



Research Activities



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Study in large HMO found that infants discharged 1 day after birth fared as well as those with longer hospital stays

A new study sponsored by the Agency for Healthcare Research and Quality found no ill effects from discharging infants in a large Massachusetts HMO from the hospital 1 day after uncomplicated vaginal birth, compared with sending them home with their mothers 2 days after birth. But, because a sharp rise in hospital costs offset the savings realized by limiting postpartum stays to 1 day, the health plan's average per-delivery expenses decreased only \$90 while this policy was in practice, according to the researchers who conducted the study.

After studying data on more than 20,000 pairs of mothers and newborn infants covered by the HMO, researchers found that emergency room visit and hospital readmission rates following hospital discharge did not change after the State established a 48-hour minimum stay. Prior to the minimum-stay legislation, effective in 1996, the HMO normally covered only a 1-night hospital stay for infants and their mothers after birth. This early

discharge protocol, first implemented in 1994, also included one home visit by a nurse within 48 hours of birth.

Rates of newborn hospital readmissions and emergency room visits were found to be stable over nearly 8 years, regardless of which hospital discharge policy was in place at the time of birth. On average, 1.1 percent of the newborns had emergency room visits not resulting in hospital admission, and 1.5 percent were readmitted to hospitals during the first 10 days of birth. However, the percentage of newborns receiving clinical evaluations on either the third or fourth day after birth—which is when postpartum problems such as jaundice and feeding difficulties are most likely to occur—dropped when the State mandate requiring a longer hospital stay replaced the early discharge program (from roughly 64 percent to 53 percent).

The research team was headed by lead author Jeanne M. Madden, Ph.D., and principal investigator Stephen B. Soumerai, Sc.D., both at Harvard Medical School and

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Newborn hospital stays

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Harvard Pilgrim Health Care in Boston.

Details are in "Effects of a law against early postpartum discharge

on newborn follow-up, adverse events, and health maintenance organization expenditures," by Drs. Madden and Soumerai, Tracy A. Lieu, M.D., and others, in the

December 19, 2002 *New England Journal of Medicine* 347(25), pp. 2031-2038. ■

Outcomes/Effectiveness Research

Patients with hip fracture who leave the hospital too soon are at risk for worse outcomes

Patients recovering from a hip fracture who had one or more abnormal vital signs, mental confusion, heart or lung problems, or couldn't eat when they were discharged from the hospital had a 360 percent greater chance of dying and a 60 percent greater chance of readmission within 60 days, according to a new study funded by the Agency for Healthcare Research and Quality (HS09973 and HS09459).

The research team, led by Ethan A. Halm, M.D., M.P.H., of the Mount Sinai School of Medicine in New York, developed a list of what they termed "acute clinical issues," or ACIs. These are potentially dangerous problems that should be resolved prior to discharging a patient with hip fracture. They include abnormal vital signs (fever above 101° F, very high or low blood pressure, very high or low heart rate, high

breathing rate, poor oxygenation of the blood), an inability to eat, wound infection, acute chest pain or shortness of breath, or mental status that differs from the pre-fracture level.

In addition, the researchers found that the risk of leaving the hospital too soon was not prevented by discharging the patients to a post-acute care facility such as a rehabilitation hospital or skilled nursing home. Because even one ACI put patients at increased risk, Dr. Halm and his team caution doctors and other hospital personnel to provide more intense treatment and observation of these patients while in the hospital and to consider trying to keep them there until the ACI stabilizes. In addition, they advise doctors discharging a patient with an ACI to a post-acute care facility to provide more information to the facility about the patient's need for immediate treatment or monitoring.

The study reported on 559 patients admitted with hip fractures and discharged from four hospitals in the New York metropolitan area in 1997 and 1998. The researchers reviewed the patients' medical records, collected supplemental data during the last 2 days of hospitalization, and conducted followup at 60 days after discharge by telephone interview and querying State hospital discharge databases. Approximately 350,000 hip fractures occur annually in the United States and account for nearly \$6 billion per year in hospital costs.

For more details, see "Frequency and impact of active clinical issues and new impairments on hospital discharge in patients with hip fracture," by Dr. Halm, Jay Magaziner, Ph.D., Edward L. Hannan, Ph.D., and others, in the January 13, 2003, *Archives of Internal Medicine* 163, pp. 107-112. ■

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Patients undergoing hip replacement surgery fare better when their surgeons perform 10 or more of these surgeries per year

The volume of total hip replacement (THR) surgeries done by an elderly patient's individual physician may be more important than the volume of THRs done at the hospital where the patient has the surgery, according to a recent study that was supported in part by the Agency for Healthcare Research and Quality (HS09775). Apparently, surgical volume by individual surgeons, not other surgeon-related characteristics or hospital characteristics, is the determining factor in the occurrence of postoperative orthopedic complications such as deep wound infection of the hip or dislocation of the prosthetic hip within 3 months after surgery.

The researchers analyzed Medicare claims data on 5,211 elderly patients (most of whom were white women) who underwent primary THR in 1995 or 1996 at 167 hospitals in three States, as well as data on hospitals and surgeons. They developed a model to determine whether hospital structure or surgeon-associated factors were at the root of the relationship between THR volume and postoperative orthopedic complications.

Of all the patients studied, nearly 3 percent suffered from an

orthopedic complication after THR. Sixty-nine percent fewer complications occurred in hospitals that performed more than 100 THRs on Medicare patients each year, compared with hospitals that performed 25 or fewer THRs each year. However, when surgeon volume alone was added to the model, hospital volume was no longer significantly associated with complications.

After adjustment for patient-level and hospital-level characteristics (for example, dedicated orthopedic nursing unit), patients undergoing THR in low-volume hospitals whose surgeons performed 10 or more THRs per year on Medicare patients had a lower risk of complications compared with patients whose surgeons performed less than 10 THRs per year in the same hospitals. Similar surgeon-volume-related outcomes were found for patients in high-volume hospitals. In these models, characteristics of the hospital explained relatively little of the volume-outcome association. This finding suggests that the strategy of adapting prognostically favorable hospital characteristics may not improve outcomes in low-volume centers.

More details are in "Contribution of hospital characteristics to the volume-outcome relationship: Dislocation and infection following total hip replacement surgery," by Daniel H. Solomon, M.D., M.P.H., Elena Losina, Ph.D., John A. Baron, M.D., and others, in the September 2002 *Arthritis & Rheumatism* 46(9), pp. 2436-2444. ■

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Researchers examine strategies to improve asthma outcomes

Patients with uncontrolled asthma are at increased risk for hospitalization and frequent visits to the emergency department (ED). Self-management skills are widely promoted by health plans and specialty societies with the expectation that they will improve care for people with asthma. Although written action plans and peak flow meters

are considered to be key components of asthma self-management, a recent study has shown that despite widespread use, action plans probably do not have a large effect on outcomes when applied to the general asthma population. These are findings from a study by the Blue Cross Blue Shield Association Technology

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Asthma outcomes

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Evaluation Center in Chicago, an Agency for Healthcare Research and Quality Evidence-based Practice Center (contract 290-97-0015).

A second AHRQ-supported study (HS07834) shows that asthma patients who are counseled by community pharmacists don't improve in lung function or quality of life compared with those who are not counseled. The researchers note, however, that inadequate pharmacy staffing may have limited pharmacists in providing the advice they were trained to provide. Both studies are discussed here.

Lefevre, F., Piper, M., Weiss, K., and others. (2002, October). "Do written action plans improve patient outcomes in asthma? An evidence-based analysis." *Journal of Family Practice* 51(10), pp. 842-848.

A peak flow monitor allows asthma patients to blow into a tube to record the force of expiration, an indication of lung functioning. A written plan typically advises the patient what to do when the peak flow drops a certain amount (indicating lung inflammation), usually adjusting medications, to prevent worsening of the asthma. Both of these approaches are advised, along with medication, to manage asthma. Although written action plans are widely used, there is insufficient evidence to determine whether their use, with or without peak flow monitoring, improves asthma outcomes, according to this analysis.

The investigators systematically reviewed published studies of randomized controlled trials that compared the outcomes of an asthma self-management intervention with and without the use of a written action plan. The studies examined asthma outcomes such as hospitalizations, ED visits, and measures of symptom control and lung function. Of the reviewed studies, nine trials enrolling a total of 1,501 patients, met selection criteria. The majority did not show improved asthma outcomes associated with a written action plan. However, many of the studies had methodologic flaws, and none met the definition of high quality.

Although this review did not establish that written asthma plans are ineffective, it suggests that they will not have a large effect on outcomes when applied to the general population of people with asthma. The indiscriminate application of written action plans to all people who have asthma may be a wasteful use of resources. As a behavioral intervention, the general principle of engaging patients in self-management may be more important than the specific components of these programs. Also, compared with the optimal use of medications, particularly the use of inhaled steroids, the impact of written action plans is likely to be relatively small, particularly on lung function or symptom control. Patients with more severe asthma may be most likely to benefit from self-management interventions.

Stergachis, A., Gardner, J.S., Anderson, M.T., and Sullivan, S.D. (September, 2002). "Improving pediatric asthma

outcomes in the community setting: Does pharmaceutical care make a difference?" *Journal of the American Pharmaceutical Association* 42, pp. 743-752.

This study found that when community pharmacists advised children with asthma how to use metered dose inhalers or about other medication issues it did not affect pediatric asthma outcomes or the use of health care services. However, pharmacists' compliance with the study protocol was low, due in part, to patient- and practice-related obstacles.

The researchers examined asthma outcomes and use of health care services of 330 children, aged 6 to 17 years, who filled asthma medication prescriptions at 14 intervention (153 children) or 18 usual care (177 children) HMO or community pharmacies in Washington State. Intervention (IN) pharmacists were trained to provide individualized asthma management services to these children during patient-pharmacist (and/or parent-pharmacist) encounters for up to 1 year after study enrollment.

IN pharmacists attended or watched a videotape of an 8-hour group training session on age-appropriate goals for asthma management, patient assessment and age-appropriate communication tips, documentation of pharmaceutical care, and the like. They also received followup support via newsletters and site visits. They were expected to establish a relationship with the patient, collect relevant patient data, assess the patient for potential or actual drug-related problems,

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Asthma outcomes

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prioritize and make a plan for resolving each drug-related problem, implement the plan, and provide followup. The children in both groups were similar in age, sex, ethnicity, household income, and duration of asthma.

Of the 153 IN patients, 69 percent received one or more interventions from a pharmacist,

most often oral or written information about the treatment plan. Sixty-six percent of patients in the IN group and 39 percent of patients from the UC group reported speaking with the pharmacist once during the study period. There was no evidence that patients in the IN group compared with the UC group experienced improvements in pulmonary function, functional status, quality of life, asthma management,

satisfaction with care, or use of antiinflammatory medications, total asthma-related medical care use, or asthma-related school days lost. Although most pharmacists felt they learned what to do, more intensive training programs may be needed. High prescription volume, insufficient staffing, and poor patient motivation were barriers to pharmacists performing recommended interventions. ■

Clinical Decisionmaking

Older women who have breast cancer recover faster and have a more positive outlook when they are offered treatment choices

Two surgical alternatives with equivalent survival are available for women with early-stage breast cancer: mastectomy (surgical breast removal) and breast conservation surgery (BCS, removing only the cancerous lump). In most patients, the treatment choice reflects the preferences of patients and physicians, and appropriateness of treatment is not an issue. A recent study supported by the Agency for Healthcare Research and Quality (HS08395) found that older women (aged 67 or older) who participate with their doctor in choosing which treatment they receive tend to recover faster and have a more positive outlook in the short-term than women who are not given a choice.

Lead author Daniel Polsky, Ph.D., of the University of Pennsylvania, and his colleagues surveyed 683 older women with localized breast cancer who were treated at one of 29 hospitals in Massachusetts, Texas, Washington, DC, and New York. Patients were surveyed at 5 months, 1 year, and 2 years following

surgery for breast cancer. They were asked whether they had a choice in their treatment and how they assessed their current health.

Women assessed their health using a visual analog scale (VAS) and the Multi-Attribute Health Status Classification System: Health Utilities Index Mark 3 (HUI3). Using the VAS, women rated their current health status on a scale from 0 (worst imaginable health state) to 100 (best imaginable health state). The women used the HUI3 to rate each of eight health attributes (vision, hearing, speech, emotional function, dexterity, ambulatory function, pain, and cognitive function) and to provide a summary health rating.

Overall, 83 percent of women studied said they had a treatment choice. Five months after surgery, women who had a choice of treatment assessed their overall health more than 3 points higher on the VAS than those who had no choice, a significant difference.

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Breast cancer treatment

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However, their VAS scores were insignificantly higher 1 and 2 years after surgery.

The only HUI score that was significantly higher for the choice group was emotional health. It was 2 points higher at 5 months and 3 points higher 1 year after surgery, suggesting a better short-term outlook for women with a choice. Women who felt they had a

choice also received fewer medical services after treatment than women who did not have a choice, indicating they may have had an easier recovery from surgery and fewer complications.

More details are in "Patient choice of breast cancer treatment: Impact on health state preferences," by Dr. Polsky, Nancy L. Keating, M.D., M.P.H., Janice C. Weeks, M.D., and Kevin A. Schulman, M.D., in *Medical Care* 40(11), pp. 1068-1079, 2002. ■

Florida physicians are more aggressive in screening and treating men for prostate cancer than colleagues in other States

Radiation oncologists and urologists in Florida are more aggressive in screening and treating men 75 years and older for prostate cancer than their colleagues in other parts of the country, according to a study supported by the Agency for Healthcare Research and Quality (HS08397). Researchers led by Mary McNaughton Collins, M.D., M.P.H., and Michael J. Barry, M.D., of Massachusetts General Hospital, surveyed a random sample of radiation oncologists and urologists in the United States in 1998 to determine their beliefs about prostate cancer screening and treatment. A total of 559 radiation oncologists (76 percent) and 504 urologists (64 percent) responded to the survey.

Even though prostate-specific antigen (PSA) screening of men is not recommended for men with

limited life expectancy (since they are more likely to die from other causes than slow-growing prostate cancer), 92 percent of Florida radiation oncologists recommended PSA screening of men aged 75 to 79 more than one-half of the time compared with 68 to 81 percent of radiation oncologists in other States. Comparable figures for urologists were 84 percent of Florida urologists versus 42 to 53 percent of urologists in other States.

In addition, the Florida physicians were more likely to treat at least 20 percent of their patients with brachytherapy (short-distance radiation), considered a primary therapy for prostate cancer, and to believe it had survival value for men with a life expectancy of less than 10 years. There were no regional differences in physician beliefs about the survival value of radical prostatectomy (surgical removal of

the prostate). More Florida radiation oncologists (but not urologists) than those from other States recommended early androgen deprivation therapy for a rising PSA after both radiotherapy and surgery. However, the value of this therapy, which can cause fatigue and emotional distress, has not been documented. The higher concentration of older patients in Florida may pressure doctors in that State to give older men more care than is offered to men in other States. Nevertheless, the value of this more aggressive approach is unproven, caution the researchers.

See "United States radiation oncologists' and urologists' opinions about screening and treatment of prostate cancer vary by region," by Drs. Collins and Barry, Anthony Zietman, M.D., and others, in the October 2002 *Urology* 60(4), pp. 628-633. ■

Frequent users of nonsteroidal antiinflammatory drugs may need medications to prevent associated ulcers

About 1 to 2 percent of older patients taking traditional nonsteroidal antiinflammatory drugs (NSAIDs) regularly for 1 year develop serious gastrointestinal complications such as perforation, obstruction, or bleeding. Another 2 to 3 percent develop uncomplicated ulcers or other gastrointestinal problems. Yet, doctors don't commonly prescribe gastroprotective medications even for the highest risk

patients, according to a study supported in part by the Agency for Healthcare Research and Quality (HS10384).

Researchers from AHRQ's Center for Education and Research on Therapeutics at Vanderbilt University used Tennessee Medicaid data to analyze use of gastroprotective therapies for 76,765 recurrent users of

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NSAID use and ulcers

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NSAIDs (50 years or older), who received medications from January 1999 through June 2000.

The researchers calculated the frequency of either of two recommended gastroprotective strategies: traditional NSAIDs combined with recommended antiulcer cotherapy or use of a selective cyclooxygenase 2-inhibiting drug (coxib) such as misoprostol. They categorized use of these therapies by patient risk for ulcer complication. Coxib users were, on average, older, had been hospitalized more frequently, and had more coexisting medical conditions than users of traditional NSAIDs.

Among the recurrent NSAID users (more than one prescription), only 16 percent received one of the two recommended gastroprotective therapies: 10 percent received traditional NSAIDs along with antiulcer drugs at the recommended doses, and 6 percent received coxibs. Only 30 percent of patients with two or more risk factors for ulcer complications (for example, 75 years or older and peptic ulcer in the past year) received gastroprotective therapy.

See "Underutilization of gastroprotective measures in patients receiving nonsteroidal antiinflammatory drugs," by Walter Smalley, M.D., M.P.H., C. Michael Stein, M.D., Patrick G. Arbogast, Ph.D., and others, in the August 2002 *Arthritis & Rheumatism* 46(8), pp. 215-220. ■

Many doctors lack basic knowledge about venous thromboembolism and how to treat it

In venous thromboembolism (VTE), a vein becomes blocked by a blood clot that can dislodge and end up in the lungs or other vital organ. Although there are well-established guidelines for the appropriate management of VTE, multiple specialties are involved in the care of patients at risk for or with established deep vein thrombosis, and individual physicians manage a relatively small number of cases per year, according to a study supported in part by the Agency for Healthcare Research and Quality (HS09348).

A University of Washington research team led by Brenda K. Zierler, Ph.D., surveyed 650 physicians (from hematologists and cardiologists to different types of surgeons) at three academic medical centers to determine their knowledge of and management strategies for VTE. Of the 128

physicians who completed the survey, only 12 percent were able to correctly identify all of the veins routinely imaged as either deep or superficial veins. Only 14 percent of physicians were able to correctly identify the range of charges for a venous duplex scan. About 70 percent of physicians said that they would not treat symptomatic isolated calf vein thrombosis. Of those, only 42 percent said that they would obtain serial duplex scans to monitor for development of further clots, even though guidelines indicate that calf deep vein thrombosis should be treated or monitored serially if anticoagulation is contraindicated.

Failure to treat and monitor this problem could lead to potentially fatal pulmonary embolism or other problems. Surgeons, who encounter VTE more often than other physicians, were the most

knowledgeable in the diagnosis and management of VTE, and primary care physicians were the least knowledgeable. The researchers, who have developed an integrated care pathway (ICP) for VTE, believe that problems in the acute management of deep vein thrombosis can be overcome by implementing ICPs with preprinted orders.

Details are in "A survey of physicians' knowledge and management of venous thromboembolism," by Dr. Zierler, Mark H. Meissner, M.D., Kevin Cain, Ph.D., and D. Eugene Strandness Jr., M.D., in *Vascular and Endovascular Surgery* 36(5), pp. 367-375, 2002. ■

Researchers confirm guidelines for use of imaging to diagnose low back pain

Back pain is usually benign and self-limited, but occasionally it is a symptom of systemic disease such as cancer or spinal infection. Thus, the major diagnostic task is to distinguish the 95 percent of patients with simple back pain from the 5 percent with serious underlying diseases or neurologic impairments. A new study supported by the Agency for Healthcare Research and Quality (HS08194 and HS09499) recommends a diagnostic strategy similar to that recommended in the AHRQ clinical guidelines on acute low back problems.

University of Washington researchers Jeffrey G. Jarvik, M.D., M.P.H., and Richard A. Deyo, M.D., M.P.H., reviewed abstracts and selected articles from 1996 to September 2001 on accuracy of the clinical and radiographic examination of patients with low back pain. They extracted diagnostic results from clinical examinations and imaging tests and evaluated these methods informally, since there were few studies, and there were methodologic problems. Based on this review, Drs. Jarvik and Deyo recommend that for adults younger than age 50 with no signs or symptoms of systemic disease, symptomatic therapy without any x-rays or other

imaging is appropriate. For patients 50 years of age and older and those whose findings suggest systemic disease, plain x-rays and simple laboratory tests can almost completely rule out underlying systemic diseases.

Advanced imaging such as magnetic resonance imaging (MRI) and computerized tomography (CT) should be reserved for patients who are considering surgery or those in whom systemic disease is strongly suspected. Imaging may not be needed for patients with acute back pain of less than 6 weeks' duration unless findings suggest systemic disease or progressive neurologic deficit. Choice of imaging tests after acute pain has persisted for 6 weeks depends on clinical findings. For patients with systemic diseases, MRI probably offers the greatest sensitivity and specificity; for patients with degenerative conditions that produce neurologic compromise, MRI offers results comparable to those obtained with CT.

See "Diagnostic evaluation of low back pain with emphasis on imaging," by Drs. Jarvik and Deyo, in the October 2002 *Annals of Internal Medicine* 137, pp. 586-597. ■

Testing for maternal group B streptococci during labor is more cost effective than current screening strategies

Over 2,000 U.S. infants each year are infected with group B streptococcus (GBS) in the first 7 days of life (early-onset GBS, EOGBS). These infants can develop cerebral palsy or die. However, with good maternal GBS screening techniques and timely infusion of antibiotics to the mother during labor, the majority of these neonatal infections can be prevented.

Giving antibiotics to the mother during labor eradicates vaginal GBS infection and prevents its spread to the fetus and infection of the infant during passage through the birth canal. Use of a rapid and accurate polymerase chain reaction (PCR) test to detect maternal GBS infection during labor is more cost effective than two current screening strategies, according to a study supported by the Agency for Healthcare Research and Quality (National Research Service Award training grant T32 HS00028).

Researchers from Stanford University and the Veterans Affairs Palo Alto Health Care System performed a cost-benefit analysis using the human capital method. They examined the potential health benefits, costs, and savings associated with three alternative strategies for identifying and treating a hypothetical group of pregnant women at risk for passing GBS infection on to their infants: use of the new rapid PCR (45-minute results with 100 percent sensitivity and 98.9 percent specificity) at the time of hospital admission for labor; the standard maternal rectovaginal culture at 35-37 weeks of pregnancy; and screening for maternal risk factors for GBS infection at the time of labor.

A screening strategy using the new rapid PCR generated a net benefit of \$7 per birth when compared with the maternal risk-

factor strategy. For every 1 million births, 80,700 more women would receive antibiotics, 884 fewer infants would become infected with EOGBS, and 23 infants would be saved from death or disability. The PCR-based strategy generated a net benefit of \$6 per birth when compared with the 35-37-week prenatal culture strategy and would result in fewer maternal courses of antibiotics (64,080/million births), fewer perinatal infections with EOGBS (218 per million births), and a reduction in 6 infant deaths and severe infant disability per million births.

See "Perinatal screening for group B streptococci: Cost-benefit analysis of rapid polymerase chain reaction," by Corinna A. Haberland, M.D., William E. Benitz, M.D., Gillian D. Sanders, Ph.D., and others, in the September 2002 *Pediatrics* 110(3), pp. 471-480. ■

Obstetricians don't always follow guidelines for preventing group B streptococcal infection in neonates

Group B streptococcus (GBS), which is typically transmitted from mothers to their infants during birth, is the most common cause of early-onset sepsis, pneumonia, and meningitis among newborns. It can be prevented by screening pregnant women for GBS—for example, through anorectal/vaginal culture during labor—and providing them with intrapartum antibiotics to prevent transmission of infection to their babies. Although most New Jersey obstetricians/gynecologists agree with one or another guideline for antenatal GBS screening and intrapartum antibiotics, they don't necessarily follow them in practice, according to a survey supported in part by the Agency for Healthcare Research and Quality (HS09788).

Obstetricians need to be better educated about GBS prevention in

neonates to promote more evidence-based practice, conclude researchers at the Robert Wood Johnson Medical School. They surveyed by mail American College of Obstetricians and Gynecologists (ACOG) fellows in New Jersey on physician characteristics, existing GBS guideline preferences, and reported actual GBS prevention practices. The guidelines vary in whether they recommend culture of the mothers for GBS, timing of culture, and selective or universal use of intrapartum antibiotics.

Of the 306 obstetricians who responded to the survey, 75 percent said they preferred the GBS guidelines from the Centers for Disease Control and Prevention (CDC), 13 percent preferred those of ACOG, 9 percent preferred guidelines of the American Academy of Pediatrics (AAP), and

4 percent preferred other guidelines. The proportions of obstetricians who actually adhered to their stated preferred guidelines were 58 percent, 64 percent, and 39 percent for CDC, ACOG, and AAP guidelines, respectively. In addition, only 57 percent of the obstetricians appropriately cultured women for GBS with the use of combined vaginal-anorectal swabs.

See "Obstetrician preferences for prenatal strategies to reduce early-onset group B streptococcal infection in neonates: A population-based survey," by Anna Petrova, M.D., Ph.D., John C. Smulian, M.D., M.P.H., and Cande V. Ananth, Ph.D., M.P.H., in the September 2002 *American Journal of Obstetrics & Gynecology* 187, pp. 709-714. ■

Children's Health

Among children undergoing heart surgery, girls are far more likely than boys to die in the hospital

Girls are far more likely than boys to die in the hospital after undergoing surgery for congenital heart disease (CHD), according to a study supported in part by the Agency for Healthcare Research and Quality (National Research Service Award training grant T32 HS00028). Ruey-Kang R. Chang, M.D., M.P.H., of the Harbor-UCLA Medical Center, and colleagues examined California hospital discharge data from 1995 to 1997 to identify children under 21 years of age who underwent one of 23 types of cardiac surgery for CHD and died in the hospital.

They controlled for age, race and ethnicity, type of insurance, home income, type of hospital admission, date and month of surgery, hospital case volume, and type of procedure to evaluate the effect of sex on in-hospital death. Overall, there were 6,593 cases of cardiac surgery for CHD, with 345 in-hospital deaths

(mortality rate of 5.23 percent). Crude mortality rates (unadjusted for risk) for males (4.98 percent) and females (5.54 percent) were not significantly different. However, after controlling for all variables (other than sex) affecting mortality (for example, coexisting medical conditions and risks of various types of cardiac surgery), girls had a 51 percent higher odds of death than boys. The reasons for this disparity are unclear.

Neonates had mortality rates that were nearly four times as high (nearly three times as high for infants) as those of children 1 year or older. Nonelective surgeries carried a two-fold higher mortality rate than elective surgeries. Finally, high-volume hospitals (average

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annual case volume of more than 100) had significantly lower overall mortality rates than the low-volume (less than 100 cases per year) hospitals (5 vs. 5.74 percent). The sex difference in mortality after cardiac surgery was probably not due to variation in service use during hospitalization, since risk-adjusted

hospital length of stay and hospital charges were similar for boys and girls. Race and ethnicity, type of insurance, and home income did not affect outcomes.

More details are in "Female sex as a risk factor for in-hospital mortality among children undergoing cardiac surgery," by Dr. Chang, Alex Y. Chen, M.D., and Thomas S. Klitzner, M.D., Ph.D., in the September 17, 2002 *Circulation* 106, pp. 1514-1522. ■

Tennessee data indicate significant use of oral steroids among Medicaid-insured children

Oral corticosteroids are often used to treat inflammatory conditions such as asthma, croup, and rheumatologic conditions. Both short-term and long-term use of these drugs can create problems, such as increased risk of infection, impaired growth and bone abnormalities, cataracts, and development of depression, anxiety, and aggressive behavior. Nevertheless, if Tennessee is any indication, use of oral steroids among Medicaid-insured children is common, concludes a study supported by the Agency for Healthcare Research and Quality (HS10384). Findings show that 7 percent of children insured by TennCare, Tennessee's managed health care program for Medicaid-eligible or uninsured people, had at

least one oral corticosteroid prescription filled in 1998.

Providers should ensure that use of these potentially dangerous drugs is warranted for individual children. Children should be monitored closely for infections, slowing of growth, ophthalmologic problems, and psychiatric complications. Close monitoring is especially important for chronic users (four or more short courses of corticosteroids in 1 year) who have other chronic health conditions that place them at risk for complications, cautions Wayne A. Ray, Ph.D., of Vanderbilt University.

Dr. Ray and his colleagues studied prescriptions filled for oral corticosteroids in 1998 by 400,724 TennCare-insured children and files of medical encounters temporally

related to the index prescription.

The rate of corticosteroid use among children birth to 2 years of age was three to four times that of older children, and use was more common among white and rural children than it was among black and urban children. About 80 percent of new users had a possible indication for steroid use, with asthma being the most common indication. About one child in five (22 percent) had an unknown indication for corticosteroid use.

More details are in "Oral corticosteroid use among children in TennCare," by William O. Cooper, M.D., M.P.H., Judy A. Staffa, Ph.D., R.Ph., J. William Renfrew, M.S., and others, in the September/October 2002 *Ambulatory Pediatrics* 2(5), pp. 375-381. ■

Social worker-based intervention reduces symptom days and is cost effective for inner city children with asthma

Children living in urban areas with high levels of poverty and large minority populations are disproportionately at high risk for avoidable asthma-related illness and death. The National Cooperative Inner-City Asthma Study (NCICAS) shows that a comprehensive program that includes social worker-based asthma education and control of environmental asthma triggers can reduce asthma symptoms for a modest increase in costs among inner city children, especially those with more severe

asthma, according to Peter J. Gergen, M.D., M.P.H., of the Agency for Healthcare Research and Quality.

After a baseline assessment of about 1,000 children (age 5-11 years) with physician-diagnosed asthma, Dr. Gergen and his colleagues randomly assigned them either to the asthma counselor (AC) or usual care (UC) group. The researchers followed the children's clinical outcomes and use of health care services for 2 years.

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Asthma intervention

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In the AC group, asthma counselors coordinated asthma care and helped families identify and control environmental asthma triggers such as smoke, animals (including pets and cockroaches), and dust mites. The ACs also encouraged families to obtain and understand the asthma care plan from their primary care physician (PCP), helped them improve communication with their PCPs, and facilitated referrals to appropriate community resources for smoking cessation, psychologic counseling, housing problems, and health insurance.

Over the 2-year period, the AC group had an average of 27 more symptom-free days than the UC group (565 vs. 538). However, there were no significant differences between the groups in rate of

scheduled and unscheduled physician visits, hospital admissions, and ED visits. The mean cost of providing the AC program was about \$337 per child over the 2 years, of which about 33 percent was for personnel expenses, with remaining expenses for medical devices, materials, skin tests, and cockroach extermination visits. When compared with usual care, the AC program improved outcomes at an average additional cost of \$9.20 per symptom-free day gained, similar to that of established medication interventions.

See "The cost-effectiveness of an inner-city asthma intervention for children," by Sean D. Sullivan, Ph.D., Kevin B. Weiss, M.D., M.P.H., Henry Lynn, Ph.D., and others, in the October 2002 *Journal of Allergy and Clinical Immunology* 110, pp. 576-581. Reprints (AHRQ Publication No. 03-R006) are available from AHRQ.** ■

Parents prefer an on-call pediatrician to a nurse advice service to discuss their child's medical problems

In the past, when parents had urgent questions about their child's health after office hours or on the weekend, they called their pediatrician. In recent years, professional telephone triage systems, often manned by nurses, have grown rapidly to meet this need, with an estimated 100 million people using such services. However, parents say they are less satisfied with the medical advice provided by a nurse advice service compared with the traditional on-call pediatrician, according to a study supported by the Agency for Healthcare Research and Quality (HS10604).

The researchers randomized after-hours medical advice calls from parents or guardians of about 6,000 children seen over a 10-month period in 2000 at the pediatrics practice of an urban university medical center to either a nurse advice service (566 callers)

or the on-call pediatrician (616 callers). They surveyed callers within 3 days after their initial advice call about their satisfaction with the telephone triage service and subsequent health care use. Although the callers who spoke to nurses were given almost identical advice, spent less time waiting to have their calls answered, and spent more time speaking on the phone than callers who spoke to the on-call pediatrician, they were much less satisfied, less likely to comply with the advice, and more likely to call back within a short time for more advice.

Parents rated call satisfaction as very good or excellent significantly more often for the on-call pediatrician than for the nurse advice service. Adults who spoke to the on-call pediatrician were more likely to comply with advice given for an office visit within 72 hours than those who spoke to the

advice nurse (52 vs. 30 percent) and less frequently made repeat calls for advice both within 4 hours (5 vs. 13 percent) and within 72 hours (13 vs. 23 percent). The researchers suggest that future studies examine whether the potential cost savings of nurse telephone triage services is worth the possible decline in patient satisfaction.

See "Caller satisfaction with after-hours telephone advice: Nurse advice service versus on-call pediatricians," by Thomas J. Lee, M.H.S., M.D., Judith Guzy, B.S.N., David Johnson, Ph.D., and others, in the November 2002 *Pediatrics* 110(5), pp. 865-872. ■

Study demonstrates a powerful association between decreasing social class and poor health and behavior problems in children

Children from higher social classes (defined by parental education and work status) are likely to be healthier than those in the poorest social classes. Two differences in particular stand out. Children in the poorest social classes have less family involvement, an aspect of resilience considered key to good health. They also are more likely to have a history of disruptive behaviors, which can lead to injury or illness or disrupt social development. This suggests that families in the lower social class may face difficulties in providing the support and resources their children need for positive health, explains Barbara Starfield, M.D., M.P.H., of Johns Hopkins University.

In the study, which was supported in part by the Agency for Healthcare Research and Quality (HS07045), Dr. Starfield and her colleagues examined parent and child responses to the Child Health and Illness Profile (CHIP)-Child Edition at five sites across the United States. They analyzed scores that parents gave their children 6 to 11 years old and that children gave themselves in six health domains: satisfaction with health (perceived health status and self-esteem); comfort (including restricted activity that

interferes with comfort); resilience (family involvement, social problem-solving, and fitness-related activity); risk avoidance (risky or disruptive behaviors that can lead to illness or injury or behaviors that prevent it); achievement (academic performance and peer relations); and medical or psychosocial disorders. The researchers correlated these scores for children of low, middle, and upper socioeconomic status (SES).

Parent reports placed twice the proportion of lower social class children in the poorest health profile (22, 11, and 10 percent respectively, for low, middle and upper SES). Children with disorders in the lowest social class had significantly poorer scores than children with similar disorders in the highest social groups. Child-reported scores showed no significant differences in domain mean scores by social class, only trends toward better health among the higher social classes in all domains except satisfaction.

For more information, see "Social class gradients and health in childhood," by Dr. Starfield, Judy Robertson, B.S., and Anne W. Riley, Ph.D., in the July/August 2002 *Ambulatory Pediatrics* 2(4), pp. 238-246. ■

Researchers link cigarette smoking in adolescents with excessive television viewing

The number of U.S. adolescents who smoke cigarettes has been increasing since 1991, with 70 percent of smokers becoming regular smokers by age 18. Despite bans on television tobacco advertising, smoking on television remains widespread. Young people apparently notice it. Youths who watch 5 or more hours of TV per day are six times more likely to begin smoking cigarettes than youths who watch less than 2 hours a day. TV, with its frequent portrayals of smoking as personally and socially rewarding, may be an effective indirect method of tobacco promotion, according to a recent study supported in part by the Agency for Healthcare

Research and Quality (National Research Service Award training grant T32 HS00063).

Researchers led by Pradeep P. Gidwani, M.D., M.P.H., of Children's Hospital and Health Center in San Diego, CA, used data from the National Longitudinal Survey of Youth, Child Cohort, to examine the association of TV viewing (based on an average of adolescent and parent reports) in 1990 among 592 youths ages 10 to 15 years with smoking initiation from 1990-1992. They controlled for many of the factors found to be associated with both TV viewing and smoking incidence among youths, including ethnicity, household income, poverty, and school performance. In 1990, one-

third of the youths watched more than 5 hours of television per day, and one-tenth watched 0 to 2 hours per day.

Among these young people overall, smoking increased from 4.8 percent in 1990 to 12.3 percent in 1992. Youths who watched more than 4 to 5 hours of TV per day were 5.2 times more likely to start smoking than those who watched TV 0 to 2 hours per day; young people who watched 3 to 4 hours were 3.15 times more likely to be smoking, and those who watched more than 2 to 3 hours were 2 times as likely. TV viewing may serve as a marker for youths who exhibit high-risk behaviors such as smoking. Alternatively, TV

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Cigarette smoking in adolescents

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viewing may substitute for activities that build resilience and

help young people guard against high-risk behaviors, conclude the authors.

See "Television viewing and initiation of smoking among youth," by Dr. Gidwani, Arthur

Sobol, A.M., William DeJong, Ph.D., and others, in the September 2002 *Pediatrics* 110(3), pp. 505-508. ■

Health Insurance

Being uninsured for just 2 years adversely affects the health of adults in late middle age

Millions of Americans have periods during which they have no health insurance. For example, 19 percent of the U.S. population lacked insurance for all of 1994. According to a recent study supported by the Agency for Healthcare Research and Quality (HS10283), being uninsured for just 2 years adversely affects the health of adults in late middle age. David Baker, M.D., M.P.H., and his colleagues at Case Western Reserve University used 1992, 1994, and 1996 Health and Retirement Study data files for community-dwelling U.S. adults who were 51 to 61 years of age in 1992.

They examined major declines in self-reported health (from good or excellent to fair or poor, or from fair to poor) and functioning (indicated by a new mobility difficulty, for example, in walking one or more blocks or being able to climb stairs without resting) for those with private health insurance in 1992 (7,222 adults) who became uninsured in 1994. At the time of the 1994 interview, 5,768 people (95 percent) continued to have private insurance, 3.8 percent no

longer had any form of insurance, and a little more than 1.2 percent converted to having only public insurance. By 1996, those who lost all insurance had a 15.6 percent risk for a major decline in overall health compared with 7.2 percent for those with continuous private insurance.

After adjustment for sociodemographic characteristics, health behaviors, and health status, those who had lost coverage had nearly double the relative risk for a major decline in health (adjusted relative risk, ARR 1.82). Those who became uninsured in 1994 were at increased risk for a major decline in health even if they had regained private insurance by the 1996 interview (ARR 1.59). For those who were uninsured in 1994 and remained uninsured in 1996, the adjusted relative risk was even higher at 2.07.

More details are in "Loss of health insurance and the risk for a decline in self-reported health and physical functioning," by Dr. Baker, Joseph J. Sudano, Ph.D., Jeffrey M. Albert, Ph.D., and others, in the November 2002 *Medical Care* 40(11), pp. 1126-1131. ■

Minority Health

Workplace factors, length of U.S. residency, and language barriers contribute to lack of insurance among Hispanics

Hispanics are more likely to have no health insurance than non-Hispanic whites and blacks. Workplace factors, time lived in the United States, and language barriers all play different roles in the lack of insurance among various Hispanic groups, according to a study by Margaret

Weigers Vitullo, Ph.D., of Gallaudet University, and Amy K. Taylor, Ph.D., of the Agency for Healthcare Research and Quality. They used data from the 1996 Household Component of AHRQ's Medical Expenditure Panel Survey (MEPS), which included 5,000 Hispanics, to examine factors

linked to lack of health insurance among nonelderly Mexican American and Puerto Rican adults living in the United States.

Workplace characteristics were a major factor influencing Hispanic insurance coverage. Hispanics were

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Lack of insurance among Hispanics

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more frequently employed in low-wage jobs than blacks and non-Hispanic whites (24 vs. 15 and 9 percent, respectively) and small firms (44 vs. 34 and 41 percent, respectively), which are less likely to offer health insurance. They also were more likely to be employed in industries that do not typically offer health insurance, such as agriculture and construction. Thus, despite similar rates of full-time employment among these three groups, Hispanic adults were less likely to have private insurance

(49 percent) than blacks (56 percent) and whites (78 percent) and more likely to have no health insurance at all (40 vs. 29 and 16 percent, respectively).

Time lived in the United States was a major factor associated with being uninsured for Mexican Americans, particularly those who had lived in the United States less than 10 years. Undocumented immigrants, individuals without green cards, and in some cases anyone who was not a U.S. citizen may not have been eligible for public health insurance. However, since Puerto Rico is a U.S. territory, Puerto Ricans are American citizens at birth, and

residency was not a barrier to obtaining Medicaid insurance. This helps explain why 27 percent of Puerto Ricans had public insurance versus only 11 percent of Mexican Americans. For Puerto Ricans, language was a major factor limiting access to private health insurance.

More details are in “Latino adults’ health insurance coverage: An examination of Mexican and Puerto Rican subgroup differences,” by Drs. Vitullo and Taylor, in the *Journal of Health Care for the Poor and Underserved* 13(4), pp. 504-525, 2002. Reprints (AHRQ Publication No. 03-R007) are available from AHRQ.* ■

Despite greater poverty, less education, and less access to care, Hispanics tend to have similar or better health than whites

In general, people who are poorly educated and financially disadvantaged have less access to care and poorer health than those who have more advantages. However, that is not the case for Hispanics, especially Mexican Americans, living in the United States. Despite higher rates of poverty, less education, and worse access to health care than non-Hispanic whites, the health of Hispanics is similar to or better than that of non-Hispanic whites, according to a recent review of studies on the topic. The research was led by Leo S. Morales, M.D., Ph.D., of RAND Health, and supported by the Agency for Healthcare Research and Quality (HS09204).

The review confirmed that Hispanics—whether Mexican American, Puerto Rican, Cuban, or members of another group—are less educated than most non-Hispanic whites, and their low socioeconomic status is associated with unhealthy behaviors, especially among the most acculturated. These range from smoking and poor diet to lack of exercise and obesity (about half of Mexican Americans are overweight compared with one-third of whites). Many studies have shown that Hispanics lack sufficient access to health services due to financial, transportation, and linguistic and cultural

barriers. For example, in 1997, 37 percent of Hispanic nonelderly adults lacked health care coverage compared with 24 percent of blacks and 14 percent of non-Hispanic whites.

Yet, Hispanic and white infant mortality rates were comparable (6.1 vs. 6.3 per 1,000 live births); the projected 1999 life expectancy at birth was 1 to 2 years greater for Hispanics than whites; and the 1995 age-adjusted, all-cause mortality rate for Hispanics was 18 percent below that of whites. Differences emerged in disease-specific mortality rates. Non-Hispanic whites had higher mortality rates than Hispanics for heart disease, cerebrovascular disease, cancers, chronic obstructive pulmonary disease, pneumonia and influenza, and suicide. Conversely, Hispanics had higher mortality rates than non-Hispanic whites due to chronic liver disease, HIV/AIDS, unintentional injuries, and homicide.

See “Socioeconomic, cultural, and behavioral factors affecting Hispanic health outcomes,” by Dr. Morales, Marielena Lara, M.D., M.P.H., Raynard S. Kington, M.D., Ph.D., and others, in the November 2002 *Journal of Health Care for the Poor and Underserved* 13(4), pp. 477-503. ■

Black race and low levels of education are associated with health disparities such as higher death rates

Blacks and people who have fewer years of education live about six fewer years than whites and people who are better educated. A few diseases in particular account for most of these socioeconomic and racial disparities, according to a study supported by the Agency for Healthcare Research and Quality (HS10858).

The researchers found that smoking-related diseases caused the most deaths among people with fewer years of education, while high blood pressure, HIV, diabetes, and trauma caused the most deaths among blacks. Targeting these diseases could help to reduce these and other health disparities, concludes Martin F. Shapiro, M.D., Ph.D., of the University of California at Los Angeles.

Dr. Shapiro and his colleagues used data from the National Health

Interview Survey conducted from 1986 through 1994 to estimate cause-specific risks of death among a representative sample of the U.S. population, stratifying the population by educational level and race. People without a high school education lost 12.8 potential life-years per person compared with 3.6 years of potential life lost for high school graduates. Smoking-related heart disease and cancer contributed the most to the difference in potential life-years lost. Ischemic heart disease contributed 11.7 percent to the difference (with all cardiovascular diseases accounting for 35.3 percent). All cancers accounted for 26.5 percent, including 7.7 percent due to lung cancer. Other lung diseases and pneumonia contributed 10.1 percent of the total. Income-level disparities were similar.

Blacks and whites lost 7.0 and 5.2 potential life-years per person, respectively, as a result of deaths from any cause. Cardiovascular diseases accounted for one-third of this disparity, in large part because of hypertension (15 percent). HIV disease (11.2 percent) contributed almost as much as ischemic heart disease (5.5 percent), stroke (2.8 percent), and cancer (3.4 percent) combined, and trauma and diabetes accounted for 10.7 percent and 8.5 percent, respectively.

More details are in “Contribution of major diseases to disparities in mortality,” by Mitchell D. Wong, M.D., Ph.D., Dr. Shapiro, W. John Boscardin, Ph.D., and Susan L. Ettner, Ph.D., in the November 14, 2002 *New England Journal of Medicine* 347(20), pp. 1585-1592. ■

Health Care Quality

Medicare enrollees who have disabilities are most dissatisfied with not being able to get to a doctor and the high cost of care

Nearly two-thirds of people insured by Medicare have at least one disabling condition. Although most Medicare enrollees who have disabilities are satisfied with their care, one in ten is not. People with disabilities are most dissatisfied with getting information about their condition(s), costs of care, and the availability and ease of getting to the doctor, according to a study supported by the Agency for Healthcare Research and Quality (HS10223).

Cost dissatisfaction probably reflects inadequate or absent coverage of prescription drugs or the assistive devices (for example, eyeglasses, hearing aids, or mobility aids) that help people who have disabilities perform their daily activities. Also, it may be difficult for some disabled people to get to a doctor. Although some Medicaid programs provide taxi vouchers, Medicare does not.

Redesigning practice settings and procedures, and changing payment policies may offer the only solutions to some of these problems, concludes Lisa I. Iezzoni, M.D. M.Sc., of Beth Israel Deaconess Medical Center. Dr. Iezzoni and her colleagues analyzed responses to the 1996 Medicare Current Beneficiary Survey of both elderly and nonelderly community-dwelling, Medicare-insured people. They calculated the odds of being dissatisfied with five general care quality measures and five access-to-care measures according to five disabling conditions: blind or low vision, deaf or hard of hearing, difficulty walking, difficulty reaching, and problems with manual dexterity.

They adjusted for other factors affecting care satisfaction that ranged from race and household

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Disabled Medicare enrollees

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income to insurance type. Of the estimated 33.6 million Medicare beneficiaries surveyed, 64 percent reported at least one disabling condition. Ten percent of younger people (aged 18 to 65) with disabilities were dissatisfied with their care overall compared with 5 percent of younger people without disabilities. Elderly people with any major disability were three to four times more likely than nondisabled elderly

individuals to be dissatisfied with care, including overall care quality, access to specialists, followup care, and ease of getting to doctors.

More details are in "Satisfaction with quality and access to health care among people with disabling conditions," by Dr. Iezzoni, Roger B. Davis, Sc.D., Jane Soukup, M.Sc., and Bonnie O'Day, Ph.D., in the *International Journal for Quality in Health Care* 14(5), pp. 369-381, 2002. ■

Patients who are dissatisfied with their usual source of care may seek costly nonurgent care in the emergency department

Emergency departments (EDs) are a safety net for nonurgent care for patients who do not have a usual source of care (USC). However, patients who are dissatisfied with their USC or have trouble accessing their USC are also more likely to go to the ED for a nonurgent visit, concludes a study supported by the Agency for Healthcare Research and Quality (National Research Service Award training grant T32 HS00059). Joshua H. Sarver, B.A., of Case Western Reserve University School of Medicine, and colleagues measured USC satisfaction and access as well as nonurgent ED use at least once during 1996 based on data from AHRQ's 1996 nationally representative Medical Expenditure Panel Survey.

Dissatisfaction with the USC (22 percent of those surveyed) or USC staff (26 percent), lack of confidence in the USC's ability (4 percent), difficulty scheduling an appointment (8 percent), difficulty reaching the USC by phone (9 percent), and waiting more than an hour despite having an appointment (6 percent) were all significantly associated with having a nonurgent ED visit. For example, less than 5 percent of those who were very satisfied and 11 percent of those who were "not at all" satisfied with the quality of their USC had a nonurgent ED visit.

The relationship between USC dissatisfaction and nonurgent ED use persisted even after adjustment for patient age, sex, race, education, health status,

employment status, income, insurance, region of residence, and rural versus urban residence. Improving satisfaction with and access to a patient's USC may be a safe and effective alternative to financial disincentives to reduce non-urgent ED use. The researchers suggest that health insurance plans exercise caution in imposing large financial barriers to ED use because this may doubly penalize patients who perceive poor access and quality of care from their USC.

More details are in "Usual source of care and nonurgent emergency department use," by Mr. Sarver, Rita K. Cydulka, M.D., M.S., and David W. Baker, M.D., M.P.H., in the September 2002 *Academic Emergency Medicine* 9, pp. 916-923. ■

Federal program provides a national approach to therapeutics education and research through a public-private partnership

Advances in medical therapeutics have improved longevity and quality of life. However, inadequate and/or inappropriate use of drugs, biologic products, and medical devices is a significant problem. The Centers for Education and Research on Therapeutics (CERTs) provide a mechanism for coordinated systematic study of the critical issues in therapeutics and a means to educate providers and the

public about them. The seven CERTs, a public-private partnership that involves academic medical centers, the Federal government, medical products industry, and the public, are administered and supported by the Agency for Healthcare Research and Quality (HS10548) in conjunction with the U.S. Food and Drug Administration.

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CERTs program

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The goal is to develop effective strategies to optimize the benefits and manage the inherent risk in therapeutic medical products. For example, often new drugs and medical devices are evaluated in short-term studies that will permit rapid regulatory evaluation and approval. However, some drugs and devices approved from such trials have subsequently presented serious problems. Also, the vast majority of adverse outcomes are not reported, leading to years of continued patient treatment even while the agents are known to cause specific problems, notes Robert M. Califf, M.D., of the CERTs Coordinating Center.

The goal of the CERTs is to increase knowledge before and after marketing of drugs and medical devices begins and to develop a national database of

this information. Over 100 CERTs projects are in progress or have been completed. One example is the work of several centers aimed at reducing inappropriate prescribing of QT-prolonging drugs. The Georgetown CERTs maintains a prospective registry of patients who develop the potentially lethal event of torsades de pointes from QT-prolonging drugs, while the Duke CERTs has been evaluating the launch of the drug dofetilide, an agent found to cause QT prolongation and torsades de pointes in the registration trials prior to marketing. Also, the Vanderbilt CERTs is doing fundamental work examining the biology of sodium and potassium channels, which are the basis for QT prolongation.

See "The need for a national infrastructure to improve the rational use of therapeutics," by Dr. Califf, in *Pharmacoepidemiology and Drug Safety* 11, pp. 319-327, 2002. ■

Adding CAHPS® data to standard enrollment materials does not affect health plan choice among new Medicaid enrollees

Providing newly enrolled beneficiaries in the Iowa Medicaid Program with consumer assessments of various health plans within the program (via the Consumer Assessment of Health Plans Study, CAHPS®) in addition to standard Medicaid enrollment materials did not affect their plan choices, according to a recent study. The findings to date suggest that the value of CAHPS information may be limited to a subset of receptive consumers who actively study health plan information and, even then, only when ratings of available plans differ greatly, ratings differ from prior beliefs about plan quality, and reports are easy to understand, conclude the RAND researchers who conducted the study.

In a study that was supported in part by the Agency for Healthcare

Research and Quality (HS09204), the researchers randomly assigned new Medicaid enrollees in three Iowa counties to experimental or control groups. The control group received standard Medicaid enrollment materials, and the experimental group received these materials plus a CAHPS report for MediPASS, a primary care case management program, and one or two health maintenance organizations (HMOs). The CAHPS report included consumer ratings of primary and specialty care and plan experience, for example, ease of getting an appointment or specialty referral when needed.

Under Iowa Medicaid rules, new beneficiaries in counties with more than one HMO were randomly assigned with equal probability to one of the two HMOs as their

default HMO. In general, most beneficiaries (77 percent) remained in the default plan to which they were initially assigned. Beneficiaries in the counties with three plan choices were more likely to remain in the default plan (80 percent) than those in the counties with only two choices (75 percent). The CAHPS information had no significant effect on the rates at which beneficiaries switched out of a default plan into another option.

More details are in "Effect of CAHPS performance information on health plan choices by Iowa Medicaid beneficiaries," by Donna O. Farley, Ph.D., Marc N. Elliott, Ph.D., Pamela Farley Short, Ph.D., and others, in the September 2002 *Medical Care Research and Review* 59(3), pp. 319-336. ■

Underfunded State-operated AIDS drug assistance programs are struggling to provide medications to those in need

State-operated AIDS Drug Assistance Programs (ADAPs) were established in 1987 to pay for HIV-related medications in the United States and to help provide prescription medicines for HIV-infected patients who had no private insurance and were ineligible for Medicaid. However, the availability of costly antiretroviral medications, a tendency for patients to live longer, and increased numbers of people who are infected with HIV have led to skyrocketing medication costs for ADAPs. As a result, ADAPs have increasingly been operating under emergency measures, with coverage limitations and eligibility restrictions, note researchers supported in part by the Agency for Healthcare Research and Quality (National Research Service Award training grant T32 HS00020).

Since late 1995, ADAPs have struggled with explosive growth in budgets, expenditures, and numbers of clients served. The national ADAP budget increased almost four-fold from \$188.5 million in FY 1996 to \$724.5 million in FY 2000, with combination antiretroviral drug regimens accounting for about 90 percent of total ADAP spending. Meanwhile, ADAPs have failed to realize the savings associated with

reduced HIV-related hospital expenditures. By 1997, 35 of 54 ADAPs were operating under emergency measures: transferring funds from other health programs, instituting waiting lists for medication access, restricting eligibility, and limiting the number of drugs covered.

Increased survival of HIV-infected patients, growing inequities in ADAP coverage between States, and emerging infections (such as hepatitis C) will exacerbate difficulties faced by ADAPs in the next several years. States could use cost-effectiveness analyses, in conjunction with input from representative populations of infected people, to confer the maximum possible benefit to needy patients, suggest the researchers. They caution, however, that the greater issue is that the ADAP allowance appears to be altogether too small.

More details are in "AIDS Drug Assistance Programs: Highlighting inequities in human immunodeficiency virus-infection health care in the United States," by Rochelle P. Walensky, M.D., A. David Paltiel, Ph.D., and Kenneth A. Freedberg, M.D., in the September 1, 2002 *Clinical Infectious Diseases* 35, pp. 605-610. ■

Health Care Workplace

Sharps-related injuries cause substantial anxiety in health care workers

Between 400,000 and 800,000 hospital workers are stuck by potentially infectious needles or other sharp instruments each year. It costs about \$500 million a year to evaluate and treat these injured workers. "Sharps" injuries cause tremendous anxiety in workers because of the potential to transmit infectious agents such as hepatitis B and C virus or HIV from infected patients to workers.

The intangible psychological cost of these injuries should be

incorporated into economic analyses of the benefits of sharps-injury prevention programs, concludes a study supported in part by the Agency for Healthcare Research and Quality (National Research Service Award training grant T32 HS00020).

David N. Fisman, M.D., M.P.H., F.R.C.P., of the City of Hamilton Social and Public Health Services Department in Ontario, Canada, and his colleagues analyzed the medical and

nonmedical costs of 116 employees at two hospital centers, who reported a sharps-related injury while handling a contaminated medical device in 2000 or 2001. They interviewed workers by telephone a few days (median of 3 days) after injury and asked them how much they would be willing to pay (from \$10 to \$5,000) out of pocket if there were a reusable device that could have prevented the injury.

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Sharps-related injuries

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The crude median amount workers would be willing to pay to avert such an injury was \$850. Thus, presented with a device costing \$850, half the workers would have paid for the device out of pocket if it could have prevented their injury. However, when adjusted for patient risk status (for

HIV and HCV) and working with an uncooperative patient at the time of injury, the median amount increased to \$1,270. Although the costs of worker distress are intangible, they may be similar in magnitude to the direct medical costs associated with the management of sharps-related injuries, conclude the researchers.

More details are in "Willingness to pay to avoid sharps-related injuries: A study in injured health care workers," by Dr. Fisman, Murray A. Mittleman, M.D., Dr.P.H., F.R.C.P., Gary S. Sorock, Ph.D., and Anthony D. Harris, M.D., M.P.H., in the *American Journal of Infection Control* 30, pp. 283-287, 2002. ■

Physician retention may depend on preventing their dissatisfaction with pay and community relationships

Until recently, physician satisfaction was studied only among those working in special settings, such as rural and urban underserved areas. With the onset of managed care, many physicians have become employees and have found their autonomy constrained, medicine managed as a business, and incomes falling for some specialties. The result is a growing number of doctors considering a job change, nonclinical work, and retirement.

Dissatisfaction with pay and with community relationships are most likely to prompt physicians to leave their jobs, according to a survey of 1,939 practicing generalists and specialists across the United States. The research was supported in part by the Agency for Healthcare Research and Quality (National Research Service Award training grant T32 HS00032).

Lead author, Donald E. Pathman, M.D., M.P.H., of the University of North Carolina at Chapel Hill, and colleagues analyzed whether physicians in the top and bottom quartiles of satisfaction for each of ten aspects of work were more or less likely to anticipate leaving their jobs within 2 years compared with physicians in the middle quartiles for satisfaction. Generalists and specialists had similar levels of satisfaction. One-fourth (27 percent) of doctors anticipated a moderate-

to-definite likelihood of leaving their practices within 2 years. Relative dissatisfaction with pay and with their relationship to the surrounding community (reflected in survey questions such as "a sense of belonging, respected, and strongly connected") were associated with plans for leaving the current practice for nearly all physician groups surveyed.

How physicians felt about their relationships with patients and how they felt about their autonomy were not related to plans to leave their practices. Perhaps these once-central features of doctoring are no longer as important to physicians, or perhaps physicians believe they cannot find better relationships or more autonomy elsewhere and thus see no need to change jobs, explain the researchers. They suggest that clinical practices could promote workforce stability by providing doctors with opportunities and incentives to participate in local and State professional and service organizations or local volunteer clinics.

More details are in "Physician job satisfaction, job dissatisfaction, and physician turnover," by Dr. Pathman, Thomas R. Konrad, Ph.D., Eric S. Williams, Ph.D., and others, in the July 2002 *Family Practice* 51(7), pp. 593-601. ■

Behavioral health care workers need increased training to meet the changing realities of today's practice

Behavioral health care workers confront problems ranging from drug addiction and depression to psychosis. Unfortunately, many of these workers lack the training they need to handle the realities of today's practice environment, with many non-degreed staff on the front lines

of care often having little or no training at all. The Conference on Behavioral Health Workforce Education and Training, held in Annapolis, MD, on September 10-11, 2001, took the first step toward bridging the gaps in education and training of workers in the mental and addictive disorders field. The

conference was supported in part by the Agency for Healthcare Research and Quality (HS10965).

An introduction by guest editors, Michael A. Hoge, Ph.D., and John A. Morris, M.S.W., C.H.E., and the

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following conference papers were published in a special May 2002 issue of *Administration and Policy in Mental Health* 29(4/5):

Hoge, A. "The training gap: An acute crisis in behavioral health education," pp. 305-318.

Adams, N., and Daniels, A.S. "Sometimes a great notion...A common agenda for change," pp. 319-324.

Stuart, G.W., Burland, J., Ganju, V., and others. "Educational best practices," pp. 325-334.

Hoge, M.A., Jacobs, S., Belitsky, R., and Migdole, S. "Graduate education and training for contemporary behavioral health practice," pp. 335-354.

Daniels, A.S., and Walter, D.A. "Current issues in continuing education for contemporary behavioral health practice," pp. 359-376.

Morris, J.A., and Stuart, G.W. "Training and education needs of consumers, families, and front-line staff in behavioral health practice," pp. 377-402.

Huey, L.Y. "Problems in behavioral health care: Leap-frogging the status quo," pp. 403-420.

O'Connell, M.J., Gill, D., Artar, A., and others. "Student voices: Perspectives on behavioral health education," pp. 421-434. ■

Researchers identify characteristics and training of complementary and alternative medical providers

Complementary and alternative medicine (CAM) therapy has become very popular in the United States, especially in the Northeast and West. A new study supported by the Agency for Healthcare Research and Quality (HS09565 and HS08194) provides unique information on the characteristics of CAM providers. Group Health researcher Daniel C. Cherkin, Ph.D., and colleagues conducted telephone interviews with more than 160 licensed acupuncturists, chiropractors, massage therapists, and naturopathic physicians from four States (Massachusetts, Connecticut, Washington, and Arizona) in 1998 and 1999.

The researchers compared data about sociodemographic characteristics, training, and practice characteristics of CAM providers with data on conventional physicians published by the American Medical Association. More women than men practiced massage therapy (85 percent) and acupuncture and naturopathy (almost 60 percent), but women represented only a minority of chiropractors (about 25 percent) and conventional medical physicians (23 percent). Except for acupuncturists, about 20 percent of whom are Asian, only 5 percent of CAM providers

were not white. CAM providers were more likely than conventional physicians to practice solo (51-74 percent vs. 26 percent), and less than 10 percent practiced in conjunction with medical physicians.

Mean hours of direct patient care in a typical week totaled roughly 15 for massage, 25 for acupuncture and naturopathy, and 30 for chiropractic, compared with more than 50 for conventional physicians due to time spent outside the office (for example, in hospital and nursing home visits). The median duration of basic training was 3 years for acupuncturists, 4 years for chiropractors and naturopathic physicians, and 600 to 650 hours for massage therapists. Most doctors spend 4 years in medical school and 3 years in residency training.

For more information, see "Characteristics of licensed acupuncturists, chiropractors, massage therapists, and naturopathic physicians," by Dr. Cherkin, Richard A. Deyo, M.D., M.P.H., Karen J. Sherman, Ph.D., M.P.H., and others, in the September/October 2002 *Journal of the American Board of Family Practice* 15(5), pp. 378-390. ■

HHS Secretary appoints new members to AHRQ's National Advisory Council

HHS Secretary Tommy G. Thompson has named 12 new members to the National Advisory Council for the Agency for Healthcare Research and Quality. The council provides advice to the Secretary and to the Director of the Agency. The council is made up of 19 members from the private-sector and eight ex officio members from other Federal health agencies.

The 12 new council members are:

Donald Berwick, M.D., M.P.P., President and CEO, Institute for Healthcare Improvement, Boston

Timothy F. Cullen, Senior Vice President, Cobalt Corporation, Milwaukee

Lisa Egbonu-Davis, M.D., Vice President and Medical Director, Pfizer, Inc., New York City

Barbara Ann Barth Frink, Ph.D., R.N., F.A.A.N., Enterprise Nurse Executive, Patient Care and ICU Systems, Cerner Corporation, Kansas City, MO

Elena Fuentes-Afflick, M.D., M.P.H., Associate Professor in Residence, University of California, San Francisco

Newt Gingrich, Senior Fellow, American Enterprise Institute, Washington, DC

Brent C. James, M.D., Vice President for Medical Research and Executive Director, Institute for Health Care Delivery Research, Intermountain Health Care, Salt Lake City

Jonathan T. Lord, M.D., Chief Clinical Strategies and Innovation Officer and Senior Vice President, Humana, Inc., Louisville, KY

Dennis O'Leary, M.D., President, Joint Commission on Accreditation of Healthcare Organizations, Oakbrook Terrace, IL

Mark Pauly, Ph.D., Chair, Department of Health Care Systems, The Wharton School, University of Pennsylvania, Philadelphia

Robert Rex Waller, M.D., President Emeritus, the Mayo Foundation, Rochester, MN

Pamela Jean Woods, Ph.D., Chief Nursing Officer and Administrator, University of New Mexico Hospital, Albuquerque

The seven current council members are:

Jo Ivey Boufford, M.D., Dean, Robert F. Wagner Graduate School of Public Service, New York University, New York City

Arthur Garson, Jr., M.D., M.P.H., Dean and Vice President, University of Virginia Medical School, Charlottesville

Robert F. Meenan, M.D., M.P.H., M.B.A., Dean and Professor of Health Services, Boston University School of Public Health, Boston

Janice H. Platner, J.D., Director of Programs, National Breast Cancer Coalition Fund, Washington, DC

W. Allen Schaffer, M.D., F.A.C.P., Chief Medical Officer, CIGNA HealthCare, Hartford, CT

Marita G. Titler, Ph.D., R.N., F.A.A.N., Director, Research Quality and Outcomes Management, Department of Nursing Services and Patient Care, University of Iowa, Iowa City

Mary Katherine Wakefield, Ph.D., Director, Center for Rural Health, Grand Forks, ND ■

Task Force recommends dietary counseling for adults with high cholesterol and other risk factors for chronic disease

Although citing insufficient evidence to recommend for or against routine dietary counseling in the general population of adult patients, the U.S. Preventive Services Task Force has recommended that primary care

clinicians provide dietary counseling for adult patients with high cholesterol and other known risk factors for diet-related chronic disease, such as high blood pressure and obesity. These recommendations

appear in the January 2003 issue of the *American Journal of Preventive Medicine*.

The Task Force found that effective counseling for promoting healthy diets among patients at

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known risk for cardiovascular disease generally requires multi-session group or individual behavioral counseling provided by specially trained physicians and nurse practitioners or by primary care dietitians, nutritionists, or health educators. Effective counseling combines education about healthy diet with specific behavioral counseling that increases patients' motivation, skills, and social support for healthier eating patterns.

The Task Force, an independent panel of experts sponsored by the Agency for Healthcare Research and Quality, found that counseling by specially trained primary care clinicians can help high-risk patients eat less saturated fat and eat more fruits and vegetables and fiber and concluded that the magnitude and duration of diet changes produced were significant enough to have beneficial effects on cardiovascular disease and possibly other health problems such as cancer and diabetes that may be related to unhealthy diets.

In 2002, Medicare began covering nutrition therapy for beneficiaries with diabetes and kidney disease. Four of the ten leading causes of death—coronary heart disease, some types of cancer, stroke, and type 2 diabetes—are associated with unhealthy diets. Most studies show that people who eat diets low in fat, saturated fat, transfatty acids, and cholesterol and high in fruits, vegetables, and whole grain products containing fiber have lower rates of death and disease from coronary heart disease and possibly several forms of cancer. The Task Force noted that counseling that focuses only on

reducing fat intake without giving attention to all the components of a healthy diet could have adverse effects if it inadvertently leads to higher carbohydrate and calorie intake, which has been linked to obesity, diabetes, and elevated lipids.

Among the general population of adult patients, brief counseling may prove beneficial, but the existing evidence was insufficient to determine whether such patients would maintain these small changes over time or whether the changes would lead to significant improvements in health outcomes such as lowered risk of heart disease, according to the Task Force.

The Task Force noted two promising strategies for addressing diet problems in average-risk patients. These strategies range from multi-session group or individual treatments delivered by a dietitian, nutritionist, or trained clinician to much briefer (as short as 5 minutes) behavioral counseling supplemented by self-help materials, telephone counseling, and individually tailored health mailings and messages. Further research is needed, however, to determine whether these treatments are consistently effective in the general population.

The Task Force found no controlled research on primary care dietary counseling for children or adolescents. Given the serious and growing national epidemic of youth obesity, reflecting both unhealthy diet and insufficient physical activity, more research on youth-focused interventions is greatly needed, according to the Task Force. One of AHRQ's Practice-Based Research Networks is conducting research about diet and youth obesity.

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 Michael Pignone, M.D., M.P.H., and Alice Ammerman, Dr.P.H., R.D, from AHRQ's Evidence-based Practice Center at Research Triangle Institute/University of North Carolina at Chapel Hill.

The Task Force grades its recommendations from "A" (strongly recommends) to "D" (recommends against) or "I" (insufficient evidence). The Task Force recommendation is a "B" for high-risk patients and an "I" for adults in the general population. In 1996, the Task Force recommended simply that all patients be advised about a healthy diet. At that time, there was limited evidence about the role of the clinician in dietary counseling. Since then, more studies have been done to examine the benefits of dietary counseling in the primary care setting.

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

AHRQ releases evidence reports on autopsy and other topics

Autopsies continue to detect clinically important diagnostic discrepancies, according to a new evidence report from the Agency for Healthcare Research and Quality. The report was prepared for AHRQ by researchers at the University of California at San Francisco- Stanford University Evidence-based Practice Center.

Based on an analysis of more than 50 studies spanning 40 years, the EPC researchers estimate that, in U.S. hospitals in the year 2000, the correct cause of death escaped clinical detection in between 8 percent and 23 percent of cases, with as many as 4 percent to 8 percent of all deaths having a diagnostic discrepancy that may have harmed the patient. In addition to clinically missed diagnoses, up to 5 percent of autopsies disclosed clinically unsuspected complications of care.

These diagnostic discrepancy rates do not simply reflect selection by clinicians of diagnostically challenging cases, according to the researchers. In fact, considerable evidence suggests that clinicians have trouble predicting which autopsies are likely to yield important new information. The researchers note that, although often referred to as “diagnostic errors,” these findings refer to discrepancies between clinical diagnoses and autopsy diagnoses and not necessarily to medical mistakes. Although diagnostic discrepancies can result from a clinician’s failure to consider an appropriately broad listing of alternative diagnoses or misinterpretation of test results, there are also situations with atypical symptoms or limited diagnostic test information. These discrepancies, regardless of source, create inaccuracies in death certificates and hospital discharge data, both of which play important roles in epidemiologic research and health care policy decisions, according to the researchers.

For the evidence report, they examined the benefits of the autopsy as a tool in health care performance measurement and improvement. However, they did not attempt to address other roles of the autopsy in medical education, furthering medical research, quality control within the medical specialty of pathology, verification of second opinion consultations, legal documentation of findings, and the bereavement process for surviving family members. The focus of

the report on the autopsy’s role in detecting quality problems reflected an objectively quantifiable area to evaluate the potential negative effects of the trend toward fewer autopsies during the past 40 years.

In 1994, the last year for which national data exist, the autopsy rate for all non-forensic deaths fell below 6 percent, from a high of 50 percent in the 1960s. This decline is probably due to lack of reimbursement for autopsies, the attitudes of clinicians regarding the utility of autopsies in light of other diagnostic advances, and general unfamiliarity with the autopsy and techniques for requesting one, especially among physicians in medical training.

A summary of Evidence Report/Technology Assessment No. 58, *The Autopsy as an Outcome and Performance Measure*, is available online at <http://www.ahrq.gov/clinic/epcsums/autopsium.htm> and also from the National Guideline Clearinghouse™ (NGC) at www.guideline.gov (select NGC Resources). Print copies of the summary (AHRQ Publication No. 03-E001)** and the full report (AHRQ Publication No. 03-E002)* are available from the AHRQ Publications Clearinghouse. See the back cover of *Research Activities* for ordering information.

Other recently published evidence reports and summaries are now available from AHRQ. They include:

- *Diagnosis and Treatment of Worker-Related Musculoskeletal Disorders of the Upper Extremity*, Evidence Report/Technology Assessment No. 62; summary (AHRQ Publication No. 02-E037)** and full report (in press).
- *Utility of Blood Pressure Monitoring Outside of the Clinic Setting*, Evidence Report/Technology Assessment No. 63; summary (AHRQ Publication No. 03-E003)** and full report (AHRQ Publication No. 03-E004)*.
- *Management of Neonatal Hyperbilirubinemia*, Evidence Report/Technology Assessment No. 65; summary (AHRQ Publication No. 03-E005)** and full report (in press). ■

AHRQ factbook shows that childbirth and depression are leading reasons for hospitalization of younger women

A new women's health care fact book from the Agency for Healthcare Research and Quality shows that pregnancy and childbirth accounted for 4.4 million hospital admissions in 2000, or one of every four hospital stays, and that depression was the second leading reason for the hospitalization of younger women.

Approximately 205,000 hospital stays for women between the ages of 18 and 44 were associated with treatment of depression in 2000, the most recent year for which data are available. Physicians generally hospitalize women with more severe cases of depression, and many more women are treated for depression on an outpatient basis.

Other leading reasons for admitting younger women to the hospital include:

- Fibroids of the uterus (139,000 admissions in 2000).
- Gallbladder disease (117,000 admissions).
- Back problems (85,000 admissions).
- Asthma (70,000 admissions).

Among women older than 44, pneumonia and heart problems are among the top reasons for hospitalizations. For women older than 80, treatment for hip fractures and hip replacements are among the top 10 reasons for hospitalization.

These statistics are from *Care of Women in U.S. Hospitals, 2000*, a fact book that includes a wealth of

data on why women of different ages are hospitalized, what happens to them in the hospital, what hospitals charge for their care, and who pays the bill. The report is based on data from AHRQ's Nationwide Inpatient Sample, a powerful database that is part of the Healthcare Cost and Utilization Project. It provides national estimates based on a sample of approximately 1,000 hospitals and 7 million hospital discharges. The new fact book is the third in a series of AHRQ publications that provide detailed statistical information on different aspects of hospital care.

Care of Women in U.S. Hospitals, 2000. (AHRQ Publication No. 02-0044) is available from AHRQ.* See the back cover of *Research Activities* for ordering information. ■

New AHRQ data indicate that people with chronic conditions continue to smoke

A substantial number of smokers who report having a diagnosed chronic condition continue to smoke despite their health problems, according to new data from the Agency for Healthcare Research and Quality. Specifically, in 2000, about 37.9 percent of people with emphysema, 24.8 percent of people with asthma, 20 percent of people with hypertension or cardiovascular problems, and 18.5 percent of people with diabetes reported that they currently smoked.

In addition, three out of five smokers who also had the chronic conditions listed above reported that their doctor had advised them in the previous 12 months to stop smoking. Overall, about 57 percent of smokers who had a routine checkup in the previous 12 months were counseled by a physician to stop smoking.

The new data come from a self-administered questionnaire added to AHRQ's Medical Expenditure Panel Survey in late 2000/early 2001 to collect information on health care quality and satisfaction with health care. These data on smoking in the United States were derived by combining the results of the new

questionnaire with demographic, chronic condition, and preventive care information collected by MEPS' nationally representative survey of people who are not in the military or living in institutions. More than 15,600 people responded to the survey questions.

The data are published in a MEPS Statistical Brief available on the AHRQ Web site at www.meps.ahrq.gov/printproducts/.

Other findings include:

- In late 2000 through early 2001, 23.1 percent of people over 18 reported that they currently smoked.
- People with less than a high school education were more than twice as likely as those with at least some post high school education to be smokers (32.8 percent vs. 15.8 percent).
- Almost a quarter of non-Hispanic blacks (23.6 percent) and non-Hispanic whites and other people (23.8 percent) smoked as compared with only 16.8 percent of Hispanics. ■

New from NTIS: Records of all 750,000 documents archived at the National Technical Information Service—including many AHRQ documents and final reports from all completed AHRQ-supported grants—can now be searched on the new NTIS Web site. Also, all items in the database from 1997 to the present now can be downloaded from the NTIS Web site. Documents from 1-20 pages are free; documents 21 pages and over are \$8.95 per download. Go to www.ntis.gov for more information. ■

Case studies show how findings from AHRQ-supported research are being used by the Federal Government

In the January 2002 issue of *Research Activities*, we invited you, the researcher, to send us information on how your AHRQ-supported research is being used, and we explained how AHRQ draws on that information to produce Impact Case Studies. In August, we presented the first in a series of articles that showcase specific case studies, starting with examples of how State governments use AHRQ-supported research. In this issue, we present some examples of AHRQ research findings being used by other agencies of the Federal Government.

For example, since 2000, the U.S. Commerce Department's Bureau of Economic Analysis has been using the Medical Expenditure Panel Survey Insurance Component (MEPS-IC) to calculate its estimate of the Gross Domestic Product. Additionally, the Commerce Department used the MEPS-IC in its revisions of GDP estimates from 1997 through the first quarter of 2000.

The Centers for Medicare & Medicaid Services routinely bases coverage decisions on AHRQ-funded technical assessments. Using the AHRQ Technology Assessment for Actinic Keratoses Treatment, for example, CMS revised its Medicare Coverage Issues Manual to include a national coverage policy permitting coverage for the treatment of this condition (actinic keratoses is a common skin condition that is often the precursor of skin cancer).

The Office of Personnel Management uses a tool developed from an AHRQ-funded Small Business Innovation Research (SBIR) project to help Federal employees choose among the 400-plus health plans in the Federal Employee Health Benefits Program (FEHBP). Called PlanSmartChoice, the resource is an interactive, multi-media health plan selection tool provided on CD-ROM. Today, 6 million Federal employees and retirees have the option of using the tool to help select the best health coverage for themselves and their families.

Additionally, the FEHBP makes use of AHRQ's Consumer Assessment of Health Plans Study (CAHPS®), a resource that provides the consumers' view of the quality of care and services experienced with health plans.

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-supported research to Jane Steele at jsteele@ahrq.gov. Even a one-line statement such as "institution xyz is using AHRQ-supported research as part of its quality improvement program" is enough to help us get started tracking the impact of AHRQ-funded work. ■

New MEPS products now available

AHRQ recently released the following new publications and public use files from the Medical Expenditure Panel Survey (MEPS). The publications and public use files described here can be accessed online at www.meps.ahrq.gov/.

Statistical Brief # 7: Smoking Status of Adults – United States 2000. This MEPS Statistical Brief presents preliminary findings based on smoking data obtained from the

self-administered questionnaire (SAQ). Self-reported data from the SAQ were used in concert with demographic, chronic condition, and preventive care information collected in the core MEPS instrument to describe the prevalence of smoking in the United States. The Brief reports that 23.1 percent of the U.S. adult population currently smokes. About 57 percent of smokers who had a routine check up in the last year

were counseled by a physician to stop smoking. A substantial number of people who report having physician-diagnosed chronic conditions continue to smoke.

Statistical Brief #8: Access to Urgent Medical Care: 2001. This MEPS Statistical Brief presents preliminary findings based on the data obtained from the 2001 SAQ.

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New MEPS products

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Overall in 2001, 32.8 percent of the U.S. civilian noninstitutionalized population aged 18 or older (67.0 million) reported that they had an illness or injury that needed care right away from a doctor's office, clinic, or emergency room. More than half of those needing urgent care (56.9 percent) said they always received care as soon as they wanted. Older people were more likely than adults under age 65 to say they needed urgent care (37.3 percent for age 65 and older and 31.9 percent for ages 18-64), and of those needing care, older people were more likely than adults under age 65 to say they always received care as soon as they wanted (68.1

percent for age 65 and older and 54.5 percent for ages 18-64).

MEPS HC-041: 1996 Supplemental Public Use File.

This data release is intended to supplement MEPS variables previously released for 1996. The HC-041 data file is a person-level file, containing health insurance variables and a language of interview variable. In order to use these variables, this file should be linked to the 1996 Consolidated Full-year Use and Expenditure File (HC-012) which contains all previously released 1996 person-level data including demographic and socioeconomic information.

MEPS HC-043: 1998 Supplemental Public Use File.

This data release contains two data

files and is intended to supplement MEPS variables previously released for 1998. File 1 of HC-043 is a person-level file, containing health insurance, disability, access to care, and language of interview variables. In order to use these variables, this file should be linked to the 1998 Consolidated Full-year Use and Expenditure File (HC-028) which contains all previously released 1998 person level data including demographic and socioeconomic information. File 2 of HC-043 is an event-level file, containing a variable (SEETLKPV) provided to supplement the variables in the 1998 event-level Outpatient Department Visits File (HC-026F). ■

Research Briefs

Glance, L.G., Osler, T.M., and Dick, A.W. (2002). "Rating the quality of intensive care units: Is it a function of the intensive care unit scoring system?"; and "Identifying quality outliers in a large, multiple-institution database by using customized versions of the simplified acute physiology score II and the mortality probability model II₀." (AHRQ grant K08 HS11295). *Critical Care Medicine* 30(9), pp. 1976-1982, 1995-2002.

Intensive care units (ICUs) use mortality measures, adjusted for patient severity of illness, to benchmark their performance. The first study demonstrates that three severity of illness scales: the APACHE II, Simplified Acute Physiology Score (SAPS) II, and the Mortality Probability Model (MPM) II₀, exhibit fair to moderate agreement in identifying ICUs that are quality outliers, that is, either

provide far worse or far better care than other ICUs. However, the finding that most ICUs in this study were judged to be high-performing units by all three scoring systems limits the usefulness of these models in their present form for benchmarking, conclude the researchers. They calculated standardized mortality ratios for each ICU at 32 hospitals. Patient outcomes were identified in the Project IMPACT outcomes database created by the Society of Critical Care Medicine, using the APACHE II, SAPS II, and MPM II₀. In the second study, the researchers assessed whether customized versions of the SAPS II and the MPM II₀ agreed on which ICUs were outliers within a multiple-center database of 54 hospitals. Although both customized models showed good discrimination and good calibration, there was only

moderate agreement on which hospitals were quality outliers. Seventeen of the 54 hospital ICUs were categorized differently, depending on which of the two screening systems was used.

Li, X., Stanton, B., Feigelman, S., and Galbraith, J. (2002, September). "Unprotected sex among African-American adolescents: A three-year study." (AHRQ grant HS07392). *Journal of the National Medical Association* 94(9), pp. 789-796.

Face-to-face discussions about use of condoms to prevent sexually transmitted diseases such as HIV can reduce unprotected sex among black adolescents over the long-term, according to this study. The researchers used trained adult leaders to use discussions, games,

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and multimedia formats to discuss use of condoms to reduce HIV risk among small groups of black, inner-city youths aged 9 to 15 years (total of 383). Following this primary series, the youths were invited to attend six monthly face-to-face booster sessions after the six-month followup, which reinforced good decisionmaking, communication, and condom use after the followup, as well as annual booster sessions at 15 and 27 months. After only 1 and 2 years of followup, there was no significant difference in cumulative failure to use a condom by the counseled and non-counseled youths. However, cumulatively over the 3-year period, youths who received the counseling reported

significantly lower rates of failure to use a condom.

Newgard, C.D., Martens, K.A., and Lyons, E.M. (2002). "Crash scene photography in motor vehicle crashes without air bag deployment." (AHRQ National Research Service Award fellowship F32 HS00148). *Academic Emergency Medicine* 9, pp. 924-929.

Variables obtained through motor vehicle crash (MVC) photographs are associated with anatomic injury patterns, injury severity, hospital length of stay, and hospital charges in patients involved in MVCs without air bag deployment. As a result, these photographs may provide a useful means of communicating objective information from the crash scene to

the clinician in a timely manner, concludes this article. The researchers used photographs of vehicles involved in MVCs taken by emergency personnel from 12 fire departments serving two hospitals over 22 months and collected outcome information for 559 patients from medical charts. Frontal crashes and increasing passenger space intrusion (PSI) were associated with head, facial, and lower-extremity injuries, while rear crashes were associated with spinal injuries. Restraint use had a protective effect in head, facial, and upper and lower extremity injuries but increased odds of spinal injury. Lack of restraint use, increasing PSI, and steering wheel deformity were associated with longer hospital stays and higher charges. ■

Research Activities - 2002 Author Index

The following is an alphabetical listing of the first authors of journal articles, book chapters, and reports summarized in *Research Activities* during 2002. Month and page number(s) are given.

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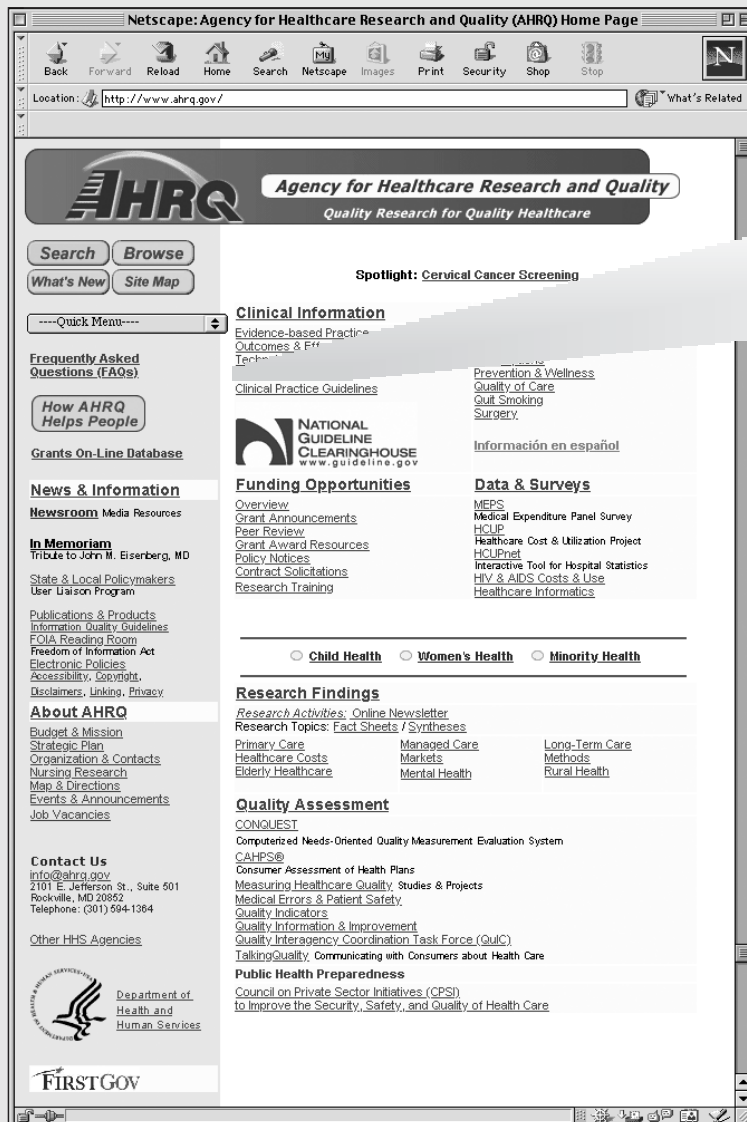
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