months to observe actions and interactions of family members, who were formally and informally interviewed about their beliefs and practices concerning use of medications and to ascertain the families’ domestic response to illness. Questionnaires, self-care diaries, and medicine inventories were also used to learn about household self-medication practices in each participating household. The University of Arizona Institutional Review Board approved the project, and informed consent was obtained from all participants.

All interviews were audiotaped and transcribed for analysis. Codes were inserted into the transcript by The Ethnograph text-analysis software program (Scolari/Sage, Thousand Oaks, California) to identify responses to specific questions and to flag themes that emerged from analysis of multiple responses. Segments of text coded for a given topic were reviewed to identify response patterns. Assumptions drawn from this process were tested in consultation with a group of colleagues who read a sample of the transcripts. Participants were assigned pseudonyms for this report.

Qualitative methods (eg, in-depth interviews) allowed participants to describe beliefs and experiences in their own words and to make associations they felt were relevant as they described events and experiences. Because qualitative methods effectively elicit the participant’s perspective, these methods are particularly useful for defining the range and variability of beliefs, behaviors, and experiences of study populations as well as the natural language people use to discuss these issues.

Although this type of in-depth ethnographic research is generally incompatible with large sample sizes, it offers richness of information that cannot usually be obtained by more superficial inquiries, whether quali-
tative or quantitative. Extended study “in the field” enables researchers to gather data by various means and to corroborate findings by comparing data from multiple on-site sources. In addition, when data are collected through repeated contacts over time, participants also may feel less need to “impress the researcher” and may thus offer information that more accurately reflects reality.

To learn about households’ health care behavior, this inquiry primarily observed women in recognition of their role as primary agents in the household production of health and as principal providers of domestic health care. Research in the United States indicates that despite changes in gender roles related to wage and domestic labor, women are still the primary decision-makers regarding purchase and administration of medicine and are usually the adults responsible for the care of sick children. The women studied were all mothers of young children and had an acute sense of time famine. Making arrangements to meet with

<table>
<thead>
<tr>
<th>Table 1. Demographic characteristics of adult women in 40 households surveyed in study</th>
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<tbody>
<tr>
<td>Households with</td>
</tr>
<tr>
<td>private health</td>
</tr>
<tr>
<td>insurance (n=18)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Mean age (years)</td>
</tr>
</tbody>
</table>

**Ethnicity**

<table>
<thead>
<tr>
<th></th>
<th>Households with</th>
<th>Households without</th>
<th>Households insured</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>72%</td>
<td>72%</td>
<td>25%</td>
</tr>
<tr>
<td>Mexican American</td>
<td>11%</td>
<td>22%</td>
<td>50%</td>
</tr>
<tr>
<td>African American</td>
<td>--</td>
<td>6%</td>
<td>--</td>
</tr>
<tr>
<td>Otherb</td>
<td>17%</td>
<td>--</td>
<td>25%</td>
</tr>
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</table>

**Mean number of children**

<table>
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<th></th>
<th>Households with</th>
<th>Households without</th>
<th>Households insured</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>private health</td>
<td>any health</td>
<td></td>
</tr>
<tr>
<td></td>
<td>insurance (n=18)</td>
<td>insurance (n=18)</td>
<td></td>
</tr>
<tr>
<td>Mean number of children</td>
<td>2.06</td>
<td>1.94</td>
<td>1.25</td>
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**Highest educational level attained**

<table>
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<th></th>
<th>Households with</th>
<th>Households without</th>
<th>Households insured</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some high school or</td>
<td>39%</td>
<td>39%</td>
<td>75%</td>
</tr>
<tr>
<td>or graduated</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some college or</td>
<td>61%</td>
<td>61%</td>
<td>25%</td>
</tr>
<tr>
<td>graduated</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

**Employment status**

<table>
<thead>
<tr>
<th></th>
<th>Households with</th>
<th>Households without</th>
<th>Households insured</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wage earner</td>
<td>61%</td>
<td>61%</td>
<td>25%</td>
</tr>
<tr>
<td>Homemaker</td>
<td>39%</td>
<td>39%</td>
<td>75%</td>
</tr>
</tbody>
</table>

**Annual income**

<table>
<thead>
<tr>
<th></th>
<th>Households with</th>
<th>Households without</th>
<th>Households insured</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥$30K</td>
<td>69%</td>
<td>39%</td>
<td>--</td>
</tr>
<tr>
<td>$20-29K</td>
<td>25%</td>
<td>33%</td>
<td>--</td>
</tr>
<tr>
<td>&lt;20K</td>
<td>6%</td>
<td>28%</td>
<td>100%</td>
</tr>
</tbody>
</table>

* Arizona’s Medicaid Program and the State of Arizona’s health care program for persons who do not qualify for Medicaid.

b Includes Native Americans and Asian Americans.
these informants opened my eyes to the importance of time and timing in American culture. I had to be prompt, and—at least initially—my visits needed to be scheduled and to the point. Even after I established relationships with these women, dropping in for visits or spending time together beyond the interview was problematic because of their work and family schedules. I soon became aware that time pressures also played a salient role in their self-medication decisions. Having “no time to be sick” emerged as an issue early in my research on pharmaceutical practice in US households and remained an issue of repeated discussion for the subsequent months of field work.

This paper describes the lives and reports words of women who were my principal informants in this study of self-medication practices. Nonetheless, evidence suggests that the experiences of the women in this study are representative of more pervasive time famine that also affects male parents as well as persons of either gender who do not have children.7

Results

Impatience with Illness

An outcome of the American cultural ideal of progress and productivity is impatience with illness9—12—not merely reluctance to be uncomfortable, but a practical need to keep the household and workplace running that fuels this expectation of productivity. Multiple responsibilities—jobs, child care, home management, and social commitments—allow women little time to “give in” to illness,13,14 The women in the present study measured their own productivity by activity in their household as well as in their workplace. Summarizing the feelings of other women, Gloria said: “I don’t enjoy being sick. I don’t like it slowing me down. It takes a lot to keep me home from work. Because of guilt. I don’t ever want to be in a situation where I’m wondering ‘Well, I can be at work. I know I could.’ I want to know that when I’m in bed, I really belong there. And that no one can question that and that I’m not questioning it. You know I’ll go to work until I really can’t. Until it becomes just physically insane to be there.”

Another woman, Karen, explained her situation with a laugh—and with a phrase I often heard during my conversations with her and other women: “I don’t have time to be sick—not with three kids!” She continued: “No, I don’t do much of that [ie, being sick]. There’s always something to be done. There is. If I’m really feeling bad, I’ll go to bed early. But it’s a rare day that I would actually sit down and do nothing.”

Women who have jobs outside the home often feel that they cannot afford to take time off from work when they are sick because time off for illness means lost income—and sometimes jeopardizes job security. If a woman takes time off for her own illness, less sick leave remains available for when her children are sick and need to be cared for at home. As a result of these pressures, women continue to go to work unless their symptoms are debilitating.

Maureen’s story is one example of such behavior. She told me, “If I call in sick to work, man I can’t. Until it becomes just physically insane to be there.”

Increased Use of Medications

When women “have no time to be sick,” medicines provide a way to keep them going. As Teresa said, “If I have a headache, I’ll go get a Tylenol because I got to keep going. I’ve got to fix dinner and clean the house and take care of the kids and do laundry. I don’t have time to sit on the couch and go, ‘Oh, I really feel bad.’”

Response to illness becomes more aggressive when time demands create pressures to keep going. Women reach for medicinal solutions to alleviate symptoms quickly and to prevent them from becoming worse. This practice results in increased medicine use over-

Primary Care Physician Commentary: Women’s Health Choices

Today’s American women are frequently caught between competing priorities of home, family care, and the workplace, leaving little time for personal needs—especially when illness strikes, as this article illustrates. By direct linkage of “time famine” and women’s health choices, Nancy Vuckovic leaves open many implications for health care.

Women tend to postpone their own health care and are prone to burnout in caring for chronically ill family members. As clinicians, we may be able to positively affect the whole family unit by seizing the opportunity to speak to these caregivers as they accompany ill family to clinic and by encouraging them to attend to needs for personal time and health care.

This article can help us to be more understanding when confronted with expectations for quick fixes such as inappropriate antibiotics so we can address the whole problem. We should consider whether our clinical behavior ameliorates time famine or reinforces women’s sense of the “clock as enemy” by our prescribing practices, compressed appointment schedules, and long waiting room times. One can speculate whether much use of alcohol, tobacco, and even caffeine is also a manifestation of time famine as women fortify themselves for what can feel like a treadmill into a dark tunnel.

— Donna Strain, MD  
Internal Medicine, NWP
Primary Care Physician Commentary: A Lure and a Snare

Expansion of workplace opportunities for women since World War II has proved a lure and a snare. Although attracted to the promise of satisfying jobs and of gaining parity with men in professional status and income, women with occupations have mostly retained their traditional domestic roles. They go to work but remain caregivers and what some call “CEOs of the home.” Particularly when households become dependent on double incomes, women can be trapped by economics. Finding sufficient time to run a household and to be a mother and spouse can seem impossible even without the additional role in the workplace.

In this article, Nancy Vuckovic introduces her concept of “time famine” and ties together two elements of contemporary culture: time pressure and pill-taking. From interviews with women done in the course of preparing a doctoral dissertation, she finds evidence that one effect of time pressure is increased use of medicines. Her subjects attribute this to attempts to save time three ways: 1) avoid time-consuming office visits; 2) shorten the course of illness; and 3) treat symptoms that threaten to interfere with performance of job or household activities. Moreover, use of medicine in children is described as a way to keep them in daycare when fere with performance of job or household activities. Moreover, use of medicine in children is described as a way to keep them in daycare when they might otherwise be home with a parent forced to miss work.

Vuckovic’s discovery that many women feel hounded by demands for their time is familiar to those of us practicing primary care. Among our patients are many whose disease seems broadly related to time-pressure, loss of personal time, and work/home life imbalance, or whose dedication to work leads to neglect of personal health. Clinicians of both genders contend with similar time pressures in our own lives. Vuckovic’s article helps us complete our picture of the dilemma by describing medicine use among women who generally seek to avoid office treatment. Readers will gain empathy for these women. The bibliography contains references that contribute more fully to understanding the impact of time pressure in contemporary culture.

What are some ways this article can help us in Permanente practice?

- Explain the motivation for some medicine-seeking behavior
- Remind us that loss of time constitutes a significant burden of illness
- Lead us to directly address time pressure and time management with patients
- Encourage us to streamline our processes to reduce the time members invest in obtaining medical care

- Arthur D. Hayward, MD
Internal Medicine, NWP

All, even among women who voice a preference to avoid medicines as much as possible.
Claire explained: “I don’t think I got sick less often [before I had children], but when I got sick, I got really sick. Because I would probably not treat it. And now I know I can’t afford that. There are three other people depending on me in my house, plus my job. It affects my household, my husband, my children. Just more responsibility. So I treat my symptoms sooner.”

Women acknowledged that they relied more on medical solutions to treat symptoms when time commitments prohibited rest or relaxation. Penny talked about consciously assessing her day before deciding whether to take a pain reliever or allergy medicine. She explained that on a work day, she might reason that “I’ve got a lot of stuff to do” and consequently take medicine to relieve symptoms quickly. Other informants described a similar thought process. Gloria said: “If it was a weekend and I was feeling bad and I knew I was just going to be able to just basically hang around and maybe cook a few meals and what not, I’m less apt to take something than if I’ve got to be at work and be on top of it, you know. That’s when I’ll start taking the Dristan or, you know, carry the Pepto-Bismol with me if my stomach’s a little upset. Yeah, I definitely take more medications when I’m working.”

Other researchers have noted a higher incidence of medicine use among women than among men but often look for answers in different morbidity rates between genders or in gender difference in perception of illness. Such reports indicate that women may be more aware of bodily symptoms because they generally have more experience with hormonal changes (in addition to the extensive changes they experience during pregnancy) and that women therefore may identify symptoms and signs of health problems before men do. However, the present study suggests that feeling a lack of time to be ill leads women to downplay their illnesses and to “keep going” despite having minor—and sometimes major—physical symptoms. The study shows that this tendency to downplay illness does not reduce women’s consumption of medicine and in fact may increase it.

Entitlement to Health Care

Anthropological studies of entitlement to health care show that women often forego medical care for themselves when scarce household resources are allocated preferentially to the care of children or male wage earners. These findings hold true for the women in this study, for whom time as well as money can be in short supply.

For example, when Claire’s husband and children suffered from a round of intestinal “flu” during the winter, they stayed at home to recuperate. Claire therefore stayed home to care for them, missing two days of work. Later, when Claire herself had the upset stomach and diarrhea which had caused her other
family members to stay home, she took two doses of an antidiarrheal agent and went to work. She explained, “I just didn’t want to miss any more work.” By saying that they “do not have time” to be ill, women not only forfeit medical care but also relinquish the sick role as a legitimate way to refrain from productive labor.

No Time for Professional Care

When their ability to meet responsibilities became threatened by physical symptoms, women quickly responded to these symptoms by taking medicines that can relieve symptoms—or, at least, that can mask them. However, the demands of their lives sometimes caused women to postpone curative therapy, such as seeing a doctor, until the illness became severe. One woman explained that she postponed treatment of her urinary tract infection because “I was so busy taking care of the family that I couldn’t allow myself to be sick.”

The motivations for choosing self-medication in preference to seeing a health care practitioner are complex and may include lack of money, conflicting medical ideology, negative experiences, or fear. Another important factor driving women’s decisions to avoid clinic visits for themselves is unwillingness to invest the time necessary to obtain professional care. Although willing to take their children to the doctor when necessary, women are reluctant to go to the doctor themselves because “it’s just too time-consuming.” Often this time is not willingly spent, especially when other options are available to alleviate symptoms. Thus, self-medication is popular in part because it is less time-consuming than professional care. A multitude of medicines are available from stores that are nearer to home than the doctor’s office and that are open at all hours. Many women feel that if their self-medication efforts solve a medical problem and thereby avoid a visit to the doctor, then the relatively small time and money invested are worthwhile.

Time Regulation and Children’s Illness

When conflicts arose between the need to care for a sick child and the need to go to work, some women medicated their children to make them comfortable and to mask symptoms so that the children could continue to attend school or daycare. Claire explained the decision-making process she used when one of her children became ill during the workweek: “I’m responsible for what I do at my work, and I like what I do, and if they [ie, my children] are sick and I feel like I have to be away from work, I feel guilty about leaving my work there for other people to do....So, if they [ie, the children] wake up with a temperature, I give them some Tylenol and then we go to school and we pray that the temperature doesn’t go up during the day and that they don’t call me.”

Daycare workers confirmed that parents commonly use medicines to mask symptoms such as cough or high fever in an attempt to keep the child in attendance. High rates of disease prevalence in some daycare facilities may be due in part to this practice.

Parental aggressiveness in treating children’s illness with medications may vary by day of the week. For example, if the child becomes ill on Wednesday, his or her parents may try to keep the child in daycare or school until the weekend by using medications that mask the symptoms. Over the weekend, medication use may be reduced in response to the increased time available for rest and home care. If both strategies fail to produce a cure by Monday, a doctor’s visit may be scheduled.

Expectations that Medications Must Act Quickly

Their quickened pace of life causes Americans to favor commodities (people as well as products) that respond quickly to the demands of a given situation and that work efficiently to optimize productivity. A mentality of time famine alters expectations such that punctuality and the ability to “get to the point” become valued traits not only of employees, but also of family, friends, and even inanimate products. The same reasoning that leads people to expect punctuality from people leads them to expect promptness from medicines. When applied to medications, expectations of punctuality and quick access manifest as demand for rapid transformation from illness to health. If “instant gratification” (ie, fast relief) is not forthcoming, individuals may consume greater amounts and varieties of medications.

For example, Lydia routinely doubled the dosage of ibuprofen that she took for headaches. She said, “If it says one tablet, I take two ... I want pain relief immediately.” Other women also reported that they became impatient when medicines failed to achieve a desired effect after a short time. Mercy said, “I should feel better in about ten minutes. And if not, I’ll just take more.”

Fast-acting medicines and those which treat several symptoms in a single dose are valued for their efficiency. Product efficiency was the reason Mercy
gave: “I like the Contact best. It takes care of about 50,000 symptoms.” Multisymptom drugs are an encapsulation of Linder’s simultaneous consumption, ie, consumption of more than one product simultaneously in an effort to achieve maximum use of time. In this way, multisymptom medications represent a single product opportunity to engage in polypharmacy. Preparations that treat a variety of symptoms are valued for their ability to adapt to the situation at hand because they can be used at one time for one illness and at another time to treat a different illness. Multisymptom products promote time efficiency by eliminating the need to buy specific medicines each time a family member gets sick.

Sleeping Efficiently
The side effects of allergy and cold medicines containing antihistamines can be both undesired and desired. When productivity is important, the sleepiness these medicines produce is experienced as a negative side effect. The same sleep-enhancing quality becomes a positive side effect at night, when sleep is desirable. Because sleep is viewed as a time when the body rejuvenates and heals itself, women in the study expressed their belief that sleeping well could help a person overcome illness more quickly. On occasion, the sleep-inducing effect of cold and allergy medicines was so desired that women took multisymptom products with antihistamines even when they did not have symptoms that generally indicate use of these products. Women recognized that they could regulate side effects through deliberate choice of particular medicines at particular times of the day. Teresa said, “When I go to bed is when I usually notice my back has hurt all day ... It’s real tight, and it’s hard to relax to get it to stop hurting. And everybody else is snoring and you’re just like, ‘I’ve go to get to sleep or I won’t be able to function tomorrow.’ I’ll get up and pop a couple of Tylenol.”

Efficiency and the need to be productive at all times has been extended to the most leisurely of leisure times: sleep.

Efficiency and the need to be productive at all times has been extended to the most leisurely of leisure times: sleep.

Medicines as Timesaving Devices
Products and services designed to save time and improve time management dominate the market and captivate the minds and wallets of Americans. These commodities of efficiency—ranging from microwave ovens to drive-through pharmacies, day planners to disposable diapers—all share one attribute: By buying them, consumers hope to also buy time. Commodities offer consumers the illusion of buying time, not only because the products permit users to do things faster but also because these products enable individuals to do several tasks at the same time—a phenomenon described as “multitasking.” In this way, equipped with car phone and fax machine, an executive can begin the workday while driving to her office. A parent at home can wash clothes and cook dinner while helping her child download information from a local library.

Medicines possess such time-management attributes in that they enable consumers to increase their productive time by eliminating the “downtime” caused by illness, behavioral difficulties, or “bothersome” biological functions. Certain products, such as “nondrowsy” formulations of medicines, allow a person to treat symptoms and still care for children or function on the job. In yet another way, products formulated to care for multiple symptoms promise to simultaneously accomplish more than one task by treating several symptoms at once. Medicines have become commodities that make consumers more efficient; and in doing so, medicines have joined the ranks of other time-management products.

Women’s participation in the labor force often results in increased medicine use, both by women and by their children. Increased demands on women’s time cause them to treat illness sooner or to take medications for symptoms that she might not otherwise treat. Similarly, the need to get to work prompts women to medicate their children’s symptoms more aggressively so that the children can remain in daycare or school. Limits on maternal time also lead mothers to rely on medicines in lieu of spending time comforting a sick child. Taking time off work because of a child’s illness is often frowned upon by employers, and this disapproval threatens women’s job security and ultimately the welfare of their families. In this kind of environment, it is financial necessity—not lack of concern for children—that motivates aggressive use of medicines.

Implications for Clinical Practice
In addition to creating and exacerbating illness, time-induced stress drives impatience with symptoms and
desire for fast-acting treatment. The need for quick relief prompts greater and more frequent use of medicine and thus raises the risk of overmedication, adverse drug reactions, and a tendency for people to self-medicate for nonpathological conditions. Lowered tolerance for discomfort can also lead people to rely on medications instead of seeking longer-term, behaviorally oriented strategies. Use of vitamins, laxatives, and antacids to counteract poor eating habits is one example of this strategy.

The self-care practices described in this paper may affect the timing of professional care as well as the stage at which patients are initially seen for their illness. As described above, patients may view self-medication as more expedient than seeking professional care. This behavior may be appropriate for self-limiting illnesses but can be harmful when applied to more serious conditions. Further, these self-medication strategies can mask symptoms and thus complicate diagnosis when patients finally seek medical care.

Because use of over-the-counter (OTC) medications for symptomatic relief is so common, patients may not remember whether they used some products or may not consider them to be "medication." Health care professionals must therefore query patients about their use of specific drugs so that patients report their medication use as accurately as possible. In addition, some patients are reluctant to report their self-care activities, because they fear being ridiculed or chastised for taking inappropriate action. A nonjudgmental approach to asking questions about medication use may help alleviate these patients' concerns.

A final consideration for clinical practice: Desire for fast relief may prompt some patients to ask for particular pharmaceuticals even when use of that medication is clinically inappropriate. More than one participant in the present study told me about having demanded antibiotics to speed relief from a cold.

**Conclusion**

In our current cultural environment, use of medicine becomes one way in which to make the best of what is perceived to be the unchangeable, taken-for-granted phenomenon of time famine. When women have "no time to be sick," medications act as time-saving devices that enable women to fulfill responsibilities at work or at home while attending to sick children or while being ill themselves. Over-the-counter and prescription drugs are used to "beat the clock" by increasing a person's capacity to be productive. Like other timesaving commodities, consumers find medications appealing because they seem to shift the time-power differential in favor of individuals, placing them in control of how time is spent. 

A related version of this article was published as: Vuckovic N. Fast relief: buying time with medications. Med Anthropol Q 1999;13(1):51-68.

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**References**

original research


The Most Beautiful Verb in the World

After the verb 'To love,' 'To help' is the most beautiful verb in the world.
Baroness Bertha Von Suttner, 1843-1914, author and peace activist, winner of the 1905 Nobel Peace Prize
Psychiatric Disorders and Functional Disability in Patients with Fibromyalgia

OBJECTIVE: The objective of this study was to describe the prevalence of current psychiatric disorders and functional disability among a sample of patients attending a fibromyalgia group clinic in the Rheumatology Department at Kaiser Permanente Colorado.

METHODS: A sample of 184 patients, 92% of whom were women, were given questionnaires at the beginning of the group clinic. Questionnaires included items on demographics, work disability, and history of trauma and abuse. Also included were the following instruments: the Illness Intrusiveness Scale, the Fibromyalgia Impact Questionnaire, and the Quick Psychodiagnosics Panel.

RESULTS: Most patients reported a history of trauma (74.7%) or abuse (53.5%). Major depression (34.2%), anxiety (29.9%), and panic disorders (17.4%) were prevalent in this sample. Symptoms of bipolar disorder were present in 59.2% of patients. In addition, a high level of psychiatric comorbidity was evident: 64.1% of the patients met DSM-IV criteria for two or more diagnoses. These patients also reported clinically significant functional impairment (especially in the life domains of active recreation, health, and work) and were most negatively affected by fatigue, lack of restfulness at waking, and stiffness.

CONCLUSIONS: Baseline assessment of this patient sample confirmed clinicians’ suspicion of clinically significant psychiatric and functional disability and led to the addition of a clinical psychologist to the group clinic to target and intervene with patients who had psychiatric disorders. We conclude that treatment effectiveness for fibromyalgia can be enhanced by collaboration between rheumatologists and behavioral medicine specialists.

Introduction

Fibromyalgia—a condition characterized by chronic widespread pain with multiple tender points, fatigue, sleep disturbances, and clinically significant functional impairment—is often associated with psychiatric comorbidity.1-3 The prevalence of fibromyalgia in the general population has been estimated to range from 2% among 20-year-old persons to 8% among 70-year-old persons, and the condition affects approximately 3.7 million Americans.4-6 The overwhelming majority of individuals suffering from fibromyalgia are women.

Although some treatments have been shown effective for fibromyalgia (eg, medications to improve sleep, exercise, some complementary therapies),7-16 no cure has yet been found. Patients with fibromyalgia pose a challenge to health care practitioners because the condition affects multiple aspects of physical as well as psychological function. For this reason, the traditionally brief medical office visit is often inadequate to address the needs of patients affected with fibromyalgia. Moreover, the care provided to these patients is often fragmented: typically, they see a variety of different specialists (ie, rheumatologists, neurologists, orthopedic specialists, mental health providers) in addition to their primary care physician, often with no practitioner managing their overall care.

Most patients diagnosed with fibromyalgia by their primary care physician at Kaiser Permanente (KP) in Colorado are referred to a rheumatologist. Because of the volume of fibromyalgia patients seen there—fibromyalgia is the second most prevalent condition seen at the KP Colorado Rheumatology Department—and because of the difficulties in providing care to these patients within the traditional office-visit model, the rheumatologists developed a fibromyalgia group clinic that was implemented in 1998. The group clinic consists of one four-hour session that includes education about fibromyalgia and its diagnosis; behavioral guidelines for restorative sleep, relaxation, and exercise; and treatment such as medications and physical therapy. Because...
Kaiser Permanente
Fibromyalgia Assessment

Date: 04/04/00
PID: 
Gender: Female
Age: 26
Session: Follow-up

Employment Status
Have job outside home
Y Presently working ‘usual’ job
Y Presently unemployed
N Declared medically disabled
N Applying for medical disability
N Fibromyalgia caused job change

APGAR Social Support: 7 (good)
Y Exercise in past 6 months
Y Suffered severe emotional trauma
Y Has been abused

Illness Intrusiveness
How does illness interfere with your:
4 Health
5 Diet
5 Work
6 Active Recreation
2 Passive Recreation
2 Financial Situation
4 Relation w/spouse
5 Sex Life
3 Family relations
4 Other social functions
2 Self expression/improvement
1 Religious expression
1 Community/Civic improvement

Scale: 1-Not very much to 7-Very Much

Fibromyalgia Impact

1 Physical Functioning Score
5 Days felt good last week
4 Nights restful sleep last week
0 Days missed work
3 How did pain interfere with job
1 How bad has pain been
7 How tired have you been
7 How you feel when you wake up
5 How bad is stiffness
2 How tense have you felt
2 How depressed have you felt

Scale: 0-Best to 10-Worst

Stress Management

Biggest Source of Stress
___ Marriage
___ Family
x Work/School
___ Finances
x Health
x Other

How do you handle stress:
___ Ignore it
x Talk to spouse
x Exercise
x Relaxational exercises
x Alcohol/drugs
x Yoga
___ Prayer
x Other

QPD Results

<table>
<thead>
<tr>
<th>TEST</th>
<th>RESULTS</th>
<th>REFERENCE RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>12</td>
<td>0-10</td>
</tr>
<tr>
<td>Anxiety</td>
<td>15</td>
<td>0-10</td>
</tr>
<tr>
<td>Panic Disorder</td>
<td>0</td>
<td>0-8</td>
</tr>
<tr>
<td>OCD</td>
<td>4</td>
<td>0-5</td>
</tr>
<tr>
<td>Bulimia</td>
<td>0</td>
<td>0-4</td>
</tr>
<tr>
<td>Somatization</td>
<td>12</td>
<td>0-11</td>
</tr>
</tbody>
</table>

Notes:
- Rule out bipolar disorder before treating depression.
- Depression Score is out of range, but patient does not appear to meet formal diagnostic criteria for major depression or dysthymia.
- Anxiety Score is out of range, but patient does not appear to meet formal diagnostic criteria for generalized anxiety disorder.
- Patient may be prone to somatization.

Depressive Symptoms:
- depressed mood
- weight gain
- insomnia
- agitation
- fatigue, loss of energy
- poor concentration
- thinks about death

Anxiety Symptoms:
- excessive anxiety or worry
- worried about multiple things
- restless, keyed up
- easily fatigued
- difficulty concentrating
- muscle tension
- sleep disturbance
- easily startled
- frequent cold, clammy hands or feet
- frequent stomach aches
- frequent hot flushes or chills
- frequent heart racing or pounding
- frequent “lump in throat”
- frequently feels out of breath
- frequent dizziness or lightheadedness
- frequent sweating

Figure 1: Rheumatologist-designed format for organizing results of fibromyalgia assessment.
the course of the condition is greatly affected by the presence of psychiatric disorders and by the patient’s initial level of functional impairment, assessment of these two domains among patients attending the group clinic became a primary goal for the rheumatology providers.

To understand the prevalence of psychiatric disorders and functional impairment in patients with fibromyalgia and to develop treatment plans more closely tailored to individual patient clinical status, we administered a patient questionnaire at the beginning of the clinic. We were particularly interested in screening for psychiatric disorders, because the rheumatology clinical staff expressed their belief (and the medical literature about fibromyalgia suggests) that psychiatric disorders are common among patients with fibromyalgia and greatly affect these patients’ ability to manage their condition and to achieve successful treatment outcomes.

**Methods**

**Study Setting**

The fibromyalgia group clinic is facilitated by a rheumatologist and by a nurse or nurse practitioner. The purpose of this clinic is to inform patients about the diagnosis and treatment of fibromyalgia, to suggest and develop self-management strategies, and to provide a forum for questions and answers. During part of the clinic, a physical therapist educates patients about exercise, and a psychologist provides information about stress management. The fibromyalgia group clinic was envisioned as a more efficient approach to educating and supporting patients while avoiding the unnecessarily duplicative care that results within the traditional office-visit model. Originally designed as three separate two-hour sessions over a period of three months, the clinic format was revised to consist of one four-hour session. This change was based on patients’ preference to minimize the number of trips to the rheumatology clinic. Group size has ranged from 15 to 30 patients.

**Study Subjects and Data Collection**

The data for this study were obtained from a variety of validated self-report measures administered to 184 patients attending the fibromyalgia group clinic between November 1998 and August 1999. Patients had been referred to a rheumatologist by their primary care physician, who made the initial diagnosis of fibromyalgia; the rheumatologist scheduled the patient for the group clinic after confirming the diagnosis.

When patients arrived for the group clinic, they were given a questionnaire assessing demographics, job-related disability, history of trauma and abuse, fibromyalgia-related functional status, intrusiveness of the illness, and psychiatric disorders.

Questionnaires were contained in a Point-of-View Survey Systems (Denver, Colorado) “box”—a handheld tablet about the size of a book, equipped with a liquid crystal display (LCD) screen displaying questions and a keypad with numeric and true/false buttons for entering responses. Questionnaires required a mean of 15 to 20 minutes to complete. After each questionnaire was completed, the Point-of-View box was placed on a docking station connected to a printer; questionnaire results were immediately summarized and printed in an easy-to-read format designed by the rheumatologists to highlight key findings and to allow rapid assessment of symptom severity and to assist with individualized treatment planning (Figure 1). The rheumatologists and nursing staff reviewed these results to develop care plans for patients and to assess any serious psychopathology that warranted referral to the mental health department. Data were stored in the Point-of-View boxes until they could be downloaded to a microcomputer for later analysis.

**Measurement Instruments**

Measurement instruments were selected by the rheumatologists after they reviewed the most widely used measures of condition-specific functional status as described in the rheumatology literature. The psychiatric assessment tool was chosen by the first author (AB) on the basis of his extensive experience with its use in primary as well as specialty care settings. The measures, self-administered by patients using the Point-of-View box, included the following:

- **Illness Intrusiveness Scale**. This scale measures the degree to which an illness interferes with major life domains, including diet, work, active and passive recreation, financial situation, relationship with significant other, sex life, family relations, other social relations, self-expression/self-improvement, religious expression, and community and civic involvement. Items are scored from 1 (not very much interference) to 7 (very much interference).
- **Fibromyalgia Impact Questionnaire**. This instrument was designed to measure the impact of fibromyalgia on instrumental activities of daily living (eg, shopping, meal preparation, household chores, walking several blocks, driving a car). This instrument...
The Quick PsychoDiagnostics Panel screens patients for nine mental disorders according to DSM-IV diagnostic criteria. This instrument is an automated tool for diagnosing and assessing the severity of psychiatric disorders. This part of the test required about 6.2 minutes to complete using the Point-of-View box. Diagnostic items are displayed on the screen in a true/false response format, and patients respond by pressing response buttons labeled “True” and “False.” When a patient completes the test, the Point-of-View box is placed on a docking station connected to a printer, and a diagnostic report is printed automatically. The computer-generated report resembles a blood chemistry report (lower half, Figure 1). Patient data are also stored electronically in a database that can be accessed for subsequent analysis (eg, to create aggregate reports).

The Quick PsychoDiagnostics Panel screens patients for nine mental disorders according to DSM-IV diagnostic criteria: major depression, dysthymic disorder, bipolar disorder, generalized anxiety disorder, panic disorder, obsessive-compulsive disorder (OCD), bulimia nervosa, alcohol and/or other substance abuse, and somatization disorder. The “lab report” provides 1) numeric scores that indicate severity of symptoms, 2) a specific psychiatric diagnosis, and 3) a list of the symptoms that led to the diagnosis. The algorithm for ruling out bipolar disorder does not provide a DSM-IV diagnosis, because the diagnosis requires an interview by a trained clinician. The algorithm requires that patients report at least eight symptoms of depression specified by the Quick Psychodiagnos-tics Panel and answer “True” to at least four of the following items, including the first item:

1. There have been periods in my life lasting a WEEK OR MORE when I was so excited or “hyper” that people thought I was not my normal self, or I got myself into real trouble.
2. During these periods when I was “hyper” or excited, I needed far less sleep than usual.
3. I talked so much or so quickly that people had trouble stopping me or understanding me.
4. My thoughts were racing through my head, and I could not slow them down.
5. I was so distracted by everything that I could not keep myself on one track.
6. I did reckless things that I would not normally do (like having promiscuous sex or going on spending sprees).
7. I felt I could do anything or that I had special powers.

Some of these bipolar-type symptoms also appear to be common in fibromyalgia patients and may be associated with sleep disturbance. The test also identifies patients who may be at risk for suicide. The second page of the report lists the symptoms that led to the diagnosis. The validity of the Quick PsychoDiagnostics Panel has been described elsewhere.

Additional questionnaire items asked about work-related disability, family support, participation in exercise programs during the past six months, history

![Figure 2: Diagnostic data for 184 patients attending](image-url)
of trauma and abuse, sources of stress, stress management behaviors, and past and current medication use.

Results

Mean age of patients in the sample was 48.8 years (SD = 12.2), and 92% were female. More than one fifth (20.7%) of the patients reported that they currently were receiving medical disability benefits, and 11.4% indicated that they were applying for these benefits. More than one third (35.9%) of the patients indicated that fibromyalgia caused them to change jobs. Past trauma and abuse were prevalent: 74.7% responded affirmatively to the question, “Have you ever been in a severe accident, suffered the loss of a child, spouse, or suffered severe emotional trauma from some other life event?”, and 53.5% responded affirmatively to the question, “Have you ever been abused (emotionally, physically, or sexually)?”

Psychiatric Diagnoses and Symptom Severity

Figure 2 shows the percentage of patients meeting DSM-IV criteria for diagnostic categories assessed by the Quick PsychoDiagnostics Panel. The most common diagnoses were major depressive episode (34.2%) and anxiety secondary to depression (29.9%). Panic disorder was also prevalent (17.4%). The Quick PsychoDiagnostics Panel generated a note suggesting to clinicians that they rule out bipolar disorder for 59.2% of the patients.

Figure 3 shows the percentage of patients who had multiple DSM-IV diagnoses. Most patients (61.4%) had two or more diagnoses, suggesting a high level of psychiatric comorbidity.

In addition to diagnoses, results were obtained describing the mean symptom severity scores for several disorders (Figure 4). These scores reflect the actual number of symptoms reported by the patient for any given diagnostic category. Mean scores for depression (12.8) and anxiety (14.1) were within a clinically significant range. Similar to the finding of high levels of comorbidity among psychiatric diagnoses, Figure 5 shows a large percentage of patients (76.1%) with clinically significant psychiatric symptoms in two or more diagnostic categories. Therefore, even when they did not meet DSM-IV criteria for a diagnosis, most patients reported multiple clinically significant symptoms—most commonly, a combination of depression and anxiety.

Illness Intrusiveness and Fibromyalgia Impact

Figure 6 shows mean illness intrusiveness scores across the 13 different dimensions assessed. Ten of the 13 mean scores were higher than the midpoint score of 3.5, indicating that patients reported at least moderate interference of fibromyalgia with most domains of function. Areas of highest reported impact were active recreation (5.74), health (5.33), and work (5.21).

Results from the Fibromyalgia Impact Questionnaire (Figures 7 and 8) showed that patients had the highest mean levels of functional impairment in ability to do yard work (2.24), walk several blocks (1.77), and do vacuuming (1.69). More pronounced impairment...
The finding of self-reported bipolar-type symptoms in more than half of our patient sample was somewhat unexpected.

was evident for items associated with symptoms of fibromyalgia: on a scale of 1 (best) to 10 (worst), mean scores for these domains ranged from 5.68 (for interference of fibromyalgia with job) to 8.05 (for fatigue). Poor scores were reported also for feeling rested at waking (7.89) and stiffness (7.87). Moreover, patients reported that during the past week, on average, they felt good 2.08 days, had 1.84 nights of restful sleep, and missed 2.08 days of work.

Discussion

Baseline questionnaire results for our sample of fibromyalgia patients showed a high prevalence of past trauma and abuse, major depression and anxiety disorders, and clinically significant functional disability. Detailed histories of trauma and abuse were not obtained from patients; instead, single questionnaire items were used to ascertain this information. Therefore, caution must be used in interpreting these results, which are nonetheless consistent with other reports describing a history of trauma and abuse among fibromyalgia patients.20,25

Our findings regarding psychiatric disorders are also generally consistent with other published research findings.1-12 In particular, depression among fibromyalgia patients might be expected, because considerable overlap exists between fibromyalgia symptoms and symptoms of depression (eg, fatigue and sleep disturbance). Of particular note was the high level of psychiatric comorbidity—the most common being a combination of mood and anxiety disorders. Because the Quick PsychoDiagnostics Panel assessed multiple psychiatric disorders, we were able to gain a more comprehensive picture of the range and severity of psychiatric impairment in our patient sample.

The finding of self-reported bipolar-type symptoms in more than half of our patient sample was somewhat unexpected. As discussed earlier, substantial overlap may exist between symptoms of sleep disturbance associated with fibromyalgia and bipolar symptoms. However, the rheumatologists expressed their clinical impression that bipolar disorder is fairly common among fibromyalgia patients and complicates treatment—and that, therefore, the bipolar-type symptoms reported in responses to the Quick PsychoDiagnostics Panel may identify some patients who truly have bipolar disorder. Nonetheless, the definitive diagnosis of this disorder can be made only after a more in-depth interview by a trained mental health clinician.

The patients in our study sample had clinically significant levels of functional disability that appeared to be widespread across most life domains and that most severely affected performance of physical activities such as doing yard work and walking several blocks. Notably, work-related function was substantially impaired. About one third of the sample were either receiving or applying for disability benefits, and, on average, patients had been absent from work more than two days during the prior week. The most commonly reported symptoms associated with this disability included fatigue, lack of restful sleep, and stiffness.

Clinical Implications of Findings

Our findings of substantial current psychiatric disorders as well as a history of trauma and abuse among fibromyalgia patients underscored these patients’ need for behavioral health services. As a result, the rheumatology and behavioral health departments formed a stronger collaboration to make behavioral health services more readily accessible to fibromyalgia pa-
A psychologist is now present at the group clinics to discuss stress and stress reduction with the patients. The psychologist also reviews printouts of Quick PsychoDiagnostics Panel results, identifies patients with high-risk profiles, conducts more detailed assessment with these patients (e.g., obtains more thorough information about trauma and abuse history, confirms a diagnosis of bipolar disorder) and plans more intensive, individualized intervention (e.g., cognitive behavioral therapy, referral to a psychiatrist for medication evaluation).

The results from this study suggest the importance of a multidisciplinary team approach to treating fibromyalgia. This approach is supported by other published research. As an important next step, follow-up surveys should be conducted to assess changes in fibromyalgia patients' psychiatric symptoms and functional status six months to one year after they attend the group clinic. The goal of this follow-up would be to identify factors that improve the health of fibromyalgia patients or that inhibit this improvement. Such findings will enable us to modify the group clinic to better meet the needs of fibromyalgia patients and to increase the likelihood of improved outcomes in this patient population.

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References

Figure 6: Illness intrusiveness scores for 184 patients attending fibromyalgia group clinic.

Figure 7: Response scores for 184 patients answering Fibromyalgia Impact Questionnaire.

Figure 8: Distribution of symptoms reported by 184 patients answering Fibromyalgia Impact Questionnaire.
Sexuality and Aging

Menopausal and postmenopausal women can experience decreases in both libido, orgasm, and frequency of coitus—most commonly because of physiologic changes due to menopause, less commonly due to depression or marital discord (Figure 1). The differential diagnosis in women who are seen for sexual difficulties during the climacteric is challenging, especially when symptoms such as decline in libido and/or persistent dyspareunia occur simultaneously with depression and marital discord. Estrogen, with or without androgen, can ameliorate the physiologic changes of menopause affecting sexuality. Depression can be treated with psychotherapy, with or without antidepressant drugs. Marital discord is best treated with couples therapy. The marital difficulties can either be the cause or the consequence of changes in sexual activity. In the latter case the marital discord resolves with the return of regular coital activity.

The physiologic changes of menopause affecting sexual response are largely mediated by estrogen. The most notable effect is on orgasmic response: Altered nerve function due to the hypoestrogenic state of menopause may delay clitoral reaction time and result in slow or absent orgasmic response. This effect, along with delayed or absent vaginal secretion, diminished orgasmic platform (ie, decreased or absent congestion in the outer third of the vagina), and painful uterine contractions (in some 60- to 70-year-old postmenopausal women) can further affect the sexual experience.¹² The psychological impact of these sexual changes is varied and can be very disturbing to women and to their partners.

Although the ratio of dysthymia and depression is as high as 2:1 in women versus men, many of these women are not treated for this depression and thus enter the menopausal years with untreated depressive illness.³-⁵ Depression can itself cause decreased libido as well as marital problems and can complicate any sexual problems arising from menopause. In addition, hot flushes and consequent nonrestorative sleep can complicate all these clinical situations.

Medication and illness in the postmenopausal years can affect sexuality and can complicate existing physiologic changes associated with menopause.⁶ The newer forms of antidepressant medication, ie, selective serotonin reuptake inhibitors (SSRIs), may cause slowed or absent orgasm and can reduce or eliminate libido in some women. Illness can decrease desire or simply make sexual activity inadvisable, given illness-associated lack of energy or anatomic difficulties.⁷

In about one third of couples, male sexual dysfunction contributes to decreased frequency of coitus (Figure 2); the remaining two thirds of couples are affected by physiologic factors of menopause (Figure 3).⁸ The psychological aspects of aging are less a factor in decreased coital activity than the physiologic effects of aging and the way couples adjust to those changes. Couples may choose to include alternatives

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**Figure 1.** Factors impacting changes in sexual function at menopause

**Figure 2.** Importance by age (N=635)

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to genital-genital contact if the male partner is having erectile problems; increased nonpenile stimulation may be helpful for women who have delayed response; and couples may develop a more flexible attitude toward their sexuality.10

Sexual problems are numerous in the US population and increase with aging. The scientific literature indicates, however, that sexual problems in elderly people are often anatomic or physiologic in nature,11,12 whereas sexual problems in younger people tend to be more psychological and sociocultural.13 Because of the complexity of sexual problems in postmenopausal women, gynecologists and primary care physicians have a central role in expediting the differential diagnosis and treatment (Figure 4).14,15

Clinical View of Sexual Functioning

Davidson16 divided sexual functioning into behavior and potency, whereas Sarrel and Whitehead8 divided sexual functioning into the desire phase, excitement phase, orgasmic phases, and dyspareunia. Both are useful ways to view sexual functioning when evaluating perimenopausal and postmenopausal women. These classifications are shown in Table 1.9,16

Sex and Menopause: Studies on Etiology of Decreased Coitus

Sexual research on sexual functioning during the climacteric has been studied for 30 years. This research has approached the issue from different points of view, including biologic, psychiatric, anthropologic, and sociologic. The two main conclusions are that decreasing sexual activity in a woman results in part from decreasing sexual functioning of her male partner and in part from anatomic and physiologic changes associated with her menopause. The representative studies are summarized in Table 2.17-25 The large majority of these studies found a decrease in coitus and sexual interest of greater than 40% within a few years of the menopause.

Physiologic Changes at Menopause and Their Effect on Sexuality

Hormones affect sexual arousal through sensory perception, central as well as peripheral nerve transmission and discharge, peripheral blood flow, and capacity to develop muscle tension. Impairment of this mechanism can lead to diminished sexual responsiveness, dyspareunia, decreased sexual activity, decline in sexual desire, and sexual aversion.

Decreasing estrogen affects the integrity of female reproductive tract tissues. Decreased vaginal lubrication and atrophic vaginitis result in dyspareunia. Decreased blood flow to the reproductive organs results in diminished vasocongestion. Progressive ischemia, thinning of the barrier layers of skin and mucous membrane tissue, loss of subcutaneous fat, and a shrinking introitus are among many changes which occur in the genital structures as a result of hypoestrogenemia. Exogenous effects include loss of pelvic muscle tone, decreased intraurethral pressure, a smaller bladder, and thinning of the mucous membrane lining of the bladder and urethra. These effects have been found to be somewhat ameliorated by continuing sexual activity despite no estrogen replacement. Women who were sexually active had less atrophy than those who were not.26 In general,
the health of the vaginal tissues decline in the absence of estrogen stimulation, despite sexual activity.

The physiology of the sexual response changes with prolonged hypoestrogenemia. These changes include diminished and slowed clitoral reaction time, diminished or absent secretion by the Bartholin glands, delayed or absent vaginal secretion, decreased vaginal length, and decreased transcervical width as well as possible painful uterine contractions in women aged 60 years to 70 years. Lack of estrogen decreases blood flow to the genitalia, and one study found a 50% increase in vulvar blood flow measured ultrasonographically when estradiol treatment was initiated. Ovarian steroids affect nerve cell growth, proliferation, transmission time, and rate of discharge along nerve fibers. A hypoestrogenemic state results in altered nerve function. Possible clinical manifestations of change in peripheral nerve function in postmenopausal women are numbness, itching, clothing intolerance, increased 2-point discrimination threshold, paresthesia, loss of clitoral reaction sensation, and decreased capacity for orgasm. Ovarian steroids can also affect neurotransmitters centrally, although this topic is beyond the scope of this article. All these changes affect desire, mainly through aversion. A postmenopausal patient’s experiences of persistent dyspareunia, postcoital bleeding, delayed or absent lubrication, and delayed or absent orgasm affect her motivation for sexual intercourse. Pain can cause vaginismus, a conditioned response to painful coitus. Lack of sexual relations due to physiologic change may then be further complicated by the effect of this condition on the marital relationship. Decline in sexual relations may cause a couple to respond or cope in ways that lead to further decline in coitus and further deterioration of the marital relationship.

Testosterone and Libido

Androgen levels in postmenopausal women decline over time. The impact of this decline on libido depends on the woman’s inherent biologic sensitivity to testosterone, her sexual history, and many other factors. Half of postmenopausal women continue to secrete appreciable amounts of testosterone from their ovaries, whereas the other half of postmenopausal women have negligible ovarian production of testosterone. In postmenopausal women who still secrete testosterone, testosterone levels may be approximately 50% lower than in premenopausal, younger women. Postmenopausal ovarian stromal tissue secretes testosterone but little to no androstenedione. The evidence that testosterone affects libido in women draws from clinical research on women who have lost ovarian testosterone production. The best known of that research was done by Sherwin, who examined mood, memory, and libido before and after surgical oophorectomy in the absence of preexisting depressive illness. With regard to testosterone and libido, Sherwin found that in surgically menopausal women, women receiving estrogen-testosterone preparations reported higher levels of sexual desire and arousal and higher frequency of sexual fantasies compared with women treated postoperatively with estrogen alone or with placebo. Other research on replacement therapy in postmenopausal women described use of estrogen versus estrogen-testosterone and found that libido improved in the combined treatment group only. Evidence shows that to the degree loss of testosterone affects libido in postmenopausal women, testosterone replacement can improve libidinal functioning.

Moreover, hormone replacement therapy itself can decrease libido through the effect of different forms of estrogen on sex-hormone-binding globulin (SHBG). In this circumstance, estrogen replacement stimulates production of SHBG and thus results in reduced levels of free estradiol and free testosterone. These reductions can cause return of hot flushes and dyspareunia as well as decrease in libido. The increase in SHBG can be ameliorated by prescribing a combined testosterone and estrogen preparation, by changing to an estrogen preparation that does not stimulate SHBG as greatly, or by prescribing testosterone along with the estrogen preparation the patient is already on.

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Table 1. Views of Sexual Function from a Clinical Perspective: Comparison of Published Studies

<table>
<thead>
<tr>
<th>Reference</th>
<th>Behaviors associated with libido or sexual motivation: sexual desire, sexual fantasies, and satisfaction or pleasure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Davidson</td>
<td>Potency: pelvic vasocongestion, orgasmic contractions, and possible extragenital responses</td>
</tr>
<tr>
<td>Sarrel and Whitehead</td>
<td>Desire phase: loss of desire or sexual aversion</td>
</tr>
<tr>
<td></td>
<td>Excitement phase: touch sensation impairment, loss of clitoral sensation, vaginal dryness, and urinary incontinence</td>
</tr>
<tr>
<td></td>
<td>Orgasmic phase: primary or secondary</td>
</tr>
<tr>
<td></td>
<td>Dyspareunia: vaginal dryness, vaginismus as conditioned response to painful penetration</td>
</tr>
</tbody>
</table>
Libido and the Psyche

Physiologic problems must always be treated despite presence of psychiatric illness, because these two factors can have an indistinguishably intertwined impact on libido and coital activity. Dyspareunia-related decrease in frequency of coitus can be the primary cause of marital problems and can present as a marital problem when in fact physiologic problems of menopause are the cause of the change in libido. Lack of libido due to low testosterone levels can induce the same type of marital conflict, a circumstance that can in turn mislead physicians into diagnosing a psychological problem as the cause of the lack of libido.

For depression or anxiety disorders to be the cause of decrease in libido, onset of the psychiatric illness must be established and correlated with the onset of sexual symptoms. Depression and anxiety in women may directly affect libido and sexual response through loss of desire and also may affect the woman’s sexual partner in that he stops initiating sexual relations. Libido can be affected by marital stress as well as by accumulated anger between the couple. Both these factors should be taken into account when evaluating decrease in libido. However, the chronicity of the coital problem and of the libidinal problem is a critical aspect of determining the cause of decreasing libido and frequency of coitus.

Table 2. Epidemiological Studies of Sexual Complaints in the Menopausal Female

<table>
<thead>
<tr>
<th>Study</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kinsey et al, 1953&lt;sup&gt;17&lt;/sup&gt;</td>
<td>53% decrease in coitus 48% decrease in orgasm</td>
</tr>
<tr>
<td>Bottiglioni et al, 1982&lt;sup&gt;18&lt;/sup&gt;</td>
<td>University Menopause Clinic in Bologna Five times as many postmenopausal women as premenopausal women had ceased having coitus Postmenopausal women reported coitus less satisfying, decline in orgasmic frequency, 79% decrease in sexual interest</td>
</tr>
<tr>
<td>McCoy et al, 1985&lt;sup&gt;19,20&lt;/sup&gt;</td>
<td>85% decrease in sexual interest</td>
</tr>
<tr>
<td>Sarrel and Whitehead, 1985&lt;sup&gt;9&lt;/sup&gt;</td>
<td>39% decrease in sexual interest</td>
</tr>
<tr>
<td>Bajuliyie and Sarrel, 1986&lt;sup&gt;21&lt;/sup&gt;</td>
<td>250 black women in Lagos 40% increase in dyspareunia within one to three years of menopause and 47% loss of sexual desire; by nine years postmenopausal, 70% had ceased sexual activity compared with 10% of their premenopausal partners</td>
</tr>
<tr>
<td>Hällström et al, 1973&lt;sup&gt;22&lt;/sup&gt;</td>
<td>800 Swedish women Extensive medical, psychiatric, and psychologic evaluation 181 postmenopausal women had: marked decline in sexual interest, a decline in capacity for orgasm, an increase in dyspareunia, and a decrease in coital activity</td>
</tr>
<tr>
<td>Keep and Kellerhals et al, 1974&lt;sup&gt;23&lt;/sup&gt;</td>
<td>448 Swiss women Menopause led to a decrease in the frequency of sexual activity, decrease in the quality of the sexual experience; greatest decline was among the lower social classes</td>
</tr>
<tr>
<td>Hällström, 1977&lt;sup&gt;24&lt;/sup&gt;</td>
<td>Longitudinal study of menopause in Sweden 52% decrease in sexual interest 20% decrease in orgasm frequency Decrements related to menopause and not to aging</td>
</tr>
<tr>
<td>Hällström and Samuelsson, 1990&lt;sup&gt;25&lt;/sup&gt;</td>
<td>33% decrease in sexual interest</td>
</tr>
</tbody>
</table>
Many perimenopausal and postmenopausal women have untreated dysthymia, a new episode of depression, or an untreated anxiety disorder. Because of the high prevalence of these untreated psychiatric illnesses, the likelihood of psychiatric comorbidity in postmenopausal women is high.43

Many types of medication used to treat psychiatric illness can lead to a decrease in libido or orgasm. This issue will be reviewed in another article on the newer forms of antidepressant medication. Because prevalence of depression and anxiety disorders is higher in women than in men and often remains untreated, the probability of a comorbid psychiatric disorder developing in midlife patients is high. Consequently, evaluation for problems of libido requires in-depth evaluation for depression and anxiety as well as for marital discord.

Psychological barriers to continued sexual functioning can also exist. Women who did not find sex pleasurable before menopause may look forward to ceasing sexual activity after menopause. Women with problems in their marital relationships may have resentment toward their spouses, and menopause may give these women permission to decline sex. Some women were raised to believe that sexual relations end at a certain age, and altered body image due to atrophic changes can impact libido. Consideration of these factors is necessary for understanding libido and the psyche.44 For marital problems to be the cause of decrease in libido, the marital problems must precede the decrease in libido and must be somewhat long-standing.

Cultural issues

Cultural issues too can affect a woman’s view of herself and thus can affect her psyche as well as her libido. Societal attitudes toward sex in midlife affect behavior.12 A woman’s value as a sexual person increases or decreases postmenopausally according to the society in which she lives.12 In a Nigerian study, most of the older women became sexually abstinent.29 In contrast, older women in almost 25% of primitive societies were seen as less inhibited, became more sexually active, and were more attractive to young men. Thus, societal context can substantially affect women’s libido.21

Previous sexual functioning has also proved to be a predictor of future sexual functioning. Koster and Gardner45 examined sexual wellness in Danish women aged 40, 45, and 51 years by in-person interview and by questionnaire and found that current frequency of sexual desire was highly correlated with former sexual activity. An additional finding was that anticipation of declining desire predicted decline in desire.

Sexual scripts may require people to adapt to the challenges of aging. Geriatric problems with health, pulmonary function, cardiovascular function, and mobility may all affect a woman’s ability to have sexual relations.7 Degree of comfort with alternative modes of sexual interaction may also affect her ability to have continued sexual relations.46

Summary

Coital and libidinal change can be singularly caused by anatomic and physiologic change associated with the climacteric—by psychiatric illness, by marital discord, or by a combination of all these factors. The ideal treatment for women in midlife is complete evaluation of the factors affecting sexuality and use of a combined treatment approach to ameliorate these factors. Use of such an individualized approach can enable the women in midlife to continue to have a satisfying sexual life, should they choose to do so.

References

14. Sherwin BB, Gelfand MM. The role of androgen in the maintenance of sexual functioning in oophorectomized women.

Our Contemporary World
Everything, absolutely everything in our contemporary world, has been tailored to the measure of men.
Eva Peron, 1919-1952, First Lady of Argentina, women’s suffrage and social activist.
**Likelihood That a Woman Will Have No Major Risk Factors At the Time of First Myocardial Infarction or Stroke**

This article describes an analysis of data from a case-control study of myocardial infarction (MI) and ischemic stroke in women aged 45-74 years who had been inpatients at any of 10 Kaiser Permanente Northern California (KPNC) facilities from November 1991 to November 1994. Information on major risk factors for ischemic stroke (ie, diabetes, hypertension, and smoking) and MI (ie, diabetes, hypertension, smoking, and hypercholesterolemia) known at the time of the MI event was obtained at patient interviews. The percentage of patients and controls who had MI or stroke and one, two, three, or (for MI) four major risk factors was calculated along with the odds ratio and 95% confidence intervals for stroke according to the number of major risk factors.

In 25.8% of women with incident ischemic stroke and 17.5% of women with incident MI, no major risk factors for the disease were identified at time of hospital admission. Among women with incident stroke, absence of major risk factors was associated with younger age; among women with MI, absence of major risk factors was associated with older age, although the changes with age were not statistically significant in this group. Among women who had only one of these major risk factors at presentation, hypertension was seen significantly more often with increasing age, whereas among women who had stroke or MI, smoking was the risk factor seen significantly less often with increasing age.

The data show that a substantial minority of female patients with incident stroke and MI have no identified major risk factors at the time of their MI event.

**Introduction**

Epidemiologic research over the last three decades has elucidated a number of important risk factors for myocardial infarction (MI) and stroke. That hypertension, diabetes, and cigarette smoking increase the risk of both MI and ischemic stroke is now well established. These factors are associated with an increased risk for MI and stroke in women as well as in men. High levels of total serum cholesterol are an established risk factor for MI in both men and women, but the question of whether high cholesterol increases the risk for stroke remains controversial.

For persons with MI and stroke, recognition and identification of risk factors is an important part of clinical care because postevent efforts to prevent recurrent disease are increasingly focused on management of these risk factors. The presence or absence of risk factors can influence physicians’ assessment of disease probability as well as their decisions about diagnostic testing in people who present with symptoms of MI or stroke.

Largely absent from the literature on cardiovascular epidemiology is information on the likelihood that a person will not have any risk factors when they are first seen with cardiovascular disease. Information about cardiovascular disease and risk factors in women is particularly sparse, because women have not been the subject of intensive epidemiologic investigation until recently. The present analysis of data from a previously completed study was done to answer the question: What is the likelihood that women with a confirmed diagnosis of MI or stroke have no identified major risk factors when they present with the condition?

**Methods**

**Case Ascertainment and Classification**

The methods used for case ascertainment and classification have been described in detail elsewhere. Briefly, an attempt was made to identify all fatal and nonfatal strokes and MIs in women aged 45-74 years who had been inpatients in any of 10 medical centers of Kaiser Permanente Northern California (KPNC) from November 1991 to November 1994. Sources for case ascertainment included hospital admission and discharge records, emergency department logs, and payments for out-of-plan hospitalizations.
Stroke was defined as the new onset of rapidly developing symptoms and signs of loss of cerebral function with no apparent cause other than that of vascular origin. Patients who had a history of cerebrovascular disease were excluded. Details of our protocol for verifying the diagnosis of stroke and for subclassifying stroke by type appear in our prior publication. The present analysis includes only stroke classified as ischemic.

Diagnostic criteria for myocardial infarction were adapted from those of the American Heart Association Council on Epidemiology. These criteria use presence or absence of chest pain, results of cardiac enzyme measurement, and electrocardiograms to classify events as definite, probable, or suspect MI or not MI. Consistent with other epidemiologic studies of MI based on these criteria, we included events categorized as definite or probable MI.

For each patient, an attempt was made to interview one control, matched by year of birth as well as medical facility at which care was usually received. To obtain one interviewed control per case, three potential controls were selected at random from among all female members of the Kaiser Permanente Medical Care Program. If the first potential control could not be located, declined to participate, or spoke a language other than English or Spanish, an attempt was made to enroll the second potential control and, if necessary, the third.

**Information Sources**

Eligible patients and controls were interviewed in person by trained interviewers using a standardized instrument. If a study subject had died or was unable to communicate verbally, an attempt was made to interview a proxy. Interview questions pertained to an index date, which was the date of symptom onset for each case and matched control.

Hypertension, diabetes, and current smoking were considered major risk factors for ischemic stroke. These three factors plus hypercholesterolemia were considered major risk factors for MI.

Family history was not considered as a major risk factor because it is not generally described as a major risk factor for MI.

### Table 1. Number and percentage distribution of major risk factors for myocardial infarction and ischemic stroke in patients and controls and age-adjusted odds ratios by number of risk factors

<table>
<thead>
<tr>
<th>No. of major risk factors</th>
<th>Myocardial infarction</th>
<th>Ischemic stroke</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Patients (Number, %)</td>
<td>Controls (Number, %)</td>
</tr>
<tr>
<td>0</td>
<td>93 (17.5) 269 (49.4)</td>
<td>1.0 (referent)</td>
</tr>
<tr>
<td>1</td>
<td>225 (42.3) 197 (36.1)</td>
<td>3.3 (2.4, 4.5)</td>
</tr>
<tr>
<td>HBP only</td>
<td>69 (13.0) 71 (13.0)</td>
<td>2.6 (1.7, 3.9)</td>
</tr>
<tr>
<td>DM only</td>
<td>37 (7.0) 14 (2.6)</td>
<td>7.2 (3.7, 14.0)</td>
</tr>
<tr>
<td>Smoking only</td>
<td>75 (14.1) 54 (9.9)</td>
<td>4.3 (2.8, 6.7)</td>
</tr>
<tr>
<td>High cholesterol only</td>
<td>44 (8.3) 58 (10.6)</td>
<td>2.1 (1.3, 3.3)</td>
</tr>
<tr>
<td>2</td>
<td>171 (32.1) 73 (13.4)</td>
<td>6.8 (4.7, 9.7)</td>
</tr>
<tr>
<td>3</td>
<td>37 (7.0) 6 (1.1)</td>
<td>17.9 (7.3, 43.8)</td>
</tr>
<tr>
<td>4</td>
<td>6 (1.1) 0 (0.0)</td>
<td>Inestimable</td>
</tr>
<tr>
<td>All</td>
<td>532 545</td>
<td>407 422</td>
</tr>
</tbody>
</table>

1. Major risk factors for myocardial infarction are hypertension, diabetes, smoking, and high cholesterol level.
2. Major risk factors for ischemic stroke are hypertension, diabetes, and smoking.

Note: Due to rounding, percentages do not total 100.0.
Table 1 shows the distribution of ischemic stroke and MI among patients and controls according to number of major risk factors along with age-adjusted odds ratios for stroke and MI in women who had one, two, three, or (for MI) four major risk factors. Also shown are the age-adjusted odds ratios for ischemic stroke and MI in women with only one major risk factor according to the risk factor. The odds ratios for both stroke and MI increased according to the number of major risk factors. For women with one major risk factor, odds ratios were highest in women with diabetes for both ischemic stroke and MI, although the 95% confidence limits for these estimates overlapped.

Among women with stroke, 25.8% had no major risk factors identified at the time of the incident event. Among women with MI, 17.5% had no major identified risk factors.

Table 2. Number and percentage distribution of major risk factors* for ischemic stroke in women with incident ischemic stroke by age at event

<table>
<thead>
<tr>
<th>No. of major risk factors</th>
<th>Age 45-54 yr</th>
<th>Age 55-64 yr</th>
<th>Age 65-74 yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>24 (35.8)</td>
<td>29 (21.0)</td>
<td>52 (25.7)</td>
</tr>
<tr>
<td>1</td>
<td>26 (38.8)</td>
<td>65 (47.1)</td>
<td>94 (46.5)</td>
</tr>
<tr>
<td>HBP only</td>
<td>8 (11.9)</td>
<td>29 (21.0)</td>
<td>60 (29.7)</td>
</tr>
<tr>
<td>DM only</td>
<td>6 (9.0)</td>
<td>9 (6.5)</td>
<td>14 (6.9)</td>
</tr>
<tr>
<td>Smoking only</td>
<td>12 (17.9)</td>
<td>27 (19.6)</td>
<td>20 (9.9)</td>
</tr>
<tr>
<td>2</td>
<td>14 (20.9)</td>
<td>42 (30.4)</td>
<td>55 (27.2)</td>
</tr>
<tr>
<td>3</td>
<td>3 (4.5)</td>
<td>2 (1.4)</td>
<td>1 (0.5)</td>
</tr>
<tr>
<td>Total</td>
<td>67</td>
<td>138</td>
<td>202</td>
</tr>
</tbody>
</table>

* Major risk factors for ischemic stroke are hypertension, diabetes, and smoking.

Note: Due to rounding, percentages do not total 100.0.
Among patients with only one risk factor, the percentage of patients with only hypertension increased significantly with age for patients with stroke ($p < 0.01$) and for patients with MI ($p < 0.01$); the percentage of patients whose only risk factor was smoking decreased significantly with age ($p < 0.05$).

**Discussion**

Epidemiologic research has identified several major risk factors for ischemic stroke and MI in women. Our analysis of data from a large case-control study in women confirms that the risk of both MI and stroke is substantially higher in women with these well-recognized major risk factors, whether alone or in combination. Knowledge of the relation between these factors and disease is important for designing programs aimed at preventing the diseases.

Clinicians see patients—not cases and controls. Knowing about the epidemiologic associations between major risk factors and disease may lead physicians to expect that women with disease will have major risk factors, although we have no proof of this speculation. Our data show that a substantial minority of female patients with incident stroke and MI have no major risk factors identified at the time of their event.

The pattern of risk factors among women with only one major risk factor is also of interest. For women who had MI or stroke, cigarette smoking decreased with increasing age as a single risk factor, whereas hypertension increased with increasing age as a single risk factor in these women.

Unfortunately, we have no comparable data about men. Similar analyses of risk factors with incident disease could not be identified for either men or women. Information on major risk factors was derived from self-report, and the study results should be interpreted recognizing this limitation. More important, the absence of identified major risk factors does not mean that the woman had no risk factors; occurrence of a clinical event may prompt clinical testing that leads to a previously unrecognized diagnosis of hypertension, diabetes, or hypercholesterolemia. Thus, the present analysis should not be interpreted to mean that no major risk factors were present at the time of the incident event, only that no major risk factors had been identified at that time. An increase in rate of screening for dyslipidemia and/or hypertension might change these percentages. Finally, some risk factors were not considered here. These risk factors include family history of heart disease or stroke; obesity; dyslipidemias other than hypercholesterolemia; hyperhomocysteinemia; and others.

This study found that the absence of identified major risk factors is not uncommon in women patients with incident stroke and MI. Among patients with only one identified major risk factor, the pattern of major risk factors changed with age.

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**Table 3. Distribution of major risk factors for myocardial infarction among women with incident myocardial infarction by age at event**

<table>
<thead>
<tr>
<th>No. of major risk factors</th>
<th>Age 45-54 yr</th>
<th>Age 55-64 yr</th>
<th>Age 65-74 yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>16 (13.1)</td>
<td>29 (16.0)</td>
<td>48 (21.0)</td>
</tr>
<tr>
<td>1</td>
<td>48 (39.3)</td>
<td>74 (40.9)</td>
<td>103 (45.0)</td>
</tr>
<tr>
<td>HBP only</td>
<td>9 (7.4)</td>
<td>18 (9.9)</td>
<td>42 (18.3)</td>
</tr>
<tr>
<td>DM only</td>
<td>7 (5.7)</td>
<td>11 (6.1)</td>
<td>19 (8.3)</td>
</tr>
<tr>
<td>Smoking only</td>
<td>28 (23.0)</td>
<td>29 (16.0)</td>
<td>18 (7.9)</td>
</tr>
<tr>
<td>High cholesterol only</td>
<td>4 (3.3)</td>
<td>16 (8.8)</td>
<td>24 (10.5)</td>
</tr>
<tr>
<td>2</td>
<td>43 (35.2)</td>
<td>65 (35.9)</td>
<td>63 (27.5)</td>
</tr>
<tr>
<td>3</td>
<td>11 (9.0)</td>
<td>13 (7.2)</td>
<td>13 (5.7)</td>
</tr>
<tr>
<td>4</td>
<td>4 (3.3)</td>
<td>0 (0.0)</td>
<td>2 (0.9)</td>
</tr>
<tr>
<td>Total</td>
<td>122</td>
<td>181</td>
<td>229</td>
</tr>
</tbody>
</table>

---

* Major risk factors for ischemic stroke are hypertension, diabetes, smoking, and high cholesterol level.

Note: Due to rounding, percentages do not total 100.0.

The greatest problem with which we are confronted in the practice of gynecology is startlingly evident from the fact that “among white women cancer is the leading cause of death by a considerable margin for the 20-year period from 35-54 years of age. A study of the current statistics indicates that, if present conditions of mortality remain unchanged, cancer will take as its toll one in every seven, of the women in the prime of life are going to die from this disease. The fact that this situation persists (in spite of knowledge that we can cure 96% of certain very malignant tumors, specifically those of the cervix) is the greatest condemnation of the present lay and professional handling of cancer.

Bowen, reported two cases of “precancerous dermatoses” that had been present 19 and four years without becoming invasive but which showed the cytological changes found in undoubted cancers. Although the illustrations of his second case have been used to change found in undoubted cancers. Although the il-
etoses Wende with demonstrating what had been suspected by others, namely, that these intraepithelial changes could progress to true malignancy. Schottlander and Kermauner have been credited with observing the presence of carcinoma confined to the squamous epithelium at the periphery of invasive carcinoma of the cervix. Since then Schiller has repeatedly emphasized that carcinoma of the cervix can be diagnosed before invasion occurs and has introduced the procedure of staining the cervix with an aqueous solution of iodine to reveal suspicious areas requiring biopsy. He has also shown that cases adequately treated in the preinvasive stage are 96% curable.

Graves, during nine months experience with the Schiller test, discovered three early cases of cancer of the cervix, all of which, however, had had contact bleeding. He believed that cancer of the cervix passes through a period in its life history during which it is theoretically 100% curable and concluded that “patients must repeatedly be on our examining tables who without impairment of health, and often without symptoms, harbor a disease which at the same time is invisible to the keenest eye and intangible to the most sensitive touch.” Of the 18 cases reported by Stevenson and Scipiades two are known to have developed invasive carcinoma after three and eight years. Wollmer stated that “It becomes evident that there are neither symptoms nor clinical findings on which to base the diagnosis of cervical carcinoma in the early stage.” In one group of 35 normally menstruating women in whom he removed the entire cervical mucosa he found one unsuspected epidermoid carcinoma. In another group of 24 patients with cervicitis and erosion he found one more unsuspected carcinoma.

Commentary

By Steven A. Vasilev, MD, MBA

The Gynecologic Cancer Detection Clinic, one of a very few in that era, was established in the face of no efficacious screening modalities for cervical cancer, a potentially lethal disease that was rampant at the time. Since then, screening for cervical cancer—and more important, screening for the precursors of cervical cancer—has undergone a dramatic evolution and is the focus of this commentary. Although screening programs for ovarian and endometrial cancers also have been proposed, a litany of limitations has prevented adoption of these proposals, and no screening standards have yet been established.

Early History and Development of Cervical Cancer Screening

In the early 1940s, Dr George Papanicolaou proposed cytologic evaluation of cervical cells exfoliated into the vaginal pool. This method of screening for cervical cancer was further refined by Ayre in 1947 with the introduction of a wooden spatula to physically scrape cells directly from the cervical surface. Subsequently, routine practice came to include sampling of the endocervical canal by using a cotton-tipped applicator, an implement now largely replaced by a cytobrush, whose greater abrasiveness produces a tenfold greater yield of endocervical cells. These low-cost technical improvements occurred after Dr Footer’s experience was published in a 1944 issue of the Permanente Foundation Medical Bulletin. Without these improvements, Footer could not help but conclude that negative results of vaginal smear were not reliable. The relatively low yield of cervical cells from the...
Meyer\textsuperscript{12} maintained that cancer of the cervix can be recognized from fragments of superficial epithelium without observing its relation to the underlying connective tissue. This authoritative opinion substantiates the value of cervical scrapings, the removal with a curet or similar instrument of the epithelium down to the connective tissue, in the routine study of the cervix to detect occult carcinomatous changes. He believed that these intraepithelial changes will go on to fatal invasive carcinoma in the absence of treatment.

Knight\textsuperscript{13} reported 17 cases of noninvasive intraepithelial tumors of the cervix with an average age incidence of 44.1 years among 406 primary squamous cell epitheliomata of the cervix during a 16-year period at the Sloan Hospital for Women. He concluded that treatment should be just as thorough as when an invasive tumor is being treated. The presence of carcinoma was completely unsuspected in 11 of his patients.

Both of the methods commonly used to diagnose carcinoma of the cervix, namely, biopsy of the full thickness of the cervix, or curettage of the cervical canal and of the surface of the external cervix, have been shown to provide adequate material for diagnosis. However, the hindrance to their general application to the entire population is obvious from a consideration of the skill, time and expense involved. Their use and usefulness are dependent both upon the patient going to a physician and upon the physician to whom she goes. The next step, that of diagnosing the presence of cancer from individual cells and groups of cells shed into the vaginal secretions, has been accomplished by Papanicolaou and Traut\textsuperscript{14} and verified by Meigs, et al.\textsuperscript{15} Theoretically this would permit application to the general population without examination, that is a mass survey of the entire female population for the presence of genital cancer could be conducted by having the women send a small amount of the vaginal secretion to a central laboratory. However, the pitfalls are many and the practicability of such a detection program is doubtful.

There is now no question that advanced cancer can be diagnosed from individual cells cast off from the growth and that this method is useful when the symptoms cannot be explained by the clinical findings. A cancer of the cervical canal or in an inaccessible recess of an irregular uterine cavity might escape discovery by curettage, whereas it could be diagnosed from cancer cells found in the smear taken from the upper vagina, cervical canal or endometrial cavity. The danger of relying upon the vaginal smear lies in failure to realize its limitations; all slides made from positive cases do not contain the cancer cells, therefore a negative test is not conclusive. Furthermore, cancers such as the adenoma malignum of the fundus and cervix do not shed cells from which the diagnosis can be made.

Finally, the truly early preinvasive carcinomas of the cervix theoretically and practically cannot be diagnosed by this method. This is obvious from a consideration of the method of growth and extension of cancer below the surface epithelium are not readily sloughed spontaneously. Thus, despite its labor-intensive nature and higher morbidity, the greater emphasis at the time on visual aids and directed biopsy was understandable and predominately targeted carcinoma in situ and invasive lesions. Today, direct scraping of the cervix enables cytologic screening for the “truly early preinvasive” lesions or cervical intraepithelial neoplasia (CIN) I-III. Because progression from CIN to invasion usually takes many years, this progression is precisely where early detection and prevention of invasive cancer can make the greatest impact.

**Success of Modern Screening Tests for Cervical Cancer**

Notwithstanding Dr Footer’s positive experience with screening by visually directed biopsy, screening by exfoliative cytology (ie, Pap smear) has since been credited with having the greatest impact on reducing both the incidence of cervical cancer and the death rate therefrom. Although never the subject of prospective, randomized studies, large-scale mass screening programs consisting of yearly Pap smears were first instituted during the 1950s in British Columbia. By 1984, the result was a threefold reduction in cervical cancer incidence and fourfold fewer deaths from this disease. The Pap test was quick, simple, associated with low morbidity, and low-cost. Therefore, because of its improved sensitivity compared with the other tests of vaginal cytology, the Pap test evolved as a tool substantially more applicable to mass screening than labor- and cost-intensive visual biopsy screening. Schiller-Lugol staining (recommended by Footer as a screening method) and acetic acid wash—with or without 8-18× magnification via colposcopy—still plays a major role in management of cervical dysplasia. In
sion of these intraepithelial tumors. The first carcinomatous changes take place in the basal cells, those just above the basement membrane, and extend laterally and gradually upward toward the surface. When the surface cells are involved in the typical changes, the presence of the cancer could theoretically be diagnosed by the vaginal smear method. But even here it must be remembered that the examination by biopsy of all non-staining areas of the cervix is a more direct and conclusive approach to the problem as it involves the visible portion of the cervix. Differential suction curettage of the cervical canal and endometrial cavity are comparable procedures applicable to these hidden areas. In summary it can be said that none of these procedures is universally applicable but that taken together they provide all of the tools required by the thorough and inquisitive physician to establish the presence or absence of cancer of the cervix and fundus of the uterus.

With the aid of the American Society for the Control of Cancer, the National Cancer Institute (US Public Health Service), and private physicians, I have been able to locate only two clinics devoted to the early discovery of genital cancer.

At the Cancer Prevention Clinic at Memorial Hospital in New York during the 25 months from November 1, 1940 to January 1, 1943 among 49 malignant tumors found, four were of the fundus uteri, six of the cervix uteri, one of the vulva and two of the ovary. Both the clinic at Memorial Hospital, and the one in Philadelphia, where one fundal and three cervical cancers were discovered among 976 women are purely diagnostic. The patients are referred elsewhere for treatment. This is entirely inadequate because the significance of very early lesions that are neither palpable nor visible is not generally appreciated. Another inherent defect lies in the fact that at these clinics only patients wanting to be examined specifically for cancer are seen. As we have shown in our clinic, it is preferable to examine every woman for cancer rather than restricting our special tests to those specifically requesting it. Mortality from cancer can be reduced only on a large scale. This presupposes that the public will be made to realize the importance of periodic examinations and that every one of them will be given a complete examination to detect cancer, regardless of the patient’s complaint. The cancer detection clinics should be the center for the dissemination of detailed information to the medical profession so that every doctor will be able to determine which patients require specialized attention.

**Organization of the Cancer Detection Clinic**

At our Cancer Detection Clinic, which in reality is intimately a part of the general gynecological clinic, these problems have been largely overcome. In the first place literature is distributed to the women stressing the importance of periodic examinations and the fact that early cancer is curable. In regard to this program of lay education it is expected that the old objection will be raised that it fosters cancer phobia. How has screening affected mortality rates more recently? Unfortunately, despite today’s widespread availability of low-morbidity cytologic screening, cervical cancer continues to develop in women. The American Cancer Society estimates a relatively steady pattern of 16,000 new cases and 5,000 deaths yearly. In addition, the reported incidence of 65,000 new carcinoma in situ cases probably represents severe underreporting of this disease.

**Limitations of Cytologic Screening Tests for Cervical Cancer**

Nearly half the cases of cervical cancer in the United States are diagnosed in women who have never or rarely been screened. Barriers to access to Pap smear testing have been identified and targeted for elimination; however, even when available, Pap tests do not always alter the clinical outcome. For example, in Scotland from 1982 to 1991, 63% of women who died of cervical cancer before age 45 years had received Pap tests. In addition, as many as 20% of women with CIS or invasive cervical cancer had normal Pap test results in the preceding year. Such reports suggest that Pap tests do not have 100% positive or negative predictive value, especially when used as the sole screening method at a single screening visit. For various reasons, sensitivity and specificity of the Pap test have been estimated only incompletely. However, a false-negative rate of 15% to 20% has been shown in many series of rereviewed Pap tests. A recent meta-analysis suggests that the true sensitivity may be substantially lower. Incompletely determined specificity and false-positive findings are also of concern.
We have not seen any patients with cancer phobia, but many patients have come in to find out if they have cancer or, who in the course of an examination for some other complaint, have expressed the hope that they do not have cancer. If it is this doubt and curiosity that is usually called cancer phobia, we should have more of it. We cannot hope to appear consistent in our beliefs if on the one hand we excuse the present high cancer mortality on the basis that the patients come late for treatment and then on the other hand condemn as neurotics all of those who try to be examined early.

The routine examination includes that of the breasts and pelvic organs. Patients with suspicious lesions of the breasts are referred to the surgical service. In the course of the pelvic examination the cervix is cleansed and inspected closely. Any gross lesions are photographed in color. Then the lower cervical canal is cleansed by rotating a cotton swab gently to determine whether the mucosa bleeds easily. If it does, suction curettage of the cervical canal is performed; if an insignificant amount of tissue is obtained or if stenosis prevents performing this procedure, a smear is made from material aspirated from the cervical canal. Next the Lugol's solution is applied generously with a large well-soaked cotton swab. The excess solution can be immediately removed by a blotting motion with large cotton applicators. It is important not to rub because the upper glycogen-containing layers may be rubbed off, producing non-staining areas simulating those of occult leucoplakia. The latter appear as pale yellow-white in contrast to the dark mahogany brown of the normal staining squamous epithelium. The junction between the two is abrupt. All of the true non-staining areas are biopsied. In a series of 100 consecutive cervixes examined the Schiller test was positive, non-staining, in 28 (28%). This is of importance because among true non-staining areas we have found 12% to be carcinomas. These figures roughly correspond to Schiller's findings that 25% of the cervixes showed occult leucoplakias and that among these there were 4 to 12 percent carcinomas. From Schiller's findings, which have been verified in this clinic, it is evident that from one percent to three percent of women in the age group seen in a gynecological clinic have definite carcinoma of the cervix at the time they are examined.

It is our opinion that cancer of the cervix in its early stage can be treated best when the same person performs the diagnostic procedures, studies the pathological material grossly and microscopically and carries out the treatment, whether it be by radium or surgery. This is especially true in the very early cases where the lesion is a small non-staining area. Such a lesion might not be included in the biopsy or in the slide. If this slide is examined by anyone else the pathological report will deny the presence of malignancy. However, the person who took the material should promptly realize that the section does not reveal changes compatible with one of the many associated with non-staining areas and consequently that the slide does not contain the

One reason for “failure” of cytologic screening in individual cases (ie, false-negative or positive results) is that dysplastic lesions can spontaneously regress and recur over time. The Pap test can usually show presence or absence of abnormal cells but cannot distinguish between patients with dysplasia who will have spontaneous regression and patients in whom cancer will ultimately develop if treatment is not begun. In addition, a dysplastic lesion might not yield an adequate number of abnormal cells to provide the pathology slide with a sufficient cellular sample. For these reasons, repetitive screening at regular intervals is necessary for optimal clinical effectiveness. A single, isolated, apparently normal Pap test result has less meaning than multiple normal test results, which are associated with a much lower incidence of dysplasia or cancer. The necessary testing interval depends on presence or absence of risk factors, primarily those related to sexual transmission of human papilloma virus (HPV).

Other reasons for false test results relate to technical issues. For a Pap smear to be correctly analyzed, an adequate specimen must be collected, the slide must be closely screened for abnormalities, and the abnormalities must be appropriately interpreted. Deficiencies in any one of these steps may explain a negative test result for a dysplastic lesion or cervical cancer.

Resource Allocation for Maximally Effective Screening of Cervical Cancer

Almost 50 years after the Footer report, we still must recognize screening limitations as we develop and select appropriate adjuvant testing modalities. Proposed strategies to improve screening include advances in specimen collection, automated interpretation methods, and adjuvant physical and molecular tests. Although
Table 1. Age incidence of patients with gynecological cancer (July 1, 1943 to July 1, 1944)

<table>
<thead>
<tr>
<th>Site of cancer</th>
<th>Number of cases</th>
<th>Number of cases detected</th>
<th>Age range</th>
<th>Average age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cervix uteri</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preinvasive</td>
<td>7</td>
<td>4</td>
<td>30-55</td>
<td>38</td>
</tr>
<tr>
<td>Invasive</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage I, early</td>
<td>3</td>
<td>2</td>
<td>31-44</td>
<td>35</td>
</tr>
<tr>
<td>Stage I, late</td>
<td>2</td>
<td>0</td>
<td>43-45</td>
<td>44</td>
</tr>
<tr>
<td>Stage II</td>
<td>1</td>
<td>0</td>
<td>44</td>
<td>44</td>
</tr>
<tr>
<td>Stage IV</td>
<td>1</td>
<td>0</td>
<td>44</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>2</td>
<td>31-45</td>
<td>40</td>
</tr>
<tr>
<td>Fundus uteri</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adenocarcinoma</td>
<td>3</td>
<td>1</td>
<td>53-55</td>
<td>54</td>
</tr>
<tr>
<td>Ovary</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adenocarcinoma</td>
<td>1</td>
<td>0</td>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td>Krukenberg</td>
<td>1</td>
<td>0</td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td>Vulva</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Epidermoid carcinoma</td>
<td>1</td>
<td>0</td>
<td>34</td>
<td>34</td>
</tr>
</tbody>
</table>

not part of the medical lexicon in Footer's day, cost-effectiveness must be an inherent part of any new tests that augment the Pap test. Cost-effectiveness analysis considers health outcomes as well as the resource costs of health interventions. Going beyond cost-benefit analysis, analysis of cost-effectiveness considers general benefit as given (eg, Footer's screening methods) and then look for alternatives that are least costly while providing the greatest benefit. Thus, the primary role of cost-effectiveness analysis is to identify the value of alternative interventions for improving health while considering as many costs as possible.

Analysis is complicated by the elusive nature of determining “total” or “full” costs. Nonetheless, today’s adjuvant tests must be measured in terms of both the clinical and economic outcomes they produce. For example, we have little use for tests that lead to more diagnoses of true lesions that are nonetheless clinically insignificant. Adjuvant tests used within a specified program should ultimately lead to increased life expectancy by detecting and treating CIN and early-stage cervical cancer. To be useful, adjuvant tests must also enable stratification of risk so that for patients at low risk for cervical cancer, emphasis may be placed on surveillance and follow-up while treatment (often more costly than surveillance) is emphasized for high-risk patients, who can be expected to benefit most from it.

Perhaps the best way to view resource allocation analysis is to compare marginal cost vs marginal benefit, ie, how much additional overall benefit can be derived per additional incremental unit of cost. For the most part, such rigorous analysis of the new Pap-test-enhancing technology is lacking. Ultimately, formal decision
lesion in question. Further sections have to be made from the block and if these also fail to show the lesion the patient must be reexamined and another biopsy taken. Failure of the first biopsy to contain the lesion can be a very serious matter when the non-staining area was very small because the chances are that the distortion of the cervix as a result of the biopsy and resulting healing processes will make it difficult to determine whether or not the area was actually removed. To forestall such a situation it is preferable to remove an adequate wedge of tissue, including the junction of the normal and questionable area. After the tissue has been removed the application of Lugol’s solution again to the excised tissue will stain it as before and it can be definitely ascertained that the lesion has been removed. It is also important to orient the tissue by placing it on a piece of filter paper, before immersing it in the fixing solution, in such a way that the epithelium will be sectioned perpendicular to the surface. When the non-staining area involves a large part of the cervix it may be permissible to remove a small punch biopsy or cervical scraping with the knowledge that if the section should prove unsatisfactory, plenty of the lesion remains for future study.

Review of Cases

Between July 1, 1943 and July 1, 1944, twenty patients with malignancies of the genitalia have been seen in this clinic. These included seven preinvasive carcinomas of the cervix (in addition there are five cases in which the diagnosis is not yet conclusive), one stage I epidermoid carcinoma in the canal of a cervical stump two years after supravaginal hysterectomy for “tumors,” one endophytic epidermoid carcinoma stage I on the anterior lip of a grossly normal cervix, two stage I grossly diagnosable epidermoid carcinomas, one stage I adenocarcinoma of the posterior lip, one stage II epidermoid carcinoma and one stage IV epidermoid carcinoma.

The ages of the seven patients with preinvasive carcinomas were 30, 31, 32, 36, 41, 43 and 55, with an average age of 38 years. One of these patients had malignant changes in a cervical polyp which was not suspected before histological study. Another patient had a small grossly visible leukoplakia on the anterior cervical lip. A third patient had a sharply demarcated raised red granular area on the cervix. These cases cannot be considered as having been detected because they all presented lesions which should be submitted for histological examination. The remaining four cases, however, were discovered entirely as the result of the findings with the Schiller test, which indicated areas requiring biopsy.

The ages of the patients with invasive carcinoma were 31, 31, 43, 44, 44 and 45, with an average age of 40 years. One patient (plate I, case 3), a negress 31 years of age, had had a supravaginal hysterectomy two years previously for “tumors.” For the past six weeks she had had post-coital bleeding. The cervix appeared to have an “erosion” analysis involving costs as well as defined benefits and utility is likely to help define the best screening program for each patient.

Recent and Proposed Improvements to Cervical Cancer Screening Tests

Meanwhile, multiple technologic innovations have already been incorporated—albeit somewhat haphazardly—into screening programs. Some of these innovations have a more substantial evidence base and hold greater promise than others. A few of these promising innovations are introduced briefly; many others have been proposed.

ThinPrep®

The ThinPrep® method has been introduced to improve the quality of specimen collection. Specimens are placed in a collection fluid that homogenizes and rinses the cells, thus optimizing cell preservation and reducing artifacts that hinder interpretation. Mass screening applications for this method await improvement in handling large quantities of specimens at a reasonable cost.

PAPNET®

Because 50,000 to 300,000 cells are held on each slide, rare abnormal events may be missed by routine cytotechnologist screening. PAPNET® is a neural-network computer processing system that digitally screens conventionally prepared slides. The computer is programmed to recognize patterns and can identify abnormalities based on morphologic characteristics. Areas of concern are reviewed and confirmed by examination...
around the external os. An endocervical suction biopsy was taken which showed early invasive epidermoid carcinoma. This was confirmed by biopsies of the anterior and posterior lips including the “erosion.” Both of these contained invasive carcinoma. Thus the “erosion” was not the benign lesion it appeared to be. Two of the stage I cases of invasive carcinoma were biopsied solely because of non-staining areas. Thus two of the seven cases of invasive carcinoma of the external cervix would not have been diagnosed had it not been for the routine use of the Schiller test. The fact that this test was directly responsible for the diagnosis in six of the 14 cancers of the cervix is indisputable proof of the value of the Schiller Lugol test.

All of the three adenocarcinomas of the fundus uteri were early growths still circumscribed and essentially confined to the endometrium. One case had no symptoms other than those produced by the procidentia. The diagnosis was made during the curettage routinely performed prior to any vaginal plastic operation. Consequently one of the three cases of fundal carcinoma was actually detected prior to the onset of symptoms.

The remaining tumors consisted of one adenocarcinoma of the ovary in a patient 35 years old, one Krukenberg tumor in a 19-year-old girl who was four and a half months pregnant, and one epidermoid carcinoma of the vulva. All of these lesions were far advanced when the patients presented themselves for treatment.

Among the many faulty concepts regarding cancer, one of the most pernicious is the “cancer age” myth, the belief that certain types of cancer appear only after the person has attained a certain age. Ordinarily the cancer age, based purely on a statistical analysis of causes of death, is stated to be from 35 to 55 years. Actually the “cancer age” extends from birth to death. In any individual, cancer may be found at any age. In regard to cancer of the cervix, Waters reported a case in a seven-months-old infant and referred to two other cases at seven months and seven years. Hurdon mentions cases at 17 and 19 years of age which were not accurately diagnosed for many months because of failure to examine the patients. Such fatal delays in diagnosis will not be prevented until cancer is suspected and looked for in each and every patient. Although we have confirmed Schiller’s findings with the Lugol’s test and are firmly convinced of its value in aiding the discovery of an increasing number of early cancers of the cervix, the current literature reflects conflicting opinions regarding its value. Graves was enthusiastic, and Henricksen used the test routinely. On the other hand Hurdon, Martzioff and Novak considered it practically useless, and Macfarlane abandoned the Schiller test after two thousand examinations. My own opinion is prejudiced in its favor on the basis of the fact that of the 14 cases of cancer of the cervix mentioned here, six, or 42.9%, would not have been biopsied had the Schiller test been omitted.

of the actual slide. Critics assert that this system produces more ASCUS (atypical cells of uncertain significance) diagnoses than correct assignments into benign or dysplastic categories and that this result may create a larger problem by increasing costs as well as morbidity.

HPV Testing

HPV strain testing has become widely available, both for primary screening and for triaging patients into risk groups. However, in young, sexually active women, HPV infection patterns may change over time, weakening the clinical significance of a single test result. For most patients, information provided by HPV testing usually does not lead to changes in case management. The full utility for HPV testing remains unclear, although the best application of the test might be for triage of ASCUS Pap test results.

Speculoscopy

Proposed visual methods to improve the Pap test include speculoscopy, which uses 4× to 6× magnification of an acetic-acid-stained cervix and a blue light to visualize potentially abnormal areas of the cervix. Study results are interpreted as positive or negative on the basis of presence or absence of white lesions. When used in combination with the Pap test, speculoscopy has been reported to yield a false-negative rate under 3%. Various combinations of speculoscopic screening and Pap testing may be used to identify clinically significant lesions and to triage patients according to whether they need further evaluation, follow-up, or treatment.

Ultimately, formal analysis involving costs as well as defined benefits and utility is likely to help define the best screening program for each patient.
In the series of seven cases of preinvasive carcinoma of the cervix there were two in which color photographs (Plate I, Case 2), taken before and after the application of Lugol’s solution, vividly reveal the value of this test in pointing out areas in the relatively normal appearing cervix that require biopsy. Biopsies of the non-staining areas of these two cases showed definite carcinomatous changes without invasion of the stroma. A detailed report of these and additional cases actually detected will be published in the near future.

Conclusions
Carcinoma of the cervix uteri can be diagnosed in the preinvasive stage and in the early invasive stage before the appearance of any symptoms and before the development of ulceration or tumor.

The Schiller (Lugol) test is a definite aid in locating the optimal site for cervical biopsy.

Cancer detection should be an integral part of every gynecological examination.

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Final Comments
Two of the three conclusions noted by Dr Footer regarding screening still ring true. First, preinvasive disease can be diagnosed while it is virtually 100% curable. Second, detection of cancer and its precursors should be part of every gynecological examination.

References

Suggested further reading
**Part I**

**In the Shadow of Obesity**

**Introduction**

Vincent J. Felitti, MD

I remember that in the first decade of my career, if I had a 300-pound patient on my exam table, I would desperately have been searching my mind to find something other than the obvious to discuss. The possibility of considering why a person was obese was inconceivable; it was totally out of the question. The edge of an abyss was not something I was about to approach in a naive and inquiring manner. Why would I risk leaving the security of conventional medical knowledge to learn by observation and inquiry of what was before me?

And yet, years later I was to wonder why do people get fat? Where in nature is obesity? Why are so many obese adults born prematurely at low weights? What does it mean that a recently seen 850-pound, 29-year-old old woman was one of the first long-term survivors of severe prematurity—just under two pounds at birth? Should we even think about this? Is this medicine? It certainly has nothing to do with what we learned in medical school and residency. Isn’t it better to read about intermediary neurotransmitters and obesity, especially if one doesn’t think about the implication of “intermediary” or “transmitter”?

On the following pages are four photographs taken by Eric Blau, MD, an internist with SCPMG and an accomplished professional photographer. His efforts in medical photojournalism have already been reviewed in a recent book column of The Permanente Journal. These photographs, intermediary transmitters in their own way, will someday appear as part of a book he is now working on that provides the patients’ views of their obesity, but only to those physicians who dare ask.

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**A note from physician and photographer, Eric Blau, MD**

As a society, we spend millions of dollars annually in a mostly futile attempt to lose weight. In a culture already obsessed by health and youth, we tend to discriminate against the overweight among us, finding them lazy, out of control, and lacking willpower. As physicians, we reinforce these cultural models by pointing out to our overweight patients the health risks of obesity. Clearly, the ideal of beauty is not that of the overweight: fashionable clothing is created for the thin.

It is always a revelation when information becomes available to make me rethink basic paradigms of medicine. My training and most of the current literature on obesity led me to believe that morbidly obese people had abnormalities that probably were genetically acquired. I thought it was only a matter of time before these would be characterized and medications developed to alleviate the suffering of millions of Americans.

When I first learned of the Adverse Childhood Experiences (ACE) study and the relation between abuse and morbid obesity, I was shocked and skeptical that it was true. But after interviewing dozens of morbidly obese individuals, I am a believer. Over and over again, I would hear people state that they overeat well past the point of satisfaction—usually in response to some psychological trauma. It appears all too frequently that marked weight gain began with trauma, and becomes an habituated reaction to new life stresses. Obesity is a complex disorder and not all overweight persons have been traumatized, but unless one is aware that at least a large percentage of the grossly overweight have had severe emotional trauma, it is unlikely that successful therapies will be devised.

Rather than argue the case myself, I would prefer to let some overweight persons tell their own stories. These are excerpts from interviews that focused on how being overweight has affected their lives, and how their lives have affected being overweight.
"With my friend, Paul, the manner of this passing was not a sudden thing. Paul and I were in Air Force Pararescue in Vietnam. We grew up together in Oakland, went to the same schools, enlisted together, and ended in Pararescue together. Our job was to rescue downed pilots, patch them together, and get them medevaced to a facility that could do something for them. We had a rotating schedule of rescues. On that particular day, I was at the top of the list for missions, but I had an impacted wisdom tooth, so I spent the day with the base dentist having it removed. My best friend, Paul, ended up going on a mission that I should have drawn. He never came back from it.

It took almost two weeks for us to find him. I went in after him several times: I volunteered for every outbound mission in his direction. We found him spread-eagled between two trees and skinned alive. There was only one thing that was recognizable about him, and they made sure that it was—that was his face. They left that intact. They didn’t touch it a bit. The rest of him looked like something you’d find in a slaughterhouse.

I got weird for a while. I spent a lot of time dwelling on the fact that my friend died over there. I became a risk-taker. I increased my smoking to 8 packs of cigarettes per day—and it hasn’t changed, it’s just gone in a different direction. I have morbid obesity, advanced cardiovascular disease, diabetes, and limited respiratory function. Do you see a pattern here?

Everybody looks at the downside of obesity, of alcoholism, or drug abuse. But there is an upside, too. There has to be, or people wouldn’t do it.”

“JP,” 400+ pounds
“When I was young, about four I think, I was molested by a teenage boy. After that, my mother would often call me in the house from playing, pull down my clothes, and check me out; it was humiliating. Later, when I was growing up, I was labeled mentally retarded, and men used to think they could do things to me and no one would believe me.

When I am stressed, I eat. Food is my friend; it’s there for me. Especially because my family isn’t. I don’t eat because I’m hungry— I’m never hungry. I eat because it’s there. If it’s cake, I’ll eat it ‘til it’s gone—even if I’m feeling full. I feel good when I’m eating it. But after awhile, I realize that I can’t eat enough to stop the pain.”

Ella Herman, 300+ pounds
“I was rather slender until I was seven years old. Beginning about that time I was sexually abused by my father. It continued until I was fourteen. I never told anybody. He kept telling me it was our secret and that I shouldn’t tell anybody. In junior high school I realized how taboo this was and how I could actually get pregnant. I was terrified! It was then that I put a stop to it. I had a very low opinion of myself. I think children who are abused somehow think it is their fault. I felt guilty and that I was not terribly worthwhile. I weighed two hundred pounds then.

I’ve recognized that I always eat when I’m lonesome, unhappy, or hurt. And I spent a lot of time hurt by other people who didn’t realize that I was hurt. I’d seem like this jolly person, and then I’d go home and cry half the night—and eat. I’m a binge eater. I can sit down with a box of cookies and eat the whole box—I think because I’m alone. And I eat even when I’m full. I’ve eaten a package of cookies even when it’s made me sick to my stomach. But I’d continue to eat them because they tasted good—I guess.”

Helen McClure, 258 pounds
“No matter what you do to your face, your body is still there. I’m a hairdresser. I can make my hair look fabulous. I do great makeup. I look good without makeup: I’m an attractive female. I’m intelligent, I’m energetic, but it doesn’t matter because below the neck I am who I am. And that’s hard because even though you as an individual may not be superficial, society truly is. And I don’t know if it’s just that our society has become more superficial in other ways, too. Maybe we’re a culture of teenagers.

Food doesn’t give you a hard time. Food doesn’t create arguments. It doesn’t talk. My favorite food when I’m unhappy is pasta with my Mom’s homemade sauce.”

Karen McWhorter, 220 pounds
soul of the healer
Women in Medicine—A Living History

The following is a testimonial given to honor Dr. Ellen Killebrew (pictured below) on the occasion of her retirement.

We gather here tonight to celebrate and to honor Dr. Ellen Killebrew during this major transition in her life. Ellen’s leaving also marks a major transition in each of our lives. The impressive number of women doctors assembled here attests to her impact on us. How often does any occasion draw so many of us from our busy professional and personal lives?

Historical Context

Within a broader historical context, Ellen also embodies something compelling for all of us. When we look around this room, we see an intergenerational group of women doctors who span the period of the last half-century of American medical history. Some of the women sitting at these tables have recently completed their medical residencies. In 1968, when Ellen finished hers at Colorado General Hospital, no other women sat at the commencement table. In 1983, when I completed my own residency in Chicago, my residency group included a total of six other women; at our commencement ceremony, we were “treated” to a female striptease dancer as the main entertainment. As we embark on a new millennium, it is fitting that we honor Ellen Killebrew, both for her stellar individual accomplishments and as a model for all of us, as we embark on a new millennium, it is fitting that we honor Ellen Killebrew, both for her stellar individual accomplishments and for her obstinate insistence on being a physician. Each time Ellen challenged the barriers excluding women from medicine, she made things easier for the next group of women who came up against these barriers.

Career Facts and Barriers

The “official and usual” facts of Ellen’s career are these: Tonight we celebrate an outstanding clinician and teacher, a gifted cardiologist, a Clinical Professor of Medicine at the University of California at San Francisco, a long-standing officer of the American Heart Association, a published author of medical works, and a respected colleague who has worked 28 years for Kaiser Permanente. However, as always, the facts are never simple, and they are inherently thin. What expands the facts of Ellen’s career into an experience that has affected each of us is the particular way in which she negotiated her career through the difficult history of women in American medicine. Most of Ellen’s medical career was lived through periods of time when professional barriers to women were blatant and prejudice was inarguably overt. Remarkably, Ellen not only endured those times; through her persistence and her perennial mentoring and support of other women physicians who followed her, she also helped to reshape the landscape for other women entering medicine.

In 1955, Ellen entered Bucknell University in Pennsylvania to pursue a business major and to become an executive secretary, one of the few acceptable academic majors available to women then. However, during her sophomore year, Ellen decided to enter premedical training. Her decision was a radical act at the time. In fact, the university mandated that Ellen obtain written permission from her father as a strict prerequisite for her enrolling in premedical courses. How many of us here tonight can imagine being told that our fathers had the right to determine what we could study and what we could become?

Women in Medical Training

An instructive passage in Hedda Garza’s book, Women in Medicine, gives us a picture of this time in history: “By 1955, a new low point had been reached. Many medical schools that had welcomed women during the war no longer had a single female student. Now that women were no longer needed, polls were published to justify the sudden change. In 1949 and 1957, hospital chiefs of staff and male physicians gave familiar answers to the questionnaires asking them their opinions of female doctors. Many of them commented that women doctors were ‘emotionally unstable,’ ‘talk too much,’ and ‘get pregnant!’ One dean actually declared that he preferred a third-rate man to a first-rate woman doctor.”

Ellen’s Academic Experience

When I asked Ellen about her experiences in premed, she relayed that she frequently had to endure dreary, misogynist attitudes. Among the most painful memories she recalled was being accused of cheating on her biochemistry exam because no woman was expected to excel as she had. Male students raided her dorm room looking for evidence to support their accusations—which were, of course, false.

In 1960, just one year after Ellen completed her premedical training, Jefferson Medical College in Pennsylvania finally opened its doors to women, becoming the last medical school in the United States forced to do so. Still, at her medical school interviews, Ellen was asked why she wanted to “take a man’s place.” She was queried as to whether or not she had thought about having a family and, consequently, of dropping out of medical school. In 1962, while Ellen attended New Jersey College of Medicine, historian Frederick Rudolph congratulated male colleges like Yale and Harvard for “preserving the liberal inheritance of Western Civilization in the United States by protecting it from debilitating, feminizing, corrupting influences which shaped its career where coeducation prevailed.”

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Despite this formidable climate, Ellen graduated from medical school in 1965, when, still, only 4.6% of all women with an MD degree had become full-time medical school faculty members. When she completed her internal medicine residency at Colorado General and Denver General Hospital three years later, three fourths of the three million health care workers in this country were women, whereas nearly all administrators and physicians were men. Only 7% of physicians were women, a negligible difference from the 6% figure in 1900. In 1970—only after The Women’s Equity Action League filed a class action suit on behalf of all women against every medical college in the country—the United States Congress finally held its first hearing on the incontestable gender inequality in medical school admissions. And in 1970, while these difficulties prevailed, Ellen Killebrew finished her cardiology Fellowship at the Pacific Medical Center in San Francisco.

Kaiser Permanente

In that same year, Ellen’s first venture into the job market brought her to the doors of Kaiser San Francisco, but she was told that they were not hiring “women cardiologists.” The physician members of two private practices told her the same thing. Ellen persevered and ultimately broke through several additional barriers at Richmond and Oakland Kaiser to obtain employment. In true pioneering fashion, Ellen’s successful fight to secure employment immediately preceded passage of the Equal Opportunity Act in 1971, legislation that forced open the doors of professional education for all women in this country.

While Ellen was on her way to becoming one of the most respected physicians at Oakland Kaiser, formidable odds continued to mark the general medical landscape for women. In a study published in 1974, two thirds of practicing male physicians did not accept women as peers. That same year, another study revealed that 80% of New York City medical patients stated their preference for a male physician, although half had never been treated by a woman. In 1982, JAMA published an article, “Attitudes toward women physicians in medical academia,” which reported that almost 50% of male medical students and physicians agreed with the statement: “Women physicians who spend long hours at work are neglecting their responsibilities to home and family.” In a survey published one year later in the American Journal of Psychiatry, 30% of male physicians felt “there was a significant risk to the optimal functioning of a department that hired a woman of child-bearing age.”

Many women in this room remember arriving at Kaiser Oakland in the late 1980s and feeling immediate reassurance from Ellen’s welcoming presence. Senior women physicians were scarce in the ’80s. By 1981, but for a single post that had been held at the Women’s Medical College of Pennsylvania in 1955, no woman had yet to hold a chief administrative position (for example, full deanship). As late as 1985, only 5% of medical school professors were women, and in 1988, only 15% of active physicians were women. Perhaps as remarkable as her struggle is the style in which Ellen practiced medicine. She bore no malice for the hardships that she endured, and she never begrudged the success of other women who did not have to suffer these hardships. On the contrary, Ellen always took time to mentor any woman who approached her with professional or personal issues. She was a rare exception to Janet Bickel’s proclamation in “Women in medical education,” published in the New England Journal of Medicine in 1988: “There are few departments in any school in which a student can readily find a woman physician in a senior position who is happy with both her professional life and her personal life and available to give the student pointers and support.”

New Millennium Statistics

We enter the new millennium with some new “facts.” In the 1998-9 academic year, women comprised 44% of medical school entrants and 15% of cardiology fellows. One prediction estimates that, by 2010, women will comprise 30% of practicing physicians. Still, in 1995, a national cohort study showed that after 11 years, only 5% of women had achieved full professorship status, compared with 23% of men with similar initial rank, type of tenure track, and Board certification. Also, women comprise only 7% of all full professorships in internal medicine.

Although the numbers of women in medicine and in leadership positions continue to lag behind men, other forms of gender discrimination also continue within the experiential realm of being a physician. In her book, Walking out on the Boys, Dr Francis K. Conley of Stanford University wrote about these modern-day varieties of sexual inequality in medicine: “I have learned that universities, in general, no longer function as agents of societal change ... [that their] liberal environment is a masquerade.” In 1994, a report in the New England Journal of Medicine documented a harassment rate of 73% among women responding to a survey of sexual harassment in medical training.

To Ellen: in Conclusion

Within the sociopolitical context of women in medicine, Ellen has been a genuine heroine. She braved formidable barriers in her path to becoming a physician, and in so doing helped to pave an easier entry for other women who followed her. When we look to Ellen and recognize her brilliance and her rightful place in medicine, we are pained to think about the abuse and the misogyny she was made to endure.

Each of us has arrived here in a long procession of women, which widens in rank by the years. And near the leading edge of the procession is Ellen Killebrew—pioneering, pulling many of us along. We honor Ellen tonight for her courageous and generous leadership, her inspired mentoring, her indisputable clinical skills, her unself-conscious wisdom, and her personal and professional integrity. We thank her for being one of the rare women in a senior position who was happy with her ca-
reer and life and who offered her own happiness as a beacon for many of us who were looking for some light in our own careers. We thank her for helping us to create and integrate a professional identity.

Finally, on a personal note, besides thanking Ellen for all of these things, I also want her to know how much her vivacity and wit delighted me. And, simply, how much I will miss her.

❖

References

Our Struggle Today
Our struggle today is not to have a female Einstein get appointed as an assistant professor. It is for a woman schlemiel to get as quickly promoted as a male schlemiel.

Bella Abzug, 1920-1998, congresswoman and founding feminist
"Life on Mars"
by Mohamed Osman, MD

Imaginary figures on Mars, a planet prone to excitement and mystery yet to be discovered.
It’s more than ob-gyn. When that simple—but radical—message finally began to permeate the medical mainstream, women’s health began to emerge from the feminist margins as a discipline to be taken seriously by all health care practitioners, regardless of gender. In my own case, the message began to crystallize soon after the 1970 publication of the first edition of Our Bodies, Ourselves (originally titled Women and Their Bodies), the seminal (and much reissued) manifesto and handbook on women’s health by the Boston Women’s Health Collective. Until that time, most of the medical establishment regarded women’s health as limited to women’s reproductive functions, and, as such, the subject held limited clinical interest to me as a young physician.

Not that I hadn’t encountered plenty of anomalies in the standard view that women’s health was synonymous with men’s health, plus reproduction. As a psychiatrist, I had struggled with mounting evidence that certain mental health disorders, such as depression and anxiety, had a higher incidence in women than in men. I was gathering a growing body of anecdotal experience on conditions like postpartum depression and perimenopausal depression, but clinical literature on the subject did not exist. Consequently, discussion of the relation between women’s reproductive physiology and rates of mental health disorders remained outside the scientific mainstream.

Thanks to an entire generation of tireless, determined pioneers in women’s health—some of them within our own Permanente ranks—you no longer have to be a feminist to understand that it’s more than ob-gyn. The domain of women’s health today is widely understood to include the broad-ranging interface between women’s unique physiology and virtually all other areas of health—both physical and mental—and is vitally relevant to the great majority of health care providers.

In fact, as Dr Rhoda Nussbaum’s revealing research has shown (see following article), we could even look at the subject of women’s health as including women’s dominant social role in providing health care. Dr Nussbaum’s data show that in more than 90% of households, women play the primary (or at least equal) role in selecting a health plan for the family; and in most families, women coordinate the health care of all family members, including husbands.

This means, among other things, that health care providers have multiple reasons to focus on women’s health: first, because quality health care means recognizing that women are different from men in ways other than reproductive functions; second, because women exert enormous influence over the selection of health plans and providers; and third, because women exercise that power at least in part on the basis of how well a health care organization meets their own needs as women.

We know that most of American health care still has a way to go to align medical practice with today’s more enlightened principles of women’s health. One recent study, for instance, documented the persistence of gender bias in physicians’ diagnosis of coronary artery disease. Women initially seen for chest pain are significantly less likely to be referred for cardiac catheterization than men; and black women are less likely to be referred than white women. Similarly, female physicians order more Pap smear and mammography screenings than male physicians do. The fact that these findings are not surprising only reinforces the relevance of such studies; we expect to find more anomalies.

At Kaiser Permanente (KP), we know we can achieve better health outcomes for women than most of our competitors—thanks to both our integrated delivery system and our growing technical ability to realize the promises of evidence-based medicine. But improving member satisfaction will depend on much more than women’s health outcomes; it will also mean providing products and services that are responsive to women’s needs across the entire spectrum of life care, from pediatrics to elder care.

Part of that challenge is to improve the gender balance among our Permanente workforce and leadership. The Permanente Medical Groups generally do rather well in attracting women physicians, though we have been less successful in promoting them to leadership positions. Although a November 1999 survey showed that 35% of all KP staff physicians were women, women constituted only 20.4% of “management” physicians (Chiefs of Service, Physicians in Charge) and 11.4% of “executive” physicians (Assistant and Associate Medical Directors). To date, only one of the nine Permanente Medical Groups has had a woman Executive Medical Director (Louise Liang, MD, of Group Health Permanente).

Given the unique advantages of our integrated structure and our ethics-driven practice principles, KP has a special responsibility to provide leadership in women’s health. It’s in our members’ interest; and it is in our own interest.

References

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By Jill M. Steinbruegge, MD
Women's health stepped into the spotlight during the last decade of the 20th century, impacting the legislative, scientific, and political arenas. We applaud the efforts to change drive-by deliveries and mastectomies; the energy that has put breast cancer on the national agenda; the increased spending on women's health research and access; and the formation of Women's Health Offices at the National Institutes of Health, Centers for Disease Control and Prevention, the Department of Health and Human Services, and the Food and Drug Administration.1-4

But now women's health is truly coming into its own, focusing on all aspects of female health as a woman moves through each stage of life—adolescence, reproductive years, midlife, and older adulthood. The health care industry is taking women's health seriously by developing strategies to tackle immunologic diseases such as HIV; osteoporosis; neurologic conditions, and psychologic problems, all prevalent among women5,6; cardiovascular disease, thought to be the province of men and now known to manifest itself and respond to treatment differently in women; and pervasive, often life-threatening issues such as domestic violence and sexual abuse, formerly considered nonmedical problems.

Kaiser Permanente (KP) has certainly put women's health on the map. We would be remiss if we underestimated the importance of women as the primary health care consumer and the economic power they wield as the key decision-makers in health care purchases for their families.7

For these reasons, we have developed task forces in several regions to change how we deliver care to women. We have conducted market research to determine what women want and value in health care.8-10 We have committed ourselves to improving health outcomes for women and easing their burden as the chief health care coordinator and caregiver for their families.7

KP's integrated health care model targeting population-based medicine,11 emphasizing prevention, and relying on state-of-the-art information technology and robust research creates the framework for setting the standard in women's health and the delivery of health care to women and their families.

References
Studies of Women’s Health Care: Selected Results

Introduction

Not one to sit back as women’s health issues—“drive-by” deliveries and mastectomies—hit the front page, Kaiser Permanente Northern California (KPNC) in 1996 formed its Women’s Health Task Force, a group of 20 physicians and staff selected for their expertise in women’s health.

The Task Force accepted the challenge of developing both a rationale and a direction for changing KPNC’s system of delivering health care to its women members. The group recommended to the Board of Directors of TPMG that KP focus on becoming the premier provider of women’s health care in Northern California. To ensure that this goal would become reality, KP in 1997 appointed a women’s health leader and created Women’s Health-KP (Table 1).1

Women’s Health-KP addresses a spectrum of women’s health care needs which arise throughout life. Issues targeted by Women’s Health-KP include the leading causes of death among women as well as the societal influences and policies affecting women’s health. The ultimate goal of Women’s Health-KP is to improve the quality of health care services delivered to KP’s primary customers: women.

KPN C’s Reasons and Goals for Studying Women’s Health

KPNC’s interest in women’s health was based on sound reasoning. National2 and KPNC3 consumer research indicated that women constitute the primary customer base for health care. Further research by the Task Force showed that most health care purchasing decisions are made by women, who drive medical utilization: by coordinating care for themselves and for their entire families, women consume two thirds of all medical care.2 Even more telling was the fact that KPNC’s women members expressed substantially less satisfaction with their care than women in competing HMOs.3 Therefore, to retain and attract members, KPNC’s clear mandate was to develop strategies for meeting women’s health care needs, preferences, and expectations. KPNC faced the additional challenge of providing health care that would become the industry benchmark for improving the health and total health care experience of women and their families.

To determine what its primary customers want and value in health care, KPNC conducted a Women’s Health Study, funded by the Innovations Program, from July to November 1999. Operating from 1990 until 1999, the Innovations Program supported projects which promote innovative thinking and practice in three areas: clinical care, use of support services and automated systems, and the health plan’s relationships with its members and their employers. Of the more than 380 projects that have received grants from the Innovations Program, 75% have been adopted by the health plan.

The Women’s Health Study had three primary objectives: 1) to determine what would increase women members’ satisfaction, cause them to remain health plan members, and create more positive public opinion about the health plan; 2) to determine how redesign of delivery systems for adult primary care, obstetrics/gynecology services, pediatrics services, and other services would be accepted by women; and 3) to develop an action plan for meeting the demands of KP members.

Study Methods

The study used multifaceted research methodology, which included a telephone survey of 1500 randomly selected women members and 500 women who were members of competing health plans in Northern California; ten focus groups representing a variety of service areas, ages, sexual orientations, and ethnic groups; experiential interviews that tracked 75 women through medical visits; and two roundtable discussion groups with community advocates and employers. Given the large number of questions we needed to ask in the telephone survey, three versions of this survey were presented to random thirds of this study population. The rigorous research design produced not only quantitative results but also qualitative ones as women provided their thoughts and words in detail, confirming and providing an understanding of the quantitative results. The results allowed findings to be reproduced across multiple measures and methods.

Table 1. Women’s Health - KP Study Facilitators

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<th>Name</th>
<th>Position/Role</th>
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<tr>
<td>Cynthia Carey-Grant</td>
<td>senior consultant, Women’s Health project manager</td>
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<tr>
<td>Amy Conway, MPH</td>
<td>senior health educator, Regional Health Education</td>
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<tr>
<td>Dorothy Durkac, MA</td>
<td>administrative assistant, Women’s Health</td>
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<tr>
<td>Jennifer Eiseman, MPH</td>
<td>consultant, Operations Support Services</td>
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<tr>
<td>Theo Ferguson, project coordinator</td>
<td>Information Technology</td>
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<tr>
<td>Julie Ferris, MSW, MPH</td>
<td>project manager, Department of Quality and Utilization</td>
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<tr>
<td>Lorinda Hartwell, MPH, PhD</td>
<td>project manager, Regional Health Education</td>
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<tr>
<td>Mark Ishimatsu, senior consultant</td>
<td>National Market Research Department</td>
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<tr>
<td>Rhoda Nussbaum, MD</td>
<td>Women’s Health leader, TPMG principal investigator</td>
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<tr>
<td>Jan Rapport, senior consultant</td>
<td>Operations Support Services</td>
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<tr>
<td>Mark Thompson, PhD</td>
<td>lead external consultant</td>
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The study examined characteristics of more-satisfied and less-satisfied subsets of the KPNC population in connection with the roles and responsibilities of women in Northern California and highlights four areas of value that should be targeted by KPNC: 1) when, where, and from whom women want access to care; 2) the importance of coordination of care; 3) how flexible women are in accepting alternatives to appointments with their own primary care physician; and 4) the importance of perceiving Kaiser Permanente, its physicians, and its staff as friendly and supportive. In addition to these major themes, the study collected data on women’s preferences for the gender of their physician, women’s interest in new services, and health care for midlife women.

Results

General findings of the KP Women’s Health Study corroborated what other consumer research has found—ie, that women are key purchasers of health care—but also showed that this key role of women is even more important in Northern California than previous national research indicated: Of the 2000 women surveyed, 92% said they had primary or equal input in choosing health care coverage. This result is comparable with the national statistic, 75%.

Results also confirmed that attracting new members is both a challenge and an opportunity for KPNC: A reputation of providing excellent medical services and health improvement programs for women was an important criterion in selection of a health plan for 46% of nonmembers surveyed. When asked who comes to mind as providing superior women’s health care, 78 health plans were mentioned; however, no health plan was mentioned twice, and KPNC was not mentioned once! This outcome indicates that Northern California has no recognized leader in women’s health care.

To relate all the results of and implications of the KP Women’s Health Study would take a book. Instead, we present some findings that are unexpected or that provide information that KPNC may find useful for meeting the needs of its members, attracting new members, and raising the level of member satisfaction. These results are grouped into the four key areas found to be most important to members: access to care; coordination of care; choice and flexibility; and friendly, supportive clinicians.

Access to Care

Problems accessing urgent and routine care have an effect on members’ satisfaction with the health plan (Figure 1). More members (23%) have difficulty accessing routine care than acute care (9%), and 6% indicated problems accessing both types of care. Access has a strong bearing on member loyalty: Members who had no problem accessing either urgent or routine care were twice as likely to stay with KPNC than were members who had difficulty accessing care.

![Figure 1: Results of telephone questionnaire survey administered to 500 women health plan members show that women who perceive problems of access to urgent and routine care are less satisfied, are much less loyal, are more likely to speak negatively about the health plan to friends and family, and are less likely to perceive the health plan as “friendly and supportive.”](image)

![Figure 2: Results of telephone questionnaire survey administered to 500 women health plan members show that the perception of well-coordinated health care leads to members’ satisfaction and positive comments to others about the health plan.](image)
Adopting strategies for improving access to routine appointments has the potential to improve members’ satisfaction, increase their loyalty, and lead to more positive word of mouth (reputation). Options for scheduling appointments beyond normal work hours were applauded by members as well as nonmembers, especially women aged <55 years: 80% of the members under age 55 years would be “somewhat or very likely” to make Saturday or evening appointments, 63% would be “very likely” to schedule evening appointments, and 55% would be “very likely” to choose Saturday appointments. Half indicated that they would switch from their current primary care practitioner to a doctor who offers evening appointments and weekend appointments.

Coordination of Care

Coordination of care was the second greatest differentiator between satisfied and dissatisfied women: 66% of members would have “somewhat” or “a lot” more satisfaction if they felt KPNC was able to help them coordinate care (Figure 2). Coordination of care has two aspects: 1) ensuring that a woman member’s care does not “fall through the cracks,” and 2) helping women fulfill their roles as care coordinators for the rest of the family. Although 20% of members surveyed felt that their care “falls through the cracks,” the good news is that most of the members believed KPNC is doing a good job of coordinating their care: 78% said their doctors are good at keeping track of medications and treatments.

As many as 84% of the members surveyed praised KPNC’s “Preventive Health Prompts”—reminders about appointments and preventive measures such as mammography, immunization, and cholesterol screening that are printed on the registration slips—and said they found the information helpful for coordinating care.

The study findings put the importance of coordinating health care into perspective: 69% of married women indicated that they coordinate their spouse’s health care, and 59% of the women surveyed said they had accompanied a family member on a health care visit in the past year. In addition, 21% of the women surveyed said they regularly take care of a family member or friend who has an ongoing health problem or who is disabled in some way. The women most likely to be a caregiver are aged >55 years, are married, and have an annual income under $40,000.

Creating services that enhance coordination of care provides “one-stop shopping,” saves time, and makes it easier for women members to assume their role as the coordinator of health care for themselves and for their families. Indeed, when asked to evaluate the desirability of new services, women ranked most highly those services that could improve coordination of care: family visits, multiple screenings during regular office visits, and same-day appointments for mammograms. One fourth of women interviewed during a visit indicated that they could have avoided a future visit if they could have obtained another test or received additional care during the index visit.

Members’ Freedom of Choice and Their Flexibility in Selecting Type of Practitioner

Most women (as many as 73%) indicated a strong preference for seeing the same doctor during each visit, but women also expressed flexibility in whom they see if their regular clinician is not available (Figure 3). This response was seen especially with regard to low-acuity urgent care: As many as 72% of women were willing to see another doctor for flu or a sore throat, whereas only 35% agreed to see another doctor for routine care. Most women (72%) also would choose a registered nurse for low-acuity urgent problems, and 64% would visit a nurse practitioner (NP) for a routine checkup.

The importance of choice was again seen in women’s preferences for gynecologic care. For instance, 39% of women preferred to see their obstetrician/gynecologist for a Pap smear, whereas 26% preferred to receive...
their Pap smear from their general medical doctor. Another 35% expressed no preference.

KPNC asked women their opinions of the newly introduced health care team model, a grouping of physicians, NPs, health educators, behavioral health specialists, and physical therapists that enables members to see another doctor when their own is unavailable or to receive care directly from another team member if their complaints could be better addressed by that health care professional.

Although 81% of the women surveyed perceived the team approach to be more an asset than a barrier to seeing their regular doctor, about a third of the women said they would prefer to see their own physician every time they need care, regardless of the reason for the visit. The study further explored the multidisciplinary approach and found that 37% of the women wanted to see their physician for the same amount of time at every visit, 26% were willing to see other team providers and have only brief interaction with their regular doctor, and 37% said they would not have to see their doctor at all if their needs were met by other providers. Women who objected to multidisciplinary, team-based care generally were less satisfied with their KPNC experience.

Clearly, a “one-size-fits-all” approach to delivering health care will not satisfy women.

Friendly, Supportive Clinicians and Staff

Of the women surveyed, 32% indicated that a provider or staff member had said something rude or insensitive (Figure 4). Women who experienced rudeness were much more likely to say negative things about KPNC; 49% of these related only negative comments about KPNC to friends, family, or coworkers. The good news, however, is that 82% said they believed their KPNC facility is friendly and supportive (Figure 4). The bad news is that compared with members of other health plans, twice as many women KPNC members said they had experienced rudeness, insensitivity, or discomfort.

Experiencing KPNC as “friendly and supportive” was the top differentiator between members who were satisfied and those who were not. Of those who said they found KPNC unfriendly, only 6% felt highly satisfied, whereas 38% expressed low-to-moderate satisfaction. Of those who experienced rudeness, 26% were highly satisfied, whereas 45% said they had low-to-moderate satisfaction with KPNC.

The impact of rudeness and insensitive behavior by clinicians and staff is so strong that it undercut KPNC’s competitive position and negatively influences satisfaction, word of mouth, and member retention.

Other Areas of Importance to Health Plan Members

Physician Gender Preference

An unexpected result was that more than half (57%) of the women expressed no preference for gender of their physician. Even when it came to receiving Pap smears, only 44% said they preferred a female physician. However, overall satisfaction was negatively affected among members who had a strong preference for a woman physician but who were unable to see one.

The challenge for KPNC is to match women who strongly prefer a female physician with a female physician, allowing women with no preference to be matched with a male physician.

Menopause Information and Services

Menopause education is inadequate at KPNC: 78% of women surveyed said they had not received counseling about menopause. As many as 94% said they had not been given a brochure or seen an educational video on menopause, and 98% said they had not attended a class at KPNC on the subject, yet half of the women aged between 45 years and 60 years said they are informed about menopause. A clear possibility is that women who are informed about menopause are not receiving the information from KPNC.

Is your KP facility a friendly and supportive place?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>82%</td>
<td>4%</td>
</tr>
</tbody>
</table>

N=1500

Had an MD, RN, MA... staff said something rude, insensitive, or made you feel uncomfortable in past two years?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>32%</td>
<td>68%</td>
</tr>
</tbody>
</table>

N=1000

Source: Member Telephone Survey (Q13,25)

Figure 4. Telephone survey results showed that most members see KP as a friendly, supportive place to obtain health care.
A new HEDIS 2000 measure— one which evaluates health plans’ efforts to counsel women about menopause—should increase motivation to develop other strategies to better inform members about menopause.

**New Services**

Complementary and alternative medicine services held high interest for 70% of the women surveyed. Interest did not vary by members’ geographic service area, age or ethnic group, socioeconomic class, health status, or whether members were satisfied or unsatisfied. Complementary and alternative medicine services held substantially more appeal for members who work full-time. As many as 72% of nonmembers indicated that they would be more likely to join KPNC if complementary health services were offered.

**Nonmembers: The Importance of “Word of Mouth”**

Word of mouth about KPNC had a strong effect on nonmembers’ opinions of the organization: 74% of those who had a positive impression had heard only positive comments about KP. The percentage of nonmembers who have a positive opinion drops to 50% if they have heard both positive and negative comments about the organization. Of nonmembers who had heard nothing about KP, 48% had a positive impression; but among nonmembers who had heard only negative comments about KP, only 15% had a positive opinion.

About one in five nonmembers surveyed were interested in possibly joining KPNC. Increasing positive and decreasing negative comments and anecdotes about KP among women could increase our market penetration.

Because positive word of mouth about KP strongly influences nonmembers’ opinion and their interest in joining the health plan, it is imperative for KPNC to improve nonmembers’ impressions of the health plan.

**Comment**

Women are the major point of contact between KPNC and the populations it serves. Women coordinate care for themselves and for their partners, children, disabled friends, dependent family, and—increasingly—for their aging parents. Women call the health plan, use the parking garages, and interact with the office staff, doctors, and health care professionals more often than any other definable group. How well KPNC performs will be judged in large part by this subset of the population.

Women are also the major decision-makers: They select a health plan to purchase and determine whether to stay with that plan. Although multiple national sources state that 75% of women serve as the primary purchaser of health care, the KP Women’s Health Study shows an even greater influence of women on how families spend their health care dollars.

Women’s decisions about their health care are influenced by many factors. Women rely on word of mouth from friends, coworkers, and family to determine which health plan is right for them and their families. In addition, what women value in health care is affected by the extent of their participation in the work force. And because women are not all alike, KP should use its substantial capability in information technology to identify members’ individual preferences and to address their specific needs—and thus realize an advantage over our competitors.

Women use health care services more than men do: Two thirds of all inpatient, outpatient, and pharmaceutical services are used by women. This fact is true today and will remain true for the foreseeable future, in part due to use of obstetric and gynecologic care and because of women’s longer life expectancy—generally, a span of seven years. These additional years are often characterized by chronic illness and high utilization of health care services.

Health care utilization by women is also affected by other issues. Compared with men, women are more susceptible to immunologic, neurologic, psychiatric, and many other disorders and are more often subjects of violence and poverty. Although cardiovascular disease is as likely to occur in women as in men, rates of morbidity and mortality from cardiovascular disease are higher in women.

KP conducted the Women’s Health Study because of two important commitments incumbent on the health care industry: 1) knowing what women value in health care delivery and 2) meeting those needs. The results of the study are applicable and useful for all KP Regions and are being shared with all charged with focusing on women’s health across KP. In Northern California, each Physician-in-Chief has appointed a Women’s Health Liaison, who reports the study findings to audiences at each KPNC facility and works to implement changes in care delivery to meet and exceed the expectation of KP’s women members.

Several women’s health demonstration projects—funded by the Innovations Program as a follow-up to the Women’s Health Study—are underway in North-
ern California. Such projects include the KP Fremont Project, "Multilingual women's health project," conducted by Maria Servin; the KP South Sacramento Project, "Coordinated Preventive Health Visit," conducted by Jan Langston and Kathleen O'Brien; and the KP Richmond Project, "Care Coordination for Women and Families," conducted by Brigid McCaw. These demonstration projects will evaluate new models of care delivery to meet the demands of women who have multiple roles and needs. Each project will be evaluated and—if successful—will be incorporated into the facilities' operating budgets at the conclusion of the one-year project's funding. The models will be shared for adaptation and implementation across KPNC and in other KP Regions.

In addition to focusing KP's care delivery systems on the needs of women, Women's Health-KP is committed to improving health care outcomes for women. By using KP's robust research capability to better understand some of the differences between genders, we will contribute to improving the health of women nationwide.

KP finds itself at the beginning of an exciting new era in American medicine. In this new era, gender differences in biology, health, and illness—as well as gender differences among racial and cultural subgroups—will be recognized and incorporated into the health care delivery system to improve the health of all.

Acknowledgment: This article would not have been possible without the professional assistance of Mari Edlin, a freelance writer specializing in health care and a regular contributor to a variety of national publications. She took the mountain of data from the study and put it into a form that will allow the reader to get the most out of it. Mari's skill as a writer is matched by her commitment to improving the health of women.

References
3. 3Q98 STAR Member/Non-member for Northern CA Report. Oakland (CA): Kaiser Permanente Program Offices, Market Research Department. nd.

Premonition
If something reveals itself to you—if you have a premonition of sickness—you ought to pay attention .... These are not things you can control or manipulate. We all have wacky dreams. But when something pictorial comes to you, that's not through normal channels.
Larry Dossey, M.D., author of Reinventing Medicine
Proposed Care Management for Women with Estrogen Deficiency: Identification, Risk Stratification, and Treatment

Introduction

For years, we have understood the importance of managing the care of women with estrogen deficiency: Women’s risk for death from hip fracture and ischemic heart disease increase significantly after menopause. Population care management programs have been developed to improve quality of life and to reduce utilization of expensive resources for patients who have preventable diseases. Newly developed information technology systems within Kaiser Permanente (KP) make it possible to identify and stratify risks for chronic illnesses such as congestive heart failure, diabetes mellitus, and asthma. Using this technology, we have the potential to identify and manage the care of all women who have estrogen deficiency. Selection algorithms can be integrated into current data systems to educate and improve the overall care of menopausal women who are at risk for complications of estrogen deficiency (eg, coronary artery disease, and osteoporosis).

This article describes a proposed model of care that has been developed to help manage the care of estrogen-deficient menopausal women.

Management of Estrogen Deficiency: The Problem

In general, estrogen deficiency among women is poorly managed: Fewer than 20% of US women over age 50 years are adequately treated for estrogen deficiency. This statistic suggests that we have substantial room for improvement. Moreover, as our adult population ages, the number of women who become estrogen-deficient will increase. There is a growing concern that many of these women will not be treated for estrogen deficiency.

Management of estrogen deficiency is a subject of interest to many clinicians who care for women who have had hysterectomy or who become menopausal. Clinicians are aware that hormone replacement therapy (HRT) in women decreases symptoms of menopause and decreases their risk for death associated with hip fracture and heart disease; indeed, mortality among women who use postmenopausal hormones is lower than among nonusers. However, the survival benefit of HRT use diminishes with longer duration because prolonged HRT use is associated with a slightly increased risk of breast cancer. In the United States, hip fracture kills approximately 65,000 women per year; heart disease kills about 233,000 women per year; and breast cancer kills about 43,000 women per year. Some authors have suggested that the decrease in risk of heart disease outweighs the risk of breast cancer.

Despite the known benefits of HRT, however, many women choose to not take estrogen replacement. In one study, current use of HRT was reported by 58.7% of women who had hysterectomy and by 19.6% of women who did not have hysterectomy. Most women either do not fill prescriptions for HRT or discontinue treatment within one year after starting HRT.

Recent and Proposed Ways to Improve Identification and Management of Estrogen Deficiency

In general, women are not well informed about the risks and benefits of HRT. The Health Plan Employer Data and Information Set (HEDIS), which is maintained by the National Committee for Quality Assurance (NCQA), now uses a set of standardized performance measures to assure purchasers and consumers of health care that their managed care organizations are informing women who may have estrogen deficiency about the risks and benefits of HRT as well as alternatives to this therapy. Specifically, HEDIS will be sending to members of managed care organizations a questionnaire which focuses on exposure to counseling, breadth of counseling, and personalization of counseling. In addition, the American Association of Clinical Endocrinologists (AACE) has outlined educational guidelines to help clinicians manage their patients’ menopausal symptoms (Table 1).

As a managed care organization, we must be held accountable for our management of the care of women with estrogen deficiency. By using tracking systems to screen women for estrogen deficiency, by educating women about estrogen deficiency, and by improving compliance with prescribed treatment regimens, treatment programs could decrease the incidence of osteoporotic fracture and coronary artery disease in women with estrogen deficiency. Successful preventive therapy for these women could then have a dramatic impact on health care expenditures over the next two decades. A care management program is therefore needed and should include population identification, risk stratification, and models of care for estrogen-deficient menopausal women.
### Proposed Population-Based Care Management Model

Women should start receiving counseling in their mid- to late forties, when most women are perimenopausal or menopausal. These Health Plan members could receive counseling by a case manager with or without attending classes that review the risks and benefits of managing estrogen deficiency as well as alternative methods of managing this condition. Members seen in primary care clinics for routine examination or for cancer screening (mammography, Pap smear) or who attend the counseling sessions or classes can be asked to complete a simple self-examination tool (Table 2). Responses to the questionnaire can be used to identify members as being at low, medium, or high risk for complications associated with untreated estrogen deficiency. Feedback to primary care providers on percentage of impaneled women aged >45 years who are receiving HRT may increase the percentage of women who are appropriately counseled on the risks and benefits of HRT as well as on alternatives to this method.

---

**Table 1. AACE Educational guidelines for hormone replacement therapy\(^{10}\): risks, benefits, and alternatives**

<table>
<thead>
<tr>
<th>Benefits of hormone replacement therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Prevention of cardiovascular disease</td>
</tr>
<tr>
<td>• Prevention of osteoporosis</td>
</tr>
<tr>
<td>• Prevention of menopause symptoms (“hot flushes,” mood alteration, depression, sleep disturbance, vaginal dryness)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Risks of hormone replacement therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Thromboembolism (blood clots)</td>
</tr>
<tr>
<td>• Cholelithiasis (gallstones)</td>
</tr>
<tr>
<td>• Endometrial cancer (women with a uterus who receive estrogen but not progestin replacement)</td>
</tr>
<tr>
<td>• Abnormal vaginal bleeding</td>
</tr>
<tr>
<td>• Possible increase risk of breast cancer</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Alternative therapies to hormone replacement therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Prevention of menopausal symptoms:</td>
</tr>
<tr>
<td>Flaxseed and phytoestrogens (soy products and herbal preparations(^{a}))</td>
</tr>
<tr>
<td>Vaginal lubricants</td>
</tr>
<tr>
<td>• Prevention of coronary artery disease:</td>
</tr>
<tr>
<td>Smoking cessation</td>
</tr>
<tr>
<td>Lipid management</td>
</tr>
<tr>
<td>Blood pressure management</td>
</tr>
<tr>
<td>Glucose control</td>
</tr>
<tr>
<td>• Prevention of osteoporosis:</td>
</tr>
<tr>
<td>Smoking cessation</td>
</tr>
<tr>
<td>Exercise</td>
</tr>
<tr>
<td>Vitamin D and calcium supplementation</td>
</tr>
<tr>
<td>Selective estrogen receptor modulators (raloxifene)</td>
</tr>
<tr>
<td>Biphosphonates (alendronate)</td>
</tr>
<tr>
<td>Calcitron</td>
</tr>
</tbody>
</table>

\(^{a}\) Reasons why Health Plan members should consult a physician before taking herbal supplements and phytoestrogens for management of estrogen deficiency:

- not all herbs are safe
- not all herbs are standardized
- herbal preparations may be contaminated
- herbal preparations may interact with prescription medication
- effectiveness of herbal preparations may not be evidence-based

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health systems

of managing estrogen deficiency. Models of care (Table 3) could help guide members, staff, care managers, and clinicians in developing the best management plan for each Health Plan member.

Women who decide to take HRT should have easy access to clinics or practitioners who can provide education on the most appropriate treatment plan and who can arrange for follow-up consultation to answer any questions and, if necessary, to adjust therapy. For women who have not had hysterectomy, HRT should include estrogen and progestin agents because unopposed estrogen therapy in women with a uterus has been associated with endometrial cancer. Women who have had hysterectomy need only estrogen replacement. Multiple HRT regimens have been developed.10 For women with a uterus, these regimens commonly prescribe 0.625 mg equine estrogen taken orally every day with daily or cycled medroxyprogesterone at a dosage of 5 mg to 10 mg per day.

Hormone replacement therapy is contraindicated in women who have a history of breast or uterine cancer, thromboembolism, undiagnosed genital bleeding, gallbladder disease, or undiagnosed headache with or without hypertension.10,11 For women in whom HRT is not well tolerated or for whom HRT is contraindicated or not selected, alternative therapy for preventing osteoporosis includes vitamin D and calcium supplementation, selective estrogen receptor modulators (raloxifene), bisphosphonates (alendronate), phytoestrogens, and calcitonin.10 In addition to having protective effects on bone, raloxifene may also lower LDL cholesterol levels. Alendronate has been shown to have no effect on reduction of symptoms associated with menopause but has been approved for both prevention and treatment of osteoporosis. Alendronate has not been shown to reduce cardiac mortality associated with estrogen deficiency.12

The effects of HRT, alendronate, and raloxifene on bone disease, coronary artery disease, menopausal symptoms, breast cancer, and thromboembolism are summarized in Table 4. As stated above, HRT, alendronate, and raloxifene all help to prevent osteoporosis. The cardioprotective effects of HRT have been well documented.13 Of all 3 treatments—HRT, alendronate, and raloxifene—HRT is best for managing menopausal symptoms. Raloxifene and HRT may cause thromboembolic disease.

Menopausal symptoms are easily managed with HRT but are difficult to treat without estrogen replacement. Flaxseed, soy products, and certain herb products contain phytoestrogen, which may inhibit release of luteinizing hormone and subsequently help women with hot flushes and mood irregularity.14 Vaginal dry-

<table>
<thead>
<tr>
<th>Question A: Menopausal symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you have a history of:</td>
</tr>
<tr>
<td>• depression?</td>
</tr>
<tr>
<td>• urinary incontinence?</td>
</tr>
<tr>
<td>• vaginal dryness?</td>
</tr>
<tr>
<td>• hot flushes?</td>
</tr>
<tr>
<td>• difficulty sleeping?</td>
</tr>
<tr>
<td>• painful intercourse?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question B: Risk factors for osteoporosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you have a history of:</td>
</tr>
<tr>
<td>• fracture after age 50 years?</td>
</tr>
<tr>
<td>• parents or siblings who had fracture after age 50 years?</td>
</tr>
<tr>
<td>• taking medications such as prednisone or corticosteroid drugs?</td>
</tr>
<tr>
<td>• total hysterectomy?</td>
</tr>
<tr>
<td>• tobacco use?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question C: Risk factors for coronary artery disease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you have a history of:</td>
</tr>
<tr>
<td>• diabetes mellitus?</td>
</tr>
<tr>
<td>• high blood pressure?</td>
</tr>
<tr>
<td>• high cholesterol level (LCL-C &gt; 160 mg/dL [4.14 mmol/L])</td>
</tr>
<tr>
<td>• heart attack?</td>
</tr>
<tr>
<td>• angiogram with abnormal findings?</td>
</tr>
<tr>
<td>• parents or siblings with history of heart attack or stroke?</td>
</tr>
<tr>
<td>• tobacco use?</td>
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<table>
<thead>
<tr>
<th>Question D: Risk factors for breast cancer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you have</td>
</tr>
<tr>
<td>• personal history of breast cancer?</td>
</tr>
<tr>
<td>• personal history of breast biopsy done to rule out diagnosis of breast cancer?</td>
</tr>
<tr>
<td>• mother or sisters with history of treatment for breast cancer?</td>
</tr>
<tr>
<td>• family history of bilateral breast cancer?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Risk groups:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• More than two symptoms of menopause (Question A)</td>
</tr>
<tr>
<td>• More than two risk factors for coronary artery disease (Question B)</td>
</tr>
<tr>
<td>• More than two risk factors for osteoporosis (Question C)</td>
</tr>
<tr>
<td>• History of breast cancer or high risk for breast cancer (Question D)</td>
</tr>
<tr>
<td>• Postmenopausal woman who does not receive hormone replacement therapy</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Women with no regular primary care physician</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk for complications by number of risk factors:</td>
</tr>
<tr>
<td>• High risk for complications: 4-6 risk factors</td>
</tr>
<tr>
<td>• Medium risk for complications: 1-3 risk factors</td>
</tr>
<tr>
<td>• Low risk for complications: 0 risk factors</td>
</tr>
</tbody>
</table>

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Table 2. Proposed self-examination tool for women

<table>
<thead>
<tr>
<th>Question A: Menopausal symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you have a history of:</td>
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<td>• depression?</td>
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<tr>
<td>• angiogram with abnormal findings?</td>
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<td>• parents or siblings with history of heart attack or stroke?</td>
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<td>Do you have</td>
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</tr>
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</tr>
<tr>
<td>• Low risk for complications: 0 risk factors</td>
</tr>
</tbody>
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Table 3. Proposed models of care for women with estrogen deficiency

<table>
<thead>
<tr>
<th>Low risk for complications:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Yearly flu vaccine and routine immunizations per KP Regional guidelines</td>
</tr>
<tr>
<td>• Smoking cessation</td>
</tr>
<tr>
<td>• Mammogram, Pap smear, LDL cholesterol level tested per guidelines</td>
</tr>
<tr>
<td>• Vitamin D (400 IU/day) and calcium (1000-1500 mg/day) supplementation</td>
</tr>
<tr>
<td>• Routine contact with primary care provider at least once per year</td>
</tr>
<tr>
<td>• Osteoporosis preventive therapy per KP Regional guidelines</td>
</tr>
<tr>
<td>• Basic menopause education</td>
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</table>

<table>
<thead>
<tr>
<th>Medium risk for complications (all low-risk-group actions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Assure all members assigned to a primary care practitioner</td>
</tr>
<tr>
<td>• Consider referral to endocrinology clinic for women with risk factors for osteoporosis</td>
</tr>
<tr>
<td>• Consider referral to cardiology clinic and/or cholesterol clinic for women with risk factors for coronary artery disease</td>
</tr>
<tr>
<td>• Review medication/vitamin compliance (eg, calcium supplementation, Vitamin D, hormone replacement therapy, alendronate)</td>
</tr>
<tr>
<td>• Written treatment plan and refer for group menopause class</td>
</tr>
<tr>
<td>• Telephone follow-up to assure self-care skills assimilated</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>High risk for complications (all low- and medium-risk-group actions):</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Referral to specialist if indicated (endocrinology, cardiology, psychiatry, or cholesterol clinic, or any combination)</td>
</tr>
<tr>
<td>• Review treatment plan for management of coronary artery disease and osteoporosis</td>
</tr>
</tbody>
</table>

Table 4. Effects of using hormone replacement therapy (HRT), alendronate, and raloxifene for medical management of estrogen deficiency

<table>
<thead>
<tr>
<th></th>
<th>HRT</th>
<th>Alendronate</th>
<th>Raloxifene</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bone density</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Coronary artery</td>
<td>+</td>
<td>no effect</td>
<td>+</td>
</tr>
<tr>
<td>disease</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Menopausal</td>
<td>+</td>
<td>no effect</td>
<td>-</td>
</tr>
<tr>
<td>symptoms</td>
<td></td>
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<tr>
<td>Breast cancer</td>
<td>+</td>
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<td>Thromboembolism</td>
<td>+</td>
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+ = positive effect; - = negative effect
cancer is associated with estrogen replacement. An estimated 20%-30% of women who initiate HRT discontinue it within one year after starting treatment. Many women are concerned about associated problems, ie, abnormal uterine bleeding and the inconvenience of taking hormones for the rest of their lives. Well-organized education programs and access to counselors should be made available to women who have questions about HRT before they consider stopping treatment.

Many women avoid HRT because of the fear that by taking estrogen replacement they will increase their risk of developing breast cancer. In 1997, the results of a collaborative reanalysis of the effects of HRT on women were reported from 51 epidemiologic studies of 52,705 women with breast cancer and 108,411 women without breast cancer. The results demonstrated that an increased risk of breast cancer in estrogen users might not be conclusive. Women should know that multiple studies published over the past 20 years fail to show that estrogen use increases women’s risk for breast cancer. To ensure that all members receive counseling and comply with prescribed treatment regimens—and to assess the program’s overall success—measurable outcomes such as those proposed (Table 5) should be monitored continuously.

**Conclusion**

Information technology is revolutionizing the way we care for patients. Specifically, we now have the tools to identify and stratify risks for many chronic illnesses and to manage the care of large numbers of Health Plan members with these chronic illnesses. Over the next few years, we will therefore shift many of our resources from disease treatment to disease prevention. In this context, population-based care management for women represents the next phase

<table>
<thead>
<tr>
<th>Table 5. Overview of proposed population-based care management for women with estrogen deficiency</th>
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<tr>
<td><strong>1.</strong> Screen and educate all women at risk for estrogen deficiency on the risk and benefits of hormone replacement therapy as well as alternatives to this therapy.</td>
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<tr>
<td><strong>2.</strong> Design questionnaire (eg, Tables 1 and 2) as an outreach tool to educate women and staff members about risk of complications associated with estrogen deficiency. Women can use tool for self-examination to determine risk for complications. Develop models of care (eg, Table 3) to help members and staff determine the care modality appropriate for each member. Develop care management programs to allow women aged &gt;45 years to self-refer to educational programs (ie, lectures, tapes), to case managers, or to specialists.</td>
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<td><strong>3.</strong> After completing self-evaluation questionnaires during outreach programs, at routine clinic visits, or at hospital admission, identify members at risk for complications of estrogen deficiency. Multiple points of contact at which this population can be identified:</td>
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<td>• at entry programs for new members and at educational programs</td>
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<td>• at visit for mammogram or Pap smear</td>
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<td>• at orthopedic clinic evaluation for fracture</td>
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<td>• at cholesterol clinic evaluation for hyperlipidemia</td>
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<td>• at gynecology clinic follow-up after hysterectomy</td>
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<td>• at surgical clinic visit for treatment of breast lump or malignancy</td>
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<tr>
<td>• at Kaiser Permanente Web site</td>
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<td>• in educational letters mailed to female members on their 45th birthday</td>
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<tr>
<td><strong>4.</strong> Develop database to record questionnaire response (ie, to determine percentage of women at high, medium, or low risk for complications of estrogen deficiency)</td>
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<tr>
<td><strong>5.</strong> Develop database of measurable outcomes to monitor percentage of women aged &gt;45 years who</td>
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<tr>
<td>• meet LDL cholesterol goals for age per KP Regional guidelines (see laboratory database)</td>
</tr>
<tr>
<td>• comply with prescribed hormone replacement regimen (see pharmacy database)</td>
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<tr>
<td>• had fracture during the past year (see hospital/clinic diagnostic code)</td>
</tr>
<tr>
<td>• had myocardial infarction during the past year (hospital/diagnostic code)</td>
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of care management: after individual Health Plan members are stratified according to their health risks, long-term medical complications in these members can be prevented through routine medical evaluations given by health care practitioners, yearly reminder letters, and recommended participation in health education programs or seminars. Population-based care management of women with estrogen deficiency can be modeled after highly successful care management programs currently used by KP for management of asthma, congestive heart failure, and diabetes mellitus.

Considering these emerging needs and capabilities, a goal of our health maintenance organization should be to inform all women of the risks and benefits of hormone replacement therapy as well as its alternatives.

References
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The Heart of a True Partnership: 
Dr Oliver Goldsmith Receives “Winning Spirit Award for Partnership”

Time and time again, we have learned the importance of partnership in the practice of medicine. Nowhere is it more evident than in the relationship between Kaiser Permanente (KP) and the Women’s Information Network Against Breast Cancer (WIN ABC), an inspiring program which originated at Kaiser Permanente.

WIN ABC is a national nonprofit organization dedicated to enhancing the levels of care, education, and support available for breast cancer patients and their families. What started out as a partnership between a patient and her surgeon has grown into a collaboration between an entire health care system and an advocacy group. Together, KP and WIN ABC have had a tremendous impact on the lives of thousands of patients diagnosed with breast cancer as well as on their families.

A Patient and Her Physician: Teaming Up to Win

This unique partnership started eight years ago, when Dr Brad Edgerton, a Permanente plastic surgeon at the KP West Los Angeles Medical Center, noticed some unique and impressive qualities in one of his patients. The patient, Betsy Mullen, had been diagnosed with breast cancer at age 33 and was working closely with Dr Edgerton to learn as much as possible about the disease. Ms Mullen took the initiative to seek out as many outside resources as she could find, but she came to realize that the standard of care as it then existed did not meet her need for emotional support.

To address this situation, the patient and her physician began working together to create a program that would provide information resources, emotional support, and a new standard of breast cancer care not only for Ms Mullen but also for other breast cancer patients. What resulted was the Breast Buddy Breast Care Program, a WIN ABC program designed to pair breast cancer survivors with newly diagnosed patients to provide psychological peer support and to make resources available as needed.

WIN ABC, their first stop was to the office of Dr Oliver Goldsmith, Medical Director and Chairman of the Board for the Southern California Permanente Medical Group (SCPMG). After carefully considering the WIN ABC proposal and perceiving its importance and potential value to patients and their families, Dr Goldsmith granted seed funding for the program and designated a pilot site at the KP Fontana Medical Center.

National Impact and Recognition

The partnership has not stopped there, however. In 1998, Kaiser Permanente again teamed up with WIN ABC—this time led by Dr Balasz (Ernie) Bodai, a surgeon at the KP Sacramento Medical Center. Together, they lobbied to pass an innovative piece of legislation, the Stamp Out Breast Cancer Act, which resulted in the creation and nationwide distribution of the first semipostal fundraising postage stamp whose proceeds support biomedical breast cancer research. To date, with the support of such dignitaries as First Lady Hillary Rodham Clinton, the stamp has garnered almost $11 million for breast cancer research and raised public awareness about this deadly disease.

The Breast Buddy Breast Care Program of WIN ABC has significantly grown, and last year it was nationally recognized as a Standard of Excellence by the American Association of Health Plans, a national trade association that represents more than 1000 health maintenance organizations such as KP.

Today, WIN ABC volunteers provide peer support and resources to hundreds of newly diagnosed breast cancer patients through the Breast Buddy Breast Care Program now expanded to serve indigent women at county hospitals. The program is now considered to be an excellent model of an effective partnership between a patient and her medical practitioner.

The latest recognition for this partnership has come from WIN ABC itself. On March 28, 2000, WIN ABC presented to Dr Oliver Goldsmith the program’s first annual Winning Spirit Award for Partnership. The award honored Dr Goldsmith’s strong, personal support for the relationship between Kaiser Permanente and WIN ABC. Dr Goldsmith’s early belief in Dr Edgerton’s and Betsy Mullen’s vision for breast cancer care resulted in a
powerful alliance benefiting thousands of breast cancer patients and their families. Partnership often involves give-and-take: We must recognize that each partner is equally important to the end result. To best serve our patients, in addition, we must realize that individual needs are diverse and unique. We may not be able to fully meet each need by working alone, but by partnering with innovative organizations like WIN ABC, we can provide a coordinated and comprehensive health care experience for our patients.

References

Where Life Never Ends
Neverending dream where life never ends -
where people live in perfect harmony
where color is not wrong
where we can walk and sing without laughter of putdowns
where someone greets you with words of joy
where loneliness and inequality become a speck of dirt
in the winds of the past -
But reality must come first.
Jeff White Bear Claws, Red Cloud Class of 1990,
Footsteps of Wisdom
We Have Come a Long Way: Women’s Health at the Turn of the Millennium

Twenty-six years have passed since the publication of Our Bodies, Ourselves by the Boston Women’s Health Book Collective. That bestselling book marked the beginning of a major change in women’s attitudes about taking active responsibility for their health and about insisting on relationships with their physicians based on mutual health care decision-making. Women also began to lobby for research that would better define their health care needs: Women were becoming increasingly unwilling to accept as pertinent to them findings from observational studies or clinical trials that included only men. Lacking scientific data to indicate otherwise, the medical establishment appeared to assume that, excepting issues of reproductive health, women’s health needs were essentially the same as men’s. Since then, enormous changes have come about in our knowledge about women’s health needs and how to approach them.2

During the 1980s, the groundwork was laid for substantial advances in research on women’s health. In 1986 the National Institutes of Health (NIH) established a policy that required researchers to include women and minorities in NIH-funded research. Also in the mid-1980s, the Society for the Advancement of Women’s Health Research was created to help design and encourage research focused on women’s issues. By 1991, when the US Department of Health and Human Services created the Office of Women’s Health, a groundswell of support had arisen for clinical research on women’s health.34 In 1993, the Federal Drug Administration issued new guidelines that lifted the ban on including women of childbearing age in many clinical trials conducted to develop new drug products.56

Research on Women’s Health has Increased Massively

In the early part of the 1990s, studies on women’s health mushroomed, and although it is still too early to have definitive answers regarding many important issues, information from several large prospective, observational studies is changing the way that the medical establishment understands women’s needs. During the past few years, important data have been collected from the Nurses Study, a prospective study begun in 1976 that has been closely monitoring several cohorts of nurses. Over the years, the thousands of nurses included in the study have provided researchers with survey responses as well as biologic samples ranging from toenails to vials of blood.7 The Study of Women’s Health Across the Nation (SWAN) is examining health issues of women at midlife and is comparing the health status of African American, Latino, Asian American and white women.8 The Women’s Health Initiative (WHI) is a massive study focusing on the major causes of death, disability, and frailty in postmenopausal women. This multiyear study, conducted in >40 centers across the country, is the largest prevention-oriented clinical trial in US history.9 Effects of progesterone/estrogen regimens in postmenopausal women are being studied in the PEPI Trial.10 The National Breast Cancer Prevention Trial is studying the effectiveness of tamoxifen and raloxifene in preventing breast cancer among high-risk women.10 The National Longitudinal Study on Adolescent Health, based on a survey of 90,000 adolescents across the country, will give us new information on risk factors and health issues among girls.410

Women and Men Differ Far More Than Previously Thought

As the vast amount of new information is being analyzed, what are we learning? One of the major outcomes is that we now have evidence for a gender-based biology that shows gender differences at the system, organ, tissue, cellular, and subcellular levels as well as in epidemiology and drug response.10 Important examples of such differences are apparent in the areas of drug response, addiction, chronic disease state, susceptibility to infection, and vulnerability to mental and social problems.

Drug Response

Women tend to wake up from anesthesia more quickly than men (mean time, 7 minutes for women and 11 minutes for men). Some pain opiates (kappa- opiates) are far more effective for relieving pain in women than in men.3 Even common drugs (eg, antihistamines and antibiotics) can cause substantially different side effects and reactions in men than in women. Data suggest that the vascular systems of women differ from men in many ways; and in turn, this difference creates difference in the vasodilatory effects of many drugs. For example, side effects such as flushing, edema, and palpitations produced by the calcium blocker...
Amlodipine were found to be more pronounced in women. Women’s higher levels of body fat content are also believed to alter the effects of drugs.

**Addiction**

Women who smoke cigarettes are 7% to 20% more likely to become affected with lung cancer than men who smoke the same amount of tobacco.

After consuming the same amount of alcohol, women have a higher blood alcohol content than men, even when allowing for different body size. Compared with men, women drinkers have a higher incidence of liver disease, even though they generally consume less alcohol for shorter periods of time. Differences in how men’s and women’s bodies process alcohol are probably responsible for the greater tissue damage suffered by women.

**Chronic Disease State**

In part because they live longer than men (seven years on average), women are more likely to be affected by such chronic, disabling conditions as osteoarthritis, osteoporosis, urinary incontinence, and Alzheimer’s disease.

Although women have lower rates of chronic obstructive pulmonary disease (COPD) than men, the COPD rates for women have nearly doubled since 1979, and the most rapid increases have been seen among women ≥75 years.

Even though women have stronger immune systems to protect them from disease, women are more likely to acquire autoimmune diseases such as lupus, scleroderma, rheumatoid arthritis, and multiple sclerosis. These diseases also present differently in men and women: Greater disease acuity is seen in women. These gender differences are thought to be mediated by differences in the mechanism of antibodies.

Heart attacks are the No. 1 killer of men and women, but women tend to have heart attacks about 10-15 years later in life, and the initial attack is more often fatal in women. Moreover, women are 25% more likely than men to have a second heart attack within one year after their first heart attack. A heart attack often manifests differently in women and men: Women are much less likely than men to report chest pain and are more likely to report feelings of indigestion, nausea, and extreme fatigue.

Researchers have also learned that high levels of high-density lipoprotein (HDL) have a much greater protective effect in women than in men.

After menopause, women lose more bone mass than men—the reason why 80% of osteoporosis patients are women. Arthritis and other rheumatoid conditions (ie, chronic inflammation and stiffness of joints, muscles, and tendons) are more common in women than in men.

**Susceptibility to HIV Infection and Other Sexually Transmitted Diseases**

During unprotected intercourse with an infected partner, women are twice as likely as men to contract a sexually transmitted disease and are ten times more likely to contract HIV.

**Vulnerability to Mental and Social Problems**

Depression is two to three times more common in women than in men, partly because women’s brains produce less of the hormone serotonin. Violence is a major public health problem for women. Women are six times more likely than men to be abused by someone they know and are ten times more likely to become victims of sexual assault. Despite a move to treat domestic violence as a medical condition, the lack of good screening protocols and lack of tested, effective interventions impede progress in this area.

**Health Status Varies Greatly Across Groups of Women**

Recent data also indicate that disease incidence and mortality rates vary considerably across racial and ethnic subgroups of women in the United States.

Some findings follow:
- Although heart disease is the leading cause of death among whites, blacks and Latinas, cancer is the leading cause of death among Asian/Pacific Islander women.
- African American women have the highest age-adjusted rate of death from heart disease (164 deaths per 1000 women), and Asian/Pacific Islanders have the lowest rate (56 deaths per 100,000 women). White women, Latinas, and Native Americans have rates between the other two.
- Cerebrovascular-related death among African American women occurs at a rate of 40 per 100,000 women—a rate far exceeding that of any other group. The rate for white women ranks second (23 deaths per 100,000 women).
- Although the incidence of breast cancer...
differentiating itself from other health plans by both the rigor and quantity of the attention given to women’s health concerns.

The organization is differentiating itself from other health plans by both the rigor and quantity of the attention given to women’s health concerns. Literally dozens of research and program development efforts in women’s health are ongoing within the organization.\(^{18,19}\)

Kaiser Permanente’s Focus on Women’s Health

Kaiser Permanente researchers and clinicians are actively pursuing research on women’s health issues and are developing programs that address women’s most critical health needs. The organization is differentiating itself from other health plans by both the rigor and quantity of the attention given to women’s health concerns. Literally dozens of research and program development efforts in women’s health are ongoing within the organization.\(^{18,19}\)

The Kaiser Permanente Northern California (KPNC) Division of Research is partnering with one of the 40 centers of the WHI national study and also in the part of the study known as WHIMS— the Women’s Health Initiative Memory Study—which examines the effect of hormone replacement on Alzheimer’s disease progression. Through a subcontract with the University of California at Davis, KPNC is also included in the SWAN examination of women in midlife, a study sponsored by the National Institute on Aging.

A study, Health Implications of Sexual Orientation Among Women, has been undertaken to discover whether health behavior and health-seeking behavior differ among women with different sexual orientation. The KPNC medical center at Richmond has fielded a research and demonstration model for reducing family violence through primary prevention, screening, and appropriate referral.

At Kaiser Permanente Southern California (KPSC), researchers in the Department of Research and Evaluation are participating in a study funded by the National Institute on Aging to investigate the effects of hormone replacement therapy (HRT) on Alzheimer’s disease.\(^{20}\) Researchers in the same KPSC department are also collaborating with the Pacific Institute for Women’s Health on a demonstration and evaluation project focused on determining the feasibility and acceptability of making emergency contraceptive pills available.

Most of the research being done within Kaiser Permanente is linked to program development or service delivery and focuses on enhancing quality of care for women members.\(^{20,21}\) For example, the study on women’s acceptance of emergency contraceptive pills includes development of provider and patient education materials, repackaging oral contraceptives into emergency contraceptive kits, and development of information that will enable other health care organizations to replicate the program. Similarly, after Kaiser Permanente researchers studied different modes of care for women who were
at high risk for preterm labor, the study results were used to establish a preterm delivery prevention program that is helping to set the standard of care for these high-risk patients.

At KPNC, the Regional Health Education and Women’s Health Departments are researching, developing, and testing Menopause: a Kaiser Permanente Guidebook for Women as part of an overall effort to provide women members with specific kinds of services focused on the menopausal period.

One Kaiser Permanente service area is implementing the “Women’s Health Prevention Visit,” a Saturday morning clinic time devoted to providing multiple women’s health services and counseling at a single visit. Through a project called Care Coordination for Women and Families, another service area will integrate behavioral health care into obstetrics and gynecology services.

Kaiser Permanente has developed the nation’s first evidence-based clinical practice guidelines for BRCAl, the gene linked to increased risk of breast or ovarian cancer. These guidelines make recommendations for genetic counseling of specific groups of women on the basis of their personal and family histories of cancer.

As the findings from Kaiser Permanente’s research and demonstration projects focused on women are integrated into its service delivery patterns, the quality of services to women members is enhanced and important leadership in women’s health is provided.

Women As Consumers and Coordinators of Health Care

A New York Times article recently pointed out that an integrated managed care program seems tailor-made for women because it provides a coordinated system of care that makes preventive services readily available—and women use preventive services at twice the rate men do. Indeed, the Women’s Health Study conducted among Kaiser Permanente’s women members in 1998 indicated that coordination of care is one of four priority areas of concern to women, along with access, choice and flexibility, and friendly and supportive clinicians and staff. Not surprisingly, considering that women place a much stronger value on the quality of interpersonal relationships, this same study found that encountering friendly and supportive physicians was most important in differentiating satisfied versus unsatisfied female members.

That women’s health issues are now being taken very seriously in this country is evident from recently passed legislation that makes managed care more accountable to women patients. This legislation includes the Newborns’ and Mothers’ Health Protection Act, which requires a minimum hospital stay of 48 hours after a normal vaginal birth and 96 hours after a Caesarean delivery unless mother and physician agree to an earlier discharge. The proposed Patients’ Bill of Rights makes choosing an obstetrician and gynecologist for primary care the law of the land.

Now that numerous studies and marketing analyses have learned that women are the primary decision-makers in choosing a family’s health plan and that women assume a coordinating role in their families’ care, attention to women’s health issues is playing an important role in the financial success of health care organizations. As Kaiser Permanente builds and further improves its firm base in research and in coordinated clinical programs for women, we can expect higher member satisfaction and continued member growth.

Acknowledgment: Tracy Bone, MA, assisted with research.

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1. Pincus J, editor. Our bodies, ourselves for the new century: a book by and for women. Boston: Boston Women’s Health Book Collective; 1998. [The early version is out of print. Several later editions have subsequently been printed, and this is the latest one. It has a review of the publications.]
"Parental Respect"
by Mohamed Osman, MD
A daughter’s reluctance to keep straight eye contact with her mother signifies a formal gesture of respect in many cultures.
Bad Belly
The most important thing I know to be able to heal is not to take a cold drink on an empty stomach on a hot day ... It gives you Bad Belly ... you can't heal if you have Bad Belly.

Don Eligio Panti, 95-year-old Mayan healer, from Carl A. Hammershlag, MD
The Theft of the Spirit
Women's Health and Federal Policy

Historical Background

Until the latter part of the 20th century, the only women’s health issues recognized by policymakers were those related to women’s childbearing capacity. As a result, early debates over women’s health were characterized by misguided and artificially narrow views of the policies and changes necessary to meet women’s real health care needs.

From the early days of Margaret Sanger and fights over the legality of contraception to the high-pitched battle over the right to legal abortion—and to today’s struggles to cure diseases like breast cancer and to raise awareness about women and heart disease—women have organized around health issues and have struggled to gain recognition of their unique health needs as well as the broad range of women’s health concerns.

Expanding Recognition of Women’s Health Needs

Women’s greater use of health care services and their tendency to orchestrate health care for other members of the family (young and old) make nearly every pressing health care issue of the day a women’s health issue as well. These issues include the need for universal health insurance coverage, the need for strong patient protections, and the need for a Medicare prescription drug benefit. As they take on these and other 21st-century battles, women and women’s organizations are building on the groundbreaking efforts of the women who came before them.

The last decade of the 20th century was a time of great policy changes. Women and men brought their exclusion from clinical trials to the Congress and to the public and demanded to the Congress and to the public and their exclusion from clinical trials. Women’s struggles organized and started to change public attitudes and public policy. The Family and Medical Leave Act, signed into law in 1993, recognized the expanding role of women in the workplace and the needs of women and men to balance their dual roles as breadwinners and caregivers. The Violence Against Women Act (VAWA) was passed in 1994 and energized the public discussion around domestic violence as an important health issue.

Gender-Specific Medicine

As we enter a new era of booming medical technology, many challenges remain. One of the most important challenges, stemming from the historical exclusion of women from clinical research, is the need to better understand the biological differences between men and women and how various diseases and their treatments affect women. This clinically important area is known as “gender-specific” medicine. The right to inclusion in clinical research isn’t enough; researchers need to analyze scientific and clinical data by gender if we are to gain greater insight into biological differences between the sexes.

Human Genome Research

Advances in the understanding of the human genome raise especially pressing concerns. Women have been at the forefront of the genetic revolution for many years—first because of their involvement with prenatal testing, and then with the discovery of the BRCA1 and BRCA2 genes a few years ago. These discoveries made it possible to identify some women at higher risk for breast or ovarian cancer. Greater understanding of the cause of disease brings the hope for insight into treatment and prevention, but it opens Pandora’s box of potential discrimination if information passes into the wrong hands—employers or insurers, for example. Some women have indicated a reluctance to be tested: they fear that the act of testing will itself alarm a wary employer and may lead to loss of a promotion, loss of insurability, or even loss of a job.

Recent advances by the Human Genome Project promise increased ability to predict other genetic diseases (and perhaps, ultimately, most chronic diseases) in the future. The Coalition for Genetic Fairness, spearheaded by the National Partnership for Women & Families and comprising dozens of advocacy organizations concerned with known or suspected genetic diseases, is actively seeking stronger federal protection against misuse of genetic information as part of a Patients’ Bill of Rights or through separate legislation. Such protection would build on the Health Insurance Portability and Accountability Act of 1996 (HIPAA), which provides that employment-based group health plans cannot discriminate against present or potential policyholders on the basis of genetic information. HIPAA also provides that genetic information alone cannot be treated as a “pre-existing condition.”

Privacy of Medical Information

Meanwhile, Congress continues its struggle with the question of how to guarantee the privacy of all medical information, including genetic information. Proposed regulations promulgated by the Secretary of Health and Human Services at the close of 1999 respond to many privacy concerns, but specific Congressional action may be needed before all parties feel a sense of trust. Most observers believe that Congressional action on comprehensive medical privacy legislation is not likely to happen this year. However, the computer revolution and an ever-changing health care system that places private medical information into many hands will keep the issue in the public eye.

By Joanne L. Hustead, JD; Donald W. Parsons, MD

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The Breast and Cervical Cancer Treatment Act

More likely to gain Congressional approval this year is an important program to provide treatment for low-income, uninsured women diagnosed with breast or cervical cancer. The Centers for Disease Control and Prevention (CDC) established a national breast and cervical cancer screening program for low-income, uninsured women in 1990, but this program did not guarantee treatment for women who had positive screening test results. The Breast and Cervical Cancer Treatment Act has been introduced to fill this gap by providing for Medicaid coverage through a new state option. This proposal was passed in early May by the US House of Representatives with one dissenting vote and is likely to be enacted into law this year.

The Family and Medical Leave Act

Women are the nation’s primary health care consumers and caregivers. Nonetheless, many women now have an unmet need for time off from work because of childbirth or adoption, family illness, or their own serious medical condition, has been embraced and applauded by employers and politicians alike. However, only businesses that employ 50 or more people are required to comply with this law. Efforts are underway to expand the scope of the FMLA to include midsize businesses (ie, those with 25 to 49 employees), expand opportunities for taking leave from work, and expand sources of funding such as unemployment insurance and disability insurance. The federal government has issued a final regulation to clarify that states can use unemployment funds for this purpose. States are also addressing this issue. This year Minnesota considered financial incentives for employers, and California, Illinois, New York, Connecticut, and New Hampshire already have authorized studies of ways to make family leave more affordable.

Women's Safety Legislation

Other bills pending or proposals under consideration include a reauthorization of VAWA, and VAWA II, which, among other things, would build on HIPAA by prohibiting health insurance discrimination against victims of domestic violence in more markets. In addition, California Congressman Fortney (Pete) Stark has introduced legislation to establish federal standards for use of safer needles to protect the nursing and health care technician workforce (predominantly female) against needle-stick injuries.

When Will Women's Health Policy Meet Women's Needs?

Many women’s organizations are still working hard to bring this diverse range of issues to the attention of the public and policymakers, but much work remains to be done before women’s health policy evolves to meet women’s needs. With all this attention, women’s health, social, environmental, and workplace concerns can no longer be ignored.

References
4. Health Insurance Portability and Accountability Act of 1996 (HIPAA), Pub L No. 104-191, 110 Stat 1936 (Aug 21, 1996). [For more information on HIPAA, visit the National Partnership’s Web page (http://www.nationalpartnership.org/healthcare/hipaa/guide.htm) and read or download the HIPAA guide. HIPAA also provides some protection for victims of domestic violence from discrimination by employment-based group health plans.]
8. 65 Fed Reg 37210 (June 13, 2000).
9. For more information on the FMLA and state proposals to make family and medical leave more affordable, visit the National Partnership’s Web page (http://www.nationalpartnership.org/workandfamily/workmain.htm).
**Book Reviews**

**Your Guy's Guide to Gynecology: a Resource for Men and Women.**

*By Bruce Bekkar, MD and Udo Wahn, MD*

**Review by Patricia C. Gallo, PA-C**

Your Guy's Guide to Gynecology is a plethora of information for today's men who care about the women in their lives. This reference combines highly technical information and top-secret female facts in a humorous writing style that helps make learning easy for most men. The book helps uncover the mysteries surrounding female health problems and covers all the important topics men will need to understand women's health issues.

Bruce Bekkar, MD and Udo Wahn, MD wrote Your Guy's Guide. Both are Board-certified, practicing gynecologists with SCPMG and hold teaching positions with the Department of Reproductive Medicine at the University of California at San Diego. Between them, they represent more than 30 years of clinical experience providing health care for women. Dr Wahn has been on the staff at Kaiser Permanente in San Diego for more than 16 years; Dr Bekkar, for 12 years. These physicians have been teaching an ongoing monthly class at SCPMG, San Diego—"For Men Only"—to help men better understand women and enable men to be more supportive when PMS, menopause, and other gynecologic issues emerge. The monthly class has become very popular and helpful to our members, and now the same important information is available in a book.

The authors' premise is that men do care about women's health problems despite what women believe. As guys, Bekkar and Wahn believe this lack of attentiveness is due to lack of information—not insensitivity or a short attention span. Your Guy's Guide to Gynecology enables men to be comfortable with women's issues by providing them information in an interactive, "guy-friendly" way.

The authors have included helpful suggestions for men who have specific female questions. My favorite example is from Chapter 6, "Attack of the Killer Hormones." Here "Supportive Guy" (the icon for sensible suggestions) recommends what to do if your partner has PMS. The suggestion goes something like this: Help out more around the house. Be understanding. Listen patiently. Ask her how she is feeling. Encourage her to exercise and watch her diet. And don't forget to hide the chocolate, guys!

Although marketed for men, this book isn't just for them; many women will want to use it as a resource guide as well. Other women will want to buy it for their guy. Household partners who read this book together will be better able to manage gynecologic issues and thus make their relationship stronger. By sharing this book with their male partners, some women will no longer find themselves alone when dealing with their health problems, and their male partners will become more comfortable discussing the various issues of women's physical and emotional health.

For health care professionals, this book is humorous, easy to read, and informative. It is an important book that could help health care practitioners present information to their patients in a down-to-earth style that is easily understood. Your Guy's Guide to Gynecology is a reference source that should be included in your personal library of medical texts. Readers—men, women, and health care professionals of all kinds—should find this book an overdue resource that helps to demystify gynecology, a subject that has been taboo for too long.


Patricia C. Gallo, PA-C, has been with the Department of Preventive Medicine in San Diego for 12 years. Previously, she worked in Occupational Medicine for the East Sandwich, MA: North Star Publications [Ant Hill Press], 2000.

**Lymphedema: A Breast Cancer Patient's Guide to Prevention and Healing**

*By Jeannie Burt & Gwen White, PT; Foreword by Judith Casley-Smith, MD*

**Review by Diane C. Strum**

In July 1997, at age 49, I was diagnosed with Stage II breast cancer. I was stunned, devastated, and filled with fear about the future. As do most women diagnosed with breast cancer, I started reading books, most of which were recommended or given to me by well-meaning friends. However, the focus on statistical survival rates for women with breast cancer only served to create more fear in me, and I soon abandoned reading about breast cancer and instead placed my trust in my physicians.

I considered myself fortunate that both my surgeon and my oncologist at Kaiser Permanente in San Diego informed me about all the possibilities associated with my cancer, including lymphedema. However, I was angry and fearful about this other possible consequence of the cancer, yet another assault and deformity on my body.

Had this book been available and brought to my attention, I could have at least minimized my fear of lymphedema. The book is written by two women: one is a physical therapist at Kaiser Permanente in Portland, Oregon;
To Life! Select Recipes and Nutritional Guidance for a Healthy Heart

Mended Hearts Chapter 188, compilers

Review by Jeanne Weissman, Viviana Lombrozo, Louise Felitti

To Life! What a wonderful title for a cookbook designed to guide patients with coronary artery disease through the uncertainties of low-fat cuisine. The goal is depicted clearly on the book’s attractive, colorful cover.

Inside, help abounds. The recipes are favorites gathered by Mended Hearts Chapter 188 at Kaiser Permanente in Oakland from individuals and from famous Bay Area restaurants. Famous chef Graham Kerr has contributed a section on basic cooking techniques. Each recipe contains a nutritional analysis of calories, fat, cholesterol, carbohydrates, protein, and sodium.

The dishes described here are not “hospital food.” The book contains a remarkable range of recipes—reminiscent of the famous, ethnically diverse restaurants of San Francisco but all simple and designed for relatively inexperienced cooks. If you’ve never eaten cactus (nopalitos), here’s a new experience. If you think potato-leek soup is out because of the cream, here’s a nice solution. And if you like desserts, the book presents a baker’s dozen. William Castelli, MD, former Medical Director of the Framingham Heart Study, once commented that most Americans eat only ten menus. To Life is a cure for dull eating.

Arthur Klatsky, MD, retired Senior Cardiologist from TPMG in Oakland, is one of the people to whom this book is dedicated. He has contributed a most interesting chapter on the role of alcohol in heart disease. And a retired cardiologist equally valued by our Health Plan members in Oakland, Rudolph Oehm, MD, authored the chapter on nutrition. Both cardiologists have obviously extended themselves beyond the usual concept of what cardiologists do.
Medical Guides

Review by Eve F. Lynch

What is more important: a good bedside manner, or a good bedside manual? Both are essential parts of the overall health care picture. Everyone benefits when patients have access to medical information that can be perused at leisure or referred to in a crisis. Medical care costs can be avoided or diminished when patients don’t immediately reach for the phone at the onset of minor medical situations. Patient confidence in medical professionals increases when office visit advice is confirmed by a text. And patient education, understanding, and compliance may well improve when information is read and reread on the patient’s own time.

But which text to choose?

Kaiser Permanente’s (KP) Healthwise Handbook: A Self-Care Guide for You and Your Family is a 300-page paperback that is easy to use and easy to keep on a bedside table. In addition to the expected sections on health problems, this book also advises health plan members how to get the most from the KP system, how to make and prepare for medical appointments, how to share in medical decisions, when to use emergency services, and how to prevent and detect specific medical problems. This book is easy to use—permitting search by symptom and advising patients when to treat themselves at home and when to call a health professional. Descriptions are concise and include only the information needed for determining what action, if any, to take in response to a given set of symptoms.

Unlike the relatively brief Healthwise Handbook, The American College of Physicians’ Complete Home Medical Guide is a 1000-page tome, a true medical encyclopedia that covers all human medical topics. The book is packaged with a complimentary CD-ROM, “The Ultimate Human Body,” whose three-dimensional graphics allow users “to rotate the body, peel away the layers, examine the organs, circulatory system, and the skeleton, and call up data, thus ensuring a total understanding of how the body’s complex organs work.” Like all Dorling Kindersley publications, the book is a gorgeous production with slick paper and numerous color photographs and illustrations. Handy flowcharts based on queries about specific symptoms help readers determine whether to contact a health care provider or to use home treatment. The book also contains a lengthy list of health organizations and their Web site addresses.

Although the book is well organized and is a pleasure to read, it contains much more information than is necessary for occasional consultation by most patients. Thus, this book is most suitable for those who wish to read extensively about the human body or who tend to be hypochondriacal.

The Mayo Clinic has tackled the tome-versus-handbook dilemma by publishing one volume of each type. The Mayo Clinic Family Health Book is some 1350 pages long and includes cradle-to-grave coverage of human diseases and disorders. In addition, the book discusses staying well, first aid and emergency care, nutrition and fitness, and modern medical care. Forms are included for helping patients to draft advance directives. The large book also contains an extensive photographic guide to common skin disorders. The shorter book, the Mayo Clinic Guide to Self-Care, includes fewer than 300 pages and is a handbook more suitable for bedside consultation.

For most people, one of the shorter books mentioned here will be most suitable for everyday use. Use of the texts showed that just the weight of the two larger volumes hindered rapid research. These tomes are literally too weighty to use handily—sort of like dragging the Oxford English Dictionary into bed or bathroom for consultation during a midnight...
bout of diarrhea or fever. The big books require readers to scan a topic’s abundant index listings to find the page pertaining to first aid—not what is wanted when rushing to find a treatment for burns.

Although the two longer books are fairly comparable in scope, as are the pair of handbooks, they are not identical. Nor do the bigger books necessarily contain all the information that the handbooks contain. For example, only the KP Healthwise Handbook instructs patients on the “hot wire” technique of relieving the pressure of a blood clot located under a fingernail or toenail; the other three books don’t mention this very useful topic. The Mayo Clinic Family Health Book instructs how to make a tourniquet, whereas the handbooks mention the tourniquet as a last resort but do not direct how to make one, and the American College of Physicians’ book advises patients never to use one. Where emergency help is required, the Mayo Clinic Guide to Self-Care instructs the reader to “Dial 911,” whereas the other books merely instruct patients to “contact professional help”; the more specific directive—to dial “911”—would probably be of greater use to a panicked reader.

Either of the medical encyclopedias mentioned here would make a good addition to any home reference library but might not occasion much use. On the other hand, I have countless times referred to a medical handbook similar to the two smaller texts listed here. Clearly, some form of home medical reference is important. Which one of these four is best is more a matter of personal preference. If your patients have received the KP Healthwise Handbook, they probably have all they need. Ask them to read it—especially the sections on how to better participate in their medical care and any section currently relevant to their own health.


Eve Lynch is a San Francisco attorney, recently retired into motherhood.

**Women’s Cancers: How to Prevent Them, How to Treat Them, How to Beat Them.**

By Kerry A. McGinn, RN, NP and Pamela J. Haylock, RN

Review by Eve F. Lynch

Do you know when local versus systemic cancer therapies are applied, and why? Do you know the side effects of chemotherapy? Do you even know what cancer really is? Well, undoubtedly you know, but I didn’t know, and I bet I’m a lot like the majority of your patients—which is why the book Women’s Cancers: How to Prevent Them, How to Treat Them, How to Beat Them is the perfect prescription for anyone needing well-organized, understandable information on cancer.

This book is written for the layperson, who—trust me—typically has no accurate knowledge of cancer. But despite its readability, Women’s Cancers is not overly simplistic. On the contrary, topics are covered thoroughly, educating its readers to be able to conduct intelligent discussion with their caregivers. The authors even include lists of suggested questions to inspire such discussion.

The book spans breast cancer, the various gynecologic cancers, and lung and colorectal cancers, the last two being as much “women’s cancers” as they are men’s. The authors discuss precancerous conditions, risk factors, prevention, screening, staging and grading of cancer, signs and symptoms, diagnosis and treatment (including traditional and alternative therapies), as well as the psychologic, physical, and emotional ramifications of enduring cancer. A great quantity of information is presented without overwhelming the reader. All technical terms are explained at first appearance in the text and can thus be easily understood without the reader having to look up words (although a glossary is included). Further, the authors refer frequently to other texts which the reader can access for even more or different information on cancer; the vast bibliography also serves as a useful resource.

Women’s Cancers is written with a compassionate voice. The authors are concerned about the human being behind the cancer diagnosis. They acknowledge the fears attendant upon a suspicion of or diagnosis of cancer and give a prominent place in the book to the psychologic and emotional aspects of enduring a major illness. As an example of the authors’ understanding of the feelings that arise upon even the contemplation of cancer, the following occurred while I was reading the book: I was feeling slightly queasy just reading about a technique called wire localization biopsy, used to explore breast abnormalities. The next section is entitled “Feelings
About a Biopsy” and begins, “It is scary to have a biopsy or other diagnostic procedure.” The section goes on to realistically consider possible feelings when facing a biopsy. What a well-placed section! And how helpful that the authors discuss such things at all. Fear must be a real problem in getting patients to participate in their own care. Identifying areas in which fear may arise and preparing to deal with them is important. The large part of the book dedicated to discussing such things as fear, other people’s reactions to illness, life changes due to cancer, and the like may well end up being more important to a patient than understanding the technical aspects of diagnosis and treatment. The authors warn that “life after cancer” normally does not mean that a woman can resume her previously scheduled life, and they discuss the physical and emotional changes a person will be left to work with as well as challenges to be faced in society, such as discrimination from insurers and employers.

Forewarned is forearmed, and the authors know that a woman is better off when armed with information and ideas about how to take part in her own destiny. Meant to empower women through knowledge and inspiration, the book discusses the patient’s assembling her own recovery team, made up of doctors, nurse practitioners, practitioners of complementary therapies, support groups, family, friends, and the patient herself. The book’s attitude is inspiring, demonstrating that any patient can take action instead of resigning herself to being a “cancer victim.”

Women’s Cancers, a tool for self-empowerment and a guide on how to live, not just survive, is an ideal book for people with cancer and for those who care about them.


Eve Lynch is a San Francisco attorney, recently retired into motherhood.

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Escape from Quotation Marks

The last third of the 20th century has inserted, with blatant cynicism, quotation marks around most of our cherished notions of social, political, historical, and psychological existence. Indeed, the whole notion of what a human being is in the age of cloning, cyberspace, and public opinion polls has undergone a radical transformation.

Andrei Codrescu, commentator on National Public Radio
Kaiser Permanente Primary Care Conference
April 9-13, 2001
Oriigger Wailea Resort
Wailea, Maui, HI

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Blue Window of Hope

On February 1, 2000, a new Web site, “Blue Window of Hope,” was launched by three Kaiser Permanente RNs. The Web site is designed to be a venue for exploring prayer, health, and healing, as well as death, dying, and end-of-life issues in terms of research and application. The creators of this Web site hope it will be an asset to any medical professional dealing with a chronically ill patient. You are invited to visit the site at: http://bluewindowofhope.com.

New Women’s Health Web Site Launched

KP Southern California’s Women’s Health Leadership Committee (WHLCo) has launched a new Intranet Web site dedicated to women’s health issues. The Web site helps providers easily get the information they need to better manage the health of female members. The site features information about the Women’s Health Leadership Committee, women’s health programs and contacts, breast cancer, Internet links, and patient education materials.

To access the women’s health Web site, go to: http://kpnet.kp.org/california/scpmg/womenshealth/.

Cardiovascular Conference

The Second Annual Kaiser Permanente meeting on Cardiovascular Medicine and Surgical Therapies (COAST Conference) will be held Friday through Sunday, October 27–29, 2000, at the Hyatt Regency Monterey Resort and Conference Center in Monterey, California. Friday evening there will be a dinner and reception at the Monterey Bay Aquarium, followed by a day and a half of presentations. Conference highlights include: The Internet and Cardiovascular Medicine, Interventional Therapy for CAD: The State of the Art, Endovascular Stenting of Aortic Dissections and Carotids, Transesophageal Echocardiography, Mitral Valve Disease: Diagnosis and Time for Intervention, and New Imaging Techniques: Focus on Intravascular Ultrasound and CAD. The conference is sponsored by The Permanente Federation CME Office and you may report up to 10 Category 1 CME Credits. The registration fee is $150.00 (all categories). For information and/or registration form/brochure, please contact Juliene Malecot by phone, (415)202-3495, or by e-mail, Juliene.Malecot@kp.org.

TPJ wins APEX 2000 Award of Excellence

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Learning Relates to Relation

People learn best from those they can relate to...

James M. Kouzes, Encouraging the Heart, A Leaders Guide to Rewarding and Recognizing Others
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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 practical articles within the ranges listed are preferred. Emphasis 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. (word count range is 725-5000)

Original Research
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. (word count range is 725-5000)

Health Systems 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. (word count range is 725-3000)

External Affairs 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. (word count range is 725-3000)

Medical Legal Update 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. (word count range is 725-1400)

Soul of the Healer 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. (word count range is 725-2200)

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

Abstracts Abstracts from articles published in other journals, 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.

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

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

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Section A.

Article 1. **Management of Libido Problems in Menopause** (page 29)

The likelihood that a 58 year old woman will present with new onset pain with sexual relations and difficulty achieving orgasm is:

a. very low  
b. low  
c. average  
e. above average  
d. every patient

Which situation below would most likely decrease free testosterone via increasing sex hormone binding globulin in some women and thus may impact libido in those menopausal females?

a. estrogen patch  
b. estrogen patch or birth control pill  
c. oral estrogen and a progestogen

Article 2. **Likelihood That a Woman Will Have No Major Risk Factors At the Time of First Myocardial Infarction or Stroke** (page 35)

The likelihood that a woman age 45-74 years of age who presents for the first time with an ischemic stroke or an acute myocardial infarction will not have hypertension or diabetes or cigarette smoking as a risk factor is:

a. ≤6%  
b. 7-16%  
c. 17-26%  
d. ≥27%

Among women with newly diagnosed myocardial infarction, which risk factor decreases in prevalence with increasing age?

a. Hypertension  
b. Diabetes  
c. High cholesterol level  
d. Smoking

Article 3. **The Gynecological Cancer Detection Clinic—Commentary** (page 39)

A modern cervical cancer screening program is based on the following principles: (circle all that apply)

a. Cervical cytology specimens are obtained from both the external cervical as well as the endocervical canal, using a spatula and endocervical brush  
b. Lugol’s solution is applied to the cervical surface, and biopsies are obtained from non-staining areas as part of initial screening  
c. The main target lesion for optimal screening is pre-cancer or dysplasia while it is in a highly curable state  
d. The sensitivity and specificity of the Pap smear are low enough that adjuvant cost-effective screening tools should be sought to optimize outcomes  
e. A single, isolated, apparently normal Pap smear has less meaning than repeatedly normal smears, which are associated with a much lower incidence of dysplasia or cancer
The following is true regarding proposed adjuvant modalities for cervical cancer screening programs: (circle all that apply)

a. Adjuvant tests should be measured in terms of both the clinical and economic outcomes they produce
b. A lower rate of ASCUS Pap smears is usually reported by those laboratories using computer-assisted screening
c. Visual methods used to augment the Pap smear cause a lower false negative rate and may assist in triaging patients to observation and follow-up vs treatment
d. To date, HPV strain testing has not led to changes in patient management, but recent studies may support a role in triage and/or screening

Article 4. Proposed Care Management for Women with Estrogen Deficiency: Identification, Risk Stratification, and Treatment (page 68)

Health Plan Employer Data Information Set (HEDIS) will be sending a questionnaire to members of managed care organizations focusing on which of the following measures:

a. Exposure, personalization, and breadth of counseling for women at risk for estrogen deficiency
b. Which medications are used to prevent coronary artery disease and osteoporosis in postmenopausal women
c. How much money a managed care organization spends on osteoporosis and coronary artery disease prevention
d. What percentage of women between the ages of 47 and 57 get information regarding the management of estrogen deficiency from the Internet

Which of the following is correct regarding the benefits of a Population Care Management Program for women with estrogen deficiency:

a. Identification and risk stratification of women who are at risk for complications associated with estrogen deficiency
b. Increase percent of women who are appropriately counseled on the risk, benefits and alternative of managing estrogen deficiency
c. Develop a database to monitor percentage of women over 45 who have met goals for cholesterol management, who are compliant with osteoporosis prevention therapy, and who have been treated for a fracture or myocardial infarction over the past year
d. None of the above
e. All of the above

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

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