



RESEARCH ACTIVITIES

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Highlights

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New video helps patients use blood thinner pills safely and effectively

The Agency for Healthcare Research and Quality (AHRQ) has released *Staying Active and Healthy with Blood Thinners*, a new 10-minute video in English and Spanish to help educate patients about how to use anticoagulant drugs, commonly called blood thinners, safely.

Nearly 2 million Americans receive prescriptions for blood thinners each year to reduce their risk of forming dangerous blood clots that can lead to serious conditions such as deep vein thrombosis (clots that form in the deep veins of the legs or groin) or pulmonary embolism (clots that travel to the lungs and can be fatal). Patients who have had certain kinds of strokes or who have a type of irregular heartbeat known as atrial fibrillation are often prescribed blood thinners, as are patients who have recently had major surgery or are immobile for other reasons.

Research shows that blood thinners can have serious side effects. They can cause uncontrollable bleeding and are among the top causes of adverse drug events in the country. According to data from AHRQ's Nationwide Emergency Department Sample, more than 7,300 Americans

a year are treated in U.S. emergency departments for uncontrolled bleeding associated with use of blood thinners and about half have to be hospitalized. An unknown number of patients are treated for less-severe bleeding in urgent care clinics, doctors' offices, or at home.

Designed to complement education that patients receive in their doctor's offices, clinics, pharmacies, or hospitals, the new video helps patients better understand blood thinners and how to manage them effectively. The video introduces a mnemonic called B-E-S-T to help patients remember important parts of a treatment program they can follow to help keep them safe and healthy. B-E-S-T stands for Be careful, Eat right, Stick to a routine, and Test regularly. The video also features:

- A patient on blood thinners and how he manages his medication regimen safely in everyday settings like work, home, and leisure time.
- Simplified medical terminology and easy-to-understand language.
- Animated graphics showing how dangerous blood clots form and their consequences.

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Blood thinner pills

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- Menu selections that allow patients to replay and review specific instructional segments.

The video is available as a DVD and can be obtained from the AHRQ Publications Clearinghouse.* A companion bilingual print brochure, *Blood Thinner Pills: Your Guide to Using*

Them Safely/Pastillas que diluyen la sangre: Guía para su uso seguro, is also available free of charge. For details, visit the AHRQ Web site at <http://www.ahrq.gov/consumer/btpills.htm> ■

Health Care Costs and Financing

New methods estimate the costs of covering the uninsured

The costs of covering the uninsured are uncertain for two reasons. First, analysts cannot observe all the characteristics of the insured and uninsured, so there is uncertainty about how to extrapolate from the costs of the currently insured to the currently uninsured. Second, estimates rely on survey data, but researchers have found some survey respondents do not accurately report insurance status. Steven C. Hill, Ph.D., of the Agency for Healthcare Research and Quality, and Brent Kreider, Ph.D., at Iowa State University, used data from the Medical Expenditure Panel Survey (MEPS), a nationally representative household survey, to quantify the impact of both problems on

estimating the costs of universal coverage.

Their primary analysis considered the impact of extending insurance to the uninsured using a mix of public and private coverage. Related research found a low rate of misreporting private insurance in the MEPS, and they combined this with research on misreporting public insurance to derive statistically conservative assumptions about misreporting overall. They used new econometric methods and transparent assumptions to estimate the maximum amount health care spending could increase.

The researchers estimated that under universal coverage the fraction of the nonelderly

population (including the currently insured and currently uninsured) using ambulatory or hospital services would rise no more than 9 percent. Monthly per capita provider visits would rise by no more than 8 percent, and monthly expenditures would rise by no more than 16 percent. These estimates vary only a little under plausible, alternative assumptions about how often insurance status is misreported.

See “Partially identifying treatment effects with an application to covering the uninsured,” by Drs. Kreider and Hill, in the 2009 *Journal of Human Resources* 44(2), pp. 409-449. Reprints (AHRQ Publication No. 09-R058) are available from AHRQ.* ■

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Women are vulnerable to coverage and care gaps when their husbands transition to Medicare

Employers do not often offer retiree health benefits once a former employee is eligible for Medicare. Consequently, some near-elderly women (aged 62 to 64) experience disruptions in their insurance coverage as their husbands turn 65 and transition to Medicare, a new study finds. Women whose coverage was interrupted had a 71 percent increased probability of changing their normal care provider or clinic and a 75 percent greater probability of delaying a prescription fill or taking less medication than prescribed because of cost. They also had a 52 percent increased probability of seeking care at the emergency department, and had lower mental health scores than women whose insurance was not disrupted.

Coverage disruptions can be especially troubling, because two-thirds of the women in the study had one or more chronic condition for which disjointed care could lead to adverse consequences. The authors suggest that health systems and insurers should adopt strategies to encourage continuous care access to reduce the effects of insurance changes.

On the positive side, women who experienced insurance disruptions had a 40 percent increased probability of having a pelvic exam or Pap smear compared with women who did not have any change in insurance. A likely explanation for this increased screening is that the women switched to new insurers during the disruption, and prior research has shown that diagnostic testing, such as Pap tests, is high within the initial years of plan enrollment. This study used data from 655 women enrolled in the Wisconsin Longitudinal Study and was funded in part by the Agency for Healthcare Research and Quality (T32/HS00083).

See “Insurance disruption due to spousal Medicare transitions: Implications for access to care and health care utilization for women approaching age 65,” by Jessica R. Schumacher, M.S., Maureen A. Smith, M.D., Ph.D., M.P.H., Jinn-Ing Liou, M.S., and Nancy Pandhi, M.D., M.P.H., in the June 2009 *Health Services Research* 44(3), pp. 946-964. ■

High prescription drug copays may result in patients delaying therapy

Health insurance plans are making patients share more in the cost of care, such as increasing copays for prescription drugs. However, higher cost sharing results in patients waiting longer to start taking their newly prescribed medications, concludes a new study. Researchers studied 17,183 patients with newly diagnosed high blood pressure, diabetes, or high cholesterol. All were receiving employer-provided drug coverage from 31 different health plans. The researchers measured the time from disease diagnosis until the start of drug therapy.

Higher copayments were associated with delays in the start

of therapy for all three medical conditions. This was most evident when copayments were doubled. In this case, the predicted proportion of patients starting medication fell from 54.8 percent to 39.9 percent at 1 year. At 5 years, the proportion dropped from 81.6 percent to 66.2 percent. A patient's rate of therapy initiation and sensitivity to copayment increases was strongly associated with their history of prescription drug use.

Among patients with high blood pressure, those who did not have any experience taking prescribed medications in the past tended to start their therapy later. They were also more sensitive to increased

levels of cost sharing. Physicians need to be aware of these findings when prescribing drugs for patients newly diagnosed with chronic disease, especially those new to taking medications, caution the researchers. Their study was supported in part by the Agency for Healthcare Research and Quality (HS13869).

See “Cost sharing and the initiation of drug therapy for the chronically ill,” by Matthew D. Solomon, M.D., Ph.D., Dana P. Goldman, Ph.D., Geoffrey F. Joyce, Ph.D., and José J. Escarce, M.D., Ph.D., in the April 27, 2009 issue of the *Archives of Internal Medicine* 169(8), pp. 740-748. ■

Prescription drug copays and deductibles may increase treatment costs for some diseases

It is now commonplace for patients to share the cost of prescription drugs with their health insurance plans. Such cost sharing is designed as a financial incentive for patients to use less expensive therapies. However, a new study finds that such prescription copays may actually increase net health plan spending in some instances.

Researchers looked at 75,628 elderly residents living in British Columbia, Canada, who had received inhaler medications for asthma or other conditions. These individuals had full coverage for prescription drugs until the end of 2001. After that, they had a fixed copay of \$25 per prescription for seniors. Later, an income-based deductible plus coinsurance plan was implemented. The researchers estimated overall health care costs, costs for excess physician visits, and costs for emergency hospitalizations.

Net health plan spending increased by \$1.98 million (Canadian dollars) per year during the use of the copay

policy. It then increased to \$5.76 million per year during the first 10 months after the income-based deductible plus coinsurance plan was in place. Older patients had their out-of-pocket spending increase 30 percent during the copay policy. In contrast, spending increased by 59 percent after the income-based program was implemented. The authors conclude that such forms of cost sharing do not lower health plan spending related to full treatment coverage for some diseases. The study was supported in part by the Agency for Healthcare Research and Quality (HS10881).

See “Effects of prescription coinsurance and income-based deductibles on net health plan spending for older users of inhaled medications,” by Colin R. Dormuth, Sc.D., Peter Neumann, Sc.D., Malcolm Maclure, Sc.D., and others, in the May 2009 *Medical Care* 47(5), pp. 508-516. ■

Patient Safety and Quality

Electronic prescriptions help community pharmacists recognize prescribing errors

Electronic order entry (e-prescribing) has been shown to lower the rate of medication errors in hospitals. In the community setting, up to 11 percent of all new prescriptions have at least one problem that requires action on the part of the community pharmacist. E-prescribing can improve patient care and safety in the community as

well, suggests a new study. However, as currently implemented at community pharmacies, this still-emerging technology nevertheless poses select threats to both medication safety and effectiveness. Yet this is probably less than handwritten prescriptions, note the study authors.

Pharmacists working at 68 community chain pharmacies in 5

States reviewed 2,690 prescription orders. Intervention was required for 3.8 percent of the e-prescriptions reviewed. Most of these interventions (32 percent) were done to obtain missing information, usually medication instructions. Dosing errors were the second most frequent reason for intervention (18 percent).

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Visit the AHRQ Patient Safety Network Web Site

AHRQ's national Web site—the AHRQ Patient Safety Network, or AHRQ PSNet—continues to be a valuable gateway to resources for improving patient safety and preventing medical errors and is the first comprehensive effort to help health care providers, administrators, and consumers learn about all aspects of patient safety. The Web site includes summaries of tools and findings related to patient safety research, information on upcoming meetings and conferences, and annotated links to articles, books, and reports. Readers can customize the site around their unique interests and needs through the Web site's unique “My PSNet” feature. To visit the AHRQ PSNet Web site, go to psnet.ahrq.gov.

Electronic prescriptions

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Prescribers were most often contacted (64 percent) to resolve problems.

In the majority of cases (56 percent), the prescription order was changed and dispensed correctly. Only 10 percent of problem prescriptions were not dispensed,

while 12 percent of cases remained unresolved despite the intervention. Each intervention took the community pharmacist an average of 6 minutes to complete at a cost of \$4.74 per each problem prescription. This resulted in an incremental personnel cost of \$0.18 for the pharmacies. Best practice recommendations are needed to improve e-prescribing, conclude the researchers. Their study was

supported in part by the Agency for Healthcare Research and Quality (HS16394).

See "Analysis of community chain pharmacists' interventions on electronic prescriptions," by Terri L. Warholak, Ph.D., B.Pharm, and Michael T. Rupp, Ph.D., B.Pharm, in the January/February 2009 *Journal of the American Pharmacists Association* 49(1), pp. 59-64. ■

Physician-owned single specialty hospitals may prod nearby hospitals to increase nurse staffing levels

Single specialty hospitals (SSHs) limit their focus to providing one service, such as surgery, cardiac care, or orthopedics. In doing this, they claim to provide efficient, high-quality care. Opponents of physician-owned SSHs claim that they create unfair market competition by attracting profitable patients who otherwise would spend their money at a community hospital offering the same services. Community hospitals that compete with SSHs, especially surgical or orthopedic SSHs, may be more likely to increase their nursing staff compared with hospitals that do not compete with SSHs, according to a new study.

Community hospitals may increase their nursing staff to compete with the quality of care offered at SSHs, explain Kathleen Carey, Ph.D., M.A., and colleagues at the U.S. Department of Veterans Affairs and Boston University School of Public Health. They studied the effect SSHs had on nurse staffing levels in

10 States from 1997 to 2004, a period in which the number of SSHs consistently rose.

They found that the local market presence of an SSH was associated with 10.1 more registered nurses at a general hospital compared with a general hospital with no SSH competitor. This increase in nursing staff theoretically results in fewer adverse events, health care-associated infections, and pressure ulcers. However, more research is needed to determine if nursing levels affect these indicators of quality, the authors suggest. This study was funded in part by the Agency for Healthcare Research and Quality (HS16541).

See "Single specialty hospitals and nurse staffing patterns," by Dr. Carey, James F. Burgess Jr., Ph.D., M.A., and Gary J. Young, Ph.D., J.D., in the June 2009 *Medical Care Research and Review* 66(3), pp. 307-319. ■

Child/Adolescent Health

Factors other than gender are associated with poor growth in urban children

Most often, it is boys who visit endocrine specialists for growth evaluations and pediatric growth hormone therapy when they show signs of faltering growth. Some reports show them outnumbering girls by two to one, but this is not because boys are more likely to falter in growth than girls. Instead, growth

faltering is related to age, race, insurance, and frequency of visits with the primary care pediatrician, according to a new study.

The University of Pennsylvania researchers studied 33,476 children receiving care from 4 urban pediatric primary care practices affiliated with a large hospital. Among these children, 9 percent

experienced growth faltering (height below the 5th percentile or growing abnormally slowly). Growth problems were significantly associated with younger age. Problems peaked in children under the age of 3 years (when failure to thrive is fairly common) and then again in the second decade of life.

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Growth evaluations

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Boys are especially prone to growth problems in the younger years.

Children in the growth-faltering group had an average of 0.5 fewer pediatric primary care encounters during the 3-year study period compared with those without growth problems. This was the most powerful predictor of growth faltering, followed by race. Compared with white children, black children were less likely to have growth faltering, consistent

with other studies of growth in U.S. children. Growth problems were also associated with Medicaid coverage. Children covered under Medicaid are often in a lower socioeconomic status and have problems accessing health care. Other studies found that, independent of race or ethnicity, children may experience growth stunting if living below the poverty line. The researchers note that since boys and children with better access to care are more likely to seek specialist evaluation for growth

faltering, it can lead to missed or delayed diagnosis of underlying health problems in girls and low-income children. Their study was supported in part by the Agency for Healthcare Research and Quality (HS13492).

See “Sex-based prevalence of growth faltering in an urban pediatric population,” by Adda Grimberg, M.D., Mark Ramos, B.S., Robert Grundmeier, M.D., and others, in the April 2009 *The Journal of Pediatrics* 154, pp. 567-572. ■

Parent and provider partnerships hold promise for improving adolescent health

Forming partnerships between health care professionals, adolescents, and their families holds promise for improving adolescent health. How to form these sometimes complex partnerships was explored in a pilot study by researchers at the University of North Carolina at Chapel Hill. It revealed the perspectives of parents who, in telephone interviews and focus groups, were asked how parents and providers can work together to keep teens healthy. The researchers recruited a diverse sample of 17 parents with adolescent children (aged 11-18 years) from 8 clinical sites; all were covered by health insurance.

When asked what they could do to keep their teens healthy, most parents said that keeping them busy and monitoring their friends and activities were important. They also cited the value of open communication and the ability to seek help from a health care professional when needed. On the provider side, parents felt it was important that teens could openly communicate with clinicians. Providers may be able

to discover health issues that parents might not know about.

Communication was also the key when parents were asked about how they can work together with providers. They suggested that health care professionals should initiate open conversation with parents while at the same time respecting the teen's confidentiality. Parents also thought public health forums or information technology could be used to effectively disseminate general adolescent health information. The study was supported in part by the Agency for Healthcare Research and Quality (HS16021).

See “Parents and health care professionals working together to improve adolescent health: The perspectives of parents,” by Carol A. Ford, M.D., Amy F. Davenport, M.P.H., Andrea Meier, Ph.D., and Annie-Laurie McRee, M.P.H., in the 2009 *Journal of Adolescent Health* 44, pp. 191-194. ■

Note: Only items marked with a single (*) asterisk are available from the AHRQ Clearinghouse. Items with a double asterisk (**) are available from the National Technical Information Service. See the back cover of *Research Activities* for ordering information. Consult a reference librarian for information on obtaining copies of articles not marked with an asterisk.

Teens answer survey questions on weight control inconsistently but answer reliably about other risk behaviors

Federal, State, and local governments often rely on the results of the Centers for Disease Control and Prevention's 97-question Youth Risk Behavior Survey (YRBS) to determine what policies will most benefit teens and tweens. Teens reliably answered questions about their sex, drug, alcohol, and tobacco histories when the YRBS was given twice in 2-week intervals in 2000. Yet they were not as predictable when responding to questions about their weight control behaviors, according to a researcher from Johns Hopkins Bloomberg School of Public Health. For example, teens changed their answers to questions that addressed whether they participated in physical education weekly, tried

to lose weight, considered themselves to be overweight, dieted, took diet pills, or vomited to lose weight.

The author suggests that the consistency of survey responses is tied to personal identity. For example, a teen who took a virginity pledge after having been sexually active may be likely to retract an earlier admission of sexual activity. Because teens took the survey twice in 2 weeks, they were unlikely to have changed their sense of personal identity, so their answers were mostly consistent. However, this study does suggest that teens change their weight control behaviors more frequently than their other risk behaviors.

The author recommends the survey reword its questions about weight control to phrase them in specific time periods. Because teen obesity is a pressing public health topic, she cautions policymakers to be aware of teens' inconsistency in reporting weight control information in the YRBS when using this data to craft policy. This study was funded in part by the Agency for Healthcare Research and Quality (T32 HS00060).

See "Truth or consequences: The intertemporal consistency of adolescent self-report on the Youth Risk Behavior Survey," by Janet E. Rosenbaum, Ph.D., in the June 1, 2009 *American Journal of Epidemiology* 169(11), pp. 1388-1397. ■

Women's Health

Obese women are at risk for pregnancies exceeding 40 weeks

Babies who stay in the womb past the 40-week mark are at risk for serious complications: excessive birth weights, restricted growth, diminished oxygen supply, and death. A new study finds that women who were obese before becoming pregnant ran a high risk of having a pregnancy that went 40 weeks or longer. Additionally, white women and women who had never given birth tended to have pregnancies that crept into the 40-, 41-, and 42-week zone, compared with black, Latina, and Asian women and women who had previously given birth. Women aged 30 to 39 were also more likely than younger women to have pregnancies that reached the 41-week mark.

The authors suggest that reducing obesity through exercise and diet, both before and during pregnancy, can curb the risk of complications that come with long gestations. For example, for every 20 women who decreased their body mass indexes to below the obesity range, 1 fewer woman would go past 41 weeks of gestation. Doctors who treat obese pregnant women should consider separating the amniotic sac from the

uterus with a cervical exam or counseling obese women to have intercourse to prompt labor to begin before pregnancies reach the 40-week mark, the authors suggest.

Reasons why obese women carry their babies longer are unknown. One explanation the authors put forth is that endocrine factors that initiate labor may be affected by extra hormones produced by the fat tissue. Eugene Washington, M.D., M.Sc., of the University of California, San Francisco, and colleagues reviewed 119,162 women's birth records from a managed care organization in Northern California from 1995 to 1999. The study was funded in part by the Agency for Healthcare Research and Quality (HS10856).

See "Who is at risk for prolonged and postterm pregnancy?" by Aaron B. Caughey, M.D., Ph.D., Naomi E. Stotland, M.D., Dr. Washington, and Gabriel J. Escobar, M.D., in the June 2009 *American Journal of Obstetrics and Gynecology* 200(6), pp. 683.e1-683.e5. ■

Numeric tool helps women determine their birthing preferences after cesareans

A comparison of two computer-based decision tools shows that a graphic-numeric tool provided more consistent responses than a text-based tool in helping women determine if they were comfortable attempting a vaginal birth after cesarean, a new study finds. Using the tools, 96 women who underwent cesareans previously made a series of paired comparisons to determine how they viewed the importance of four decision criteria: avoiding harm to the baby, avoiding side effects for the mother, avoiding risk to future pregnancies, and having a good delivery experience. The tools were not designed to make a final decision for the patient but to help the woman understand her priorities for her next childbirth experience.

The graphic-numeric tool was a sliding bar that displayed a numeric value as women slid a bar between

two decision criteria. Each woman slid the bar closest to the criterion that was more important to her or set the bar in the middle for two equally important criteria. The text-based tool had women choose between two criteria by selecting radio buttons with labels ranging from “equally important” to “extremely more important.” Although both scales helped clarify the users’ values, the women who used the graphic-numeric scale were more consistent in their answers.

Women placed the most priority on avoiding harm to their babies and the least priority on having a good delivery experience. The women using the graphic-numeric tool may have had more consistent answers because the tool translated text into a number and allowed them to show how they were leaning. The authors suggest that women who used the text-based

tool may have felt pressured to choose a certain radio button over another because they feared they would be judged unfavorably if they expressed any preference for the other criterion. These results may help researchers who design future decision aids for patients who are facing medical decisions, but who may be hesitant in sharing their preferences for fear of being judged. This study was funded in part by the Agency for Healthcare Research and Quality (HS13959, HS15321, HS11338).

See “Patients were more consistent in randomized trial at prioritizing childbirth preferences using graphic-numeric than verbal formats,” by Karen B. Eden, Ph.D., James G. Dolan, M.D., Jeanne-Marie Guise, M.D. M.P.H., and others in the April 2009 *Journal of Clinical Epidemiology* 62, pp. 415-424. ■

Chronic Disease

Cost and depression serve as barriers to performing self-care behaviors for people with diabetes

People living with diabetes juggle four self-care tasks to control their disease: taking medicine, testing their blood-glucose level, following a healthy diet, and exercising regularly. Yet significant barriers prevent individuals from performing these self-care tasks, reveals a new study. Arthur J. Hartz, M.D., Ph.D., of the University of Utah, and colleagues at the University of Iowa surveyed 253 people in the Midwest who had diabetes for an average of 10 years.

Compared with those who were married, individuals who were unmarried and young had higher HbA1c test results, indicating higher blood-sugar levels. Those who reported high satisfaction with taking their medications and following meal plans had lower HbA1c test results. This test gives a picture of the average blood-glucose

control for the past 2 to 3 months and lets patients know how well their diabetes treatment plan is working.

Individuals with diabetes encountered the most difficulty with following a meal plan and monitoring their blood-glucose levels. High costs and depression were the main barriers affecting compliance with these self-care tasks, and these barriers resulted in higher HbA1c levels. Although cost is not a factor a medical team can control, the authors note that treating depression may improve patients’ health and self care. They further suggest that providers offer plans that patients find realistic and understandable, because good physician communication was also found to be

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Diabetes

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associated with lower HbA1c levels. This study was funded in part by the Agency for Healthcare Research and Quality (HS14410).

See “An assessment of attitudes, behaviors, and outcomes of patients with type 2 diabetes,” by Jeanette M. Daly, R.N., Ph.D., Dr. Hartz, Yinghui Xu, M.S., and others in the May-June 2009 *Journal of the American Board of Family Medicine*, 22(3), pp. 280-290. ■

Self-management support results in better diabetes outcomes

Patients with type 2 diabetes who receive support to manage their own disease through a multilingual health information technology tool do better than patients who receive either usual medical care or support through group visits. The finding comes from a study conducted by researchers at the University of California, San Francisco Center for Vulnerable Populations, who compared two types of self-management support interventions with standard diabetes care.

The study took place in the publicly run, safety net health care delivery system affiliated with San Francisco General Hospital. The 339 patients participating in the study were divided into 3 groups. One group received automated telephone self-management support (ATSM) in the form of weekly prerecorded calls over 39 weeks. During the call, patients were able to enter responses to questions about their diabetes, which were followed by a nurse calling them back, if necessary.

The second group participated in group medical visits (GMV). These were 90-minute sessions held each month for 9 months and facilitated by a primary care physician and health educator. A third group was randomized to usual care. More than half of the participants spoke a language other than English, and half had less than a high school education and limited literacy skills. Half also lacked health insurance.

Compared with usual care participants, both ATSM and GMV participants had significant improvements in goal setting, problem solving, and self-management behaviors. For example, both of these groups improved in home monitoring of their own blood glucose levels. The ATSM intervention was more effective at improving interpersonal processes of care (e.g., communication), physical activity, foot care, and functional status/quality of life.

Compared with usual care and GMV participants, the ATSM participants increased their

physical activity by 2 hours per week. They were also less likely to report that diabetes prevented them from carrying out daily living activities. Improvements in health behavior and functional status among patients who received the ATSM support appeared to be mediated, in part, by better interpersonal processes of care. This makes it an ideal self-management support technique for vulnerable populations with communication barriers, such as those participating in this study. The study was supported in part by the Agency for Healthcare Research and Quality (HS14864 and HS17261).

See “Effects of self-management support on structure, process, and outcomes among vulnerable patients with diabetes,” by Dean Schillinger, M.D., Margaret Handley, Ph.D., Frances Wang, M.S., and Hali Hammer, M.D., in the April 2009 *Diabetes Care* 32(4), pp. 559-566. ■

Exercise is not being used enough to treat low back and neck pain

Chronic low back and neck pain are common in the United States, resulting in lost work productivity, increased health care costs, and disability. Various treatments, such as exercise and back rehabilitation programs, have been shown to be effective at treating these conditions. Yet, two new studies show that physicians rely too much on prescribing narcotics and not enough on prescribing specific exercises to treat back and neck pain. In the first study, exercise was underutilized as a treatment for chronic low back and neck pain. In the second study, focusing on back pain, most providers offered patients narcotics for pain relief. Both studies, supported in part by the Agency for Healthcare Research and Quality (T32 HS00032), are summarized here.

Freburger, J. K., Carey, T. S., Holmes, G. M., and others. (2009, February). "Exercise prescription for chronic back or neck pain: Who prescribes it? Who gets it? What is prescribed?" *Arthritis & Rheumatism* 61(2), pp. 192-200.

In this study, researchers conducted a telephone survey of

684 individuals suffering from chronic low back or neck pain. All had seen a health care provider for the condition during the past 12 months. During the survey, they were asked about receiving a prescription for exercise, the type of activity, its frequency and length, and the degree of supervision.

Less than half of those surveyed (48 percent) were prescribed exercise. Among those who did receive an exercise prescription, 46 percent had it prescribed by a physical therapist, 29 percent by a physician, and 21 percent by a chiropractor. Treatment by physical therapists or chiropractors was the strongest predictor of getting an exercise prescription. Patients most likely to get such a prescription were female, highly educated, and receiving workers' compensation. Compared with physicians and chiropractors, physical therapists were more likely to supervise the exercise program and prescribe strengthening and stretching exercises.

Carey, T. S., Freburger, J. K., Holmes, G. M., and others. (2009). "A long way to go: Practice patterns and evidence in

chronic low back pain care." *Spine* 34, pp. 718-724.

In this study, 706 individuals with chronic low back pain were also surveyed by telephone. The vast majority (84 percent) had at least one visit to a health care provider. Most were middle aged; 62 percent were women. The researchers found that 60 percent of those interviewed had used narcotics in the past month. More than one-third of the individuals had undergone some sort of advanced imaging procedure in the past year.

Although participants had received various treatments from physicians during numerous visits, such interventions were not supported by the evidence. For example, a mere 3 percent had participated in a formal spine rehabilitation program. Untreated depression was also common. Half of patients not already taking antidepressants scored positive on a two-item depression screen. The researchers conclude that current treatment patterns for low back pain are consistent with overuse of some medications and treatments and underuse of exercise and depression treatment. ■

Without medical evidence, clinicians' judgment about chronic pain is often influenced by patient and situational factors

Clinicians are usually quite certain about the medical decisions necessary to treat acute pain. However, provider judgments become less clear when pain does not resolve or is chronic in nature. In their review of studies of pain assessment, Raymond C. Tait, Ph.D., of Saint Louis University School of Medicine, and colleagues identified interpersonal and situational factors that can affect providers' judgments about pain.

They found that several social factors influence judgments about symptom certainty. These include

patient and provider characteristics related to the clinical encounter. Their influence is most profound when pain is severe and chronic. Examples of such factors are medical evidence; patient gender, minority status, and manner; and the provider's empathy level and experience treating pain. According to the researchers, high levels of pain severity, especially in the absence of clear-cut medical evidence, consistently contribute to clinician uncertainty about the cause and treatment.

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Chronic pain

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In these cases, the patient's characteristics and situation affect the judgment process. For example, the clinician can be tempted to link worsened pain to some convenient patient factor, such as emotional distress or noncompliance with treatment. While intuitively appealing, these factors may have little association with pain severity and/or adjustment. However, high levels of provider empathy can offset the attribution of chronic pain to psychological distress, note the researchers.

They propose a model for pain judgment that encourages clinicians to use as many sources of

information as possible to inform their judgments about pain. This collective knowledge is likely to reduce symptom uncertainty. In addition, psychological distress needs to be assessed, as it is often associated with chronic pain. Finally, providers should consider involving the patient's spouse/partner as an additional source of information for determining symptom certainty. The study was supported in part by the Agency for Healthcare Research and Quality (HS14007).

See "Provider judgments of patients in pain: Seeking symptom certainty," by Dr. Tait, John T. Chibnall, Ph.D., and Donna Kalauokalani, M.D., M.P.H., in 2009 *Pain Medicine* 10(1), pp. 11-34. ■

Disparities/Minority Health

Blacks are less likely than whites to receive lung cancer treatments

When it comes to treating nonsmall cell lung cancer, a new study finds a significant gap in the treatment of blacks and whites. Compared with whites, blacks are less likely to receive surgery and chemotherapy. Researchers at the University of Texas in Houston analyzed 83,101 Medicare patients aged 65 and older, who were diagnosed with stages I to IV nonsmall cell lung cancer between 1991 and 2002. About 90 percent of patients were white and 10 percent were black. The researchers placed the patients into one of two groups: early disease (stages I and II) and late disease (stages III and IV). They then looked at who received surgery, chemotherapy, and radiation therapy.

In the early disease group, blacks were 37 percent less likely to receive surgery compared with whites. They were also 42 percent less likely to undergo chemotherapy for their cancer. This disparity was even greater for late disease patients. Blacks in this group were 57 percent less likely to receive chemotherapy compared with whites. Patient characteristics associated with greater treatment disparities included being older, female, and having a lower socioeconomic status.

The researchers offer several explanations for why such disparities still exist. Black patients are less likely to have their cancer appropriately staged and to be recommended for surgery. Even when surgery is indicated, blacks are more likely

than whites to refuse it, possibly because the myth that tumors spread when exposed to air remains common in the black community. Other factors include blacks' limited access to health care, reluctance to seek medical attention, treatment at county hospitals, reliance on prayer and spirituality, and a fatalistic attitude toward cancer. The study was supported in part by the Agency for Healthcare Research and Quality (HS16743).

See "Racial disparities and treatment trends in a large cohort of elderly black and white patients with nonsmall cell lung cancer," by Dale Hardy, Ph.D., Chih-Chin Liu, M.S., Rui Xia, M.S., and others, in the May 15, 2009 issue of *Cancer* 115, pp. 2199-2211. ■

Health Literacy

Health literacy is linked to personal happiness

Health literacy refers to a set of skills (reading and numerical) that allow individuals to function adequately in various health care settings. One such skill is the ability to fill out medical forms without assistance. Researchers from the University of Alabama at Birmingham's Center for Education and Research on Therapeutics (CERT) and the University of Oklahoma have now found a positive correlation between health literacy and personal levels of happiness.

The study involved a telephone survey of 383 individuals from 39 primary care practices in 21 Alabama counties. Study participants were 50 years of age or older and taking prescription nonsteroidal anti-inflammatory drugs. The survey gathered information on demographic and socioeconomic characteristics, health indicators, and happiness scores. Health literacy was measured by asking participants about how confident they were in filling out medical forms by themselves. Happiness was measured using the four-item Subjective Happiness Scale.

Happiness scores increased steadily with higher levels of health literacy. Low happiness scores were associated with an age of less than 65 years, poverty, no college education, and a lower literacy status.

Health literacy remained significantly associated with happiness even after controlling for demographic variables, poverty levels, and self-reported health. The researchers suggest that the easy-to-use single question about health literacy can be used in the clinical setting to identify patients at risk for multiple negative outcomes, including low happiness levels.

The study was supported in part by a grant from the Agency for Healthcare Research and Quality (HS10389) to the University of Alabama at Birmingham CERT. For more information on the CERTs program, please visit <http://www.certs.hhs.gov/>.

See "Health literacy and happiness: A community-based study," by Erik Angner, Ph.D., Michael J. Miller, R.Ph., Dr.P.H., Midge N. Ray, R.N., M.S.N., M.Ed., and others, in the online first edition of *Social Indicators Research* at <http://www.springerlink.com/content/a814346h27136m41/>.

Editor's Note: October is Health Literacy Month. AHRQ health literacy research and tools can be found at: www.ahrq.gov/browse/hlitix.htm. You can also subscribe for health literacy and cultural competence e-mail updates at: https://subscriptions.ahrq.gov/service/multi_subscribe.html?code=USAHRQ. ■

Outcomes/Effectiveness Research

Primary care nurses who convey warmth and caring enhance patient satisfaction with care

Primarily care nurses who exude warmth, positivity, energy, and capability through use of body language, gestures, facial expressions, and tone of voice enhance patient satisfaction with care, concludes a new study. University of California researchers videotaped the primary care visits of 81 nursing staff with 235 patients to assess nurses' nonverbal visual and speech behaviors and their impact on patient and nurse postvisit satisfaction, which they

obtained in a postvisit questionnaire.

Affective behaviors were expressed more strongly through vocal communication, and instrumental behaviors (conveying medical information or managing tasks) were revealed more strongly by visual clues. Characteristics of caring, warmth, and supportiveness appeared to contribute to patients' satisfaction with nursing staff members' capability and personableness. Not surprisingly, patients were less satisfied with

nurses' negativity and hurrying. This may reflect the pressures of limited time in medical visits and could result from staffing levels in primary care, note the researchers.

Nursing staff members' own satisfaction with the visit was related to the affective nonverbal and verbal behavior of their patients. Pleasantness and involvement from a patient correlated substantially with nursing staff behavior that was caring/sensitive, professional, and

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Patient satisfaction

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less hurried. In this study, more positive vocal and visual behaviors by one were met by more positive communication from the other. The researchers suggest that health care providers may need time to develop rapport with their patients and,

ultimately, effective communication may influence patients' decisions to adhere to their recommended regimens. The study was supported by the Agency for Healthcare Research and Quality (HS10922).

See "Affective and instrumental communication in primary care interactions: Predicting the

satisfaction of nursing staff and patients," by Kelly B. Haskard, Ph.D., M. Robin DiMatteo, Ph.D., and John Heritage, Ph.D., in *Health Communication* 24, pp. 21-32, 2009. ■

Genetic testing is of unproven value for preventing blood clots

As many as 600,000 Americans each year suffer from venous thromboembolism (VTE), a blood clot in the veins of the body, most often experienced as deep vein thrombosis in the leg or pelvic veins. Pulmonary embolism is the main life-threatening complication of deep vein thrombosis, in which a portion of the blood clot is carried to the lungs, where it can be deadly. The duration of treatment depends on whether the patient is considered to have continuing risk factors for a recurrent VTE. Physicians sometimes recommend that adult patients who are either at high risk for or have had VTE undergo genetic testing to determine if they have genetic mutations that make them especially likely to develop VTE. However, a new study finds there is not enough evidence to prove that genetic testing for two gene mutations in patients with a history of blood clots helps in managing VTE.

Jodi B. Segal, M.D., M.P.H., of the AHRQ-supported Johns Hopkins Evidence-based Practice Center in Baltimore and colleagues reviewed 124 studies addressing genetic testing for two mutations, Factor V Leiden and prothrombin G20210A, associated with VTE. They found that patients with the Factor V Leiden mutation are at a higher risk of recurrent VTEs

compared with patients who suffered a VTE and did not have the mutation. Although tests for identifying the mutations have excellent analytic validity and most laboratories report accurate results, studies have not shown whether testing improves outcomes for adults or their family members.

Keeping patients who have a genetic tendency to develop blood clots on blood-thinning drugs (anticoagulants) does appear to reduce the chance of developing future clots. However, this benefit appears to be similar to that seen in patients who do not have the genetic tendency to develop blood clots but who have a history of clots. This study was funded in part by the Agency for Healthcare Research and Quality (Contract No. 290-02-0018).

See "Predictive value of Factor V Leiden and prothrombin G20210A in adults with venous thromboembolism and in family members of those with a mutation: A systematic review," by Dr. Segal, Daniel J. Brotman, M.D., Alejandro J. Necochea, M.D., M.P.H., and others in the June 17, 2009 *Journal of the American Medical Association* 301(23), pp. 2472-2485. ■

Mentoring is the key to building a successful research career

Getting college graduates to pursue careers as researchers can be challenging, particularly if they come from minority backgrounds. Various academic programs are in place to foster scholarly productivity and promotion within emerging careers. Spero M. Manson, Ph.D., from the University of Colorado, Denver, has developed a conceptual framework that identifies various factors relevant to a successful research career. He

concludes that proactive mentorship is critical during postdoctoral and postresidency training to encourage successful research careers.

Even at such advanced stages of training, the young researcher's college experience and family support also play important roles in their future success. The quality of their undergraduate education may help someone appreciate and pursue a research career. Dr. Manson has also found that many of the features characterizing

undergraduate institutions are important at advanced training levels. These include academic support, peer networks, counseling resources, formal training programs, and research infrastructure.

On the personal side, young researchers need to feel a sense of control and mastery, as well as believing they can have a positive impact on people and things.

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Mentoring

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Positive feelings and self confidence promote persistence in their research career and help them cope with adversity. Finally, training programs should expose young researchers to tasks in a way that allows them to master the key

elements of a successful research career. Further research is needed to measure elements that naturally belong in career development programs, including evaluating their short- and long-term effects. The study was supported in part by the Agency for Healthcare Research and Quality (HS10854).

See “Personal journeys, professional paths: Persistence in navigating the crossroads of a research career,” by Dr. Manson, in the 2009 *American Journal of Public Health* 99(Suppl 1), pp. S20-S25. ■

Health Information Technology

Clinicians respond more positively to an electronic health record over time

How clinicians respond to the implementation of an electronic health record (EHR) system often determines its long-term success and viability. According to a new study, primary care clinicians develop increasingly positive perceptions following implementation of an EHR system. For this study, 86 primary care clinicians were surveyed, including physicians, nurse practitioners, and physician assistants. All worked at three health centers that transitioned from paper record systems to an EHR system between June and November 2006. Participants were surveyed at 1, 3, 6, and 12 months following implementation of the system.

After using the system for 1 month, 63 percent of clinicians agreed that the EHR improved quality of care. This increased to 86 percent at the end of 1 year. There was also growing agreement that the EHR

reduced medication-related errors (72 to 81 percent of clinicians), improved followup of test results (62 to 87 percent), and communication among providers (72 to 93 percent). At the end of 12 months, fewer clinicians reported a worsening in the quality of patient-physician interactions (49 to 33 percent). The majority of clinicians (92 percent) believed that the EHR improved access to a patient's clinical information. This percentage remained consistent from month 1 to month 12. The study was supported in part by the Agency for Healthcare Research and Quality (HS15226).

See “Trends in primary care clinician perceptions of a new electronic health record,” by Robert El-Kareh, M.D., Tejal K. Gandhi, M.D., M.P.H., Eric G. Poon, M.D., M.P.H., and others, in the 2009 *Journal of General Internal Medicine* 24(4), pp. 464-468. ■

Elderly/Long-Term Care

Algorithm now available to prevent recurrent bone fractures in nursing home residents

Older adults who break their hips or bones in their spines are at high risk for suffering second fractures. Many of these fractures occur in nursing homes, but only a small percentage of residents receive osteoporosis therapy to prevent second fractures. Amy H. Warriner, M.D., and

Kenneth G. Saag, M.D., M.Sc., of the Center for Education and Research on Therapeutics (CERT) of Musculoskeletal Disorders, and coinvestigators reviewed the known risk factors for second fractures and developed an algorithm for assessing and treating osteoporosis in patients living in long-term care

facilities or receiving home health care.

Active older adults are more likely to suffer second fractures, largely because their mobility presents them with more opportunities to fall, the researchers found. Home safety assessments,

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Bone fractures

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vision screenings, and medication reviews may help prevent second falls. Low levels of vitamin D also appear to be a risk factor for falls, because that vitamin aids musculoskeletal function. The researchers recommend that elderly patients be given both vitamin D and calcium to reduce their risk of breaking bones.

However, patients with a history of fracture or osteoporosis should also be treated with osteoporosis

medications, even if bone mineral density evaluation is not possible. These drugs vary in their ability to prevent fractures. The bisphosphonates alendronate and risedronate appear effective in preventing all types of fractures, while other drugs appear to significantly reduce spine or hip fractures, but not both. Individuals who take bisphosphonates and continue to suffer fractures may be candidates for teriparatide, a more expensive drug that is administered via daily injections. This study was

funded in part by the Agency for Healthcare Research and Quality (HS16956) to the University of Alabama at Birmingham CERT. For more information on the CERTs program, visit <http://certs.hhs.gov/>

See "Management of osteoporosis among home health and long-term care patients with a prior fracture," by Dr. Warriner, Ryan C. Outman, M.A., Jeffrey R. Curtis, M.D., M.P.H., Dr. Saag, and others in the April 2009 *Southern Medical Journal* 102(4), pp. 397-404. ■

Several approaches can help motivate cognitively impaired nursing home residents to participate in restorative care

Two-thirds of older adults with dementia, compared with 27 percent of their cognitively intact counterparts, are substantially limited in their ability to carry out activities of daily living (ADLs) such as dressing, eating, and bathing. A few approaches can help nursing home residents with dementia participate in care that helps restore their functioning (restorative care) and quality of life, suggests a new study.

The researchers used focus groups with seven geriatric nursing assistants (NAs), who were experts in dementia care, to explore facilitators and barriers to engaging these residents in functional activities and exercise. The NAs suggested getting to know a person's past and former role in life to understand what "makes them tick." For example, telling a former journalist he had a press conference to go to would motivate him to get up and get dressed. Use of humor and play, which sometimes makes residents feel like they are around their family, also encourages them to participate in restorative care.

Many of the NAs considered teamwork with fellow NAs, other nursing staff, rehabilitative staff, and

medical providers and families a key component of engaging impaired residents in restorative care activities. For example, they would contact medical providers if they saw any change of status, which could be due to depression or a urinary tract infection and could inhibit participation in restorative care. Other helpful approaches were use of short, verbal cues and repetition to provide clear direction during ADLs, and use of assistive devices, favorite foods, and flexible scheduling. They cited barriers to restorative care such as resident anxiety and agitation (which sometimes made tasks difficult or staff fearful), overly sedating medication, lower family expectations, and communication breakdown among the staff. The study was supported in part by the Agency for Healthcare Research and Quality (HS13372).

See "Knowing what makes them tick": Motivating cognitively impaired older adults to participate in restorative care," by Elizabeth M. Galik, Ph.D., C.R.N.P., Barbara Resnick, Ph.D., C.R.N.P., F.A.A.N., F.A.A.N.P., and Ingrid Pretzer-Aboff, Ph.D., R.N., in the *International Journal of Nursing Practice* 15, pp. 48-55, 2009. ■

Risk factors for harboring multiple strains of *E. coli* are elusive

Although some strains of the bacteria *Escherichia coli* (*E. coli*) live in the gastrointestinal tract and pose no threat, others cause stomach cramps and watery, bloody diarrhea. The bacteria are usually spread through

food or water infected with feces or by contact with an infected person. Further, some individuals can be infected with more than one strain of *E. coli*. Knowing which patients are at risk for multiple strains of *E.*

coli infection is important for epidemiology and infection control.

Researchers at the University of Pennsylvania Medical School sampled 49 residents of a long-term care facility in Philadelphia and

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E. coli

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found that 21 patients (43 percent) had more than one strain of *E. coli* present in their gastrointestinal tracts. Eleven patients had two strains of *E. coli*, eight had three strains, one had four strains, and one had five strains.

After studying patient demographics, diseases, and

previous antibiotic use, the researchers were unable to pinpoint specific risk factors for infection with multiple strains of *E. coli*. They recommend that future studies focus on how to efficiently identify patient populations colonized with multiple *E. coli* strains. This study was funded in part by the Agency for Healthcare Research and Quality (HS10399).

See “Risk factors for fecal colonization with multiple distinct strains of *Escherichia coli* among long-term care facility residents,” by Ebbing Lautenbach, M.D., M.P.H., M.S.C.E., Pam Tolomeo, M.P.H., C.C.R.P., Nicole Black, C.C.R.P., and Joel N. Maslow, M.D., Ph.D., in the May 2009 *Infection Control and Hospital Epidemiology* 30(5), pp. 491-493. ■

Agency News and Notes

Premiums for some family plans cost \$20,000 or more

One in 10 enrolled workers in Alaska, Indiana, and Minnesota were in health insurance plans costing \$20,000 or more—at least \$7,000 more than the national average. The plans were employer-based health insurance that covered their families in 2008, according to the latest data from the Agency for Healthcare Research and Quality (AHRQ). The Agency’s analysis of annual employer-based health insurance premiums also found that, for the nation as a whole, 10 percent of enrolled workers—about 2 million—had a family plan that cost \$17,000 or more. The average annual premium for family plans in 2008 was \$12,298.

In addition, AHRQ’s analysis of employer-based health insurance premiums in 2008 for private industry found that:

- The portion of family plan premiums paid by the employee for 1 in 10 workers nationwide was \$6,700 or more, compared with the national average of \$3,394.

- However, 10 percent of workers in Arizona, Colorado, New Mexico, and Washington spent at least \$8,100 to get family coverage.
- Some 3.1 million workers nationwide with single coverage were in plans with annual premiums totaling \$6,200 or more, or at least 41 percent higher than the national average of \$4,386.
- For workers who were enrolled in single-coverage plans, 1 in 10 paid at least \$1,900—more than double the national average of \$882.
- Health insurance premiums vary within and between the States; the survey provides estimates of the range of premium costs within each State and across the Nation, in addition to average premiums.

The data are taken from the Insurance Component of the Medical Expenditure Panel Survey, a source of detailed information on employer-sponsored health insurance coverage and costs at the national, State, and metropolitan area levels. For more information, go to www.meps.ahrq.gov/mepsweb. ■

Lack of insurance among full-time, low-income workers jumped in the past decade

The proportion of low-income workers who were uninsured increased from 26 percent in 1996 to 34.5 percent by 2006, according to the Agency for Healthcare Research and Quality (AHRQ). The average household income for a family in 2006 was \$40,888. AHRQ’s analysis also

found that among full-time, low-income workers between 1996 and 2006:

- The proportion of workers aged 18 to 34 without health insurance grew from 30 percent to 38 percent. For workers aged 35 to 49, the comparable shift in

uninsured rates went from 22 percent to 32 percent.

- The proportion of uninsured workers in firms with less than 25 employees jumped from 39 percent to 50 percent. Uninsured workers in firms employing 25 to 99 employees and in those with

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Uninsured workers

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- 100 or more employees saw their ranks rise from 22 percent to 31 percent and from 11 percent to 14 percent, respectively.
- The proportion of non-Hispanic black workers and white workers without health insurance increased from 18 percent to 27

percent and 22 percent to 28 percent, respectively.

- Among industry categories, workers in professional services had the largest increase in the proportion without health insurance, expanding from 11.5 percent to 26.4 percent.

These findings are based on analysis of the Medical Expenditure Panel Survey, a detailed source of

information on the health services used by Americans, how often they are used, the cost of those services, and how they are paid. For more information, see *Full-Time Poor and Low-Income Workers: Demographic Characteristics and Trends in Health Insurance Coverage, 1996-97 to 2005-06* at www.meps.ahrq.gov/mepsweb/data_files/publications/cb18/cb18.pdf. ■

Per-capita health care spending for seniors has increased by nearly a third

Spending to treat the health problems of Americans aged 65 and older increased by about \$2,000 for every senior who used health services between 1996 and 2006, according to the Agency for Healthcare Research and Quality (AHRQ). Average, inflation-adjusted spending for senior health care expenses rose from \$6,989 in 1996 to \$9,080 in 2006. AHRQ's study covered all Americans aged 65 and older with health care expenses, other than those residing in nursing homes and other institutions. The Agency also found significant increases in average spending for seniors on the following types of health care during the 10-year period (in 2006 dollars):

- Per prescription drug purchase—from \$105 to \$174 (66 percent)

- Physician office visit—from \$114 to \$180 per visit (58 percent)
- Dental visit—from \$187 to \$254 per visit (36 percent)
- Daily hospital stay—from \$2,271 to \$2,714 per day (20 percent)

These findings are based on analysis of the Medical Expenditure Panel Survey, a detailed source of information on the health services used by Americans, how often they are used, the cost of those services, and how they are paid. For details, see *Trends in Health Care Expenditures for the Elderly Age 65 and Older: 2006 versus 1996*, at www.meps.ahrq.gov/mepsweb/data_files/publications/st256/stat256.pdf. ■

Four in 10 emergency department visits are billed to public insurance

More than 40 percent of the 120 million visits that Americans made to hospital emergency departments (EDs) in 2006 were billed to public insurance, according to the Agency for Healthcare Research and Quality. About 50 million ED visits were billed to Medicaid and Medicare. The uninsured accounted for another 18 percent of visits for emergency care, while 34 percent were billed to private insurance companies. The rest were billed to workers' compensation, military

health plan administrator Tricare, and other payers.

The Agency's study of hospital ED use in 2006 also found that:

- About 38 percent of the 24.2 million visits billed to Medicare ended with the patients being admitted, compared with 11 percent of the 41.5 million visits billed to private insurers, 9.5 percent of the 26 million visits billed to Medicaid, and 7 percent of the 21.2 million visits by the uninsured.

- The uninsured were the most frequent users of hospital EDs. Their rate was 1.2 times greater than that of people with public or private insurance—452 visits per 1,000 people vs. 367 visits per 1,000 people, respectively.
- The uninsured were also the most likely to be treated and released—a possible indication of their use of hospital EDs as

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Emergency department visits

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their usual source of care. Their “treat-and-release” rate was 421 visits per 1,000 people vs. 301 per 1,000 people for the insured.

These findings are based on data in HCUP Statistical Brief

#77, *Payers of Emergency Department Care, 2006* (www.hcup-us.ahrq.gov/reports/statbriefs/sb77.pdf).

The report uses statistics from the 2006 Nationwide Emergency Department Sample, a new AHRQ database that is nationally representative of ED visits in all non-Federal hospitals. The

Nationwide Emergency Department Sample (<http://www.hcup-us.ahrq.gov/nedsoverview.jsp>) contains 26 million records from ED visits from approximately 1,000 community hospitals nationwide. This represents 20 percent of all U.S. hospital EDs. ■

Patients are increasingly leaving hospitals against medical advice

The number of hospital stays that ended with patients leaving against the advice of medical staff increased from 264,000 cases to 368,000—a 39-percent increase—between 1997 and 2007, according to the Agency for Healthcare Research and Quality (AHRQ). For cases in which patients left against medical advice in 2007, AHRQ also found that:

- The top five reasons were chest pain with no determined cause (25,600); alcohol-related disorders (25,300); substance-related disorders (21,000); depression or other mood disorders (13,900); and diabetes with complications (12,500).
- Medicaid and Medicare patients each accounted for about 27 percent of cases and privately insured patients accounted for 19 percent. About 22 percent of the cases in 2007 involved uninsured patients.

- Men were roughly 1.5 times more likely to leave against medical advice than women.
- In the Northeast, patients left hospitals against medical advice at twice the rate of that of the rest of the country—2 per 1,000 people versus an average of 1 per 1,000 people in all other regions.

These findings are based on data in *Hospitalizations in which Patients Leave the Hospital against Medical Advice (AMA), 2007*. The report uses statistics from the 2007 Nationwide Inpatient Sample, a nationally representative database of inpatient stays in all short-term, non-Federal hospitals. The data are drawn from hospitals that comprise 90 percent of all discharges in the United States and include all patients, regardless of insurance type, as well as the uninsured. For more details on the report, go to www.hcup-us.ahrq.gov/reports/statbriefs/sb78.pdf. ■

Treatment approaches for overactive bladder syndrome in women produce modest results

Drug therapy and behavior interventions produce modest results in reducing overactive bladder symptoms in women, according to a new evidence report by the Agency for Healthcare Research and Quality (AHRQ). About 11 million women in the United States cope on a daily basis with overactive bladder syndrome. Symptoms include sudden strong urges to urinate,

difficulty delaying going to the bathroom, and, in many cases, involuntary loss of urine when the urge strikes.

Researchers led by Katherine Hartmann, M.D., Ph.D., of the AHRQ-supported Vanderbilt University Evidence-based Practice Center, reviewed research evidence on treatments for overactive bladder. These treatments include prescription medications, both pills

and patches; surgeries and procedures; behavioral interventions; and complementary and alternative medicine, such as acupuncture, hypnotherapy and reflexology.

Drug therapy was found to be modestly effective at improving one or more overactive bladder symptoms; however, there is no evidence to determine the long-

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Overactive bladder syndrome

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term effectiveness of the drugs. Behavioral interventions yielded results similar to drug therapy in reducing symptoms of overactive

bladder. Researchers found little evidence to support the effectiveness of complementary and alternative therapies. Procedural and surgical treatments, such as sacral nerve stimulation (neuromodulation), and bladder instillation or injections, were found

to treat symptoms in select groups of women, though more information is needed to understand safety and effectiveness.

For more information, see *Treatment for Overactive Bladder in Women* at <http://www.ahrq.gov/clinic/tp/bladdertp.htm>. ■

Announcements

New guides can help pregnant women and doctors compare treatments for gestational diabetes

Two new guides released by the Agency for Healthcare Research and Quality (AHRQ) can help women with gestational diabetes and their doctors make informed decisions about different treatments for the condition. The consumer guide, *Gestational Diabetes: A Guide for Pregnant Women*, presents treatment options including diet, insulin, or the oral diabetes medicines glyburide or metformin. It also gives women advice on what they should do after pregnancy, such as having their blood sugar monitored regularly, since they have a higher risk of developing type 2 diabetes. The clinician's guide, *Gestational Diabetes: Medications, Delivery, and Development of Type 2 Diabetes*, covers these topics, provides an at-a-glance "clinical bottom line" for managing patients, along with ratings of the evidence for each treatment, a list of risk factors that may mean a woman is likely to develop type 2 diabetes, and other information on helping patients manage gestational diabetes.

The guides provide the latest scientific evidence on the effectiveness and safety of drugs for gestational diabetes, a potentially dangerous condition that affects

7 out of 100 pregnant women. The disease can cause the unborn child to become very large, resulting in longer labor, rupture of the uterus, trauma to the baby, and other complications. Gestational diabetes disappears after childbirth, but 5 percent of women who had it during pregnancy develop type 2 diabetes within 6 months and 60 percent within 10 years.

The guides were produced by AHRQ's Effective Health Care Program, which is the leading Federal effort to conduct comparative effectiveness research. The program, authorized by the Medicare Prescription Drug, Improvement, and Modernization Act, represents an important Federal effort to compare alternative treatments for health conditions and make the findings public. It is intended to help patients, doctors, nurses, pharmacists, and others choose the most effective treatments. Both the consumer Publication No. 09-EHC014-A) and clinician (Publication No. 09-EHC014-3) guides can be downloaded from the Web site at effectivehealthcare.ahrq.gov or ordered directly from AHRQ.* ■

AHRQ releases evidence on the health benefits of vitamin D and calcium

A new report by the Agency for Healthcare Research and Quality (AHRQ) reveals considerable uncertainty about the possible health benefits of consuming vitamin D and calcium, largely because of conflicting study findings or because specific health outcomes have not been studied. The review was conducted by the AHRQ-supported Tufts Evidence-

based Practice Center in Boston under the direction of Joseph Lau, M.D., professor of medicine. The authors reviewed 165 research reports and 11 systematic reviews, which included more than 200 additional research reports. All these studies evaluated serum 25-hydroxyvitamin D concentration, an indicator of the amount of vitamin D in a person's body, vitamin D

supplementation, dietary or supplementary calcium intake, or the two nutrients in combination. The report was commissioned by the Office of Dietary Supplements of the National Institutes of Health, the Food and Drug Administration, the Public Health Agency of Canada, and Health Canada, to make available independently

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Vitamin D and calcium

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developed, updated findings for dietary and supplemental calcium, vitamin D, and combinations of the two nutrients for a wide range of health outcomes. The results are for

possible consideration by a committee of the Institute's Food and Nutrition Board, which is currently reviewing the 1997 Dietary Reference Intakes recommendations for the amounts of vitamins and minerals that

people should consume daily. For details, see *Vitamin D and Calcium: Systematic Review of Health Outcomes* available at <http://www.ahrq.gov/clinic/tp/vitadcaltp.htm>. ■

AHRQ publishes hip fracture evidence report

According to a new report by the Agency for Healthcare Research and Quality (AHRQ), the types of devices that orthopedic surgeons use to repair different types of hip fractures in patients over the age of 50 do not appear to affect their outcomes. The authors, who are with the AHRQ-funded Minnesota Evidence-based Practice Center in Minneapolis, reviewed an extensive international body of research. However, due to inconsistencies in the studies, the strength of currently available evidence is limited to fair or poor to fair. The authors reviewed studies on the outcomes

of elderly patients who were treated for femoral neck, intertrochanteric, and subtrochanteric types of fractures. Their recommendations for improving the quality of this type of research include more collaboration between epidemiologists and surgeon researchers, including nursing home or dementia patients in studies, making consistent use of validated outcome measures, and pooling data. The review, which was requested by the American Academy of Orthopaedic Surgeons, was led by Mary Butler, Ph.D. For details, see *Treatment of Common Hip Fractures* at www.ahrq.gov/clinic/tp/hipfractp.htm. ■

Research Briefs

Alexander, C. G. and Stafford, R. S. (2009, June). "Does comparative effectiveness have a comparative edge?" (AHRQ grant HS15659). *Journal of the American Medical Association* 301(23), pp. 2488–2490.

In this commentary, the authors discuss the factors needed to permit comparative effectiveness research to substantially affect the practice of medicine. They argue there is a need for comparative effectiveness research to generate data more rapidly (before a clinical practice is widely adopted), link the evidence to strategies proven to modify practice, broaden the agenda beyond drugs and devices (to different treatment strategies and systems of care), alter the regulatory environment (particularly the Food and Drug Administration's [FDA's] drug and

device approval process), and consider the cost implications of practice alternatives. Barriers to creating and implementing comparative effectiveness findings include lack of comparison of medical management with surgical procedures, the FDA's historic focus on evaluating efficacy of new drugs against placebo rather than standard therapy in making approval decisions, and the impact of direct-to-consumer advertising of new, typically expensive drugs. The primary problem that may lead to failure of the competitive effectiveness initiative is not the absence of comparative knowledge, but of ways to put this knowledge to work, the authors conclude.

Clancy, C. M. (2009, May/June). "Re-engineered hospital discharge process lowers re-

admissions, reduces costs." *Patient Safety & Quality Healthcare* 6(3), pp. 8–9. Reprints (AHRQ Publication No. 09-R069) are available from AHRQ.*

The author begins by noting that shortened hospital stays in recent years require better planning for and explanation to the patient of posthospital care. She reports that a recent study found that 36 percent of patients discharged from the geriatric or medicine service at a large teaching hospital failed to get the after-discharge workups they needed. In addition, slightly more than half of the discharge summaries failed to document the workups recommended in the patients' hospital charts. Clinicians are seeking ways to close these information gaps. One such effort, Project RED (for Re-engineered

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Discharge) at Boston Medical Center in Massachusetts, has transformed how patients are discharged from the hospital and seen for followup care. The author summarizes the simple principles at the heart of Project RED, and the 11 steps that the project uses to put these principles into action. A randomized study of standard vs. re-engineered discharge found that patients who participated in the RED program had 30 percent fewer emergency department visits and readmissions than control patients, and were almost three times more likely to leave with followup appointments with their primary care physicians.

Clancy, C. M. and Hughes, R. G. (2009, April). "The stress of the care environment." *American Operating Room Nurses Journal* 89(4), pp. 751–753. Reprints (AHRQ Publication No. 09-R066) are available from AHRQ.*

In this commentary, the authors note some of the sources of stress that have led to nurses abandoning their profession for other careers. They point out that such loss of experienced nurses weakens the health care system's ability to provide quality care. Drawing on *Patient Safety and Quality: An Evidence-Based Handbook for Nurses*, published by the Agency for Healthcare Research and Quality, the authors highlight some key stressors that affect nurses. These include verbal bullying, restrictions on autonomy by physicians (who often see themselves as leaders of the health care team), and exclusion of nurses from the clinical decisionmaking process. Other stressors affecting nurses include the tradition-bound and highly stratified nature of most hospitals, the divergence between

nurses' training and their actual work environment, and the demands of the job.

Dhruva, S. S., Phurrough, S. E., Salive, M. E., and others. (2009, June). "CMS's landmark decision on CT colonoscopy—Examining the relevant data." *New England Journal of Medicine* 360(26), pp. 2699–2701. Reprints (AHRQ Publication No. 09-R075) are available from AHRQ.*

The authors of this commentary discuss the recent decision by the Centers for Medicare & Medicaid Services (CMS) to deny coverage of computed tomographic (CT) colonoscopy for cancer screening. CMS chose to deny coverage because the evidence of effectiveness of this technique was inadequate, especially for the Medicare age group. They note that the clinical trials that showed benefit of screening with this noninvasive technique had a mean age significantly lower than that of Medicare beneficiaries. What's more, there were no studies either evaluating this technology in the elderly or analyzing subgroups of participants older than 65 years of age. The authors reviewed the evidence used to make decisions on other recent payment decisions by CMS and found similar problems regarding age groups, analysis by sex, and representation of racial or ethnic minority groups. They note that groups with a financial stake in specific technologies—specifically, radiologists and equipment manufacturers involved with cardiac CT—have been able to influence CMS to back down on previous denials of coverage by lobbying Congress, often leaving a geographic patchwork of payment. The CT colonoscopy decision was different, in part, because Congress had authorized CMS to consider costs as well as clinical

effectiveness, the authors note. They hope that CMS holds to its colonoscopy decision and expands its evidence-based approach.

Elliott, M. N., Morrison, P. A., Fremont, A., and others. (2009). "Using the Census Bureau's surname list to improve estimates of race/ethnicity and associated disparities." (AHRQ Contract No. 282-00-0005). *Health Services Outcomes Research Methods* 9, pp. 69–83.

What's in a name? According to this paper's authors, using a list of relatively common surnames from the 2000 Census can help improve estimates of race or ethnicity in patient data, and therefore give a better estimate of associated disparities in care. The 151,671 surnames listed by at least 100 individuals represent 89.8 percent of all individuals enumerated in the 2000 Census, the authors say. Using the self-reported racial and ethnic affiliations for each surname, together with geographical information, researchers can calculate a set of likelihoods for someone with a specific surname being white, black, Hispanic, etc. For example, someone with the surname Washington is 90 percent likely to be black, while individuals named Yoder or Novak have a 97 chance of being non-Hispanic whites, the authors note. By using Bayesian analysis to adjust the national racial probabilities for a given surname for the person's Census block of residence, the authors get a set of updated probabilities of the individual belonging to a particular race or ethnic group. The authors suggest that use of first name listings may improve prediction estimates, particularly for blacks and some Asian subgroups.

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Fongwa, M., Cunningham, W., Weech-Maldonado, R. and others. (2008, November). "Reports and ratings of care: Black and white Medicare enrollees." (AHRQ grants HS09204 and HS16980). *Journal of Health Care for the Poor and Underserved* 19(4), pp. 1136–1147.

Consistent with the Institute of Medicine's observation that racial and ethnic minorities are less likely than whites to receive needed services, a new study finds that blacks insured by Medicare have far worse experiences than their white counterparts with getting care quickly, getting needed care, office staff helpfulness, and health plan customer service. They also rate their specialist care and health plans more negatively. However, elderly blacks reported better provider communication than their white counterparts and rated their personal doctors and nurses more positively. The study used the 2002 Consumer Assessment of Healthcare Providers and Systems survey of 101,189 white and 8,791 black Medicare enrollees randomly sampled from 321 health plans.

Fowler, F. J., Epstein, A., Weingart, S. N., and others. (2008, October). "Adverse events during hospitalization: Results of a patient survey." (AHRQ grant HS11928). *Joint Commission Journal on Quality and Patient Safety* 34(10), pp. 583–590.

After interviewing nearly 2,600 patients discharged from 16 diverse Massachusetts hospitals over a 5-month period in 2003, researchers found that one in four patients experienced a medical error or safety problem. These adverse events rates were substantially

higher than the rates published in hospital records. Reactions to drugs newly prescribed at the hospital accounted for 40 percent of the events, while another 34 percent of the adverse events were related to surgery. Ongoing hospital care also presented problems, such as falls (14 percent of all adverse events), rashes caused by bandages (15 percent), and drops in blood pressure (11 percent). Physician reviewers on the research team determined that 31 percent of the reported adverse events were likely preventable.

Goldmakher, G. V., Camargo, E. C. S., Furie, K. L., and others. (2009, January). "Hyperdense basilar artery sign on unenhanced CT predicts thrombus and outcome in acute posterior circulation stroke." (AHRQ grant HS11392). *Stroke* 40(1), pp. 134–139.

Blockage of the basilar artery along the brainstem at the back of the brain is typically a devastating stroke event that can lead to disability and death. Early diagnosis is critical so that clot-busting therapy or other supportive measures can begin. A new study suggests that community hospitals can use unenhanced computerized tomography (CT) to diagnose these dangerous blood clots. The researchers examined unenhanced CT scans obtained within 24 hours of symptom onset in 95 patients with suspected posterior circulation stroke. Three neuroimagers rated the presence of hyperdense basilar artery (HDBA) sign, a strong predictor of a blood clot in the basilar artery, on unenhanced CT scans. HDBA sign had 71 percent sensitivity, 98 percent specificity, 94 percent accuracy, 83 percent positive predictive value, and 95 percent negative predictive values

for basilar artery occlusion. The HDBA sign increased fivefold the likelihood of poor long-term outcome.

Hammill, B. G., Hernandez, A. F., Peterson, E. D., and others. (2009, June). "Linking inpatient clinical registry data to Medicare claims data using indirect identifiers." (AHRQ grant HS10548). *American Heart Journal* 157(6), pp. 995–1000.

The authors of this paper demonstrate that it is possible to create a high-quality link between inpatient clinical registry data and Medicare claims data, even if there are no direct patient identifiers (patient name or Social Security number) common to the two data sources. The absence of such direct identifiers in disease- and procedure-specific registries has made it difficult, if not impossible, to follow the registry patients as outpatients. Among all Medicare claims, almost all records were unique when unique dates of birth were considered with any combination of admission or discharge date, regardless of patient sex, the authors say. They validated the links between Medicare claims data and clinical registry data by comparing Medicare hospital names for the claim with the hospital names in the registry. This process was limited to patients age 65 years or older who were not treated in a Veterans Affairs hospital. Once registry patients have been identified in Medicare, researchers can track postdischarge outcomes such as mortality, readmission, and subsequent inpatient procedures, the authors note. This would permit researchers to investigate questions of long-term safety and efficacy of inpatient treatments.

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Hersh, A. O., von Scheven, E., Yazdany, J., and others. (2009, January). "Differences in long-term disease activity and treatment of adult patients with childhood- and adult-onset systemic lupus erythematosus." (AHRQ grant HS13893). *Arthritis & Rheumatism* 61(1), pp. 13–20.

Individuals living with childhood-onset systemic lupus erythematosus (cSLE) have worse outcomes and take more steroids than those who developed the disease as adults (adult-onset or aSLE), according to a new study based on self-report data of 90 adults with cSLE and 795 with aSLE from the University of California Lupus Outcomes Study. Those with aSLE were more likely to have active disease on all measures of disease activity, such as flareups in the past 3 months (49.9 vs. 23.7 percent), and were more likely to develop pulmonary disease. Those with cSLE were more likely to be on prolonged steroid therapy and to develop SLE-related kidney disease. Rates of heart attack were similar between the two groups; however, the average age of first heart attack was 32 years in the cSLE group and 48 in the aSLE group. These findings may help develop tailored treatments based on age at SLE onset and underscore the need for clinical support as patients transition from pediatric to adult rheumatology care.

Hill, S. C. and Miller, G. E. (2009). "Health expenditure estimation and functional form: Applications of the generalized gamma and extended estimating equations model." *Health Economics* (available at <http://www3.interscience.wiley.com/journal/5749/home>). Published

online May 11, 2009. Reprints (AHRQ Publication No. 09–R067) are available from AHRQ.*

The authors note that regression models of health care expenditures are used in a wide variety of economic analyses, including risk adjustment and evaluations of both programs and treatments. Specifically, generalized gamma models (GGMs) and extended estimating equations models (EEEs) have proven useful in expenditure estimation in situations with a variety of data problems. The authors use data from the AHRQ Medical Expenditure Panel Survey to compare the bias, predictive accuracy, and marginal effects of these models and four other estimation models in more common use. The study shows that the EEE model is a robust estimator for health expenditures, minimizing bias and prediction error. However, it requires large samples to obtain precise estimates of coefficients and marginal effects, the authors report.

Jackson, S. L., Taplin, S. H., Sickles, E. A., and others. (2009, June). "Variability of interpretive accuracy among diagnostic mammography facilities." (AHRQ grant HS10591). *Journal of the National Cancer Institute* 101(11), pp. 814–827.

To try to identify the factors that lead to differences in results among radiology facilities that do diagnostic mammography, the authors conducted a study of facilities associated with three mammography registries belonging to the national Breast Cancer Surveillance Consortium. They analyzed rates of false-positive mammograms, sensitivity, and likelihood of cancer among women referred for breast biopsies at 32 radiography facilities in the Pacific Northwest, Colorado, and New

Hampshire. The analyses included 28,100 diagnostic mammograms and data on 118 radiologists who interpreted them. The authors found that, after adjustment for patient and radiologist characteristics, the facilities differed significantly only in the percentage of false-positive mammograms. Facilities with higher concern about malpractice had higher false-positive rates, the authors found.

Kirby, J. B. (2008, September). "Poor people, poor places and access to health care in the United States." *Social Forces* 87(1), pp. 325–355. Reprints (AHRQ Publication No. 09–R047) are available from AHRQ.*

This study used data from the 2000 Medical Expenditure Panel Survey and U.S. Census data to identify the prevalence of poverty in communities and its relationship to health care access. The researcher found that individuals living below 200 percent of the Federal poverty line were not adversely affected by community-level poverty when it came to accessing health care. Instead, those individuals living above the 200 percent poverty line were the most affected by poverty in their community in terms of health care access.

In fact, this group completely accounted for the negative relationship found between community-level poverty and access to health care. There was no evidence that higher income residents living in poor communities can use their extra resources to overcome the disadvantage of living in these environments.

Korthuis, P. T., Saha, S., Fleishman, J. A., and others. (2008, December). "Impact of

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patient race on patient experiences of access and communication in HIV care.” (AHRQ grant HS13903 and contract 290-01-0012). *Journal of General Internal Medicine* 23(12), pp. 2046–2052. Reprints (AHRQ Publication No. 09–R032) are available from AHRQ.*

This study suggests that HIV care sites that provide services to a greater proportion of blacks and Hispanics than whites may be more difficult to access for all patients. Researchers surveyed 915 HIV-infected adults receiving care at 14 U.S. HIV clinics. On average, blacks and Hispanics spent more time traveling to the care site than whites (36 and 37 vs. 29 minutes). Further, travel time to the HIV care site lengthened as the proportion of black and Hispanic patients increased at a given site. Waiting times at care sites were longer for Hispanics and blacks than whites (36 and 31 vs. 27 minutes) and increased with the proportion of Hispanic (but not black) patients at each site. Improving access will provide more patient-centered care for blacks and Hispanics who need treatment for HIV. Despite travel and wait times, patients gave high ratings for the quality of communications with their providers.

Lautenbach, E., Babson, A., Santana, E., and others. (2009, April). “Assessment of the use of urine samples to detect colonization with fluoroquinolone-susceptible and fluoroquinolone-resistant *Escherichia coli*.” (AHRQ grant HS10399). *Infection Control and Hospital Epidemiology* 30(4), pp. 396–397.

The authors examined whether urine samples could give additional

information about the presence of fluoroquinolone-susceptible or –resistant strains of *Escherichia coli* (*E. coli*) bacteria beyond that obtained from rectal swabbing. The study, carried out in two long-term care facilities associated with the University of Pennsylvania, required growing the bacteria from swabs or urine on culture dishes in the presence or absence of the antibiotic fluoroquinolone. *E. coli* was identified in 55 percent of 56 perirectal swabs, and in 11 percent of 56 urine samples. In all six perirectal swab samples paired with urine samples that produced bacterial strains, the same strain was found in the urine sample. However, in some cases distinct bacterial strains were found in urine samples, but were not found in subsequent perirectal samples. While the use of urine samples may give a more complete measure of total exposure of the patients to colonizing bacterial strains, not all of the distinct *E. coli* strains were found to colonize the gut. The value of adding urine collection to the study will depend on the aims of the study, the authors conclude.

Levtzion-Korach, O., Alcalai, H., Orav, E. J., and others. (2009, March). “Evaluations of the contributions of an electronic web-based reporting system: Enabling action.” (AHRQ grant HS11046). *Journal of Patient Satisfaction* 5(1), pp. 9–15.

Incident reporting represents a key tool in safety improvement, and electronic voluntary reporting systems are increasingly being implemented. Since most studies of such systems have focused on the act of reporting, the researchers decided to study not only the rate and content of such reports, but also the actions and followup that result from the reports. They analyzed 14,179 reports submitted

over a 31-month period through a Web-based system operating at a large urban hospital. Most reports involved laboratory results (30.4 percent), followed by medications (17.2 percent), and falls (10.9 percent). The majority of reports (70 percent) were reviewed by an average of four people within 72 hours. First manager review was completed within a median of 22 hours. The followup actions taken included change of equipment, change of policy, further education, and change of staffing levels. The researchers conclude that the Web-based reporting system effectively captured incidents, actions, and followup.

Messina, C. R., Lane, D. S., and Colson, R. C. (2009, July/August). “Colorectal cancer screening among users of county health centers and users of private physician practices.” (Cooperative agreement between AHRQ and the National Cancer Institute). *Public Health Reports* 124, pp. 568–578.

Compliance with colorectal cancer (CRC) screening recommendations remains suboptimal. The researchers examined the use of CRC screening methods among 500 county health center registrants and 570 private physician patients aged 52 to 75 years in Suffolk County, New York. The screening methods were the fecal occult blood test (FOBT), sigmoidoscopy, and colonoscopy. Among county health center registrants, FOBT was more frequent; among private physician patients, sigmoidoscopy and colonoscopy were more common. County health center registrants less frequently cited no physician recommendation as a barrier to FOBT, but more frequently cited no recommendation as a barrier to

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sigmoidoscopy and colonoscopy compared with private physician patients. Among private physician patients, there was an association between perceived barriers to screening and lower odds of any screening. Lack of health insurance or inadequate health insurance remain barriers to equitable use of endoscopy among both groups of patients.

Resnik, L., and Plow, M. A. (2009, May). "Measuring participation as defined by the International Classification of Functioning, Disability, and Health: An evaluation of existing measures." (AHRQ grant T32 HS00011). *Archives of Physical Medicine Rehabilitation* 90, pp. 856–866.

The researchers compared and evaluated measures designed to assess participation, disability, and handicap by using the International Classification of Functioning, Disability, and Health (ICF). The World Health Organization's ICF model is the most recent and comprehensive model of functioning and disability. Content analysis was conducted by classifying participation-related items of each measure into one of the nine activities and participation chapters of the ICF taxonomy. Forty generic and condition-specific self-report measures that met inclusion criteria were evaluated. Five measures that contained participation items linked to all nine chapters were the Community Living Skills Scale, the Assessment of Life Habits, the Mayo-Portland Adaptability Inventory, the Participation Measure for Post-Acute Care, and the Psychosocial Adjustment to Illness Scale. These five measures were compared with respect to their breadth and coverage. Each of the

measures differed in specifics of coverage and the approach to assessing participation. Clinicians and researchers can use these findings to select the most comprehensive participation outcome measure for their population.

Sedrakyn, A. (2009, June). "CABG versus PCI for multivessel coronary artery disease." *The Lancet* 373, pp. 2199–2200. Reprints (AHRQ Publication no. 09-R077) are available from AHRQ.*

In a letter to the editor, the author criticizes some of the presentation and reporting of data in a study (Hlatky and colleagues, April 4, p. 1190) pooling data from trials of coronary artery bypass grafting (CABG) vs. percutaneous coronary interventions. He criticizes a table depicting 5-year event rates for showing only the overall hazard ratio of 0.91, instead of including relative risk estimates and p values for 5-year followup. Also unclear is whether the final statistical model included the two interaction terms that were significant (age and diabetes). In addition, using a very high standard for reporting subgroup effects ignores the evidence favoring the lower mortality in CABG patients with stable symptoms. Finally, even if only diabetes and older people are the subgroups that will have lower mortality with CABG, in the real world they represent more than 55 percent of people undergoing revascularization.

Shin, J.K. (2009). "Inpatient stays of Asian patients with psychiatric diagnoses in New York City." (AHRQ grant HS00149). *Issues in Mental Health Nursing* 30, pp. 112–121.

Asian Americans may resist using Western mental health services for many reasons including

stigma, fear of institutionalization, and lack of faith in the benefits of psychotherapy; however, a number of studies have suggested that those who do enter the mental health system are among the most severely disturbed patients. Using New York City data from 1995 to 1999, the researcher sought to determine whether Asians, after adjusting for other covariates in large data sets, have longer length of stay (LOS). The author found that schizophrenic disorders were the most frequent diagnoses among Asians, with a rate twice as great among Asians as among non-Asians. In the study period, Asians stayed between 2.59 and 1.67 additional days longer than non-Asians. Also, Asians, when compared to non-Asian groups, were underrepresented in inpatient services. They were only about 1 percent among total hospitalized patients with psychiatric disorders, while the population of Asians in New York City was 10 percent during this study.

Sterkel, R., Banister, C., Bruns, J. and others. (2009, June). "Collaboration with pediatric call centers for patient recruitment." (AHRQ grant HS15378). *Archives of Pediatric Adolescent Medicine* 163(6), pp. 588–589.

Recruitment of study subjects who are representative of community members is difficult. The researchers collaborated with a pediatric call center to recruit subjects for a study to evaluate whether a telephone coaching program for parents of young children with persistent asthma would reduce asthma morbidity. They found 114 pediatricians who used the call center and gave their permission to contact families from

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their practice who had received asthma care from the call center. Initially, call center nurses attempted recruitment, but parents were rarely at home during hours when the nurses could call, so study staff were allowed to contact families directly. Although multiple calls were sometimes necessary, there were few problems in the recruitment process. The collaboration with the call center enabled the researchers to reach their recruitment target of 360 children within 13 months. The use of the call center allows access to a broad sample of potentially eligible subjects who are likely representative of the general pediatric population.

Wakefield, D. S., Brokel, J., Ward, M. M., and others. (2009). "An exploratory study measuring verbal order content and context." (AHRQ grant HS15196). *Quality and Safety in Health Care* 18, pp. 169–173.

The use of verbal orders (VO), while essential in some health care settings, has been identified as a potential contributor to poor quality and less safe care. Both the content and the context of VOs potentially contribute to errors. The authors first identify variables related to VO content and context, and then provide detailed analyses from two exploratory studies conducted in a community hospital. Content variables include complexity, urgency, use of abbreviations, high-alert medications, and drugs with sound-alike names. Context variables include the type of care setting, the time of day, the communication process (face-to-face vs. telephone), personnel characteristics, and environmental factors such as background noise and staffing levels. The authors

present analyses that focus on variations in types and timing of verbal orders hospitalwide as well as for specific inpatient units, changes in the use of VOs following implementation of a computerized provider order entry system, and the presence of sound-alike and high-alert medications in VOs.

Wideroff, L., Phillips, K. A., Randhawa, G., and others. (2009). "A health services research agenda for cellular, molecular, and genomic technologies in cancer care." *Public Health Genomics* 233–244. Reprints (AHRQ Publication No. 09-R071) are available from AHRQ.*

Extensive resources have been invested to develop cellular, molecular, and genomic (CMG) technologies with clinical applications that span the continuum of cancer care. In December 2006, the National Cancer Institute (NCI) sponsored the first workshop of researchers to focus on the delivery of CMG interventions in cancer care. The authors report on the outcomes of this workshop. The workshop identified a comprehensive research agenda to better understand the delivery of care for emerging CMG interventions. This agenda incorporates health and safety endpoints, utilization patterns, patient and provider preferences, quality of care and access, disparities, economics and decision modeling, trends in cancer outcomes, and health-related quality of life among target populations. The workshop discussion included such issues as the scope of CMG technologies in cancer care, gaps in efficacy and effectiveness research, how to address these gaps, and challenges in addressing gaps.

Winter, L., Moss, M.S., and Hoffman, C. (2009). "Affective forecasting and advance care planning: Anticipating quality of life in future health statuses." (AHRQ grant HS13785). *Journal of Health Psychology* 14(3), pp. 447–456.

Affective forecasting, the process by which people anticipate their emotional responses to future events, has attracted considerable research attention in recent years. Decades of research using various methods document that quality-of-life valuations from patients with a particular illness tend to be higher than those without. Hence, sicker individuals express wishes for longer life in future poor-health statuses than do those who are well. To understand the decision process that underlies these choices, the authors previously proposed Prospect Theory, a powerful decision model that explains why closer prospects are easier to distinguish than more distant prospects. For this study, they interviewed 230 elderly persons by asking the Years of Desired Life questions which were linked to 9 separate health scenarios. They found that the interaction between current health status and health scenario supported the relative acceptability of poor-health prospects to sicker individuals, confirming the initial hypothesis.

Zuvekas, S. H., and Olin, G. L. (2009, Spring). "Accuracy of Medicare expenditures in the Medical Expenditure Panel Survey." *Inquiry* 46, pp. 92–108. Reprints (AHRQ Publication No. 09-R068) are available from AHRQ.*

In detailed comparisons of the Medical Expenditure Panel Survey (MEPS) with the National Health Expenditure Accounts (NHEA), an earlier study had found an

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estimated gap in expenditures of 14 percent between MEPS and NHEA. The authors examined underreporting and underrepresentation of high expenditure cases in the MEPS that had been identified as the primary drivers of this gap. They found that underreporting in the MEPS

affected all population groups, but there were important differences in the extent of underreporting. Underreporting was relatively greater for nonwhites compared with whites in the analytic matched sample. There was also significant geographic variation in the reporting of Medicare expenditures in the analytic matched sample. Overall, there was a 19 percent gap between the MEPS estimates of

Medicare expenditures in the matched analytic sample and a comparably defined sample of beneficiaries in the Medicare Current Beneficiary Survey. About half of the gap was due to underreporting and the other half appeared due to underrepresentation of high-expenditure cases in the matched analytic sample. ■



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