



Research Activities

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Task Force urges clinicians and patients to discuss pros and cons of taking prescription medicines to reduce breast cancer risk

The U.S. Preventive Services Task Force recommends that clinicians discuss the potential benefits and risks of taking prescription medicines such as tamoxifen to reduce the risk of breast cancer with their female patients who are at high risk for the disease. The Task Force also recommended against the use of these drugs by women at low or average risk for breast cancer.

The Task Force, an independent panel of experts that is sponsored by the Agency for Healthcare Research and Quality, reviewed three randomized controlled trials that studied the use of the drug tamoxifen and one study on the off-label use of the drug raloxifene to reduce the risk of breast cancer (known as "chemoprevention").

Researchers have long known that tamoxifen can reduce the chances for a second episode of breast cancer in women who have already had breast cancer. But only recently have studies been done to see whether medications can reduce breast cancer risk in healthy women who are at high risk for the disease. According to Janet Allan, Ph.D., R.N., vice chair of the Task Force,

the Task Force found fair evidence that tamoxifen can significantly reduce the risk for invasive estrogen-receptor-positive breast cancer by approximately 50 percent in women at high risk for the disease. They also found consistent evidence for raloxifene, but it was limited to one study that focused on use of the drug to prevent fractures.

Tamoxifen is the only medication currently approved by the U.S. Food and Drug Administration (FDA) to reduce the incidence of breast cancer in women at high risk for breast cancer. Raloxifene currently is approved by the FDA for the prevention and treatment of osteoporosis, but some clinicians prescribe it off-label to reduce the risk of breast cancer. The Study of Tamoxifen and Raloxifene (STAR), an ongoing trial by the National Cancer Institute (NCI), is recruiting postmenopausal women at increased risk for breast cancer to compare the safety and efficacy of the two drugs in reducing the risk of the disease. Information about the trial can be found at <http://www.cancer.gov/star>.

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Reducing breast cancer risk

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Women are considered at high risk for breast cancer if they are over 40 and have a family history of breast cancer in a mother, sister, or daughter or have a history of atypical cells on a breast biopsy. A risk assessment instrument developed by NCI

(<http://www.cancer.gov/bcrisktool>) can help estimate cancer risk based on age, family history, and other risk factors.

For women who are not at high risk for developing breast cancer, the Task Force recommended against the routine use of tamoxifen or raloxifene to reduce the risk of breast cancer because the potential harmful side effects may outweigh the potential benefits. Those side effects can include hot flashes and increased risk for blood clots in the legs or lungs. Tamoxifen also has been found to increase the risk for endometrial cancer.

In general, the Task Force found that the balance of benefits and harms of chemoprevention is more favorable for women in their 40s who are at high risk for breast cancer and have no predisposition toward blood clots and for women in their 50s who are at high risk for breast cancer, have no predisposition to blood clots, and do not have a uterus. However, each woman needs to talk with her clinician about whether the potential benefits of reducing her risk for breast cancer are worth the potential risks of the medications.

Breast cancer is the second most common cancer in women, behind skin cancer, and the second leading cause of cancer deaths, behind lung cancer. It is

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estimated that 203,500 new cases of invasive breast cancer will be diagnosed in 2002, and that 39,600 women will die from the disease.

The Task Force, the leading independent panel of private-sector experts in prevention and primary care, conducts rigorous, impartial assessments of all the scientific evidence for a broad range of preventive services. Its recommendations are considered the gold standard for clinical preventive services. The Task Force based its conclusion on a report from a team led by Linda Kinsinger, M.D., M.P.H., and Russell Harris, M.D., M.P.H., from AHRQ's Evidence-based Practice Center at RTI International—the University of North Carolina (AHRQ contract 290-97-0011).

The Task Force grades the strength of evidence from “A” (strongly recommends) to “D” (recommends against). For women at low or average risk, the Task Force recommends against the use of drugs to reduce the risk of breast cancer (D recommendation). For women at high risk, the Task Force recommends that clinicians and patients discuss the potential risks and benefits of taking drugs to reduce the risk of breast cancer (B recommendation).

Details are in “Chemoprevention of breast cancer: Recommendations and Rationale,” by the U.S. Preventive Services Task Force, in the July 2, 2002 *Annals of Internal Medicine* 137(1), pp. 56-58.

Editor's note: For a detailed description of the evidence synthesis for this recommendation, see also “Chemoprevention of breast cancer: A summary of the evidence for the U.S. Preventive Services Task Force,” by Linda S. Kinsinger, M.D., M.P.H., Russell Harris, M.D., M.P.H., Steven H. Woolf, M.D., M.P.H., and others, in the same journal, pp. 59-67.

The breast cancer chemoprevention recommendations and materials for clinicians are available online at <http://www.ahrq.gov/clinic/3rduspstf/breastchemo/>. Previous Task Force recommendations, summaries of the evidence, easy-to-read fact sheets explaining the recommendations, and related materials are available from the AHRQ Publications Clearinghouse. See the back cover of *Research Activities* for ordering information. Clinical information also is available from the National Guideline Clearinghouse™ at <http://www.guideline.gov>.

To help clinicians apply Task Force recommendations in practice and to help patients understand which clinical preventive services they should expect clinicians to provide, AHRQ sponsors the Put Prevention Into Practice (PIIP) program. Information about the PIIP program and products, as well as a list of other Task Force topics under review, is available on AHRQ's Web site at <http://www.preventiveservices.ahrq.gov>. ■

Improvement in urinary incontinence seen after hysterectomy for noncancerous conditions

Urinary incontinence (UI) seems to improve at least for the first 2 years after hysterectomy for most women who have moderate or severe incontinence prior to surgery. However, if they have mild or no incontinence before hysterectomy, there is a 10 percent risk of worse or new-onset UI after the surgery, according to a study supported by the Agency for Healthcare Research and Quality (HS06865).

Researchers at the University of Maryland used the Urinary Symptom Scale for Women (USSW), which they developed, to assess incontinence during interviews with 1,299 women before hysterectomy and again 3, 6, 12, 18, and 24 months after surgery. The USSW measures five types of UI: stress incontinence (urine drip during sneezing or coughing), urge incontinence (need to urinate urgently with little or no warning), urinary frequency (three or more times per hour), overflow

incontinence (dripped or leaked urine), and incomplete emptying (need to urinate again shortly after urination). Scores on each of these USSW measures and total score (based on number and severity of symptoms) decreased after hysterectomy and remained about the same for 2 years after surgery for most women with severe or moderate UI.

Women with severe UI before hysterectomy were more likely to experience improved incontinence (89 percent) 1 year after surgery than those with moderate (62 percent) and mild/no incontinence (8 percent). On the other hand, women with mild/no incontinence were more likely to have worse incontinence (17 percent) 1 year after hysterectomy than those with moderate (10 percent) and severe (3 percent) incontinence before hysterectomy. Similar results were noted 2 years after surgery.

Details are in "Urinary incontinence and hysterectomy in a

large prospective cohort study in American women," by Kristen H. Kjerulff, Ph.D., Patricia W. Langenberg, Ph.D., Lavonne Greenaway, M.D., and others, in the May 2002 *Journal of Urology* 167, pp. 2088-2092. ■

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Differences between men and women in heart attack treatments and outcomes are not explained by insurance status

The first large study to examine the impact of insurance status in the treatment and outcomes of men and women with heart attack found that women clearly received fewer cardiac treatments and procedures and had worse outcomes than men, but insurance status did not appear to explain these differences. After adjustment for patient clinical characteristics, hospital characteristics,

medications administered within the first 24 hours of admission, and invasive cardiac procedures performed in the hospital, most of the differences in mortality observed among the insurance groups for women and men disappeared, according to the study which was supported in part by the Agency for Healthcare Research and Quality (HS08843).

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Heart attack treatments

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Regardless of insurance status, women generally were less likely than men to receive aspirin, beta-blockers, intravenous heparin, or nitrate therapies within the first 24 hours of hospital admission. Also, after adjustment for age and race, women were significantly less likely than men to undergo coronary angiography or, after angiography, to undergo either coronary angioplasty or coronary bypass surgery while in the hospital. For every insurance

group, women were significantly more likely than men to die in the hospital, with the greatest difference found among women with HMO and commercial insurance.

Women's higher in-hospital death rates were largely attributed to the older age and higher proportion of coexisting medical problems among women (70 percent) than men and to a lesser degree to the fewer medications and invasive cardiac procedures received by women (10 percent). Women's higher short-term risk of death from heart attack compared with men may warrant at least

equally aggressive in-hospital assessments and treatments that are known to improve short-term survival, conclude the researchers. Their findings were based on analysis of data on 327,040 men and women enrolled in a national registry of patients who suffered heart attacks from 1994 to 1997.

See "The association of sex and payer status on management and subsequent survival in acute myocardial infarction," by John G. Canto, M.D., M.S.P.H., William J. Rogers, M.D., Nisha C. Chandra, M.D., and others, in the March 11, 2002 *Archives of Internal Medicine* 162, pp. 587-593. ■

Assessment tool helps counselors work more effectively with victims of domestic violence

A new assessment tool has been developed for use with women who disclose intimate partner violence through screening or by seeking counseling or shelter. Counselors can use the new tool to pinpoint how a victim of abuse perceives the abusive relationship and help her move forward to end the violence. The tool was developed by researchers at Georgetown University, Johns Hopkins University, the University of Washington, Tacoma, and Oregon Health Sciences University. Their work was supported in part by the Agency for Healthcare Research and Quality (HS10731).

According to the researchers, a woman typically goes through five stages before finally establishing a new life without abuse. First, she is confused when violence begins but remains committed to the relationship, minimizes the violence, and focuses on her partner's good qualities. Second, she remains committed but begins to recognize she is abused. Third, she seeks support and help, seriously considers her options, and resolves to end the violence despite opposition by her partner. Fourth, she makes and acts on plans for her own safety, either by leaving the partner or forcing him (for example, with police intervention) to curtail the abuse. Finally, in stage five,

she establishes a new life without the partner or with the partner who no longer abuses her, and she works to become more self-sufficient. These stages do not always progress in a linear fashion, and times away often are followed by a return to the abusive partner.

Family violence counselors can use the Domestic Violence Survivor Assessment (DVSA) to help clients define their domestic situations and take the necessary steps to move forward to lives that are free of abuse, explains Jacqueline Dienemann, Ph.D., of Georgetown University. Dr. Dienemann and her colleagues worked with domestic violence counselors at three Maryland family violence centers to develop the DVSA, which is a grid broken down into the five stages that a woman may experience on 11 issues at the personal, relationship, and social context levels. The DVSA is simple to use and quick for counselors to complete, yet it still reflects the complexity of women's lives.

See "The domestic violence survivor assessment: A tool for counseling women in intimate partner violence relationships," by Dr. Dienemann, Jacquelyn Campbell, Ph.D., R.N., Karen Landenburger, Ph.D., R.N., and Mary Ann Curry, Ph.D., R.N., in the March 2002 *Patient Education and Counseling* 46, pp. 221-228. ■

Note: Only items marked with a single (*) or double (**) asterisk are available from AHRQ. Items marked with a single asterisk (*) are available from AHRQ's clearinghouse. Items with a double asterisk (**) are also available through AHRQ InstantFAX. Three asterisks (***) indicate NTIS availability. See the back cover of *Research Activities* for ordering information. Consult a reference librarian for information on obtaining copies of articles not marked with an asterisk.

Selective rather than routine urine testing finds most urinary tract infections in very young infants with fever

Urinary tract infections (UTIs) are the most common serious bacterial infection seen in young febrile infants, occurring in 3 to 10 percent of infants with fever younger than 3 months. Thus, the current recommendation is that doctors test the urine of all such infants for UTI. Instead, many pediatric practitioners test the urine of young febrile infants according to their clinical judgment rather than routinely. Although this approach differs from the recommendations, a recent study found few late diagnoses of UTIs among more than 800 infants whose urine was not initially tested and who were not initially treated with antibiotics. The study was supported in part by the Agency for Healthcare Research and Quality (HS06485, Robert H. Pantell, M.D., principal investigator).

According to the researchers, doctors tend to order urine tests selectively, focusing on younger

and more ill-appearing febrile infants and those who have no apparent fever source (such as an ear infection, conjunctivitis, or respiratory tract symptoms). They studied the urine testing practices of 573 pediatricians from 219 practices who evaluated and treated 3,066 infants 3 months or younger with a temperature of 100.4°F or higher.

Over half (54 percent) of the infants initially had their urine tested, and 10 percent of those tested had a UTI. Infants with the highest fevers were more likely to be tested and to have a UTI. Younger age, ill appearance, and lack of an apparent fever source were associated with urine testing but not with the presence of a UTI. Among 807 patients not initially tested or treated with antibiotics, only 2 had a subsequent documented UTI, and both did well.

Male infants who were not circumcised had nearly 12 times

the likelihood of UTI, females had 5 times the likelihood of UTI, compared with circumcised infants, and infants with a fever lasting 24 or more hours had 80 percent greater odds of developing UTI. However, these factors were not associated with urine testing. The researchers conclude that urine testing should focus particularly on uncircumcised boys, girls, the youngest (bacteremia rates among infants with a UTI in the study ranged from 6 percent in 2- to 3-month-old infants to 17 percent in infants younger than 1 month) and sickest infants, and those with persistent fever.

More details are in "Urine testing and urinary tract infections in febrile infants seen in office settings," by Thomas B. Newman, M.D., M.P.H., Jane A. Bernzweig, Ph.D., John I. Takayama, M.S., M.P.H., and others, in the January 2002 *Archives of Pediatric and Adolescent Medicine* 156, pp. 44-54. ■

New computerized decision aids improve ED triage of chest pain patients

Each year about 6 million people suffering from chest pain arrive at hospital emergency departments (EDs), and doctors must decide whether they have unstable angina pectoris or are suffering from a heart attack (acute myocardial infarction, AMI). The price of missing an AMI diagnosis is high, with nearly twice as many deaths among AMI patients who are mistakenly discharged from the ED compared with those who are appropriately hospitalized.

Two computerized diagnostic aids may help ED staff make faster and more appropriate ED triage decisions for chest pain patients, and they also may reduce health care costs, according to a review of

studies by Daniel B. Stryer, M.D., of the Center for Outcomes and Effectiveness Research, Agency for Healthcare Research and Quality. The Acute Cardiac Ischemia Time-Insensitive Predictive Instrument (ACI-TIPI) and the related Thrombolytic Predictive Instrument (TPI) are programmed into conventional computerized electrocardiographs (ECGs), which automatically compute and print out a patient's predicted outcomes based on characteristics of the ECG when the patient arrives at the ED.

The ACI-TIPI predicts a patient's probability of heart attack based on seven risk factors that range

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ED triage of chest pain patients

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from pain in the chest or left arm to peaking or inversion of ECG T waves. The TPI, based on records from 13 major clinical trials and registries, is used to calculate 30-day and 1-year mortality and cardiac arrest probability within 48 hours with and without thrombolytic (clot-busting) therapy. Both instruments were developed, tested, and refined by researchers at Boston University, led by Harry Selker, M.D., and supported in part by the Agency for Healthcare Research and Quality (HS07360, HS08212).

Use of ACI-TIPI in a 10-hospital trial led to a decline from 15 to 12 percent in coronary care unit (CCU) admission rates and an increase from 49 to 52 percent in discharges to home among patients without

cardiac ischemia. Appropriate hospitalization and CCU admission remained about the same for patients with AMI or unstable angina. If these results were reproduced nationally, it is estimated that use of the ACI-TIPI could result in savings of \$728 million by avoiding unnecessary CCU admissions and hospitalizations. Results from recent clinical trials of the two instruments are expected to be published soon and should lead to a greater understanding of their effects.

See "The development and role of predictive instruments in acute coronary events: Improving diagnosis and management," by Dr. Stryer, in the April 2002 *Journal of Cardiovascular Nursing* 16(3), pp. 1-8. Reprints (AHRQ Publication No. 02-R064) are available from AHRQ.** ■

Researchers compare options for prostheses for patients who need hip replacement surgery

Advances in cementing techniques enable orthopedic surgeons to better fill the spaces between hip prosthetic components and surrounding bone during hip replacement surgery. In fact, a growing number of orthopedic surgeons are using cemented femur and uncemented acetabulum hip bones as a hybrid prosthesis for hip replacement surgery.

A new study demonstrated that the hybrid prosthesis cost less and resulted in similar complications and patient functioning compared with a totally uncemented prosthesis. This work was conducted by the University of Maryland Patient Outcomes Research Team (PORT) studying hip fracture management and total hip replacement for osteoarthritis, the hip PORT, which is supported by the Agency for Healthcare Research and Quality (HS06658).

The researchers compared the outcomes of 271 relatively healthy elderly patients (most of whom were white women) with hip osteoarthritis. The patients had received first-time total hip replacement from numerous orthopedic surgeons in 12 Baltimore area hospitals from 1991-1993. Twice as many patients received totally uncemented prostheses compared with those receiving hybrids. After adjustment for other factors, there were no significant differences in the rate of serious and non-serious medical complications between hybrid and uncemented prostheses. There also were no significant differences in measures of pain and functioning at 2, 6, and 12 months after surgery.

However, totally uncemented prostheses were associated with higher costs (mean of \$13,038 vs. \$10,938 in 1993 dollars) and longer hospital stays (10.1 vs. 7.9 days) than hybrid prostheses.

Surgical approach had no significant effect on hospital complication or readmission rates. Although posterior surgeries had a higher rate of postoperative prosthesis dislocation in the hospital than anterolateral surgeries (4 vs. .7 percent), these patients needed much less help walking and had slightly greater pain reduction up to 1 year later.

More details are in "Outcomes of surgical management of total hip replacement in patients aged 65 years and older: Cemented versus cementless femoral components and lateral or anterolateral versus posterior anatomical approach," by Sheryl Zimmerman, Ph.D., William G. Hawkes, Ph.D., James I. Hudson, M.D., and others, in the March/April 2002 *Journal of Orthopaedic Research* 20, pp. 182-191. ■

Cancer patients' satisfaction with primary care pain management hinges on the doctor-patient relationship

A new study shows that more than 75 percent of cancer patients were satisfied with how their primary care doctors managed pain associated with their cancer and its treatment. This was despite the fact that nearly half of them suffered from recent moderate to severe pain. Long-term pain relief seemed more important for these patients. Sustained pain relief over the past year, being told by the primary care doctor or nurse that treating pain was an important goal, and patient willingness to take prescribed opioids for pain relief (suggesting a trusting doctor-patient relationship) all predicted greater patient satisfaction with pain management.

The doctor-patient relationship clearly plays a key role in patient satisfaction with pain management, according to the researchers who conducted the study. Their work was supported in part by the Agency for Healthcare Research and Quality (HS08691). The researchers analyzed data on 316 primary care cancer patients' patterns of pain and pain treatment, beliefs and expectations about pain and pain relief, willingness to report pain and take pain medication,

care from the provider, and satisfaction with pain management.

Among the cancer patients studied, who potentially faced long-term pain, sustained pain relief during the past year rather than most recent pain was most predictive of their satisfaction with pain management. Lowered expectations of pain relief, reflected by statements like "pain medicine cannot really control pain," predicted lower satisfaction either overall or with the primary care doctor. Patients who reported more frequent pain, indicating that their pain was not adequately managed, were less satisfied with pain management. Among patients who received pain medication, satisfaction was inversely correlated with discrepancies between expected and reported levels of pain either before or after another dose of medication.

More details are in "Probing the paradox of patients' satisfaction with inadequate pain management," by Ree Dawson, Ph.D., Judith A. Spross, Ph.D., R.N., Erica S. Jablonski, M.A., and others in the March 2002 *Journal of Pain and Symptom Management* 23(3), pp. 211-220. ■

Evidence-Based Medicine

Local circumstances dictate how scientific evidence is translated into medical practice

Local circumstances determine how scientific evidence is translated into medical practice, asserted John M. Eisenberg, M.D., M.B.A., former director of the Agency for Healthcare Research and Quality, in a recent commentary that was published posthumously (Dr. Eisenberg died March 10, 2002). For example, the U.S. Preventive Services Task Force, which examined evidence on colon cancer, decided to issue screening recommendations. However, members of a similar New Zealand group looked at the same scientific research and concluded that harm

could result from the many false positives resulting from such screening.

Opportunities have recently emerged to share evidence globally about the outcomes and effectiveness of health care (globalization) and then translate that evidence into improved health care at the local level (localization). To succeed in globalizing the evidence, policymakers must realize that opportunities to do so will be tempered by three competing core values: choice, efficiency, and equity.

In the United States and many Western nations, the ability to

choose based on one's own preferences is paramount, even in the face of evidence showing less favorable outcomes with the treatment chosen. In other nations, finding the best way to use scarce resources—that is, efficiency—will control how research is translated into practice. In still other countries, devoting resources toward those with the greatest unmet needs, or equity, will dictate how evidence is used.

In the commentary, Dr. Eisenberg suggested that policymakers recognize and,

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Scientific evidence

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perhaps celebrate, the fact that variations in clinical practice are inevitable. A multitude of factors—such as national character, affordability of care, access to information, parochialism, and the legal environment—influence the

translation of research into practice. He advocated strengthening the local use of available evidence with better access to evidence-based medicine, professional commitment to translating evidence into practice, and a practice philosophy that embraces shared decisionmaking.

More details are in “Globalize the evidence, localize the decision: Evidence-based medicine and international diversity,” by Dr. Eisenberg, in the May 2002 *Health Affairs* 21(3), pp. 166-168. Reprints (AHRQ Publication No. 02-R066) are available from AHRQ.** ■

Patient Safety/Medical Errors

Medical schools and residency programs should provide more training on preventing adverse drug reactions

Adverse drug events, which are injuries resulting from the administration of a drug, and adverse drug reactions, which are unpleasant and undesired effects of drugs, are major complications of drug therapy. These adverse drug events and reactions may cause as many deaths as heart disease and cancer, and many of them could be prevented with proper medical training of doctors. Yet, very little training on medication error prevention has been incorporated into medical school and internal medicine residency programs. The majority of programs provide trainees with limited exposure to pharmacists or computerized systems to help them learn how to predict, avoid, and report adverse drug events and reactions, according to a national survey supported in part by the Agency for Healthcare Research and Quality (HS10385).

Since physician licensing examinations place little emphasis on clinical pharmacology and adverse drug reactions, there is little incentive for educators to dedicate time to these topics, note the researchers who conducted the study. They surveyed medical directors of third-year medical student internal medicine clerkship and residency programs in the spring of

2000 about clinical pharmacology and adverse drug reaction training provided by their programs.

The survey revealed that only 64 percent of internal medicine residencies had formal lectures covering adverse drug reactions, and only 59 percent offered lectures on rational drug prescribing. Also, 29 percent of inpatient and 55 percent of outpatient programs provided residents with little or no opportunity to learn about drug reactions from clinical pharmacologists; 60 percent of residency programs did not have hospital or clinic electronic systems to aid residents in detecting drug interactions. Over half (53 percent) of medical schools did not have clinical rotations that included clinical pharmacology or adverse drug reaction training. Of those that did, only 8 percent of the rotations were mandatory.

More details are in “Centers for Education and Research on Therapeutics report: Survey of medication errors education during undergraduate and graduate medical education in the United States,” by Curtis J. Rosebraugh, M.D., M.P.H., Peter K. Honig, M.D., M.P.H., Sally U. Yasuda, M.S., Pharm.D., and others, in the January 2002 *Clinical Pharmacology & Therapeutics* 71(1), pp. 4-10. ■

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Telling patients about mistakes made in their care is the right thing to do and may reduce lawsuits

Doctors should tell patients about mistakes made in their care, primarily because it is the right thing to do, says Albert W. Wu, M.D., M.P.H., of Johns Hopkins University, in a recent interview. Dr. Wu, whose work is supported in part by the Agency for Healthcare Research and Quality (HS11902), says further that the obligation to disclose is rooted in the trust that is at the core of the doctor-patient relationship.

Patients presume that their doctor will tell them the truth, and they feel angry and betrayed if not informed of a mistake. Paradoxically, disclosure of a mistake may strengthen the patient-doctor relationship, may improve patient-doctor communications, and may help patients gain more realistic expectations about medicine.

Dr. Wu agrees with the new patient safety standards established by the Joint Commission on Accreditation of Healthcare Organizations that became effective for hospitals July 1, 2001. They require organizations to inform patients, when appropriate, about the outcomes of care, whether anticipated or unanticipated. A practical reason for disclosure is that even if disclosure of unsuspected errors results in some settlements or lawsuits, it may actually reduce the risk of being sued or the payouts that result. This is because most patients or patients' families sue for one of three reasons: to get information that is not otherwise being revealed, because they are angry, or to ensure that the same thing won't happen again. Properly handled, disclosure can mitigate all of these concerns.

Many doctors want to be reassured that there is someone behind them—hospital administrators, risk management, defense counsel—to support their disclosure. Physicians in small hospitals in small communities point out that it is hard to keep anything confidential in their settings, and they worry about their reputations because of that. Others assert that disclosure will not be tenable until there is tort reform. Some hospitals regard disclosure as the right thing to do and say that they are ahead of their physicians who need more convincing. A nonpunitive disclosure policy might help convince them, says Dr. Wu.

More details are in "Reporting outcomes and other issues in patient safety," by Dr. Wu, in the April 2002 *Joint Commission Journal on Quality Improvement* 28(4), pp. 197-204. ■

Focusing on medical injuries instead of medical errors may be one way to improve patient safety

A 2000 Institute of Medicine report on patient safety called for voluntary and mandatory reporting systems to identify and learn from medical errors in health care. Yet focusing on medical injury instead of medical error may be more appropriate and productive. Rather than culpability, this public health approach emphasizes preventability, which should be the ultimate goal of patient safety efforts, according to Peter M. Layde, M.D., M.Sc., of the Medical College of Wisconsin, whose work is supported in part by the Agency for Healthcare Research and Quality (HS11893).

In a recent commentary, Dr. Layde and his colleagues note that the difficulty in reliably identifying medical errors and the potential for preventing medical injuries not associated with error suggest the benefit of an injury-oriented approach. By targeting error alone, any investigation of medical

errors focuses on a relatively small subset of medical injuries and misses the majority. Also, institutional and professional fear of legal discovery in medical malpractice litigation is a major barrier to using medical error reporting systems to improve care quality. Unless reporting is entirely anonymous, hospitals and doctors that fully disclose errors might be shunned by the public and experience economic consequences as severe as malpractice damages.

Passive injury prevention measures that require little or no effort on the part of the individual, such as engineered changes in the environment (for example, redesigned needles to reduce needlestick injuries), have been found to be more effective than active approaches. The latter approaches require more active involvement and effort on the part of individuals to

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Medical injuries

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avert injury events (for example, use of gloves when handling patients' bodily fluids to reduce transmission of HIV).

See "Patient safety efforts should focus on medical injuries," by Dr. Layde, Leslie A. Maas, M.H.S., Stephen P. Teret, J.D., M.P.H., and others, in the April 17, 2002 *Journal of the American Medical Association* 287(15), pp. 1993-1997. ■

Health Care Costs and Financing

Experience in Florida SCHIP may provide lessons for other States' reenrollment requirements

Florida's "passive re-enrollment" policy, which does not require parents to take steps to prove that their children are still eligible for the State Children's Health Insurance Program (SCHIP), results in a significantly lower percentage of children losing coverage than in States that require parents to verify periodically their children's eligibility, according to a new study. This research is part of a set of studies being conducted under the Child Health Insurance Research Initiative (CHIRI), jointly sponsored by the Agency for Healthcare Research and Quality, the David and Lucile Packard Foundation, and the Health Resources and Services Administration.

Researchers compared the effects of reenrollment policies in four States: Florida, Kansas, New York, and Oregon. All but Florida have active reenrollment policies that require parents to inform the States on a periodic basis about their children's eligibility. Florida, however, requires children's families to notify the State only if changes occur that affect eligibility and to keep paying the monthly

premium to maintain enrollment status.

The study found that only 5 percent of children in Florida's SCHIP fell off the rolls at reenrollment, compared with one-third to one-half of children in Kansas, Oregon, and New York. The authors concluded that passive reenrollment contributed to the lower disenrollment rate observed in Florida compared with the States that have active reenrollment policies. Nearly all other States have active reenrollment policies, while only a few States currently have passive reenrollment policies in place.

The study also found that up to one-quarter of the children who dropped from the SCHIP programs of Oregon, Kansas, and New York at the time they were required to reenroll returned within 2 months.

According to first author Andrew W. Dick, Ph.D., of the University of Rochester's School of Medicine and Dentistry, Rochester, NY, the rapid return of these children indicates that administrative issues such as active reenrollment and other requirements may have been the reason for their disenrollment,

while others who did not reenroll may have obtained health care coverage from other sources.

A significant number of children were still in SCHIP 2 years after their original enrollment, although many of these were disenrolled at least once during this period. The researchers observed that many children use SCHIP as temporary coverage (1 year or less) because a substantial number were initially enrolled for relatively short periods of time, and many did not return at a later date.

Details are in "Consequences of States' policies for SCHIP disenrollment," by Dr. Dick, Andrew Allison, Ph.D., Susan G. Haber, Sc.D., and others in the June 2002 issue of *Health Care Financing Review* 23(3), pp. 65-88. Reprints (AHRQ Publication No. 02-R070) are available from AHRQ.*

A CHIRI Issue Brief, "SCHIP disenrollment and State policies," about the findings is available online at <http://www.ahrq.gov/chiri/chiribrf1/chiribrf1.htm>. ■

Researchers examine poor children's access to public insurance coverage and health care

Prior to the 1996 passage of the State Children's Health Insurance Program (SCHIP), nearly 5 million uninsured children were Medicaid-eligible but not enrolled. A recent national survey found that individual uncertainty about Medicaid eligibility, Medicaid's link to welfare, the complexity of the enrollment process, and language issues are major barriers to people becoming enrolled in Medicaid. Even after insurance has been obtained, covered children can experience difficulties accessing health care.

A new study supported by the Agency for Healthcare Research and Quality shows that limited English-language proficiency is a major barrier to becoming enrolled in State Medicaid programs. A second study, part of the Child Health Insurance Research Initiative (CHIRI™) sponsored by AHRQ, the David and Lucile Packard Foundation, and the Health Resources Services Administration, reveals that in Georgia, children in Medicaid-insured families have a more difficult time gaining access to care than children enrolled in SCHIP. Both studies are described here.

Feinberg, E., Swartz, K., Zaslavsky, A.M., and others. (2002, March). "Language proficiency and the enrollment of Medicaid-eligible children in publicly funded health insurance programs." (AHRQ grant HS10207). *Maternal and Child Health Journal* 6(1), pp. 5-18.

With the increasing diversity of the American population, a growing number of people living in the United States are not proficient in the English language. These families, regardless of marital and employment status, have more

difficulty finding out about and enrolling in State Medicaid health insurance programs, according to this study. The authors recommend that screening and enrollment at medical sites remain an integral part of outreach efforts targeted at linguistically isolated families. They surveyed 1,055 parents of Medicaid-eligible children who were not enrolled in the Massachusetts State Medicaid program but instead were enrolled in the Massachusetts Children Medical Security Plan, a State insurance program with a more limited benefit package.

Respondents were asked how they learned about and enrolled their children in the State Medicaid program and perceived barriers to enrollment. Almost one-third of the families surveyed did not speak English in their home. They were less aware of the State Medicaid program than English-proficient families and were more likely to hear about the Medicaid program from medical providers (70 vs. 47 percent). After controlling for other demographic factors, these families with limited English proficiency were three times more likely than English-proficient families to receive assistance with enrollment. They also were more likely to receive this help from staff at medical sites rather than the toll-free telephone information line.

Families who were not proficient in English were more likely than English-proficient families to identify barriers to Medicaid enrollment related to "know-how." Compared with English-proficient families, they were more likely not to know if their family was eligible for coverage under Medicaid (70 vs. 60 percent), not to know how to sign up for Medicaid (43 vs. 26 percent), and to find

the enrollment forms too difficult (18 vs. 8 percent). These differences in access to Medicaid enrollment persisted, even after controlling for marital status, family composition, place of residence, length of enrollment, and employment status.

Edwards, J.N., Bronstein, J., and Rein, D.B. (2002, May). "Do enrollees in 'look-alike' Medicaid and SCHIP programs really look alike?" (AHRQ grant HS10435). *Health Affairs* 21(3), pp. 240-248.

Poor children insured by Georgia's Medicaid program had worse access to health care than children enrolled in Georgia's SCHIP, PeachCare for Kids, despite the fact that the two insurance programs have nearly identical rules and providers. Medicaid survey respondents reported more problems with access to primary, specialty, and urgent care than those enrolled in PeachCare. Parents of Medicaid children were much more likely to report being without a primary care provider, despite being assigned one. They reported more difficulties getting help on the telephone, making appointments, getting specialty referrals, seeing specialists, and getting urgent care as soon as they wanted it. More of their children than PeachCare children had not had an office visit in the previous 6 months. These results persisted, even after adjustment for race, education, and other factors.

Medicaid respondents also felt that their doctors did not spend enough time with them and that office staff were less helpful compared with PeachCare enrollees. Not surprisingly, their overall satisfaction with doctors was lower than PeachCare

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Poor children's access to health care

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enrollees. Results from focus groups with parents agreed with these findings. Medicaid parents, as well as PeachCare parents with prior Medicaid experience, said that they felt a stigma when on Medicaid. They believed that office staff treated them differently and

that they had to wait longer for appointments.

The researchers offered three possible explanations for these differences. Medicaid families may be less familiar with and supportive of systems requiring use of an assigned primary care doctor, the families may face more nonprogram barriers to using care (for example, transportation or childcare problems), and physicians

may have different responses to the two programs. These findings, based on responses to the Consumer Assessment of Health Plans Study (CAHPS®) Medicaid managed care child survey completed by 720 PeachCare enrollees and 2,490 Medicaid enrollees in 2000, were corroborated by focus groups with physicians and parents. ■

People vary in what they look for when choosing a health plan

Consumers with all types of health insurance realize the importance of choosing a good health plan and usually obtain information about plans from several sources, including family and friends. However, insured groups vary in what they value most when choosing a health plan, according to a study supported in part by the Agency for Healthcare Research and Quality (HS09218).

People insured by State Medicaid programs cared most about convenience and access to care, while the privately insured had more of a stake in their personal relationship with a doctor and out-of-pocket costs. Also, Medicare and Medicaid recipients found choosing a plan more difficult than people with private insurance.

Groups developing traditional plan enrollment materials and health plan evaluation reports, such as the Consumer Assessment of Health Plans Study (CAHPS®), probably need to tailor how they inform these different insurance groups about health plan options. For example, Medicaid reports should emphasize the accessibility and convenience of services, suggests principal investigator Lauren Harris-

Kojetin, Ph.D., of Research Triangle Institute. The researchers explored the reactions to and use of traditional health plan enrollment materials and CAHPS reports among 10,000 consumers with employer-sponsored, Medicaid, and Medicare health plans using data from eight CAHPS demonstrations.

Keeping your own doctor (or finding one you are happy with) and keeping out-of-pocket costs low ranked as two of the top five considerations for privately insured groups but were not relevant for Medicaid consumers, who are most concerned about convenience and access to care. One area that was a high priority for both Medicaid and privately insured consumers was "doctors who communicate well." Areas of high priority for Medicare respondents were ease of getting medical help in the evenings and on weekends, access to "good" specialists, a conveniently located doctor's office, and enough time with doctors.

See "Similarities and differences in choosing health plans," by Pamela Farley Short, Ph.D., Lauren McCormack, Ph.D., Judith Hibbard, Dr.P.H., and others, in *Medical Care* 40(4), pp. 389-302, 2002. ■

Patients suffering from depression often overestimate their insurance coverage for mental health services

People's understanding of their health care coverage can influence whether they seek care for their health problems. For example, high copays or strict limits on visits and other types of health care services may dissuade them from seeking care, while low

copays or unlimited visits may have the opposite effect.

Apparently, patients suffering from depression often perceive more generous mental health coverage than they actually have, which could lead to unexpected out-of-pocket costs. In contrast,

patients usually have a fairly accurate idea of their coverage for medical visits and prescription copays, according to a recent study that was supported in part by the Agency for Healthcare Research and Quality (HS08349).

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Coverage for mental health services

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More effective dissemination of information about mental health benefits by health maintenance organizations, health care plans, and employers could correct misperceptions, enhance trust, and improve access to and quality of mental health care, according to the researchers who conducted the study. Their findings were based on analysis of data from 767 depressed patients who completed a mailed survey that included questions about health insurance. The researchers compared their

responses with actual health care benefits records of medical visits, pharmacy and mental health visit copays, and mental health visit limits.

Overall, depressed patients reported better mental health benefits than they actually had. Depressed patients who had used health care services in the past 6 months had a more accurate picture of medical benefits but not of mental health benefits. Patients with depressive disorder and patients who were less satisfied with their health care more accurately reported mental health copays compared with those who had depression symptoms only and

more satisfied patients, respectively. Also, white patients and patients who had fewer chronic health problems were more accurate in reporting mental health visit limits than ethnic/minority and sicker patients.

More details are in "Knowledge of health care benefits among patients with depression," by Lisa S. Meredith, Ph.D., Nicole Humphrey, M.H.S.A., Maria Orlando, Ph.D., and Patti Camp, M.S., in the April 2002 *Medical Care* 40(4), pp. 338-346. ■

Fee-for-service Medicare plans offer better quality care than Medicare HMO plans, but costs are higher

By the year 2000, nearly 20 percent of elderly Medicare beneficiaries were enrolled in Medicare health maintenance organization (HMO) programs compared with only 6 percent in 1990. A new study shows that traditional Medicare fee-for-service (FFS) programs provide better primary care than Medicare HMO programs.

Elderly people must decide whether the advantages of primary care under traditional FFS Medicare are worth the higher out-of-pocket costs, concludes Dana Gelb Safran, Sc.D. In the study, which was supported in part by the Agency for Healthcare Research and Quality (HS09622), Dr. Safran and colleagues at the New England Medical Center and Tufts University surveyed the seniors in Medicare HMO and FFS programs in 13 States about the quality of primary care they received.

The researchers used 11 summary scales that measured 7 defining characteristics of primary care: access, continuity, integration of care, comprehensiveness, whole-person orientation, clinical interaction (thoroughness of physical exams and communication quality), and sustained clinician-patient

partnership. For 9 of 11 indicators, performance favored traditional FFS Medicare over HMOs. Only financial access (fewer cost-related barriers to care such as high copays) favored HMOs. Among HMOs, independent practice association/networks emerged with more favorable performance than staff/group-model HMOs on nine features of care, but they did not perform as well as traditional FFS Medicare in those same areas.

There were no significant differences in the rates of preventive counseling among elderly patients in either system, although counseling rates seemed low in all systems. Overall, more personalized, patient-oriented, and integrated care was an advantage of traditional FFS Medicare programs. Lower out-of-pocket costs, minimal paperwork, and in some cases, expanded benefits packages (for example, drug coverage, eyeglasses, and dental care), were benefits of Medicare HMO programs.

See "Primary care quality in the Medicare program," by Dr. Safran, Ira B. Wilson, M.D., M.Sc., William H. Rogers, Ph.D., and others, in the April 8, 2002 *Archives of Internal Medicine* 162, pp. 757-765. ■

Researchers examine impact of managed care on the U.S. health care system, local health care markets, and specialty care

In 1980, managed care was largely limited to a few health maintenance organizations (HMOs) scattered around the country. Today, nearly 200 million Americans are enrolled in managed care organizations (MCOs), including HMOs, preferred provider organizations, and point of service plans. Three recent studies supported by the Agency for Healthcare Research and Quality examined the impact of managed care.

The first study describes the trend toward a greater balance of power between health plan purchasers, MCOs, physicians, and patients during the 1990s. The second study reveals that greater managed care penetration of local health care markets is associated with growing hospital consolidation and substantially fewer physicians in solo practice. The third study concludes that managed care does not necessarily restrict access to mental health specialists, although certain managed care strategies do.

Grembowski, D.E., Cook, K.S., Patrick, D.L., and Roussel, A.E. (2002). "Managed care and the U.S. health care system: A social exchange perspective." (AHRQ grant HS06833). *Social Science & Medicine* 54, pp. 1167-1180.

From a sociological perspective, U.S. managed care initially shifted power and control of the health care system away from physicians to organizational purchasers and MCOs. Employers and other plan purchasers had a power advantage over MCOs, which held a power advantage over physicians who, in turn, held a power advantage over patients. Yet in the past decade, this power structure gradually shifted to lessen the power dominance of purchasers and MCOs. That's the

conclusion of this study of U.S. managed care from a social exchange perspective. In the past, plan purchasers were price-setters rather than price-takers. However, forecasts for 2000 indicated that MCOs would experience double-digit rate increases that year, suggesting that purchaser-MCO relationships were beginning to move toward more balanced power, in part through MCO coalition formation.

Similarly, physician coalition formation (via specialty group practices, physician-run networks, and unions) has reduced the power dominance of MCOs over physicians. These coalitions increased physicians' clout when contracting with MCOs and decreased the number of alternative sources of care with which the MCOs could contract. State "any willing provider" laws, which require MCOs to open their networks to any provider who wants to join, also contributed to greater MCO-physician power balance. Some physicians are even dropping MCOs with the lowest reimbursement rates or the most administrative hassles, moving to markets with low managed care penetration, or simply retiring early.

Not to be left out, patients are gaining more power in their relationships with doctors due to widespread daily dissemination of health information via the Internet and media about alternative treatments and sources of care. In addition, consumer dissatisfaction with and erosion of trust in MCOs are widespread. As the 1990s economic expansion accelerated and labor markets tightened in the country, employer dependence on employees increased. As a result, employers and MCOs responded to employee concerns about MCO

restrictions by offering employees a greater choice of health plans and relaxing some MCO controls.

Dranove, D., Simon, C.J., and White, W.D. (2002, June). "Is managed care leading to consolidation in health-care markets?" (AHRQ grant HS09210). *Health Services Research* 37(3), pp. 573-594.

Greater managed care penetration in a local metropolitan health care market is associated with growing hospital consolidation and a sharp decline in the number of physicians in solo practice, according to this study. As a result of hospital system formation and closings, in the average market (managed care penetration equaled 34 percent in 1994), managed care was associated with a change in a competition index that was equivalent to moving from 10.4 to 6.5 equal-sized hospitals between 1981 and 1994. At the same time, between 1986 and 1995, managed care was associated with a decline from 38 percent to 24 percent in the share of physicians in solo practice.

The growth of managed care apparently created pressure for consolidation that more than offset all remaining factors, such as income growth and demographic and regulatory changes, that would have otherwise caused an increase in the number of hospitals in the average market. Managed care also was a powerful driver of change in physician practice patterns. Both hospitals and physicians may merge to generate cost efficiencies by sharing resources and to increase their market power.

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Impact of managed care

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Whatever the forces driving consolidation, if consolidated hospitals are more resistant to MCO discounting, this may limit managed care's future ability to use selective contracting to constrain costs, conclude the researchers. They used American Hospital Association data from 1981 and 1994, American Medical Association data for 1986-1995, and government census data to examine how variation in managed care penetration affected hospital markets and physician practice sizes in large metropolitan areas.

Grembowski, D.E., Martin, D., Patrick, D.L., and others. (2002, April). "Managed care, access to mental health specialists," and outcomes among primary care patients with depressive symptoms." (AHRQ grant

HS06833). *Journal of General Internal Medicine* 17, pp. 258-269.

Highly managed MCOs typically impose controls that encourage primary care doctors to treat most forms of depression and to limit referrals to higher cost mental health specialists such as psychiatrists. However, the intensity of managed care is not generally associated with access to mental health specialists, according to this study. It found that while some managed care strategies reduced access of depressed primary care patients to mental health specialists, they were offset by other strategies that increased access.

For example, among low-income patients, a physician financial penalty for referral was associated with fewer mental health referrals. A physician productivity bonus (for seeing more patients per hour) was associated with greater access to

mental health specialists, perhaps because these doctors had incentives to refer patients who require longer or more frequent office visits. Overall, 23 percent of depressed patients were referred to mental health specialists, and 38 percent saw a mental health specialist with or without a referral.

Depressed patients in intensely managed plans had more improvement in depressive symptoms and number of days of depression-related restricted activity compared with patients in less-managed plans. Still, patients gave lower ratings to the primary care of physicians in more intensely managed offices, which is consistent with previous studies. These findings are based on a survey of 1,336 adults with depressive symptoms who visited 261 primary care doctors in private practice in Seattle. The patients completed surveys 1, 3, and 6 months after seeing the doctor. ■

Disparities/Minority Health

Even with insurance, elderly Hispanics undergo far fewer hip replacement operations than older non-Hispanic whites

Many Hispanic Medicare beneficiaries who suffer from joint-debilitating arthritis may not be getting hip replacement surgery that could relieve their pain and keep them from becoming disabled even though they have coverage for the procedure, according to a new study sponsored in part by the Agency for Healthcare Research and Quality (HS09775). The study found that Hispanics aged 65 and older in Texas, New Mexico, Arizona, and Illinois were less than one-third as likely as non-Hispanic whites the same age to undergo total hip replacement, an operation that can alleviate pain and improve physical function and quality of life in patients with severe osteoarthritis.

The authors believe that the underuse of total hip replacement surgery among older Hispanics may be due in part to their tendency to be influenced in their medical care decisionmaking by the personal experiences of relatives and acquaintances. Patients in

the study may have decided to forego the hip replacement surgery because its limited use among older Hispanics made it less likely that they knew anyone who could tell them first-hand about the operation.

A second, and related factor, may be poor English-language skills. If a patient had difficulty in communicating with the doctor, he or she may have been less inclined to undergo the surgery.

More than half of the Nation's 35 million Hispanics speak Spanish at home, and of these, nearly half speak English less than "very well." Elderly Hispanics, often recent immigrants or people who have lived in the United States awhile but depend on others for their language needs, tend to be less likely to speak English. According to the study's lead author, Agustin Escalante, M.D., of the University of Texas Health

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Hip replacement among Hispanics

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Science Center at San Antonio, underuse of hip replacement surgery by the large and growing U.S. Hispanic population could have important consequences for Medicare because the resulting excess disability could increase long-term custodial costs. Data from AHRQ's Nationwide Inpatient Sample (NIS) for 1999 show that nearly 92,000 total hip replacement procedures were performed on Medicare patients, and the average charge for the hospital stay, exclusive of physicians' fees, was about \$23,000. Medicare also paid for 84,000 partial hip replacement procedures in 1999.

The study was based on Medicare claims data for approximately 6,500 Spanish-surnamed and non-Hispanic fee-for-service Medicare patients in the four States who underwent total hip replacement surgery between 1995 and 1996. Harvard Medical School's Jeffrey N. Katz, M.D., and Jane Barrett, M.Sc., of Dartmouth Medical School, collaborated with Dr. Escalante.

Details are in "Disparity in total hip replacement affecting Hispanic Medicare beneficiaries," by Dr. Escalante, Ms. Barrett, Inmaculada del Rincon, M.D., and others, in the June 2002 *Medical Care* 40(6), pp. 451-460. ■

People who have experienced discrimination in the past may be more reluctant to be put on kidney transplant lists

Many patients with end-stage renal disease (ESRD) who receive kidney transplants live longer and feel better than those who remain on hemodialysis. Yet, women who are ESRD patients are three times less likely than men to be included on kidney transplant waiting lists. People saying they accepted unfairness as a "fact of life" were three times less likely to be listed as those who did not. Also, those who had experienced racial discrimination, whether in the purchase of a home or interacting with the criminal justice system, were seven times less likely than other similarly ill patients to be placed on kidney transplant waiting lists, according to a study supported by the Agency for

Healthcare Research and Quality (HS08136).

Among those who were not listed, older patients were 10 times less likely than younger patients to desire a transplant. Individuals who had experienced sexual, racial, or both types of discrimination and those who felt that the rich and important get transplants more quickly than others were six times less likely to desire a transplant. Finally, those resigned to the idea that a fairer organ donor system was probably not achievable were nearly 8 times less likely to want a transplant.

It is important that culturally competent providers be aware of the potential influence of past discriminatory experiences on patient decisions about kidney transplants. They should discuss

transplantation issues with these reluctant ESRD patients, suggests Ann C. Klassen, Ph.D., of the Johns Hopkins School of Public Health. Dr. Klassen and her colleagues reviewed patient records from three Baltimore-area hemodialysis units and conducted face-to-face interviews with transplant-eligible patients and with unit staff members in 1996 and 1997.

See "Relationship between patients' perceptions of disadvantage and discrimination and listing for kidney transplantation," by Dr. Klassen, Allyson G. Hall, Ph.D., Brit Saksvig, Ph.D., M.H.S., and others, in the May 2002 *American Journal of Public Health* 92(5), pp. 811-817. ■

AHRQ initiatives focus on understanding and reducing racial/ethnic disparities in health and health care

Studies have consistently documented racial and ethnic disparities in health and health care. According to a recent report from the Institute of Medicine, "Unequal Treatment," there is unambiguous evidence that even after adjusting for insurance coverage, members of racial and ethnic minorities receive care inferior to their white counterparts.

The Agency for Healthcare Research and Quality is part of a coordinated, multifaceted effort across the Department of Health and Human Services to understand and eliminate racial and ethnic disparities in health and health care. AHRQ's research focuses on

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Racial/ethnic disparities

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the contribution of disparities in health care to observed disparities in health. The Agency's efforts are summarized in a recent commentary by AHRQ's Daniel Stryer, M.D., Carolyn Clancy, M.D., and Lisa Simpson, M.B., B.Ch., M.P.H.

As part of a 5-year effort begun in 2000, AHRQ, in partnership with other agencies and foundations, provided \$45 million to fund nine Excellence Centers to Eliminate Ethnical/Racial Disparities (EXCEED). EXCEED sites focus on a variety of issues to reduce disparities. These include the quality of diabetes care provided to American Indians (who have a high rate of diabetes), factors that impede doctor-patient communications, and development of strategies to improve cultural competency among health care providers and enhance access to care for particularly vulnerable subgroups, such as those who are chronically ill and rural patients. Each EXCEED site has assembled a critical mass of investigators, policymakers, analysts, and community representatives to generate knowledge that can be rapidly and widely implemented to reduce racial/ethnic disparities.

Through its Translating Research into Practice II (TRIP II) initiative, AHRQ will provide more than \$10 million over the next 3 years to support six studies that aim to close the gap between research and clinical practice. One such study is developing and evaluating the effectiveness of interactive technology to overcome barriers to diabetes education for inner city blacks and Hispanics. Other programs being developed to augment research to improve the health of underserved and vulnerable populations are the practice-based research networks, the Minority Research Infrastructure Support Program, and the Agency's Office for Priority Populations Research, which will coordinate AHRQ-wide efforts to eliminate disparities for priority populations. In 2003, AHRQ will publish the first National Healthcare Disparities Report on behalf of the Department of Health and Human Services.

See "Minority health disparities: AHRQ efforts to address inequities in care," by Drs. Stryer, Clancy, and Simpson, in the April 2002 *Health Promotion Practice* 3(2), pp. 125-129. Reprints (AHRQ Publication No. 02-R061) are available from AHRQ.** ■

HIV/AIDS Research

HIV diagnosis may increase opportunities for medical interactions and interventions, including mammography

A high proportion of HIV-positive women in the United States are living in poverty, are Hispanic, or have other disadvantages that typically are negative correlates of mammography use. Because these characteristics have been shown to relate to lower screening rates, it would be logical to expect low mammography use among women with HIV. However, HIV diagnosis usually leads to regular contact with health professionals, and HIV-positive women may, therefore, be more likely than HIV-negative women to receive screening recommendations from their physicians.

Since life expectancy for many of these women has been prolonged

due to new antiretroviral therapies, it is important to understand cancer screening practices among HIV-positive women and to ensure that they receive recommended early detection tests, suggests Susan Preston-Martin, Ph.D., of the University of Southern California. Dr. Preston-Martin and her colleagues used data from the Women's Interagency HIV Study (WIHS) to examine mammography use among 2,059 HIV-positive and 569 HIV-negative socioeconomically disadvantaged women who were enrolled in the study between October 1994 and November 1995. The WIHS is jointly funded by the Agency for Healthcare Research and Quality, the National Institutes of Health,

and the Centers for Disease Control and Prevention.

The researchers used WIHS data on women who were at least 40 years old in 1994 and 1995 to compare HIV-positive women with demographically similar HIV-negative women on use of mammography through September 2000. They also compared mammography use between WIHS women and U.S. women in general using National Health Interview Survey (NHIS) data.

Results revealed that fewer WIHS women, regardless of HIV status, reported mammography than U.S. women (67 percent HIV-positive, 62 percent HIV-negative, 79 percent NHIS). However, HIV-

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HIV diagnosis

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positive women were 60 percent more likely than HIV-negative women to be screened for the first time while in the study, probably due to their greater health care access and use. For example, despite similar education and income, more HIV-positive than

HIV-negative women reported having health insurance (82 vs. 59 percent), having a primary care provider (93 vs. 67 percent), or having seen a doctor in the past 2 months (84 vs. 54 percent). This finding supports prior research that increased use of health care, in general, is related to increased screening.

See "Use of mammographic screening by HIV-infected women in the Women's Interagency HIV Study (WIHS)," by Dr. Preston-Martin, Lynn M. Kirstein, M.S., Janice M. Pogoda, Ph.D., and others, in the March 2002 *Preventive Medicine* 34, pp. 386-392. ■

HCSUS studies examine the impact of rural location, insurance, and physician expertise on HIV/AIDS care

Rural location, insurance status, and physician experience all influence the quality of care for people infected with the human immunodeficiency virus (HIV) that causes AIDS, according to three new studies that analyzed data from the 1996 HIV Cost and Services Utilization Study (HCSUS), a nationally representative sample of adults receiving HIV care in the United States. HCSUS studies are led by RAND researchers, Martin F. Shapiro, M.D., Ph.D., and Samuel A. Bozzette M.D., Ph.D., and supported by a cooperative agreement between RAND and the Agency for Healthcare Research and Quality (HS08578).

The first study found ongoing disparities between rural and urban areas in access to high-quality HIV care. The second study demonstrated that HIV-infected people with health maintenance organization (HMO) or public insurance are less likely than those with private non-HMO insurance to get care for HIV symptoms. The third study concluded that doctors' expertise in HIV/AIDS care is more strongly associated with HIV caseload (experience) than formal HIV/AIDS specialty training. The studies are summarized here.

Cohn, S.E., Berk, M.L., Berry, S.H., and others. (2001, December). "The care of HIV-

infected adults in rural areas of the United States." *Journal of Acquired Immune Deficiency Syndromes* 28, pp. 385-392.

The growing number of rural people infected with HIV is challenging already overburdened rural health care systems that have too few doctors, underdeveloped social and home care support systems, and long travel distances to care. In fact, there are ongoing disparities between urban and rural areas in access to high-quality HIV care, concludes this study. For example, about 6 percent of all AIDS cases were from rural counties by the end of 1997, but only 1.4 percent of adults—or less than one-fourth of HIV patients living in rural counties—received HIV care in rural areas during the first 6 months of 1996.

Rural care patients were more likely than urban care patients to be seen by providers with little experience caring for HIV-infected patients (38 vs. 3 percent saw providers who had cared for fewer than 10 HIV-infected patients during the 6-month sampling period). Also, only 22 percent of rural care patients saw providers who had cared for 50 or more HIV-infected patients in the prior 6 months versus 85 percent of urban care patients who saw doctors who had cared for 50 or more patients in the prior 2 months.

Furthermore, rural care patients were less likely than urban care patients to have taken highly active antiretroviral therapy (HAART, 57 vs. 73 percent), which has been proven to prolong life, or medication to prevent a potentially fatal infection that often strikes HIV patients with advanced HIV disease, *Pneumocystis carinii* pneumonia (60 vs. 75 percent). After controlling for disease severity and other factors, urban care patients had three times the odds of receiving HAART of rural care patients. These findings are based on interviews with 367 HIV-infected adults receiving health care in rural areas and 2,806 HIV-infected adults receiving health care in urban areas of the United States in 1996, shortly after introduction of HAART.

Kilbourne, A.M., Andersen, R.M., Asch, S., and others. (2002, March). "Response to symptoms among a U.S. national probability sample of adults infected with human immunodeficiency virus." *Medical Care Research and Review* 59(1), pp. 36-58.

Studies have shown that vulnerable groups of HIV-infected patients—such as minorities, women, and those with low education—typically receive less HIV care than others. However,

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HIV/AIDS care

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these studies did not take into account the individual's specific clinical need for health care, such as care for serious HIV-related symptoms. This study found that 68 percent of HIV-infected patients received care for their most troublesome HIV-related symptom. Surprisingly, women, minorities, and the less educated were no more likely to go without HIV symptom care than other groups.

However, the insurance status of these vulnerable patients did affect their HIV symptom care. Those without health insurance were half as likely as those with private-non-health maintenance organization (HMO) insurance to obtain symptom care. Those with private HMO, Medicare, or Medicaid insurance also were far less likely to receive symptom care than those with non-HMO private insurance.

HIV-related symptoms often signal disease progression, and lack of treatment for them can lead to subsequent medical complications and costly emergency room or hospital care, note the researchers. They used HCSUS data to determine the likelihood of receiving care for a person's most bothersome HIV-related symptom (headache, cough, weight loss, or diarrhea) within the past 6 months. They examined the impact of sociodemographics, insurance

status, coexisting psychiatric problems (mood disorder and drug dependence), and symptom severity on HIV symptom care.

Landon, B.E., Wilson, I.B., Wenger, N.S., and others. (2002, January). "Specialty training and specialization among physicians who treat HIV/AIDS in the United States." *Journal of General Internal Medicine* 17, pp. 12-22.

Doctors' expertise in HIV/AIDS care is more strongly associated with their HIV caseload than with formal HIV/AIDS specialty training, according to these researchers. They found that primary care doctors were able to develop HIV expertise similar to that of doctors with infectious disease (ID) specialty training if they had a substantial case load and made an effort to stay current on the topic by attending conferences, reading medical journals, and the like. The researchers analyzed HCSUS data on physicians' specialty training and HIV caseload, scores on an HIV-specific knowledge test, referral patterns, and attendance rates at HIV-related educational activities.

Of the 379 doctors caring for HIV patients who completed the survey, 40 percent had ID training, and 56 percent were generalists; 4 percent of ID-trained and 37 percent of generalist physicians did

not consider themselves HIV experts. ID experts had a median current HIV caseload of 150 patients, and generalist experts had a median caseload of 200 patients, compared with 5 for non-expert generalists. Mean scores on the knowledge scale were similar for ID and generalist experts (9 vs. 8.5 items correct out of 11) and lower for generalist non-experts (6.5 items correct). In models that included specialty training and caseload, doctors with caseloads of 20 to 49 patients were nearly three times as likely and those with more than 50 patients were nearly six times as likely to have a high knowledge score (80 percent or more correct) as those who saw fewer patients, and the effect of specialty on knowledge was substantially weakened.

Experts had attended more local and national HIV meetings than non-experts (9.3 vs. 2.7 and 4.0 vs. 2.3, respectively) in the past year. Fewer ID experts ever referred HIV patients to other doctors than generalist experts (13 vs. 27 percent). Similarly, general medicine experts were more likely than ID experts to refer patients for evaluating possible changes in antiretroviral therapy (22 vs. 11 percent) and choosing alternative prophylactic regimens for AIDS-related infections (16 vs. 8 percent). ■

Agency News and Notes

AHRQ awards contracts for new round of Evidence-Based Practice Centers

The Agency for Healthcare Research and Quality has awarded 13 new 5-year contracts to continue and expand the work performed by the first group of Evidence-based Practice

Centers (EPCs). Most institutions in the second group of EPCs were part of the initial set, but three institutions are new to the program.

These EPCs will continue to perform methodologically rigorous

systematic reviews and analyses of scientific literature on clinical and behavioral topics, as well as organizational and financing systems related to health care and

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Evidence-Based Practice Centers

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health care delivery. The resulting evidence reports and technology assessments will be used by Federal and State Agencies, private-sector professional societies, health delivery systems, providers, payers, and others committed to evidence-based health care.

In addition, the EPCs will update prior evidence reports; provide technical assistance to professional organizations, employers, providers, policymakers, and others to facilitate translation of the reports into quality improvement tools, evidence-based curricula, and reimbursement policies; and undertake methods research.

The newly funded EPCs are:

Blue Cross and Blue Shield Association, Technology Evaluation Center EPC, Chicago, IL; Naomi Aronson, Ph.D., Director.

Duke University EPC, Durham, NC; David Matchar, M.D., F.A.C.P., Director.

ECRI EPC, Plymouth Meeting, PA; Charles Turkelson, Ph.D., Director.

Johns Hopkins University EPC, Baltimore, MD; Eric Bass, M.D., M.P.H., Director.

McMaster University EPC, Hamilton, Ontario, Canada; Parminder Raina, Ph.D., Director.

New England Medical Center EPC, Boston, MA; Joseph Lau, M.D., Director.

Oregon Health & Science University EPC, Portland, OR; Mark Helfand, M.D., M.P.H., Director.

RAND EPC, Santa Monica, CA; Paul Shekelle, M.D., Ph.D., Director.

Research Triangle Institute-University of North Carolina EPC, Research Triangle Park, NC; Kathleen Lohr, Ph.D., Director.

Stanford University-University of California, San Francisco EPC, Stanford, CA; Douglas Owens, M.D., M.S., Director.

University of Alberta EPC (new), Edmonton, Alberta, Canada; Terry Klassen, M.D., M.Sc., FRCPC, Director.

University of Minnesota EPC (new), Minneapolis, MN; Robert Kane, M.D., Director.

University of Ottawa EPC (new), Ottawa, Canada; David Moher, M.Sc., Director.

Editor's note: Evidence reports and summaries on more than 50 topics previously prepared by the EPCs and published by AHRQ are available online (go to www.ahrq.gov and click on evidence-based practice to see a list of topics and/or download summaries and reports). Print copies are available from the Agency's Clearinghouse. See the back cover of *Research Activities* for ordering information. ■

Case studies show how AHRQ research helps State governments

In the January issue of *Research Activities*, we invited you, the researcher, to send us information on how your AHRQ-supported research is being used. We also explained how AHRQ draws upon that information to produce Impact Case Studies. In this issue, we begin a series of articles that showcase specific case studies, starting with examples of how State governments use AHRQ-supported research.

For example, research conducted by one of AHRQ's Centers for Education and Research on Therapeutics (CERTs) caused an immediate change in North Carolina public health practice. In a study of children affected by rickets, researchers at the CERT at the University of North Carolina at Chapel Hill and Wake Forest University School of Medicine, Winston-Salem, found that many exclusively breastfed, minority infants would benefit from vitamin D supplementation to protect against rickets. As a result, the North Carolina Pediatric Society requested that the State distribute a

multivitamin supplement free of charge to all exclusively breastfed infants and children, 6 weeks of age or older. With funding from a maternal and child health block grant, the North Carolina Department of Health and Human Services distributed the supplements to more than 1,500 children over a 16-month period.

In Massachusetts, the collective body of AHRQ-funded patient safety research ultimately led to establishment of a new patient safety center. State Senator Richard Moore, who serves as Chair of the State Senate's Joint Health Care Committee, attended an AHRQ User Liaison Program workshop on patient safety and crafted patient safety legislation as a direct result. Although Senator Moore's first legislative attempt failed, his second was successful, resulting in the Betsy Lehman Center for Patient Safety and

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Case studies

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Medical Error Reduction (in honor of the late Boston Globe health reporter who died in 1996 from a four-fold chemotherapy overdose).

In another Impact Case Study, the State of Washington customized an AHRQ-funded decision support tool to help State employees and retirees choose among health plans. Developed through funding from AHRQ's Small Business Innovative Research program, the tool, Health Plan Select,

integrates price, benefits, and health plan performance measures from CAHPS (another AHRQ funded resource) and HEDIS. The Washington State Health Authority called its version of this Web-based resource Compare a Plan and made it available for the State's open enrollment last fall.

In the coming months, we will be providing more examples of our Impact Case Studies. In the meantime, we encourage you to send any information you may have about the use of AHRQ research to Jane Steele at jsteele@ahrq.gov ■

Announcements

AHRQ puts the latest hospital care data on the Web

The Agency for Healthcare Research and Quality has added data for 2000—the most recent currently available information on hospital stays—to the Agency's Web-based HCUPnet (<http://www.ahrq.gov/data/hcup/hcupnet.htm>). HCUPnet is a free service that enables users to identify, track, analyze, and compare statistics on the inpatient care of individuals across the United States as a whole, in regions of the country, and in specific States.

HCUPnet also contains national trend data for the period 1993-2000, showing, for example, that patients in 2000 spent nearly 20 percent less time in hospitals, on average, than patients in 1993. The trend data also show how the number of patients treated for specific conditions has changed.

For example, the number of patients treated for septicemia—blood poisoning—rose from 330,000 in 1993 to a high of 420,000 patients in 1998, after which the number returned to the 1993 level. In contrast, hospital discharges for affective disorders, primarily depression, rose steadily from 485,000 in 1993 to 664,000 in 2000, an increase of over 35 percent.

Since its launch 2 years ago, HCUPnet has provided answers to thousands of questions about hospital care, including, for example, the most expensive conditions treated in hospitals, procedures linked with the longest hospital stays, the number of children's stays covered by Medicaid, and the trend in the number of heart procedures

performed over the past several years.

The national and regional data in HCUPnet are derived from AHRQ's Nationwide Inpatient Sample (NIS), while the data from participating States are from State Inpatient Databases (SID). Both data sets are part of AHRQ's Healthcare Cost and Utilization Project (HCUP). HCUPnet data exclusively on children's inpatient hospital care are from the Kids' Inpatient Database (KID).

To perform analysis on topics not covered by HCUPnet, users may purchase NIS, SID, or KID data. For more information, contact the HCUP Central Distributor toll-free at 866-556-4287 or by email to hcup@s-3.com. ■

Workshop for researchers to focus on geographic methods and measurement

AHRQ is sponsoring a 1-day workshop, "Geographic Methods and Measurement for Health Services Research on Vulnerable Populations." The workshop will be held September 13 in Rockville, MD. It will provide an overview of geographic information systems (GIS) methods, geographic measurement issues—including measures of urbanicity and rurality, as well as geographically based shortage designation areas—and multilevel models and studies of neighborhood effects.

The workshop is designed for active researchers with a working understanding of regression analysis who are interested in an introduction to GIS, geographic measurement, and multilevel models.

Registration information is available from Karen Brooks, 301-231-7537, ext. 260 or via e-mail to Brooksk@cygnusc.com

Research Briefs

Cohen-Mansfield, J., and Lipson, S. (2002). "Medical decisions for troubled breathing in nursing home residents." (AHRQ grant HS09833). *International Journal of Nursing Studies* 39(5), pp. 557-561.

Troubled breathing is an end-of-life symptom for many elderly nursing home residents, who typically suffer from a high rate of respiratory problems. These authors examine the decisionmaking process involved in choosing medical treatments to be considered for these residents. Researchers interviewed five physicians at a suburban nursing home about how they decided to treat 20 residents who had experienced troubled breathing within the past 24 hours or were unable to make decisions at the time of troubled breathing because of cognitive impairment. Diagnostic tests and medication were the usual treatments. Although doctors were generally satisfied with the decision process (families were involved in decisions in 45 percent of cases), they would have wanted less treatment and more symptomatic relief for 30 percent of the

residents if they were in the resident's condition (for example, comfort care or no hospitalization).

Denkers, M.R., Biagi, H.L., O'Brien, M.A., and others. (2002). "Dorsal root entry zone lesioning used to treat central neuropathic pain in patients with traumatic spinal cord injury." (AHRQ contract No. 290-97-0017). *Spine* 27(7), pp. E177-E184.

Up to 94 percent of people suffer from pain at some point after a spinal cord injury, up to 70 percent suffer from chronic pain, and from 5 to 37 percent have pain that is quite severe or disabling as a result of the injury. These authors reviewed studies to evaluate the effectiveness and safety of dorsal root entry zone lesioning in treating central neuropathic pain of patients 13 years of age and older with traumatic spinal cord injury. Ten of 11 studies found that at least half of the patients attained more than 50 percent pain relief or experienced no pain-related activity limitation and no need for narcotics. However, all of the studies poorly defined patient eligibility criteria, had no control

groups, and used inadequate reporting of adverse effects. The researchers conclude that the evidence is weak for the use of dorsal root entry zone lesioning to relieve central neuropathic pain in patients with traumatic spinal cord injury.

Frank, C., Fix, A.D., Pena, C.A., and Strickland, G.T. (2002, April). "Mapping Lyme disease incidence for diagnostic and preventive decisions, Maryland." (AHRQ grant HS07813). *Emerging Infectious Diseases* 8(4), available online at www.cdc.gov/ncidod/EID/vol8no4/00-0413-G.htm.

Mapping Lyme disease by ZIP code rather than county will improve decisions regarding diagnoses, personal and community interventions, and cost-effective use of Lyme disease vaccine, conclude these researchers. They analyzed all cases of Lyme disease reported to the Maryland Department of Health and Mental Hygiene with a known date of onset from 1993 through 1998 based on residential ZIP code rather than county. They identified areas of high incidence

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Research briefs

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on the upper Eastern Shore of the Chesapeake Bay and in counties north and east of Baltimore City. The latter places, especially, are not visible when mapping Lyme disease on the county level. For example, when analyzed by counties, focal high incidence along Gunpowder River and Deer Creek was diluted by adjacent areas of lower incidence among the comparatively urban northern inner suburbs of Baltimore City. These foci were aligned along the larger rivers and creeks in an environment that is ideal for transmission of the disease. In contrast, Maryland's upper Eastern Shore, a rural area in the Coastal Plain with an ideal tick habitat, has uniformly high Lyme disease.

Hallstrom, A.P. (2002). "Should time from cardiac arrest until call to emergency medical services (EMS) be collected in EMS research?" (AHRQ grant HS08197). *Critical Care Medicine* 30, pp. S127-S130.

Whether or not data on the time from cardiac arrest until a call is made to emergency medical services (EMS) should be collected in EMS research depends on several factors, notes this author. He conducted a simulation study to quantify the impact that such data might have on estimates of the relationship between time from a person collapsing to defibrillation and probability of survival. He found that in the absence of bias (for example, faulty witness recall of the time that it took from collapse until the call was placed), an underestimate of the slope on the order of 20 to 30 percent might

be expected. However, in the presence of bias, the impact on the slope estimate is unpredictable. The most likely bias (distracted family members who tend to overestimate how long it takes EMS to arrive) would tend to cause an overestimate of the slope. Thus, the author suggests that, unless the time from collapse to placing the 911 call can be obtained accurately and without bias, it is probably not worthwhile to do so, especially given the considerable costs involved in collecting such data.

Jiang, H.J., and Begun, J.W. (2002). "Dynamics of change in local physician supply: An ecological perspective." *Social Science & Medicine* 54, pp. 1525-1541.

The remarkable increase in physician supply over the past three decades did not alleviate physician maldistribution by geographic area or specialty. Physicians continue to be concentrated in the suburbs and in more affluent sections of urban areas. These researchers used an ecological framework to explain the growth of a particular physician population (for example, surgical specialists) in a given metropolitan statistical area by four mechanisms: the intrinsic properties of this physician population; the local market's carrying capacity; competition within the same physician population; and interdependence between different physician populations. Regression analysis of changes in the number and percentage of physicians in a particular specialty population from 1985 to 1994, based on the explanatory factors, revealed that the population ecology framework was useful in explaining dynamics

of change in the local physician workforce. For example, both hospital consolidation and managed care penetration positively affected growth of physician generalists but suppressed the growth of specialists. Reprints (AHRQ Publication No. 02-R063) are available from AHRQ.**

Putnam, K.G., Buist, D.S., Fishman, P., and others. (2002, May). "Chronic disease score as a predictor of hospitalization." (AHRQ grant HS10391). *Epidemiology* 13(3), pp. 340-346.

The Chronic Disease Score (CDS)—which is based on health maintenance organization (HMO) records of dispensed medications and patient age and sex—predicts hospitalizations in a wide group of health care delivery systems used by about one-third of the U.S. population, concludes this study. The researchers used the CDS to predict hospitalizations during the year after October 1, 1995, among 29,247 women aged 45 years and older. The overall risk of hospitalization was 12 percent. Among four CDS versions, the risk of hospitalization ranged from 4 percent for the lowest CDS decile to 27-29 percent for the highest decile. All four versions of the CDS predicted subsequent-year hospitalization about equally. However, based on the statistics used to evaluate the scores, the Clark-TC weights that predicted total health care cost, performed slightly better than the others. These findings suggest that CDS comorbidity metrics can be applied to multi-HMO studies to control for potential confounding. ■

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