



# Research Activities

No. 252, August 2001

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## Rising medication costs prompt many rural elders to take fewer medicines and smaller doses than prescribed

**M**en and women 65 years of age and older consume over 30 percent of all prescription medications in the United States, with many taking several medications daily for multiple chronic conditions. According to a recent study, rising medication costs prompted nearly half (44 percent) of elderly men and women in North Carolina to take less medicine than prescribed by their doctors at the risk of maintaining their health or recovering from illness. About 30 percent of rural elders said they had a little or some difficulty and 14 percent said they had a great deal of difficulty paying for their prescription medicines or paying the annual deductible required for the Medicaid prescription drug benefit (\$250 deductible and a four-drug benefit cap in the study region).

These adults used several strategies to manage the cost of their prescription drugs. About 17 percent bought part of a prescription instead of all of it, 15 percent took less medicine than prescribed to make it last, and 19 percent asked their doctors for free samples. However, difficulty paying for medication was not the only factor prompting

medication mismanagement. Rural elderly people also were more likely to mismanage their medication regimens if they were black, younger, in poorer mental health, or had more acute-care doctor visits, regardless of income. Neither income nor income adequacy had much effect.

While the addition of a prescription drug benefit to Medicare may help the 44 percent of the sample who had trouble affording medications, it will not completely solve the problem of medication noncompliance among the elderly, conclude Jim Mitchell, Ph.D., and colleagues at East Carolina University. With support from the Agency for Healthcare Research and Quality (HS08779), they interviewed 499 community-dwelling elders in rural Eastern North Carolina who were taking one or more prescription medications.

See "Mismanaging prescription medications among rural elders: The effects of socioeconomic status, health status, and medication profile indicators," by Dr. Mitchell, Holly F. Mathews, Ph.D., Lisa M. Hunt, R.Ph., and others, in the June 2001 issue of *The Gerontologist* 41(3), pp. 348-356.

## Pharmaceutical Research

### Hispanics in their 50s are much less likely than same-age whites or blacks to take medication to control high blood pressure

**F**ar fewer Hispanic adults who suffer from high blood pressure (hypertension, greater than 140/90 mm Hg) use antihypertensive medications to control it than do white or black adults who have the condition. This difference is not explained by lack of insurance, lower socioeconomic status, or adverse health orientations and habits, according to the findings from a recent study by Case Western Reserve University researchers Joseph J. Sudano Jr., Ph.D., and David W. Baker, M.D., M.P.H. The study was supported by the Agency for Healthcare Research and Quality (HS10283).

The researchers used data from the 1992 U.S. Health and Retirement Study to analyze differences in self-reported antihypertensive medication use by white, Hispanic, and black adults aged 51 to 61 years with a history of hypertension. A total of 53 percent of Hispanics, 64 percent of whites, and 73 percent of blacks with high blood pressure reported taking

antihypertensive medications. Adjusting for differences in demographics, socioeconomic status, insurance coverage, and health status did not significantly alter the relation between Hispanic ethnicity and lower use of antihypertensive medication.

These findings raise serious concerns that hypertension control efforts by public health and health care agencies have failed to reach this important and growing segment of the U.S. population, note the researchers. They suggest several possible reasons for less use of antihypertensive medications by Hispanics, including discrimination within medical care institutions or in medical encounters, few Hispanic health professionals and researchers, few culturally sensitive primary prevention programs targeted to Hispanics, and lack of media awareness of Hispanic health issues. The authors note that some of these same factors may also apply to black adults (e.g., potential discrimination, physician bias in treatment, underrepresentation among health professionals). Thus, it is somewhat surprising that black adults were actually more likely than Hispanic adults and white adults to report taking antihypertensive medication.

It's possible that efforts to educate blacks and health care professionals about the high incidence of hypertension among blacks may have been successful, note Drs. Sudano and Baker. They conclude that similar efforts are needed for Hispanics, including programs to educate Hispanics about the importance of taking medication and making lifestyle changes to control their blood pressure.

More details are in "Antihypertensive medication use in Hispanic adults: A comparison with black adults and white adults," by Drs. Sudano and Baker, in the June 2001 *Medical Care* 39(6), pp. 575-587.

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## Outcomes/Effectiveness Research

### Angiography recommendations appear to identify patients who are likely to benefit from the procedure

Doctors vary widely in their use of coronary angiography to diagnose heart problems in heart attack victims. Using criteria for selecting elderly heart attack patients most in need of this diagnostic procedure (in which a catheter is threaded into the heart to inject a contrast dye to image the heart) apparently results in better outcomes for these patients, according to a recent study that was supported by the Agency for Healthcare Research and Quality (HS08071). Among patients who met appropriateness criteria for angiography, those who received it had significantly increased survival 1, 2, and 3 years later compared with those who did not undergo the procedure.

This survival benefit was probably due to the revascularization (coronary artery bypass surgery or angioplasty) or drug therapy initiated based on the results of the angiography, according to the researchers who are from Harvard University's Medical School and School of Public Health, Boston University School of Medicine, and Brigham and Women's Hospital. They compared the survival of 9,784 catheterized and 9,784 noncatheterized elderly Medicare patients hospitalized for heart attack (acute myocardial infarction, AMI) during 1994-1995 in one of

seven States, who would have been recommended for angiography based on current criteria. Criteria include duration of symptom onset, patient age, prior use of thrombolytic (clot-busting) therapy, and presence of a condition complicating the heart attack (for example, shock, persistent chest pain, and/or recurrent irregular heartbeat).

Using information from medical record data, angiography was judged necessary for 29 percent of patients and appropriate for 34 percent; 36 percent of patients were judged to be uncertain candidates for angiography. By 3 years, the survival rate among necessary patients who underwent angiography was 73 percent compared with 56 percent among necessary patients who did not receive the procedure. In contrast, the survival rates were 83 percent and 75 percent, respectively, among catheterized and noncatheterized patients who were judged to be uncertain candidates. Patients who needed and underwent angiography were more likely to undergo revascularization within 3 months of the AMI and to be taking aspirin.

See "Validating recommendations for coronary angiography following acute myocardial infarction in the elderly: A matched analysis using

propensity scores," by Sharon-Lise T. Normand, Ph.D., Mary Beth Landrum, Ph.D., Edward Guadagnoli, Ph.D., and others, in the April 2001 *Journal of Clinical Epidemiology* 54, pp. 387-398.

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## Surgeon's experience and patient demographics influence the treatment and outcomes of colorectal cancer

Aside from the stage of their tumors, the treatment provided to patients with colorectal cancer and how they fare depend in large part on how many cancer surgeries of this type their surgeons have done. The number of colonoscopies done at the patient's hospital and the patient's race and socioeconomic status also influence treatment and outcomes. In fact, these factors sometimes make the difference between whether a patient must undergo permanent colostomy (creation of an opening leading from the colon to the skin surface) or not, according to a study supported by the Agency for Healthcare Research and Quality (HS09869).

John Z. Ayanian, M.D., of Harvard Medical School, and his colleagues reviewed studies from 1980 to 2000 that examined the impact of physician, hospital, and patient factors (including insurance

type) on treatment and outcomes of patients with colorectal cancer. Their analysis revealed that greater surgeon experience and case volume were associated with improved tumor control, although surgeon and hospital factors were not consistently associated with postoperative mortality or long-term survival. There also was no evidence that patients treated by HMO providers received substantially different treatment or had different outcomes than those who received care under traditional fee-for-service plans. Some studies indicated that patients were less likely to undergo permanent colostomy—meaning the surgeon was able to preserve their sphincter muscle—if they were treated by surgeons and hospitals that did a high volume of surgeries for colorectal cancer.

Certain patient characteristics influenced cancer treatment. Older

patients were less likely to be given chemotherapy after surgery than younger patients, even after adjustment for other coexisting illnesses and tumor stage. Black and American Indian patients with colorectal cancer received less intensive therapy and had worse outcomes than white patients. When black and white patients did receive comparable care, the two groups had similar rates of survival, indicating that racial disparities in treatment may account in part for the disparities in outcome.

See "Impact of patient and provider characteristics on the treatment and outcomes of colorectal cancer," by David C. Hodgson, Charles S. Fuchs, and Dr. Ayanian, in the April 4, 2001 *Journal of the National Cancer Institute* 93(7), pp. 501-515.

### Primary Care

## Training in basic skin cancer triage can improve primary care providers' practice of skin cancer control measures

The incidence of melanoma, a deadly form of skin cancer, and deaths associated with it have increased over the past few decades. The average American makes 1.7 visits to a primary care provider (PCP) each year, offering an opportunity to prevent skin cancer. Early detection of skin cancer by PCPs has been limited in the past by low confidence and lack of training. Training in basic skin cancer triage (BSCT) may increase the practice of skin cancer

control measures by PCP, concludes a study supported in part by the Agency for Healthcare Research and Quality (National Research Service Award training grant T32 HS00011).

The researchers used pre- and posttraining surveys to examine how a 2-hour BSCT curriculum influenced skin examination, skin cancer counseling

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**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.

## Skin cancer triage

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attitudes, and skin cancer control practices of 22 PCPs. The BSCT curriculum was designed to increase the ability of PCPs to accurately and confidently identify skin lesions and to counsel patients on skin cancer issues. Each PCP received a packet containing the lecture outline, triage algorithm, skin cancer information pamphlets, and review articles. The lecture emphasized skin cancer epidemiology, clinical characteristics and diagnosis, and prevention and counseling approaches.

Following BSCT training, providers were more likely to agree about the importance of conducting total body skin exams (TBSEs), moving from 4.20 to 4.60 on a 5-point scale (with 5 being most agreement). Agreement about the importance of skin cancer

prevention counseling improved only slightly (from 4.09 to 4.22). Providers also reported an increase in the practice of skin cancer control measures (for example, performing TBSEs, asking about sun protection behavior, counseling about skin cancer risk, and providing information about skin cancer) both during an initial patient visit (from 2.17 to 3.21) and routine visits with patients at high risk for melanoma (2.15 to 3.00). Patient exit interviews confirmed these changes in practice patterns.

For more details, see "Impact of the basic skin cancer triage curriculum on providers' skin cancer control practices," by Radha Mikkilineni, M.D., M.Sc., Martin A. Weinstock, M.D., Ph.D., Michael G. Goldstein, M.D., and others, in the May 2001 *Journal of General Internal Medicine* 16, pp. 302-307.

## Parental assessment is a practical and reliable way to measure pediatric primary care

**I**t turns out that parents are pretty good judges of pediatric primary care. Several measures of the quality of pediatric primary care exist. However, they require an interviewer, are lengthy, or are impractical in other ways. A new study demonstrates the success of a brief and valid measure of pediatric primary care from the parent's unique perspective.

The Parent's Perceptions of Primary Care measure (P3C) is a 23-item questionnaire that asks parents to evaluate the elements of primary care as defined by the Institute of Medicine. Essentially, the P3C elicits from the parent an evaluation of certain characteristics of his or her child's primary care which, when present, constitute high quality care.

With support from the Agency for Healthcare Research and Quality (HS10317), Michael Seid, Ph.D., and colleagues at the

Children's Hospital and Health Center, San Diego, administered the P3C to 3,371 parents of elementary school children in a large, diverse urban area. The P3C questionnaire yields a total score, as well as subscale scores for care continuity, access to care (timeliness and convenience), contextual knowledge (doctor's awareness of the parent's values and medical care preferences, clear understanding of the child's health needs, and familiarity with the child's medical history), adequacy of doctor's communication, comprehensiveness of care, and coordination of care (doctor's knowledge of other medical visits and followup of problems via later visits or phone calls).

The researchers found the P3C to have good internal consistency, reliability, and validity. The quality of pediatric primary care was higher (higher P3C scores) when

children had health insurance, their parents completed the survey in English (the P3C was also translated into Spanish, Vietnamese, and Tagalog), and they had a regular doctor. P3C scores were positively related to parental reports of the child's health-related quality of life. The P3C can be used by pediatricians and medical groups that are interested in improving their care and by policymakers who can use it to measure the experiences of children covered by Medicaid and minority children who may have limited English ability.

More details are in "Parents' perceptions of primary care (P3C): Measuring parents' experiences of pediatric primary care quality," by Dr. Seid, James W. Varni, Ph.D., Laura Olson Bermudez, Ph.D., and others, in the August 2001 *Pediatrics* 108(2), pp. 264-270.

## Health Care Delivery

### Cancer screening decisions for the elderly should not be based on age alone

Considerable uncertainty exists about optimal cancer screening in elderly patients. Doctors should estimate the expected benefit of screening for a specific individual and not rely solely on age-specific guidelines. Also, since the outcomes of screening decisions affect elderly patients directly, doctors should allow them to share in these decisions, recommend Louise C. Walter, M.D., and Kenneth E. Covinsky, M.D., M.P.H., of the University of California, San Francisco. Their research was supported in part by the Agency for Healthcare Research and Quality (K02 HS00006).

Drs. Walter and Covinsky developed a framework to guide elderly patients and their doctors in individualized screening decisions. Their framework anchors decisions with quantitative estimates of life expectancy, risk of cancer death, and screening outcomes based on published data. They present potential benefits of screening as the number of people who must be

screened to prevent one cancer-specific death based on the estimated life expectancy during which a patient will be screened. For example, those with life expectancies of less than 5 years are unlikely to derive any survival benefit from cancer screening.

The researchers also consider the likelihood of potential harm from screening based on patient factors and test characteristics. These harms include complications from additional diagnostic procedures due to inaccurate test results, identification and treatment of clinically unimportant cancers (cancers that would never have become clinically significant), and the psychological distress that can result from screening (the alarm of false-positive results and the anxiety caused by a "temporary" diagnosis of cancer).

Considering the estimated outcomes according to the patient's own values and preferences is the final step. The value placed on different health outcomes will vary among patients, as will preferences

for screening. For example, some patients may want to avoid the worry and risk of a cascade of further tests that may follow an ambiguous result of a screening test.

In conclusion, the researchers note that cancer screening discussions and decisions are difficult tasks, and that optimizing cancer screening decisions will require medical systems that reimburse doctors for the complexity and time requirements associated with these discussions.

See "Cancer screening in elderly patients: A framework for individualized decision making," by Drs. Walter and Covinsky, in the June 6, 2001 *Journal of the American Medical Association* 285(21), pp. 2750-2756.

### Physician understanding of patient expectations is critical to patient satisfaction

Meeting patients' expectations for care produces greater care satisfaction, which in turn is related to greater adherence to medical advice, less "doctor shopping," and a lower tendency to sue for malpractice. Doctors can meet these expectations only if they first find out and understand what the patient expects of them and, in some cases, redirect misguided expectations, such as demands for inappropriate care.

One obstacle to progress in this area has been disagreement over the most appropriate methods for

identifying, monitoring, and classifying patient expectations and requests. In a study supported in part by the Agency for Healthcare Research and Quality (HS09812), Richard L. Kravitz, M.D., M.S.P.H., of the University of California, Davis, reviews the conceptual relationships linking patients' expectations, requests, and satisfaction with care, as well as approaches to measuring these expectations and requests.

Dr. Kravitz points out that the clinical encounter is a negotiation between patient and physician. The

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## Physician understanding of patient expectations

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negotiation will be easier if physicians remember that many patients are concerned that their symptoms represent a serious illness, and patients often have their own explanations for the symptoms. Various studies have found that some expectations are so prevalent (for example, expectations of physical examination and discussion of prognosis) that physicians should incorporate these elements into most symptom-focused office visits. Also, since patients' expectations are varied and can be specific, physicians should simply ask, "Is there anything in particular you were hoping I would do today?" Since many patients

have residual unmet expectations, doctors should reserve time toward the end of the visit to ask, for example, "Is there anything we didn't get to or anything else you were hoping I would cover?" To facilitate research on patients' verbal requests to doctors, Dr. Kravitz developed a Taxonomy of Requests by Patients (TORP). An initial use of TORP suggests that it can be a useful tool for identifying the most common forms of patient requests and clarifying which communication strategies lead to the most successful doctor-patient negotiations.

See "Measuring patients' expectations and requests," by Dr. Kravitz, in the May 2001 *Annals of Internal Medicine* 134, pp. 881-888.

## Doctors vary in how they resolve medical conflicts with dying patients

When dying patients demand or refuse treatments, doctors often feel compelled to comply with the wishes of the patients and their families, even when these demands conflict with the doctor's sense of what treatments constitute high-quality care. Doctors also may feel pressure to limit access to treatments because of concerns about compromising human dignity for minimal benefit or the costs of the treatment (complications, harm, and financial costs). Physicians vary in how they communicate and negotiate with patients to resolve such conflicts, according to a study that was supported in part by the Agency for Healthcare Research and Quality (HS06655).

The researchers interviewed 158 doctors at one medical center who were caring for at least one terminally ill patient about how they would handle such conflicts. Seventy-one percent of doctors said

they would negotiate with and educate patients who asked for nonbeneficial treatments, 34 percent would defer to patient requests for benign or uncomplicated treatments, and 33 percent would try to convince patients to forgo nonbeneficial treatments. About one-fifth of doctors (22 percent) would refuse patient requests for nonbeneficial treatment, 16 percent would use family influence, 13 percent would not offer futile treatments, and 9 percent would refer patients to other doctors for disputed care. Twenty-three percent of doctors cited potential harm and 18 percent cited cost of treatment as reasons for withholding nonbeneficial treatments.

In response to patient refusals of beneficial treatments, 59 percent of doctors would negotiate with patients, 41 percent would try to convince patients to receive the treatment, 32 percent would assess

patient competence, 27 percent would use family influence, and 21 percent would refer the patient to other physicians.

In conclusion, the authors note that physicians providing care at the end of life respect autonomy through strategies that involve graduated degrees of accommodation. Physicians report being most accepting of patient requests for benign, technically simple, inexpensive, and medically effective treatments. The authors point out that medical ethicists could play a greater role in teaching communication skills to clinicians to help them mediate and resolve ethical conflicts with patients.

See "Conflict resolution at the end of life," by Michael D. Fetters, M.D., M.P.H., M.A., Larry Churchill, Ph.D., and Marion Danis, M.D., in the May 2001 *Critical Care Medicine* 29(5), pp. 921-925.

## Children's Health

### ER staff can use a brief questionnaire to identify children and adolescents who are suicidal

**T**he rate of suicide among adolescents in the United States has tripled since the 1950s and now ranks as the third leading cause of death for this age group. As many as 12 percent of children aged 6 to 12 and 53 percent of adolescents aged 13 to 19 have suicidal thoughts, and 8 to 10 percent of all children in the United States attempt suicide at some point during their childhood.

A growing number of these troubled children and adolescents are showing up at hospital emergency departments (EDs) primarily for self-destructive behavior. By asking them just four questions, nonmental health professionals in the ED can quickly identify children and adolescents who are suicidal, a critical first step to getting them into treatment.

In fact, responses to these four questions asked by the triage nurse

identified 98 percent of children at risk for suicide, based on a standard 30-item Suicide Ideation Questionnaire (SIQ) later administered to them by a mental health clinician. The four questions assessed major factors in suicide risk: present and past thoughts of suicide, prior self-destructive behavior, and current stressors. Adding the other 10 questions on the Risk of Suicide Questionnaire (RSQ) to these four did not significantly improve the accuracy of identifying suicidal patients. Not only did the RSQ take less than 2 minutes to complete, but ED nurses reported in a poststudy focus group that it reduced the stress of handling such patients.

In addition, patients felt it was acceptable to discuss suicidal thoughts they had kept to themselves. For the most part, parents were relieved that a

clinician was delving into a topic that they feared discussing with their children, explains Lisa M. Horowitz, Ph.D., M.P.H. In the study supported by the Agency for Healthcare Research and Quality (National Research Service Award training grant T32 HS00063), Dr. Horowitz and her Harvard Medical School colleagues developed the RSQ, which was administered by a triage nurse to 144 pediatric mental health patients admitted to a hospital ED. All patients were later administered the SIQ.

More details are in "Detecting suicide risk in a pediatric emergency department: Development of a brief screening tool," by Dr. Horowitz, Philip S. Wang, M.D., Dr.P.H., Gerald P. Koocher, Ph.D., and others, in the May 2001 *Pediatrics* 107(5), pp. 1133-1137.

### Doctors can do much more to encourage adolescents to not smoke or stop smoking

**M**ore than one-third of adolescents smoke, and as many as 20 percent of high school boys use smokeless tobacco. It appears that doctors can do much more to encourage adolescents to not smoke or stop smoking, according to a study supported in part by the Agency for Healthcare Research and Quality (HS08192).

Many physicians ask their adolescent patients about their use of tobacco products, but far fewer physicians pursue the subject with these youngsters, despite guidelines that recommend specific steps that have been effective in helping many adults to quit smoking. Among these are smoking prevention guidelines sponsored by the U.S. Public Health Service (PHS).

Researchers at the University of Rochester Medical Center, led by Jonathan D. Klein, M.D., M.P.H.,

analyzed survey responses from a random sample of New York pediatricians and family physicians who had seen one or more adolescents for well care within the past 6 months. Physicians reported asking 91 percent of adolescents about their smoking habits, and they discussed the health risks of tobacco with 77 percent. However, the physicians only asked 41 percent of adolescents about smoking among their friends (which increases the likelihood they will smoke), and only 32 percent were asked if they used smokeless tobacco. Doctors assessed the motivation of 81 percent of smokers to quit, but they only set quit dates for 34 percent and scheduled followup visits for 28 percent of smokers.

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## Adolescents and smoking

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Pediatricians asked more patients about peer influences than did family physicians. However, family physicians more often asked about smokeless tobacco use, assessed motivation to quit, provided smoking cessation handouts, helped set quit dates, and scheduled followup visits for smokers, perhaps because of their experience with adult smokers. Overall, doctors used more tobacco interventions when

they were familiar with the PHS guidelines (family doctors were more familiar than pediatricians at 48 percent vs. 27 percent), spent more time with adolescent patients (female doctors spent more time at 26 vs. 21 minutes), and spent more time alone with patients (enhancing rapport and confidentiality).

See "Delivery of smoking prevention and cessation services to adolescents," by Dr. Klein, Leonard J. Levine, M.D., and Marjorie J. Allan, B.S. in the May 2001 *Archives of Pediatric and Adolescent Medicine* 155, pp. 597-602.

## Nursing Research

### Nurses around the world are among the least satisfied workers, and the problem is getting worse

American consumers' trust in hospitals is not as strong as it once was, nurses feel that they are under siege, and hospitals are having a hard time finding enough nurses willing to work under current hospital conditions. However, nurses in countries with distinctly different health care systems report similar burnout, shortcomings in their work environments, and concern about quality of hospital care.

This international problem suggests a fundamental flaw in the design of clinical care services and management of the hospital workforce. Resolving these issues is essential to preserving patient safety and quality of care, asserts Linda H. Aiken, Ph.D., R.N., of the University of Pennsylvania School of Nursing. In a study that was supported in part by the Agency for Healthcare Research and Quality, Dr. Aiken and her colleagues examined reports from 43,000 nurses from more than 700

hospitals in the United States, Canada, England, Scotland and Germany in 1998 and 1999.

The reports revealed that just under 30 percent to more than 40 percent of nurses in all countries except Germany had high burnout scores on a standard burnout scale. Also, more than 3 in 10 nurses in England and Scotland and more than 2 in 10 in the United States planned on leaving their jobs within the next year. Only 30 to 40 percent of nurses said that there were enough registered nurses to provide high-quality care and enough staff to get the work done. Fewer than half of the nurses in each country reported that management in their hospitals was responsive to their concerns, provided opportunities for nurses to participate in decisions, and acknowledged nurses' contributions to patient care.

Despite caring for sicker patients, U.S. and Canadian nurses said the number of patients

assigned to them had increased in the past year. Also, in North America front-line nursing managers and support staff have been eliminated in a number of hospitals, with staff nurses taking up the slack at the expense of direct patient care. Not surprisingly, only one in nine nurses in Germany and one in three nurses in the remaining countries rated the quality of nursing care provided on their units as excellent. To retain a qualified nurse staff, hospitals need to develop personnel policies comparable to those in other lines of work, conclude the researchers.

See "Nurses' reports on hospital care in five countries," by Dr. Aiken, Sean P. Clarke, Douglas M. Sloane, Ph.D., and others, in the May 2001 *Health Affairs* 20(3), pp. 43-53.

## Health Care Costs and Financing

### Costs associated with asthma have increased substantially since the mid-1980s

**A**sthma morbidity and mortality have increased dramatically in the United States in the past 20 years. Not surprisingly, the economic impact of the disease is large, and it continues to increase. For example, the total cost of asthma was \$4.5 billion in the mid-1980s compared with \$6.2 to \$10.7 billion in the mid-1990s.

Peter J. Gergen, M.D., M.P.H., of the Center for Primary Care Research, Agency for Healthcare Research and Quality, points out in a recent paper that economic outcomes are being reported more often in clinical trials and as part of cost-of-illness studies, but these data have limitations. For example, the level of impact of economic outcomes depends on the target audience. From a payer/provider perspective, direct costs (hospital, outpatient, and medication costs) tend to carry greater weight because these costs influence the cost of doing business. At the family/individual level, indirect costs (loss of school or work days, for example) have a much greater impact because they reflect the functioning and quality of life of the individual and family in the presence of disease.

Also, significant cost savings do not necessarily mean an improvement or deterioration in the clinical

course of the disease. For example, a study looking at the impact of peak flow monitoring found reduced emergency department use among people with asthma who used the monitoring compared with nonusers, resulting in a significant cost savings. Yet other indicators of asthma activity (waking at night with asthma, beta-agonist use, self-reported asthma severity) were not different between the intervention (peak flow use) and control groups. Also, 20 percent of asthmatics in the United States use 80 percent of the resources. Thus, an intervention aimed at the whole group would not be as effective as identifying high users. Finally, cost-of-illness studies give an idea of the economic burden of asthma in a population but not for an individual or family, some of whom have used up to 30 percent of the family's gross income for asthma care.

See "Understanding the economic burden of asthma," by Dr. Gergen, in the May 2001 *Journal of Allergy and Clinical Immunology* 107, pp. S445-S448. Reprints (AHRQ Publication No. 01-R076) are available from AHRQ.\*\*

### Healthy, working-age, privately insured consumers currently may be over-insuring for medical care

**W**hen consumers are provided with supplemental information on the expected out-of-pocket costs associated with competing health plans for different patterns of health care, they often change their choice of health plan. In fact, consumers—particularly those in relatively good health—tend to shift into plans with lower premiums and less comprehensive benefits. This suggests that relatively healthy, working-age, privately insured consumers currently may be over-insuring for medical care, concludes Michael Schoenbaum, Ph.D., lead author of

a study supported in part by the Agency for Healthcare Research and Quality (HS09204).

The researchers randomly assigned 330 adults to read either standard materials on four hypothetical health plans like those typically offered to employees or the standard materials plus one of two types of supplemental decision-support materials intended to help consumers understand the out-of-pocket expenses they could expect in the respective plans.

Consumers who received the "total cost" supplemental material were asked to rate anticipated need for medical care in the next year as

none, low, average, high, and very high, which would affect out-of-pocket costs. If their health care needs were expected to be high or very high, the total out-of-pocket costs of the low-benefit plans would be higher than the costs of the high-benefit plans. "Illness episode" supplemental materials helped consumers identify what they might pay out-of-pocket for each health plan choice, based on episodes of illness they might incur in the coming year.

These supplemental materials significantly decreased demand for

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## Over-insuring for medical care

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high benefit/premium plans by 20 percent (from 78 percent to 62 percent). The effect of the cost

materials differed substantially by participants' health status. Demand for high premium/benefit plans fell around 25 percent among those in excellent or very good health but actually rose somewhat for those in good or fair health.

See "Health plan choice and information about out-of-pocket costs: An experimental analysis," by Dr. Schoenbaum, Mark Spranca, Ph.D., Marc Elliott, Ph.D., and others, in the Spring 2001 *Inquiry* 38, pp. 35-48.

## Proposed antitrust exemption for physicians may alter the balance of power between doctors and health plans

**U**nder current antitrust law, doctors are forbidden to join together to collectively negotiate with managed care or other health plans. This year 10 State legislatures introduced legislation, which is also being considered in the U.S. Congress, to exempt physicians from antitrust law so that they can negotiate with health plans.

Doctors claim that this exemption will enable them to enhance or at least preserve quality of care and will improve the patient-physician relationship. They assert that currently health plans can force them to accept unreasonably low fees that threaten health care quality and access to care. Critics portray the legislation as a thinly veiled attempt to enhance the economic power of physicians, which will prove costly to consumers and reduce the number of people who are able to afford health insurance.

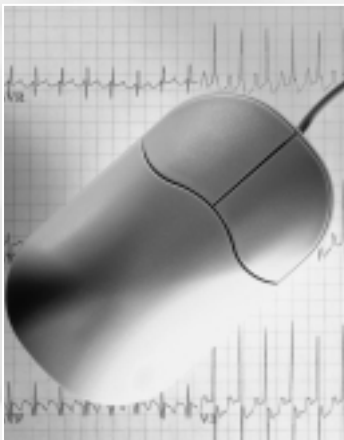
In a recent paper, Fred J. Hellinger, Ph.D., of the Center for Organization and Delivery Studies, Agency for Healthcare Research and Quality, and Gary J. Young, Ph.D., J.D., of Boston University, examine the potential impact of physician antitrust exemption legislation on the balance of power between physicians and managed care plans. They describe two studies which concluded that proposed Federal legislation

would increase health insurance premiums and physician fees. However, both studies had flaws, and neither they nor any other studies have examined the potentially beneficial impact of such legislation on quality and access to health care, according to the researchers.

In the view of Drs. Hellinger and Young, it is unlikely that enactment of State laws will appreciably alter the balance of power between doctors and managed care plans. Most State plans, like the one in Texas, would restrict the maximum size of the physician group and the minimum size of the managed care plans and require doctors to detail financial and medical information, as well as information about the number and activities of physicians operating in the same market. On the other hand, Federal law would appreciably alter this balance of power, since physicians applying to collectively negotiate would not necessarily be required to comply with these requirements.

For more details, see "Adjusting the balance of power: An analysis of physician antitrust exemption legislation," by Drs. Hellinger and Young, in the July 4, 2001 *Journal of the American Medical Association* 286(1), pp. 83-88. Reprints (AHRQ Publication No. 01-R085) are available from AHRQ.\*\*

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## HIV/AIDS Research

### Targeting specific HIV-related symptoms that most diminish functioning would improve life for those with HIV disease

For people infected with the human immunodeficiency virus (HIV) that causes AIDS, some symptoms diminish their ability to function and overall quality of life more than others. Many of these symptoms can be successfully treated.

In order to provide optimal care and quality of life for patients with HIV, clinicians need to find ways to incorporate systematic symptom assessment more effectively into the time-constrained environment of routine clinical practice, conclude Martin F. Shapiro, M.D., Ph.D., of the University of California, Los Angeles, and Samuel A. Bozzette, M.D., Ph.D., of the University of California and the VA Healthcare System, San Diego. Drs. Shapiro and Bozzette are co-principal investigators of the HIV Cost and Services Utilization Study (HCSUS), which is supported in part by the Agency for Healthcare Research and Quality (HS08578 and HS10227).

The researchers, who were led by Karl A. Lorenz, M.D., of the VA Healthcare System, Los Angeles, interviewed a nationally representative sample of 2,267 adults with known HIV infection in 1996 and again between 1997 and 1998. They asked patients to rate their current health and quality of life from 0 (worst) to 10 (best) and number of disability days (days in which at least half of the time was spent in bed because of poor health) to elicit the association of 14 HIV-related symptoms with perceived health, quality of life, and disability days.

Oral symptoms, gastrointestinal symptoms, labored breathing, pain, and weight loss affected 24 to 51 percent of HIV-infected patients initially evaluated. Among symptomatic patients, white patches in the mouth were associated with 4 percent lower perceived health scores, 6 percent lower perceived quality-of-life scores, and 1 additional disability day. Nausea (often a side effect of HIV drug treatment) was associated with 5 percent lower perceived health scores, 8 percent lower perceived quality-of-life scores, and 1 additional disability day. Dyspnea (labored breathing) was associated with 7 percent lower perceived health scores and 8 percent lower perceived quality-of-life scores.

Weight loss (greater than 2.25 kg or about 5 pounds) was associated with 3 percent lower perceived health scores and 4 percent lower perceived quality-of-life scores. Both dyspnea and weight loss were associated with additional disability days. Eye symptoms, extremity pain, and diarrhea were associated with poorer perceived quality of life, and headache and fever were associated with increased disability days.

See "Associations of symptoms and health-related quality of life: Findings from a national study of persons with HIV infection," by Karl A. Lorenz, M.D., Dr. Shapiro, Steven M. Asch, M.D., M.P.H., and others, in the May 1, 2001 *Annals of Internal Medicine* 134(9), pp. 854-860.

### HIV infection is associated with a greater number of skin abnormalities among women as well as men

Men infected with the human immunodeficiency virus (HIV) that causes AIDS commonly have HIV-related skin disease. Apparently skin abnormalities, ranging from unsightly to painful, are also common among women with HIV disease and are more common among women with more advanced disease (fewer CD4 cells or a

higher viral load), concludes a new study. The researchers analyzed baseline data from the Women's Interagency HIV Study, a prospective study of the natural history of U.S. women who are infected with HIV or at risk for infection. They included a total of 2,018 HIV-infected women and 557 uninfected women in the analysis.

HIV-infected women were more likely to report skin abnormalities than uninfected women (63 percent vs. 44 percent), and were more likely to be diagnosed with more than two skin problems (6 percent vs. 2 percent). Folliculitis (inflammation of hair follicles), seborrheic dermatitis (chronic skin

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## Skin abnormalities in HIV patients

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inflammation characterized by scaling and yellow crusted patches, especially on the scalp), herpes zoster (shingles, a painful reactivation of the chicken pox virus that affects the nerves), and onychomycosis (fungal infection of the nails) were more common among HIV-infected women.

HIV-infected women who had CD4 counts less than 50 or high

viral loads (100,000-499,999 and greater than 499,999 copies of virus per ml of blood) were nearly twice or twice as likely to have skin abnormalities (odds ratio, OR 1.68, 1.77, and 2.15, respectively). Other predictors of skin abnormalities included black race (OR 1.38) and injection drug use (OR 2.74).

The viremic state may cause a heightened but nonspecific inflammatory skin response analogous to increased drug eruptions seen with Epstein-Bar virus infection. On the other hand,

HIV may have a direct effect on the pathogenesis of Kaposi's sarcoma (skin cancer characterized by bluish-red nodules), which affected women with viral loads greater than 50,000 copies per ml.

For more details, see "Prevalence and predictors of skin disease in the Women's Interagency HIV Study (WIHS)," by Paradi Mirmirani, M.D., Nancy A. Hessel, M.S.P.H., Toby A. Maurer, M.D., and others, in the May 2001 *Journal of the American Academy of Dermatology* 44, pp. 785-788.

## Agency News and Notes

### AHRQ releases new evidence on proven patient safety practices

The Agency for Healthcare Research and Quality has released a new evidence report on practices that could improve patient safety throughout the Nation's health care system. The evidence report, compiled by AHRQ's Evidence-based Practice Center at the University of California, San Francisco/Stanford University, reviews the evidence on a total of 79 patient safety practices. It lists 73 practices that are likely to improve patient safety and describes 11 others that the researchers considered highly proven to work but not performed routinely in the Nation's hospitals and nursing homes.

The report, *Making Health Care Safer: A Critical Analysis of Patient Safety Practices*, is the result of a comprehensive review of the literature from medicine, aviation, and other relevant fields. Among the 11 highly proven practices are giving patients antibiotics just before surgery to prevent infections, using ultrasound to help guide the insertion of central intravenous lines and prevent punctured arteries and other complications, and giving surgery patients beta blockers to prevent heart attacks during or after surgery. Some practices are not included because they lack sufficient testing to be considered highly proven or they carry important potential risks. These include the increasing use of antibiotics to prevent infections, which may lead to antibiotic resistance.

The report also is being provided to members of the National Forum for Health Care Quality Measurement and Reporting (NQF), which includes consumers,

public and private purchasers, employers, health care providers, accrediting bodies, and organizations involved in health care research or quality improvement. The NQF plans to use this information to develop a list of measures that patients throughout the Nation can use to determine the actions that hospitals and/or health care facilities have taken to improve safety.

To compile the 640-page report, researchers reviewed the medical and other scientific literature on safety practices and consulted with health care experts. They focused on issues relevant to care delivered in hospitals (where the risk of medical errors is significant) and on prevalent diseases and procedures rather than on specific diagnoses. They chose to exclude practices for which little or no scientific evidence could be found to help assess their usefulness, as well as practices that only affect the care of patients with a specific diagnosis.

Researchers were surprised that more than a dozen practices long considered important by patient safety experts—including the use of computerized order entry systems, improved handwashing compliance, and changes in nurse/patient staffing ratios—haven't been sufficiently studied and therefore didn't make the top 11 list. Go to AHRQ's Web site at [www.ahrq.gov](http://www.ahrq.gov) to access both a summary and the full report. Print copies of the summary (AHRQ Publication No. 01-E057) and the full report (AHRQ Publication No. 01-E058) are available from AHRQ.\*

## AHRQ releases 1998 and 1999 State inpatient and ambulatory surgery databases

The Agency for Healthcare Research and Quality has announced the availability of 1998 and 1999 data from the State Inpatient Databases (SID) and State Ambulatory Surgery Databases (SASD). The SID and SASD are powerful health care research and policy analysis tools. The SID contain information for every inpatient hospitalization in each participating State, while the SASD capture information on surgeries performed at hospital-affiliated ambulatory surgery sites. Some SASD include records from free-standing surgery centers as well. In addition, data from the SID and SASD have been translated into a uniform format to facilitate multi-State analysis.

Both data sets contain a core set of clinical and nonclinical information that includes principal and secondary diagnoses and procedures, patient demographics,

total charges, length of stay, discharge status, and patients' expected payment source, such as Medicare, Medicaid, private insurance, and whether they were uninsured. SID and SASD also contain hospital identifiers that permit linkages to hospital-level and county-level databases. The data files do not contain direct personal information about patients or characteristics that might lead to the identification of patients.

These research resources are part of a family of databases and software tools developed as part of the Healthcare Cost and Utilization Project (HCUP), a Federal-State-industry partnership sponsored by AHRQ for building a standardized multi-State data system.

The first seven States to make their 1998 and 1999 SID data available for purchase through the AHRQ-sponsored HCUP Central Distributor are Arizona, Colorado,

Iowa, Maryland, New York, Oregon, and Wisconsin. The first four States to make their 1998 and 1999 SASD data available for purchase through the same source are Colorado, Maryland, New York, and Wisconsin. Additional States are expected to make their SID and SASD files available through the HCUP Central Distributor by September 30, 2001. As soon as their data become available, we will announce the availability on the AHRQ Web site at [www.ahrq.gov/data/hcup](http://www.ahrq.gov/data/hcup).

For more information about SID and SASD, including prices, contact the HCUP Central Distributor, Social and Scientific Systems, Inc., 7101 Wisconsin Avenue, Suite 1300, Bethesda, MD 20814-4805 (toll-free telephone: 866-556-4287; fax: 301-986-8051; e-mail: [hcup@s-3.com](mailto:hcup@s-3.com)).

## Methods seminar scheduled for fall 2001

The Academy for Health Services Research and Health Policy will present the fourth in a series of fall seminars in health services research methods November 5-7, 2001, at the Doubletree Hotel in Rockville, MD, a suburb of Washington, DC. The objectives of the seminar series are to facilitate the use of Federal and State databases in conducting health services research, provide participants with an opportunity to learn from experts, and present an opportunity for attendees to network and share experiences with others in the field.

This 3-day meeting, "Using Federal and State Databases," will feature the following databases:

- HCUP—Healthcare Cost and Utilization Project
- MEPS—Medical Expenditure Panel Survey
- NHIS—National Health Interview Survey
- National Health Care Survey, Parts 1 and 2
- Medicare and Medicaid Databases
- VA Databases

Participants may select up to three databases (one each day) to study in-depth with the database

developers and users. The seminar is being cosponsored by the Academy, the Agency for Healthcare Research and Quality, Department of Veterans Affairs, Centers for Medicare and Medicaid (formerly the Health Care Financing Administration), and the National Center for Health Statistics.

To register online or obtain session descriptions, faculty bios, and more information, visit [www.academyhealth.org/seminars/fall2001](http://www.academyhealth.org/seminars/fall2001). Send questions via e-mail to [seminars@ahsrhp.org](mailto:seminars@ahsrhp.org).

## AHRQ unveils Nation's first all-children's hospital care research database

**T**he Agency for Healthcare Research and Quality has announced the Nation's first database on the hospital inpatient care of America's children. The Kids' Inpatient Database (KID) was developed to make national and regional estimates of children's treatment, including surgery and other procedures, and for estimating treatment outcomes and hospital charges.

The database includes information on the hospital care of pediatric patients from birth through age 18, regardless of whether they had insurance, public assistance, or were uninsured. The KID's large sample size enables researchers to analyze hospital care and charges for common conditions in children, such as respiratory diseases and injuries, as well as rare conditions, such as congenital abnormalities. The power of the database also enhances the ability to study infrequently used

procedures, such as bone marrow biopsy and organ transplantation.

The KID contains information on the inpatient stays of about 1.9 million children at over 2,500 hospitals across the United States in 1997. Included is information on children's principal and secondary diagnoses, tests, surgeries and other procedures, length of stay, hospital charges, payment sources, and type of hospital.

For details on the KID, including costs and software requirements, contact the HCUP Central Distributor, Social and Scientific Systems, Inc., 7101 Wisconsin Avenue, Suite 1300, Bethesda, MD 20814-4805. For more information, call 866-556-4287 or fax your questions to 301-986-8051.

For those who want quick answers about the hospital care of children and other patients, AHRQ's HCUPnet now includes data from the KID. HCUPnet is an interactive, online service designed

to help policymakers, administrators, analysts, educators and students obtain answers instantly to their questions about hospital care, outcomes, and charges. The tool's menu-driven format permits users to tailor queries to national or regional statistics. HCUPnet is available without charge on the AHRQ Web site at [www.ahrq.gov](http://www.ahrq.gov). Select "HCUPnet," followed by "Start HCUPnet," and then click on "Hospital Stays for Children Only."

The KID and HCUPnet are part of the Healthcare Cost and Utilization Project (HCUP), a family of databases, Web-based products, and user-friendly software developed and maintained by AHRQ. HCUP is a Federal-State-industry partnership to build a standardized, multi-State health data system to facilitate health care research.



## Robert Graham named to head AHRQ's Center for Practice and Technology Assessment

**J**ohn M. Eisenberg, M.D., Director of the Agency for Healthcare Research and Quality, has announced the selection of Robert Graham, M.D., as Director of AHRQ's Center for Practice and Technology Assessment (CPTA). Dr. Graham takes over from Douglas Kamerow, M.D., who directed CPTA from 1994 until his recent retirement from the Public Health Service Commissioned Corps.

As CPTA Director, Dr. Graham will oversee the Agency's evidence-based practice and technology assessment programs, research and evaluation on translating evidence-based findings into clinical practice, and the National

Guideline Clearinghouse™. CPTA also encompasses the U.S. Preventive Services Task Force.

Dr. Graham previously served in the Department of Health and Human Services from 1970 to 1985, holding various positions in the Health Services and Mental Health Administration, Bureau of Health Manpower, and the Health Resources Administration. Dr. Graham also served as the first Administrator of the Health Resources and Services Administration. An officer in the U.S. Commissioned Corps, Dr. Graham achieved the rank of Assistant Surgeon General.

Dr. Graham served as executive vice president and chief executive

officer of the American Academy of Family Physicians (AAFP) from 1985 to 2000. Most recently, he has been on sabbatical as Scholar in Residence at the AAFP's Washington, DC-based policy center, named by the AAFP in his honor as the Robert Graham Center: Policy Studies in Family Practice and Primary Care.

Dr. Graham is a graduate of Earlham College in Richmond, IN, and received his medical degree from the University of Kansas School of Medicine in Kansas City, KS. He is a member of the Institute of Medicine and has spoken and written extensively on critical health care issues.

## Announcements

### AHRQ announces new research priorities: Patient-centered care and payment and organization

**T**he Agency for Healthcare Research and Quality has announced two new research priorities: studies that promote patient-centered care and studies that examine the impact of payment and organization on cost, quality, and equity. These new priorities are described in two Program Announcements (PAs) published in the August 3 *NIH Guide to Grants and Contracts*.

In its recent report, *Crossing the Quality Chasm*, the Institute of Medicine (IOM) called for "action to improve the American health care delivery system as a whole, in all of its quality dimensions (i.e., efficiency, effectiveness, equitability, timeliness, patient-centeredness, and safety), for all Americans." The IOM noted that to a large extent, the gap between the health care we have and the health care we could have stems from the way we pay for care and the way we structure the organizations that provide it. Moreover, the IOM report noted that patients too often must adapt to the

customs and usual procedures of health care organizations and professionals rather than receiving services designed to focus on their individual needs and preferences.

Research funded under the PA "Impact of Payment and Organization on Cost, Quality, and Equity" (PA-01-125) will provide the rigorous evidence base that policymakers and health system managers need to design new payment and reimbursement strategies, practical and effective risk-adjustment methods, and changes in public and private purchasing efforts. Findings from this research also will provide decisionmakers with the information they need to structure more efficient care processes; improve coordination of care across patient conditions, services, and settings; and develop networks, affiliations, and alliances to promote efficient and high-quality health care.

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## New research priorities

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For more information on PA-01-125, go to the August 3 *NIH Guide* at <http://grants.nih.gov/grants/guide/pa-files/PA-01-125.html>. Additional inquiries should be directed to 301-594-6912 or 301-594-0653 or by e-mail to [cods@ahrq.gov](mailto:cods@ahrq.gov) or [ccfspa@ahrq.gov](mailto:ccfspa@ahrq.gov).

The PA "Patient-Centered Care: Customizing Care to Meet Patients' Needs" (PA-01-124) is intended to support the redesign and evaluation of new care processes that lead to greater patient empowerment, improved patient-provider interaction, easier navigation through health care systems, and improved access, quality, and outcomes. Specific strategies could include, but are not limited to, electronic clinical communication, self-management programs, Web-based applications for patients and/or health care providers, and shared decisionmaking programs. AHRQ encourages projects that emphasize chronic

illness, episodes of care that extend beyond hospitalization, longitudinal care, and priority populations.

For more information on PA-01-124, go to the August 3 *NIH Guide* at <http://grants.nih.gov/grants/guide/pa-files/PA-01-124.html>. Additional inquiries should be directed to Helen Burstin at 301-594-1782 or via e-mail to [hburstin@ahrq.gov](mailto:hburstin@ahrq.gov).

Receipt dates for regular research grant (R01) applications in response to these PAs are three times annually: October 1, February 1, and June 1. The last date for submitting initial R01 applications in response to PA-01-125 is June 1, 2004; the last date for submitting initial R01 applications in response to PA-01-124 is June 1, 2002.

R03 (small project grant) applications are received March 24, July 24, and November 24. The last date for initial R03 applications in response to PA-01-125 is July 24, 2004; for PA-01-124 the deadline for initial R03 applications is July 24, 2002.

## AHRQ'S new quality indicators are coming!

**B**eginning this fall, the Agency for Healthcare Research and Quality will make available a series of Web-based, user-friendly indicators for improving the quality of inpatient and ambulatory health care. The first to be announced will be AHRQ's prevention/access indicators, followed by mortality/utilization indicators and lastly the Agency's patient safety/complications indicators. These indicators resulted from a refinement and expansion of the original Healthcare Cost and Utilization Project (HCUP) Quality Indicators by the University of California, San Francisco-Stanford Evidence-based Practice Center. Go to [www.ahrq.gov/data/hcup/qilist.htm](http://www.ahrq.gov/data/hcup/qilist.htm) for more information. While visiting the Web site, you can sign up to be notified electronically when each set of indicators and accompanying software packages become available.

## Statistics for health insurance coverage from the 2000 MEPS are now available

**I**n early 2000, 16.1 percent of the U.S. civilian noninstitutionalized population (44 million people) had no health insurance coverage, according to the Agency for Healthcare Research and Quality's 2000 Medical Expenditure Panel Survey (MEPS). MEPS collected nationally representative data from a sample of 25,000 civilian noninstitutionalized people on their health care use, expenditures,

sources of payment, and insurance coverage. The new estimate is not significantly different statistically from the estimated 15.8 percent of the population (42.8 million people) who lacked health insurance in early 1999.

The MEPS survey is one of several that includes estimates of the uninsured population in addition to the data collected by the U.S. Census Bureau (Current Population Survey). Other statistics

from the 2000 MEPS uninsured data include:

- Young adults, ages 19-24, were at greatest risk of being uninsured, with one-third (33.1 percent) of this group lacking health insurance. This group was overrepresented among the uninsured, comprising just 9.5 percent of the total nonelderly

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## **2000 MEPS data**

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- population but 17.2 percent of the uninsured population.
- Hispanics accounted for one-fourth (24.9 percent) of the uninsured nonelderly population, even though they represented only 12.9 percent

of the entire population under age 65.

- People who never married accounted for nearly one-fourth (23.7 percent) of the nonelderly population but over one-third (36.5 percent) of the uninsured population.
- About one-third (32.1 percent) of all people under 65 who were separated were uninsured.

The complete data file is available from the MEPS Web site, <http://www.meps.ahrq.gov/Pubdoc/H022/HIC2000Stats.HTM>, which also includes graphics representing some of these statistics. A Statistical Brief of these statistics will be available later this summer through the Web site only.

## **Attention researchers: Call for abstracts and proposals on childhood emergencies**

The third National Congress on Childhood Emergencies will be held April 15-17, 2002, in Dallas, TX. This federally sponsored, multidisciplinary conference of practitioners and researchers is focused on reducing morbidity and mortality in children and adolescents by educating and training professionals in how they can improve the entire continuum of pediatric emergency health care. The theme of the 2002 Congress, "Taking Action, Saving Lives," reflects the Federal goals of stimulating action to improve care; encouraging dynamic interchanges among providers, researchers, administrators, and families; and translating research into effective practice and policy.

Conference sessions will focus on illness and injury prevention, primary care, prehospital and emergency department care, acute care, rehabilitation, and re-entry into the community. Conference attendees also will explore issues surrounding managed care, pediatric disaster response, child and school health care, family-centered care, and children with special health care needs.

Abstracts for presentation of original research are now being solicited for: basic, behavioral, and clinical research; research on costs, education, outcomes, policy, and systems; and research on other areas of interest to the field of emergency medical services for children. The deadline for proposals is November 30, 2001, and forms are now available for downloading from [www.ems-c.org](http://www.ems-c.org) (for more information, call 202-884-6859 or send an e-mail to [imelese@emscnrc.com](mailto:imelese@emscnrc.com)).

## Research Briefs

**Choo, P.W., Rand, C.S., Inui, T.S., and others. (2001, June). "Derivation of adherence metrics from electronic dosing records." (AHRQ grant HS07821). *Journal of Clinical Epidemiology* 54, pp. 619-626.**

Electronic medication monitors generally capture the date and time of a dosing event, be it the opening of a vial cap or blister pack, actuation of a metered dose inhaler, or administration of droplets from an eye dropper. None of these devices, however, can actually confirm consumption of the medication in the recommended dose. These authors derived several representative adherence metrics and analyzed their relationship to the underlying dosing event rate. They then used data from a 3-month study of 286 individuals on single-drug antihypertensive therapy to study the statistical properties of several of these adherence metrics. They found that metrics that average the consumption rate over multiple doses may be less sensitive to short-term fluctuations in medication intake. Metrics that are more sensitive to timing variability may be preferable when timing as well as quantity of dosing are of interest.

**Eisen, S.V., Shaul, J.A., Leff, H.S., and others. (2001, August). "Toward a national consumer survey: Evaluation of the CABHS and MHSIP instruments." (AHRQ grant HS09205). *Journal of Behavioral Health Services Research* 28(3), pp. 347-369.**

These researchers evaluated the Consumer Assessment of Behavioral Health Survey (CABHS) and the Mental Health Statistics Improvement Program

(MHSIP) surveys to identify ways to improve such surveys. The surveys included 3,443 adults in 6 behavioral health plans. The surveys did not differ significantly in response rate or consumer burden. Both surveys reliably assessed access to treatment and aspects of appropriateness and quality of care. The CABHS survey also reliably assessed features of the insurance plan, and the MHSIP survey reliably assessed treatment outcomes. Analyses of comparable items suggested which survey items had greater validity. The researchers compare these surveys with other consumer surveys and make recommendations for survey development, quality improvement, and national policy initiatives to evaluate health plan performance.

**Hargraves, J.L., Wilson, I.B., Zaslavsky, A., and others. (2001). "Adjusting for patient characteristics when analyzing reports from patients about hospital care." (AHRQ grant HS09205). *Medical Care* 39(6), pp. 635-641.**

Adjusting for patient characteristics has a small impact on patient reports about hospital care, conclude these authors. They surveyed by telephone a sample of patients hospitalized in 22 hospitals in one city and mailed a survey to hospitalized patients State-wide. Each survey assessed respect for patients' preferences, coordination of care, information exchange between patient and providers, physical care, emotional support, involvement of family and friends, and transition and continuity. The surveys also asked the patients to rate their doctors, nurses, and other hospital staff. Patient age and reported health status were most

consistently associated with patient-reported problems. Patient sex and education level also sometimes predicted reports and/or ratings. However, models including these variables explained only 3 to 8 percent of the variation in ratings of hospital care. Nevertheless, the researchers recommend adjusting at least for patient age and health status to alleviate concerns about bias in patient reports of hospital care.

**Kelts, E.A., Allan, M.J., and Klein, J.D. (2001, May). "Where are we on teen sex? Delivery of reproductive health services to adolescents by family physicians." (AHRQ grant HS08192). *Family Medicine* 33(5), pp. 376-381.**

Despite efforts to modify adolescents' risky sexual behaviors, more than one-third (35 percent) of high school students report having been sexually active within the past 3 months, and only 57 percent of them report using a condom the last time they had intercourse. Female doctors, younger doctors, and those who regularly discuss confidentiality or have a more positive attitude toward and familiarity with preventive care guidelines are more likely to provide reproductive health screening and counseling during adolescent visits. These are the findings of a survey of 354 New York family physicians with patients aged 15 to 18. On average, family doctors reported asking 79 percent of their adolescent patients about contraceptive use, 73 percent about condom use, 72 percent about sexual relationships, and 61 percent about sexual behaviors. Only 36 percent asked teens when

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## Research briefs

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they thought sex was appropriate, and 30 percent discussed sexual orientation. Seventy-six percent discussed adolescents' risk of HIV, 78 percent advised adolescents to use condoms, 21 percent gave handouts about HIV, and 9 percent gave condoms to adolescent patients.

**Knight, J.R. (2001, May). "The role of the primary care provider in preventing and treating alcohol problems in adolescents." (AHRQ/NIAAA interagency agreement). *Ambulatory Pediatrics* 1(3), pp. 150-161.**

A recent survey found that substantial numbers of 8th to 12th grade students have begun to drink, and many have gotten drunk at least once. Also, 15 to 31 percent of students had five or more drinks within the 2 weeks before the survey, and some students were daily drinkers. Heavier drinking was strongly associated with use of illicit drugs. Despite persuasive evidence that primary care involvement can be effective, few primary care doctors follow guidelines that recommend yearly screening of all adolescent patients for alcohol problems. The reasons for this are unclear but may include infrequent medical visits by adolescents, insufficient time during visits, lack of physician skills, and perhaps lack of practical and effective medical office screening tools. This article presents a summary of what is currently known about adolescent alcohol use and how it can be addressed in primary care settings. The goal is to translate research evidence into practical office interventions that improve alcohol screening, counseling, and treatment of adolescent drinkers.

**Moyer, V.A. (2001, January-February). "Evidence syntheses in child health." *Ambulatory Pediatrics* 1(1), pp. 53-58.**

There is a relative dearth of child health research, even for common childhood conditions. Nonsystematic reviews of child health studies have been shown to be nonreproducible and of low scientific quality, often failing to mention recent advances and continuing to mention treatments that have been shown to be ineffective or harmful, notes this author in a recent commentary. She points out that in contrast, systematic reviews are scientific evaluations of existing studies, which have explicit and reproducible methods, whose results can be critically appraised. Many sources for high-quality evidence syntheses now exist, with considerable support from government agencies, to develop both the methods and the products of such reviews. Evidence syntheses can increase the efficiency and effectiveness of medical practice, but they face many hurdles, particularly in child health. Four barriers are: lack of high-quality primary studies, the difficulty of finding studies that do exist, the variability and usefulness of the outcome measures in child health, and problems with production and dissemination.

**Walter, L.C., Brand, R.J., Counsell, S.R., and others. (2001, June). "Development and validation of a prognostic index for 1-year mortality in older adults after hospitalization." (AHRQ grant K02 HS00006). *Journal of the American Medical Association* 285(23), pp. 2987-2994.**

For many elderly patients, an acute medical illness requiring hospitalization is followed by

progressive physical decline, resulting in high mortality rates during the year following discharge. Prognostic information can provide the basis for discussions about the goals of care and therapy. This study of patients 70 years of age and older, who were hospitalized for an acute medical illness, identified six characteristics that may be used to predict a patient's risk of dying in the year after discharge: male sex, dependence in activities of daily living, cancer, heart failure, kidney insufficiency, and low albumin level. Each risk factor was given one to five points, and the risk of mortality was based on the sum of the points. The prognostic index was based on analysis of data from two prospective studies with 1-year of followup conducted from 1993 through 1997. The index was developed in 1,495 older adults who were discharged from one Ohio hospital and validated in a separate group of 1,427 patients discharged from another Ohio hospital.

**Weinberger, M., Murray, M.D., Marrero, D.G., and others. (2001, May). "Pharmaceutical care program for patients with reactive airways disease." (AHRQ grant HS09083). *American Journal of Health-Systems Pharmacy* 58, pp. 791-796.**

These researchers describe a pharmaceutical care program they have begun at 36 CVS pharmacies for patients with reactive airway disease (RAD, asthma and reversible chronic obstructive pulmonary disease). After participating in baseline interviews, 1,113 patients with RAD are being monitored for 12 months. Primary outcomes being evaluated are peak expiratory flow rate, health-related quality of life, medication compliance, and acute exacerbation

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## Research briefs

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of RAD (requiring emergency department visits or hospitalization). Secondary outcomes being measured are patient satisfaction with care and their pharmacists, missed days from school or work, and pharmacists' job satisfaction, job stress, and attitudes toward pharmaceutical care. The researchers believe that pharmacists are ideally positioned to encourage compliance with inhalers and other medications. The program, designed from focus-group sessions with CVS pharmacists and their customers with RAD, has five components: computer display of patient-specific data for patients enrolled in the study, tailored patient education materials, a resource guide to facilitate the implementation of pharmaceutical care, strategies to reinforce and facilitate the program, and pharmacist training in the program.

**Zingmond, D.S., Wenger, N.S., Crystal, S., and others. (2001, July). "Circumstances at HIV diagnosis and progression of disease in older HIV-infected Americans: Results from a nationally representative sample of HIV-infected adults receiving care." (AHRQ grant HS08578). *American Journal of Public Health* 91(7), pp. 1117-1120.**

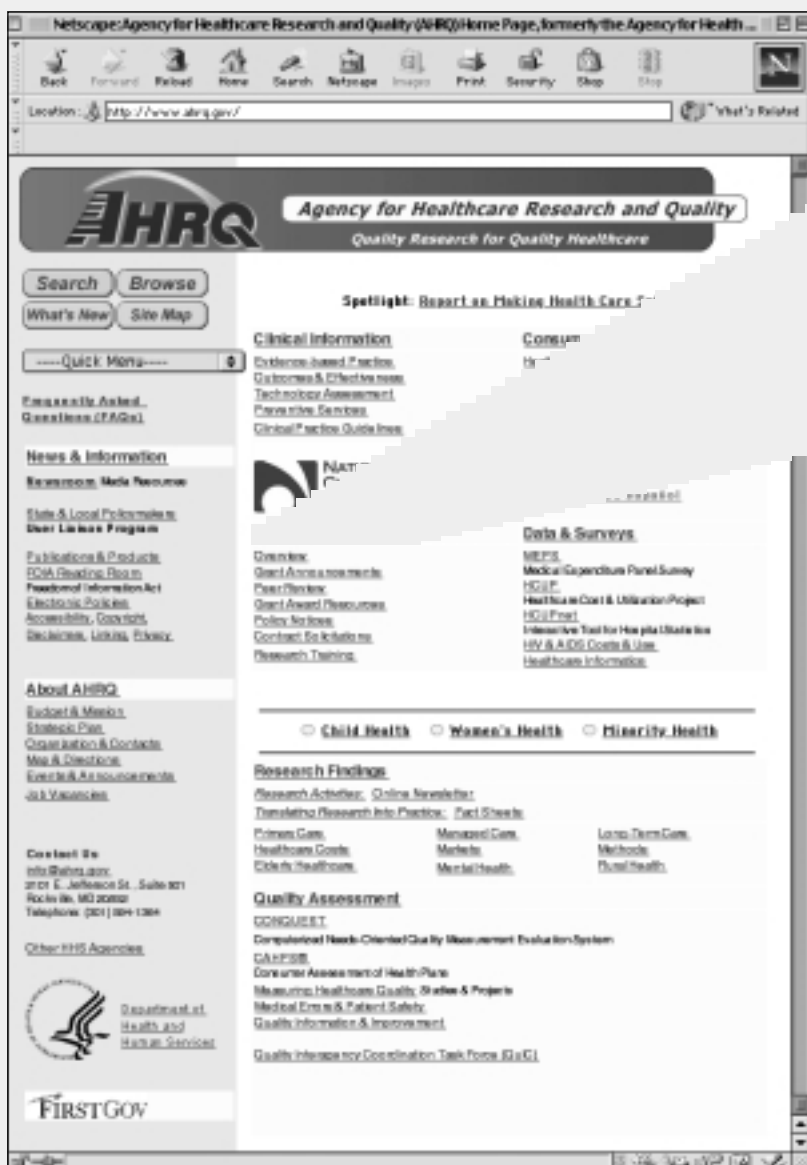
About one of every 10 people in the United States who has AIDS is over the age of 50. Although progression of HIV infection is similar across age groups and races, this study found that older minorities were diagnosed later, appeared healthier with fewer symptoms at study entry, and clinically deteriorated faster after study entry than similar-aged whites. The researchers analyzed data from the HIV Cost and Services Utilization Study (HCSUS), a survey of a nationally representative sample of HIV-infected individuals receiving care in the United States. They

evaluated circumstances at diagnosis and clinical characteristics at study entry (1996) and 2 years later. Of the 2,864 patients who completed the baseline survey, 286 were at least 50 years of age (half were minority). Older patients were more likely to be diagnosed when ill, especially older minorities who were more than twice as likely to be diagnosed when already ill. At baseline, older patients reported fewer symptoms and lower symptom intensity than younger patients despite similar CD4 counts; older minorities reported significantly fewer HIV-related diseases. After a mean followup period of 14 months, survival, CD4 count, prevalent and incident diseases, total symptoms, and symptom intensity were similar between groups. The researchers note that the short followup time may have been inadequate to observe differences by age and race in disease progression.



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