



# RESEARCH ACTIVITIES

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## Patients admitted to the hospital on weekends wait for major procedures

**O**f the 8 million patients who were admitted to U.S. hospitals on weekends in 2007, approximately one-third received needed major procedures on the day of admission, according to the latest data from the Agency for Healthcare Research and Quality. Yet 65 percent of patients who were admitted on weekdays received needed major procedures on their first day in the hospital.

Patients who were admitted on weekends were nearly three times more likely to be there due to emergencies, such as heart attack, stomach bleeding, fractures, or internal injuries than patients hospitalized on a weekday (28 vs. 11 percent). In addition, 65 percent of patients admitted on weekends were initially seen in hospital emergency departments compared with 44 percent of weekday-admitted patients. The Agency's analysis also found that:

- Nearly 7 of every 10 patients hospitalized on a weekend were admitted through the emergency department compared with roughly 4 in 10 patients admitted during a weekday.
- Sixty-four percent of heart attack patients admitted on a weekend

had a major cardiac procedure such as angioplasty or heart bypass surgery performed by the second day of their hospitalization compared with 76 percent of heart attack patients admitted on a weekday.

- A smaller share of weekend than weekday admissions received treatment on the day of admission for back surgery (35 vs. 90 percent); angina (23 vs. 37 percent); gallbladder removal (23 vs. 32 percent); and hernia repair (54 vs. 68 percent).
- Weekday admissions were often planned in advance. For example, 99 percent of admissions for osteoarthritis and 93 percent of those for back problems occurred on weekdays.
- About 2.4 percent of patients admitted on a weekend died in the hospital compared with 1.8 percent of patients admitted on a weekday.

These findings are based on data from the report *Characteristics of Weekday and Weekend Hospital Admissions*. The report uses statistics from the 2007 Nationwide Inpatient Sample, a database of

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## Hospital admissions

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nationally representative hospital 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. You can view the report at [www.hcup-us.ahrq.gov/reports/statbriefs/sb87.pdf](http://www.hcup-us.ahrq.gov/reports/statbriefs/sb87.pdf). ■

## Patient Safety and Quality

### Physicians need to be better educated about FDA-approved indications for drugs and evidence for off-label drug use

Physicians frequently prescribe FDA-approved drugs for nonapproved indications. This “off-label” use may be a source of innovation, and in some settings represent the standard of care. However, off-label use of drugs often lacks supporting evidence and may expose patients to unwarranted risk. The researchers used a survey to assess physicians’ knowledge of the evidence supporting a set of 14 commonly used drug-indication pairs that varied in the FDA-approval status and level of supporting evidence. Physicians knew the FDA-approval status for only 55 percent of drug-indication pairs, according to Donna T. Chen,

M.D., M.P.H., of the University of Virginia, and colleagues.

Physician accuracy increased only modestly (to 60 percent) when the drug-indication pairs were confined to those that the physician reportedly prescribed during the previous year. Also, 41 percent of physicians erroneously believed some off-label uses to be FDA-approved, despite uncertain or no evidence of efficacy for the off-label use.

The survey results indicate an urgent need for effective methods of disseminating information to physicians about the level of evidence supporting off-label drug uses, with specific attention to

common off-label uses known to be ineffective or to carry unacceptable risk of harm, suggest the researchers.

They surveyed 600 psychiatrists and 599 primary care physicians with a 62-item questionnaire. Psychiatrists were included in the survey since psychiatric medications are among those most often used off-label by psychiatrists and generalists alike. Drugdex, a commercial indexing service, was used to categorize labeling status and the level of evidence regarding efficacy. This study was supported in part by the Agency for

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### Also in this issue:

**Chemotherapy and later cardiac problems among breast cancer patients, see page 6**

**Impact of neighborhoods on children’s weight, see page 9**

**Underuse of colorectal cancer screening among minorities, see page 16**

**Information technology benefits for nursing homes, see page 20**

**Safety of vaginal birth after cesarean, see page 22**

## Off-label drug use

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Healthcare Research and Quality (HS15699).

See “U.S. physician knowledge of the FDA-approved indications and evidence base for commonly

prescribed drugs: Results of a national survey,” by Dr. Chen, Matthew K. Wynia, M.D., M.P.H., Rachael M. Moloney, B.A., and G. Caleb Alexander, M.D., M.S., in *Pharmacoepidemiology and Drug Safety* 18, pp. 1094-1100, 2009. ■  
MWS

## To reduce hospital deaths, managing surgical complications may be as important as preventing them

Differences in hospital deaths among patients who had inpatient surgery depend on two factors, according to a recent study: avoiding surgery-related complications and timely recognition and management of complications once they occur. Among 84,730 patients who underwent general or vascular surgery as inpatients, about one in six patients had a surgical complication, and more than half of such complications were serious. Mortality ranged from 3.5 percent in the fifth of hospitals with the lowest risk-adjusted death rate to 6.9 percent in the fifth of hospitals with the highest death rates. The researchers could not attribute the differences in mortality to differences in the type of surgeries done at the high- and low-death-rate hospitals. Nor did they find significant differences in the types of complications reported or overall rate of complications.

Hospitals with very high or very low mortality rates had similar rates of complications (24.6 and 26.9 percent, respectively) and major complications (18.2 and 16.2 percent, respectively). However, patients who were treated for surgery-related complications at high-

death-rate hospitals were nearly twice as likely to die from a major complication (21.4 percent) than patients at a low-death-rate hospital (12.5 percent).

These findings suggest that improving the care that patients receive once complications have occurred is crucial for reducing mortality, note the researchers. They recommend that initiatives to improve the care of patients once a complication has occurred focus on structural or organizational factors, such as promoting minimum standards for nurse staffing or organization of the intensive care unit. Their findings were based on data on patients who had undergone inpatient general and vascular surgery from 2005 through 2007 at hospitals participating in the American College of Surgeons National Surgical Quality Improvement Program. The study was funded in part by the Agency for Healthcare Research and Quality (HS17765).

More details are in “Variation in hospital mortality associated with inpatient surgery,” by Amir A. Ghaferi, M.D., John D. Birkmeyer, M.D., and Justin B. Dimick, M.D., M.P.H., in the October 1, 2009, *New England Journal of Medicine* 361(14), pp. 1368-1375. ■ *DIL*

## FACE cards have a small positive effect on hospital patients' ability to identify their physicians

Improving patients' ability to identify their hospital physicians and understand their doctors' roles is vital to safe patient care. However, patients report that doctors often fail to introduce themselves and that they do not understand their doctors' roles on their care team. With use of picture identification cards, patients were significantly more likely to correctly identify at least one inpatient physician (21.1 percent) than those without picture cards

(12.5 percent), according to a new study. However, in spite of the picture cards, the majority of patients still could not correctly identify an inpatient physician.

Patients who cannot identify their inpatient physicians may be more likely to suffer harm and have difficulties obtaining answers to questions about their recent hospitalization after discharge, note the researchers. During the intervention period, team members (attending, resident, and intern

physicians) introduced themselves to 857 inpatients at one hospital with the FACE (Feedback Care and Evaluation) cards, which were placed in plastic cardholders left in the rooms by environmental services staff. The size of a baseball card, each FACE card had a picture of the team member together with name and title. The reverse side included a description of the physician's level of training and specific role. Later, during an

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## FACE cards

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inpatient interview, research assistants asked patients to name their inpatient physicians and to rate their understanding of their physicians' roles.

The researchers were surprised that fewer patients rated their understanding of their physicians'

roles as excellent or very good in the intervention period (45.6 percent) compared with the 1,686 patients at the same hospital during the baseline period before FACE cards (55.3 percent). The researchers speculated this was because the roles as listed on the cards were too confusing for the patients to understand. The study was supported in part by the

Agency for Healthcare Research and Quality (HS16967).

See "Improving inpatients' identification of their doctors: Use of FACE cards," by Vineet M. Arora, M.D., M.A., Caitlin Schaninger, Michael D'Arcy, Ph.D., and others in the December 2009 *Joint Commission Journal on Quality and Patient Safety* 35(12), pp. 613-619. ■ MWS

## Types and rates of fungal infections vary among groups and treatment is often suboptimal

Superficial fungal infections can affect the scalp (e.g., ringworm), feet (e.g., athlete's foot), nails, and the groin area (e.g., jock itch), among other parts of the body. A new study finds population-based differences in who is affected by such infections. What's more, those who have them may not be getting optimal treatment from their health care providers.

The study found more than 4 million health care visits each year from 1995 to 2004 for superficial fungal infections. Most visits were for infections of the nails (23.2 percent), followed by skin (20.4 percent), and feet (18.8 percent).

Most nail infections (71.6 percent) affected individuals older than 45 years. More men had foot infections than women, perhaps related to men's greater participation in manual labor and sports. These activities involve wearing shoes for long periods, which increases the risk of such infections. Blacks, particularly poor school-aged children, were more likely to have scalp fungal infections than whites.

Troubling was the fact that ineffective treatment was provided to patients with fungal infections of the feet, skin, and groin. For example, polyenes such as nystatin,

are not effective against most tinea (ringworm) infections, but were commonly prescribed for tinea pedis (foot), tinea corporis (body), and tinea cruris (groin/perineum). According to the researchers, better health care provider education is needed to help with the correct diagnosis, treatment, and prevention of these various fungal conditions. Their findings were based on analysis of data on outpatient visits, including patient characteristics, geographic region, diagnosis codes for common fungal infections, and the antifungal drugs used to treat them from the National Ambulatory Medical Care Survey and the National Hospital Ambulatory Medical Care Survey. The study was supported in part by the Agency for Healthcare Research and Quality (HS14563).

See "Cutaneous fungal infections in the United States: Analysis of the National Ambulatory Medical Care Survey (NAMCS) and National Hospital Ambulatory Medical Care Survey (NHAMCS), 1995-2004," by Anil A. Panackal, M.D., F.A.C.P., Elkan F. Halpern, Ph.D., and Alice J. Watson, M.D., M.P.H., in the *International Journal of Dermatology* 48, pp. 704-712, 2009. ■ KB

## 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](http://psnet.ahrq.gov).

## Rural and urban residents have similar perceptions of health care quality, despite differences in care delivery

Both urban and rural residents have similar overall perceptions of health care quality, even though the context in which care is delivered and individual-level characteristics of these areas differ, reveals a new study. Lars F. Peterson, M.D., Ph.D., of the Medical University of South Carolina, studied a sample of 11,255 individuals in 48 rural counties, and 28,698 individuals in 40 urban counties of Ohio. He asked participants to rate the overall quality of care they received in the past year. He obtained additional data to determine the characteristics of each community and its health care delivery system.

The context in which health care was delivered differed in rural and urban areas. Compared with urban areas, health care resources in rural areas were characterized by fewer

health care providers per capita, a higher proportion of primary care providers, and less managed care penetration. Rural areas also differed from urban areas in individual-level characteristics. For example, they had higher rates of unemployment, lower rates of educational attainment, lower median income, and more individuals with poorer health status.

After adjusting for contextual and individual-level characteristics, there were no significant differences in how rural and urban respondents perceived the quality of care they received. After adjusting for individual-level characteristics, residing in a small rural county nonadjacent to a large urban area was the only characteristic associated with a lower quality rating. Higher care quality was

associated with an increasing proportion of hospitals offering more than 25 services in urban areas. This resulted in close to a 1-point increase in perceived quality. The findings suggest that those who have crafted rural and urban health care systems may have anticipated and/or matched the health care needs and expectations of their service populations, concludes Dr. Peterson. His study was supported in part by the Agency for Healthcare Research and Quality (T32 HS00059).

See “Associations between self-reported quality of care and county characteristics are largely similar in rural and urban settings,” by Dr. Peterson in the October-December 2009 *Quality Management in Health Care* 18(4), pp. 257-267. ■  
KB

## Making nursing home quality reports public leads to improved posthospitalization care

Public reports on the quality of care are one way to motivate health care institutions to strive for excellence. For example, the Nursing Home Compare Web site, launched in 2002, publicly rates the performance of nursing homes on certain quality measures. The launch of this Web site was associated with improvement in two of the three postacute (posthospitalization) care performance measures: no pain and improved walking. However, it was not linked to fewer potentially preventable reshospitalizations, a broader measure of nursing home postacute care quality, reveals a new study.

Rachel M. Werner, M.D., Ph.D., of the University of Pennsylvania, and colleagues used national data collected between 1999 and 2005 on every resident in Medicare- and Medicaid-certified nursing homes. They also used information from Medicare part A claims to determine the number of potential hospital readmissions that could have been prevented. Their analysis was limited to the quality of postacute care rather than long-term care. They compared these

quality measures both before the launch of the Nursing Home Compare Web site and after and controlled for secular trends in quality using nursing homes not included in public reporting. The Web site contains reports on 10 quality measures from more than 17,000 nursing homes. The study included information on 8,137 nursing homes and nearly 1 million postacute care stays.

Two of the three postacute quality measures were better in the 3 years after the public reporting system was launched than before. The number of patients without moderate-to-severe pain improved 0.6 percent. There was also a 0.7 percent improvement in the number of patients with improved walking, but no change in the number of patients without delirium. There was also no significant improvement observed in the rate of preventable reshospitalizations. The researchers recommend combining public reporting with pay-for-performance incentives to drive even

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## Posthospitalization care

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stronger improvements in quality. Their study was supported in part by the Agency for Healthcare Research and Quality (HS16478).

See “Impact of public reporting on quality of postacute care,” by Dr. Werner, R. Tamara Konetzka, Ph.D., Elizabeth A. Stuart, Ph.D., and others, in *HSR: Health Services Research* 44(4), pp. 1169-1187, 2009.

■ KB

## Women's Health

### Chemotherapy that contains anthracyclines is associated with later cardiac illness in breast cancer patients

**A**nthracyclines are effective chemotherapy agents for battling breast cancer. However, because high doses can damage the heart, lifetime limits are placed on these drugs. A new study finds that women who received anthracycline-containing chemotherapy were 25 percent more likely to have congestive heart failure than women who did not receive chemotherapy.

University of Texas researchers followed the 16-year course of 19,478 women aged 65 and older who were diagnosed with breast cancer from 1991 to 1997. The 1,104 women who received anthracycline-containing

chemotherapy had higher incidence rates for congestive heart failure, cardiomyopathy, and cardiac dysrhythmia than women who received no chemotherapy. In fact, the probability of experiencing congestive heart failure in year 10 was 31.9 percent for women who received chemotherapy that contained anthracyclines compared with 26.4 percent for women who received other kinds of chemotherapy and 27.2 percent for women who received no chemotherapy.

Further, women who received 10 or more doses of the anthracycline-containing chemotherapy were at the highest risk for congestive heart

failure compared with women who did not receive chemotherapy. In fact, patients with advanced cancer who received 10 or more doses of that type of chemotherapy were 37 percent more likely to develop congestive heart failure. This study was funded in part by the Agency for Healthcare Research and Quality (HS16743).

See “Cardiac toxicity associated with anthracycline-containing chemotherapy in older women with breast cancer,” by Xianglin L. Du, M.D., Ph.D., Rui Xia, M.S., Chih-Chin Liu, M.S., and others in the November 15, 2009 *Cancer*, 115(22), pp. 5296-5308. ■ KFM

### Women's lack of knowledge and mistrust play a role in underuse of breast cancer adjuvant therapy

**D**espite the proven effectiveness of postsurgical adjuvant therapies in the treatment of early-stage breast cancer, many women do not receive them. According to a new survey, 32 of 258 women who should have received adjuvant therapy (chemotherapy, hormonal therapy, or radiotherapy) did not. The principal factors associated with lack of adjuvant treatment were being 70 years or older, having other illnesses, and expressing mistrust in the medical delivery system.

The survey included questions about trust of physician, physician communication about treatment, trust of hospitals, knowledge and belief about adjuvant treatment, racism, self-efficacy, and instrumental and emotional social support. Untreated women reported lower levels of self-efficacy than treated women, were

less likely to know that adjuvant therapies have been proven to increase survival, and were more likely to believe them to be harmful. The researchers were disturbed that women's knowledge of treatment benefits and risks were not affected by their physicians' communications about treatment. Women with less than a high school education expressed more mistrust than women who had a high school education or more.

The 258 patients selected for the study were all women with stage I or II breast cancer who had surgery 6 or more months prior to the survey. Based on practice guidelines, among the 258 women, 64 should have received chemotherapy, 150 should have received hormonal therapy, and 174 should have received radiotherapy. Yet, 12.5 percent, 7.3 percent, and 8.6

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## Adjuvant therapies

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percent of these groups, respectively, were untreated. To reduce underuse of adjuvant therapies, the researchers recommend that all women should be educated regarding the benefits and risks of treatment. Physicians should also directly address issues of trust, particularly with minority populations and patients with

other illnesses in addition to breast cancer. This study was supported by the Agency for Healthcare Research and Quality (HS10859).

See “Underuse of breast cancer adjuvant treatment: Patient knowledge, beliefs, and medical mistrust,” by Nina A. Bickell, M.D., M.P.H., Jessica Weidmann, Kezhen Fei, M.S., and others in the November 1, 2009 *Journal of Clinical Oncology* 27(31), pp. 5160-5167. ■ *MWS*

## Abused women have higher risks for numerous medical disorders

**H**ealth care professionals who treat women for mental health problems, sexually transmitted diseases, or serious injuries may want to ask their patients about possible abuse, suggests a new study. After scouring medical records and interviewing 3,568 randomly sampled women, researchers found that the 242 women who reported being abused in the past year had higher relative risks for certain mental, musculoskeletal, trauma-related, and reproductive conditions.

In fact, compared with women who never experienced domestic violence, abused women had

nearly a sixfold increased risk of substance abuse, a fivefold greater risk of family or social problems, and a threefold greater risk of depression. Additionally, these women were more likely to have been diagnosed with sexually transmitted diseases and have cuts that required medical care. The study authors recommend that care providers be especially suspicious when women seek treatment for any of these conditions, because abused women may not volunteer that they are victims of abuse.

These findings reinforce earlier studies that found high injury rates for abused women. However, the

researchers suggest that their study improves on the methods for collecting data because they used randomly sampled women from a health plan and had physician diagnoses in lieu of gathering data from women seeking medical services. This study was funded in part by the Agency for Healthcare Research and Quality (HS10909).

See “Medical and psychosocial diagnoses in women with a history of intimate partner violence,” by Amy E. Bonomi, Ph.D., M.P.H., Melissa L. Anderson, M.S., Robert J. Reid, M.D., Ph.D., and others in the October 12, 2009 *Archives of Internal Medicine*, 169(18), pp. 1692-1697. ■ *KFM*

## Stressed-out women may delay getting preventive care

**T**he stress of juggling work and family responsibilities may lead some women to delay or skip regular preventive care, like routine physicals or screening tests, a new study finds. Just over 13 percent of 9,166 women aged 18 to 49 reported experiencing signs of psychological distress, including feeling nervous, hopeless, restless, fidgety, or depressed. These distressed women were more likely to delay getting health care than women who did not experience distress symptoms (27 percent versus 22 percent).

Delaying health care was a common practice for all women who lacked regular sources for care. However, more than 59 percent of distressed women without regular care sources delayed care compared with 45 percent of nondistressed women who did not have usual care sources.

The authors suggest that an unhealthy cycle develops when distressed women neglect their health care, because providers are not able to detect and treat stress symptoms. To prevent long-term health consequences, clinicians should screen women for distress in both urgent and routine care settings and follow up with them to make sure they get preventive care services, the authors suggest. This study was funded in part by the Agency for Healthcare Research and Quality (T32 HS00063).

See “Psychological distress as a barrier to preventive healthcare among U.S. women,” by Whitney P. Witt, Ph.D., M.P.H., Robert Kahn, M.D., M.P.H., Lisa Fortuna, M.D., M.P.H., and others in the September 2009 *Journal of Primary Prevention* 30(5), pp. 531-547. ■ *KFM*

## Nearly two-thirds of mothers with depression do not receive adequate care for their condition

A new study finds that about 65 percent of mothers who suffer from depression do not receive adequate treatment for their condition. In other words, they do not receive the care necessary to reduce or eliminate depression symptoms so they are able to function at work and home with little chance for relapse. Of the 2,130 mothers in the study, 9.5 percent reported experiencing depression. Of these women, 37.9 percent did not receive any treatment, 27.3 percent received some treatment, and just 34.8 percent received adequate treatment for depression.

Mothers who received adequate treatment were more likely to be 35 years or older, white, or have completed some college. Further, they were less likely to be in the paid workforce. The authors suggest

that spending long hours on the job may prevent working mothers from being able to access health care. They recommend that employers better promote counseling services such as their Employee Assistance Programs so that working mothers suffering from depression are aware that these programs are available to help them with their symptoms. More than 80 percent of mothers who did not receive any treatment for their depression reported having insurance. The authors suggest that while having insurance is an important factor for receiving care, having it does not necessarily lead to receiving care for depression.

The study also found that black mothers were nearly 80 percent less likely to receive adequate treatment for depression than white mothers. In fact, all minority mothers were less likely to receive adequate care

for depression than white mothers. The authors suggest studies of this disparity focus on the possible roles that racial bias and patient-provider communication may play as barriers to depression treatment. The University of Wisconsin-Madison researchers used Medical Expenditure Panel Survey data from the Agency for Healthcare Research and Quality (AHRQ) for this study, which was funded in part by AHRQ (T32 HS00063 and T32 HS00083).

See “Access to adequate outpatient depression care for mothers in the USA: A nationally representative population-based study,” by Whitney P. Witt, Ph.D., M.P.H., Abiola Keller, M.P.A.S., P.A.-C., Carissa Gottlieb, M.S., and others in the October 17, 2009 online *Journal of Behavioral Health Services and Research*. ■ KFM

### Child/Adolescent Health

## Neighborhoods, abuse, and anxiety contribute to low birth weights

Babies born with low birth weights often struggle to keep up physically and mentally with their peers. In some cases, their lean beginnings lead them to suffer from chronic conditions, such as high blood pressure, heart disease, and diabetes. A new study finds that maternal internal stressors of abuse and anxiety are linked to low birth weights, possibly due to their effect on hormone levels. Further, high-crime neighborhoods, an external stressor, may also lead to

low birth weights because mothers may perceive their neighbors as threatening, not supportive.

Of the 554 pregnant women (mostly black, poor, and unmarried) seen at obstetric clinics in Memphis from 1990 to 1991, researchers found that just over 15 percent delivered low-birth-weight babies. Mothers who experienced either verbal or physical abuse during their pregnancies delivered babies that were, on average, 98.2 grams lighter than the average-weight

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**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.



## Low birth weight

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babies delivered by mothers who did not suffer abuse. Additionally, anxious mothers delivered babies that were 71 grams lighter than average, and moms who experienced neighborhood stress delivered babies 64.7 grams lighter than average.

The authors suggest that while neighborhood stress probably does not wreak havoc on hormones like abuse and anxiety do, it likely does affect expectant mothers' access to good-quality food or safe areas to exercise. To combat these stressors, the authors suggest improving

access to mental health services, expanding interventions for abuse to include men, and adopting a Federal demonstration program in which families are relocated to better neighborhoods. This study was funded in part by the Agency for Healthcare Research and Quality (T32 HS00044).

See "The effects of stress on birth weight in low-income, unmarried black women," by Margaret L. Holland, Ph.D., M.P.H., Harriett Kitzman, R.N., Ph.D., and Peter Veazie, Ph.D., in the November/December 2009 *Women's Health Issues* 19(6), pp. 390-397. ■ *KFM*

## Neighborhood surroundings may affect whether children are overweight

Children who live in low-income neighborhoods tend to live close to many fast food restaurants and are at higher risk for being overweight than children who live in affluent areas, a new study finds. Massachusetts researchers used geographic information systems to pinpoint locations of fast food restaurants, proximity to public transportation and schools, and availability of recreation areas. They then used height and weight data in medical records to determine the prevalence of overweight and obese children in Massachusetts neighborhoods.

The 3,334 children from high-income areas (average household income of \$123,006) tended to live farther from fast food restaurants

and have fewer burger joints to choose from than the 3,346 children from low-income areas (average household income of \$35,800). The researchers estimate that a child in a low-income area could find fast food within 7 minutes of home, but a wealthier child faced a 21-minute hike to an unhealthy feast.

Children from wealthy neighborhoods tended to walk an average of 30 minutes to school and have access to open play areas, while children from low-income areas walked just 12 minutes to school and had fewer open areas to play in. Only 12 percent of the children from high-income towns were obese compared with 29 percent of the children from low-income towns. The authors suggest

that children who live in affluent areas encounter more environmental features that promote energy expenditure and exercise, while less affluent children have limited opportunities for exercise but ample access to junk food. This study was funded in part by the Agency for Healthcare Research and Quality (T32HS00063).

See "Built environment and weight disparities among children in high- and low-income towns," by Nicolas M. Oreskovic, M.D., M.P.H., Karen A. Kuhlthau, Ph.D., Diane Romm, Ph.D., and James M. Perrin, M.D., in the September/October 2009 *Academic Pediatrics* 9(5), pp. 315-321. ■ *KFM*

## Outpatient advice on pediatric medication safety is inadequate

Children are particularly vulnerable to medication safety errors. When they occur, such errors usually happen during the administration stage when several individuals might be responsible for getting the medication to the child. Yet a new study reveals that little advice is being given to parents on medication safety in the ambulatory setting. If it is given by office and pharmacy personnel, the advice is often incomplete.

Researchers collected data on 1,685 children who received care from 6 office practices in Boston. Information was gathered from chart and prescription

reviews. Parents were also interviewed at 10 days after the child's first visit and then again 2 months later. Parents were asked when information on medication safety was provided, by whom, and the content of such advice. The researchers also identified medication errors that occurred, any near misses, as well as any adverse drug events.

Providers did give information on why the medication was being given (indication) most of the time (91 percent). However, they only mentioned side effects 28 percent of the time. Only 14 percent of the

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## Medication safety

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time was written information given to parents on medication safety issues. While pharmacies were good at giving written information (82 percent), only 19 percent of prescriptions came with advice on the drug's indication. Even fewer prescriptions (9 percent) were accompanied by advice on medication side effects. Overall, 57 percent of families did not receive information because it was not presented to them, rather than that they refused it. The researchers propose

that novel strategies are needed to deliver advice using Web-based technologies and motivational interviewing techniques. The study was supported in part by the Agency for Healthcare Research and Quality (HS11534).

See "The role of advice in medication administration errors in the pediatric ambulatory setting," by Claire Lemer, M.B.B.S., M.R.C.P.C.H., David W. Bates, M.D., M.Sc., and others in the *Journal of Pediatric Safety* 5(3), pp. 168-175, 2009. ■ KB

## The stability of a usual source of care is important to the care of low-income children

**G**rowing children need good, quality health care as they mature into adulthood.

This makes having an ongoing relationship with a pediatrician or other primary care provider important. Changes in insurance coverage, however, may make having a usual source of care (USC) difficult at times. A new study suggests that children without a USC and those without a stable USC have greater odds of having one or more unmet health care needs compared with children with a consistent USC.

Jennifer E. DeVoe, M.D., D.Phil., of the Oregon Health and Science University, and colleagues conducted a survey among families living in Oregon and participating in the food stamp program. A total of 2,681 households completed surveys that

asked questions about unmet health care needs over the past 12 months. The researchers collected data on their insurance coverage and any USC changes, and compared the Oregon sample with national estimates.

They found that 1 in 10 low-income children in Oregon did not have a current USC, reflecting national trends. Significantly more of these children experienced an unmet health care need compared with children with a USC (79 vs. 45 percent). More than 1 in 5 children participating in the food stamp program had to change their USC for insurance reasons. Such instability in having a USC resulted in these children also having a higher probability of experiencing an unmet health need compared with children with a stable USC. In many cases, their

rates of unmet care need were similar to that of children without a USC. According to the researchers, it is not enough for children to simply have a USC. They need to have one over a long period of time where they can establish an ongoing relationship to ensure quality care. The study was supported in part by the Agency for Healthcare Research and Quality (HS14645 and HS16181).

See "A medical home versus temporary housing: The importance of a stable usual source of care," by Jennifer E. DeVoe, M.D., D. Phil., John W. Saultz, M.D., Lisa Krois, M.P.H., and Carrie J. Tillotson, M.P.H., in the November 2009 *Pediatrics* 124(5), pp. 1363-1371. ■ KB

## Rotavirus was culprit in one-fourth of children's diarrhea-related emergency department visits prior to vaccine

**R**otavirus is the leading cause of severe vomiting and diarrhea among children worldwide. In fact, rotavirus contributed to about one-fourth of all diarrhea-associated outpatient and emergency department (ED) visits among U.S. children under 5 years old, according to a new study. What's more, the rate of diarrhea-associated outpatient and ED visits

among these children changed little from 1995 through 2004. These data will help determine the impact of the new rotavirus vaccine introduced in 2006, which is given during the first year of infant life, on reducing diarrhea-related visits, note the researchers.

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## Rotavirus

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They examined the number of diarrhea-related visits per 10,000 patient-years to outpatient clinics and EDs by children under age 5. Outpatient clinic rates of 932 visits per 10,000 patient-years for 1995-1996 rose only slightly to 1,011 visits per 10,000 patient-years for 2003-2004. The rate for ED visits also remained essentially stable over these years, at 345 and 327 per 10,000 patient-years for 1995-1996 and 2003-2004, respectively.

The total rate of ambulatory visits was comparable among white and black children (1,298 and 1,236 per 10,000 patient-years, respectively). However, black children had a lower rate of diarrhea-related visits to outpatient clinics than did white children (716 versus 1,107 visits per 10,000 patient-years), but a higher rate

of such visits to the ED (520 versus 286 visits per 10,000 patient-years). Black children with diarrhea-related illnesses were less likely than white children to be seen at an outpatient clinic, even when both groups had private insurance. In comparison, black children with Medicaid/State Children's Health Insurance Program were more likely to go to an ED than were similarly insured white children.

The researchers obtained their data from the National Ambulatory Medical Care Survey and the National Hospital Ambulatory Care Survey for 1995-2004. Their study was funded in part by the Agency for Healthcare Research and Quality (HS13833).

More details are in "National rates of diarrhea-associated ambulatory visits in children," by Stephen J. Pont, M.D., M.P.H., Carlos G. Grijalva, M.D., M.P.H., Marie R. Griffin, M.D., M.P.H., and others in the *Journal of Pediatrics* 155(1), pp. 56-61, 2009. ■ *DIL*

## Certain factors can help prepare families to bring infants home from neonatal intensive care units

A new study of neonatal intensive care unit (NICU) nurses and families with newborns treated in the NICU has uncovered factors likely to make the infant's transition home a success. Specifically, the researchers found a correlation between preparedness for infant discharge from the NICU and the parents' confidence in their choice of a pediatrician, their readiness for the infant to come home, and their confidence in their infant's health and physiological maturity. This type of maturity means that infants can coordinate their breathing and taking in food by mouth, ingest adequate amounts of food to gain weight, maintain normal body temperature outside of an incubator, and maintain stable heart rate and breathing.

The researchers analyzed data from 867 discharge nurse-family pairs, out of 1,492 eligible discharges from a medical center NICU between November 2003 and April 2007. Both the discharge nurses and the families rated the family's emotional or technical preparedness for discharge. At discharge time, 9 percent of the families were deemed unprepared for discharge by the responding nurse, 3 percent of the families reported feeling less than prepared (although the nurse found them to be prepared), and less than 1 percent of the families were both self-rated as unprepared and rated as unprepared by the nurse. Factors that correlated with preparedness for discharge were heavier infant weight and the presence of medical problems requiring

special teaching for proper parental care.

Future studies need to assess the impact of discharge preparedness on long-term outcomes for preterm infants and their families, such as infant development and growth, readmission to the hospital, receipt of recommended immunizations, and continued parental confidence, the researchers suggest. Their study was funded in part by the Agency for Healthcare Research and Quality (T32 HS00063).

More details are in "Are families prepared for discharge from the NICU?" by Vincent C. Smith, M.D., Steven Young, Ph.D., DeWayne M. Pursley, M.D., M.P.H., and others in the *Journal of Perinatology* 29(9), pp. 623-629, 2009. ■ *DIL*

### Providing customized clinical information to patients and physicians does not improve diabetes care

Patients with diabetes continue to have trouble meeting their goals for blood glucose levels, blood pressure readings, and LDL (“bad”) cholesterol levels. Delivering customized clinical information to patients and their physicians failed to improve outcomes in these patients, according to a new study. Patrick J. O’Connor, M.D., M.P.H., of the Health Partners Research Foundation in Minneapolis, and colleagues included 123 primary care physicians and 3,703 adults with diabetes who had elevated hemoglobin A1c (a measure of long-term blood glucose control) or LDL cholesterol levels. All were randomized to one of four groups. In the patient-only group, individuals received a customized, four-page brochure in the mail every 4 months with detailed information of their A1c and LDL trends along with medication recommendations and checklists to discuss with their doctors.

Physicians in the physician-only group received printed lists of their diabetic patients every 4 months with information on their A1c and LDL cholesterol levels along with recommendations to adjust therapy when necessary. A third group had both patients and physicians receiving the customized information. Finally, in the fourth group, neither patient nor

physician received any of this information (control group).

Twelve months after the customized interventions, there was no significant improvement in the ordering of A1c tests. Testing rates for LDL cholesterol actually were lower for all three of the intervention groups compared with the control group. The interventions had no effect on LDL cholesterol values; these improved in all patient groups. The interventions also had no impact on the likelihood that physicians would intensify therapy in patients not at their targeted A1c or LDL cholesterol goals. According to the researchers, customized information mailings are actively being sent to patients by large medical practices. Given the results of this study, they recommend that such interventions be re-evaluated to determine what, if any, benefit they provide to patients. The study was supported in part by the Agency for Healthcare Research and Quality (HS11919).

See “Customized feedback to patients and providers failed to improve safety or quality of diabetes care,” by Dr. O’Connor, JoAnn Sperl-Hillen, M.D., Paul E. Johnson, Ph.D., and others in *Diabetes Care* 32(7), pp. 1158-1163, 2009. ■ KB

### Counseling education does not significantly boost residents’ dietary counseling of patients with diabetes

Lifestyle modifications, including dietary changes, can alter the course of diabetes. Unfortunately, physicians infrequently provide diabetic dietary counseling to their patients. Internal medicine (IM) residents reported low levels of comfort with and frequency of diabetic dietary counseling in a study led by Joyce M. Tang, M.D., of Northwestern University.

Those IM residents with prior education in chronic disease counseling (31 percent) expressed three times greater comfort with dietary counseling and reported more frequent counseling, but not

significantly so. The researchers suggest several explanations for this, including lack of time, lack of appropriate resources, and the low perceived effectiveness of dietary counseling. Only 12 percent of residents with or without chronic disease counseling education perceived dietary counseling to be effective.

The low levels of comfort with and frequency of diabetic dietary counseling reported by IM residents are consistent with the rates of general dietary counseling observed in other studies of physicians and residents. The researchers speculate that educational efforts have not

addressed physicians’ perception that dietary counseling is not effective in prompting patients to improve their diet. Their study surveyed 111 IM residents at a single academic institution. It was supported by a grant from the Agency for Healthcare Research and Quality (T32 HS00078).

See “Internal medicine residents’ comfort with and frequency of providing dietary counseling to diabetic patients,” by Dr. Tang, Benjamin Freed, M.D., Timothy Baker, M.D., and others in the *Journal of General Internal Medicine* 24(10), pp. 1140-1143, 2009. ■ MWS

## Positive outlooks may bring better outcomes for patients with heart failure

**M**any patients who experience heart failure also suffer from depression, which puts them at higher risk for hospital stays or even death. To determine why some patients with heart failure become depressed, researchers from Duke University and the University of North Carolina asked 222 patients to complete questionnaires that measure depression, optimism, coping style, and social support. They found that depression was linked to patients having less optimism, low levels of social support, and poor coping styles such as denial of the problem. Optimists, because they expect good results, may be more likely to stay active in managing their symptoms and to seek help when they need to. Additionally, having ample social support from friends or family members may ward off depression and physical deterioration for patients with heart failure, note the authors.

They suggest that depression in these patients may be linked to coping styles that interfere with constructively managing their condition. For instance, high scores for depression were linked to low scores for coping tools including acceptance, humor, planning, emotional support, and mental disengagement. Further, depression was also linked to denial, which may lead some patients with heart failure to not seek treatment when it is clearly warranted. This study was funded in part by the Agency for Healthcare Research and Quality (T32 HS00079).

See “Coping styles in heart failure patients with depressive symptoms,” by Ranak B. Trivedi, Ph.D., James A. Blumenthal, Ph.D., Christopher O’Connor, M.D., and others in the October 2009 *Journal of Psychosomatic Research* 67(4), pp. 339-346. ■ *KFM*

## Common sleep disorder contributes to work disability and need to modify work duties

**A**s a common sleep disorder, obstructive sleep apnea (OSA) can cause daytime fatigue and the inability to think clearly. Those who suffer from it may also experience excessive daytime somnolence (sleepiness, EDS), which can interfere with work activities. Individuals with both OSA and EDS are at high risk for work disability and modification of their work duties, concludes a new study. Researchers at the University of California, San Francisco, studied 183 patients who were referred to the university’s Sleep Disorders Center. In addition to undergoing an overnight sleep study (polysomnography), participants also filled out a survey. They were asked about any work-related disability due to their sleep problems, the type of work they did, and reported levels of EDS.

More than half of the patients (55 percent) had OSA. Out of 83 with OSA, 77 percent reported experiencing recent work disability. The presence of both OSA and EDS was found to be associated with 13 times greater risk of recent work disability and nearly 4 times greater risk of longer-term work duty modification. Even patients with only OSA had nearly three times greater risk for any recent work disability compared with those without OSA.

The greater risk of work duty modification was found for jobs that involved shift work with periodic changes in sleep schedules and jobs that involved carrying out precise measurements, hand movements, and calculations. Recent work disability was associated with work-related activities such as reading printed

text or display screens. Work activities considered more physical in nature, such as handling heated materials or food, were associated with less risk of work disability. The researchers hope their findings will highlight the importance of employers encouraging their workers to be screened for OSA when signs of decreased productivity and EDS are present. The study was supported in part by the Agency for Healthcare Research and Quality (HS17664).

See “Obstructive sleep apnea: A risk factor for work disability,” by Theodore A. Omachi, M.D., M.B.A., David M. Claman, M.D., Paul D. Blanc, M.D., M.S.P.H., and Mark D. Eisner, M.D., M.P.H., in *Sleep* 32(6), pp. 791-798, 2009. ■ *KB*

## Veterans who use pharmacy services at VA facilities tend to be sicker, poorer, and have no alternative insurance

The Department of Veterans Affairs (VA) provides health care and prescription drug coverage for veterans. Veterans who use VA pharmacy services tend to be more ill, poorer, and have no alternative insurance compared with veterans who do not use them, according to a new study. More than one-fourth (27.2 percent) of nonelderly veterans who use VA pharmacy services have no other insurance and 31.6 percent of them report a mental disorder. Taken together, these findings suggest that the VA may be a safety net for nonelderly veterans with mental health conditions, note Jessica Banthin, Ph.D., and G. Edward Miller, Ph.D., of the Agency for Healthcare Research and Quality (AHRQ).

They and coinvestigators used data from AHRQ's Medical Expenditure Panel Survey on veteran status, health conditions, and demographic information. The study included 533 nonelderly veterans and 638 veterans aged 65 and older who used VA pharmacy services. The nonpharmacy user groups consisted of 1,555 nonelderly and 1,428 elderly veterans.

Veterans who used VA pharmacy services were more likely to be black, have no other insurance, and come from lower income and educational levels compared with nonusers. More users than nonusers also reported poor physical and mental health. Regardless of their age, veterans who used VA pharmacy services tended to report suffering from more medical conditions and were more likely to be disabled. Nonelderly users reported having diabetes, hypertension, and mental health problems; the latter being especially prevalent. Elderly users, on the other hand, were more likely to suffer from diabetes, peptic ulcers, and gastroesophageal reflux disease.

See "VA pharmacy users: How they differ from other veterans," by Sherrie L. Aspinall, Pharm.D., Dr. Banthin, Chester B. Good, M.D., M.P.H., and others in the October 2009 *The American Journal of Managed Care* 15(10), pp. 701-708. Reprints (AHRQ Publication No.10-R017) are available from AHRQ.\*

■ KB

## Primary Care

### Primary care patients who see physician assistants and nurse practitioners are as complex as those who see doctors

Nonphysician providers such as physician assistants (PAs) and nurse practitioners (NPs) have been used to improve care access and reduce health care costs since 1967. Approximately 110,000 PAs and NPs currently practice in the U.S., with half of the PAs and 85 percent of NPs practicing in primary care. Their primary care patients are more likely than those of doctors to be rural, uninsured or publicly insured (other than Medicare), younger, less extroverted, and to be women. Their patients are also more likely to perceive less access to care and make less use of some preventive

services such as complete health exams or mammograms. Despite these differences in care use, there were no differences in difficulties/delays in care or self-rated health between primary care patients of physicians and those of PAs and NPs.

However, the patients of the PAs and NPs did not differ in medical complexity from the patients of doctors. These findings suggest that PAs and NPs are acting as primary care providers to underserved patients with a range of disease severity. This has important implications for policy, including clinician workforce and

reimbursement issues, note the University of Wisconsin researchers. They point out that PAs and NPs typically work under the supervision of or in collaboration with doctors, and that their roles and level of autonomy are dictated by their State medical statutes and negotiated agreements with their supervising/collaborating doctor. Yet clear operational definitions of the potential roles of PAs and NPs is lacking, as is evidence of their potential to contribute to the functions of primary care within each role.

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## Nonphysician providers

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The findings were based on analysis of data from the Wisconsin Longitudinal Study, a long-term study of over 10,000 graduates from Wisconsin high schools that

started in 1957. Data for 6,803 respondents taken from the 1993-1994 and the 2004-2005 surveys were used in the present project. The study was funded in part by the Agency for Healthcare Research and Quality (T32 HS00083).

See “Physician assistants and nurse practitioners as a usual source

of care,” by Christine M. Everett, M.P.H., Jessica R. Schumacher, M.S., Alexandra Wright, M.S., and Maureen A. Smith, M.D., M.P.H., Ph.D. in the Fall 2009 *The Journal of Rural Health* 25(4); pp. 407-414. ■ MWS

## Lack of time, resources to blame for primary care doctors rarely counseling women on birth-defect-causing drugs

Primary care physicians (PCPs) claim they have neither the time nor the resources to provide women with information on whether the drugs they prescribe can cause miscarriages or birth defects, a new study finds. Eleanor Bimla Schwarz, M.D., M.S., and her colleagues at the University of Pittsburgh conducted 8 focus groups of 48 PCPs. They found that, although these doctors feel responsible for counseling women on the effect so-called teratogenic drugs may have on an unborn child, they encounter several barriers in routinely providing this information. These include short appointment times, lack of reimbursement for counseling, limited resources for finding up-to-date information on teratogenic drugs, difficulty in determining women’s reproductive plans, and concerns that discussing a drug’s side effects may result in a woman refusing to take it.

The PCPs proposed technological solutions, including online resources that provide plain-language information on the risks of taking teratogenic drugs and reminders to ask a woman about her pregnancy plans in

electronic medical records or when computerized order entry is used to issue prescriptions. The doctors also suggested development of patient education materials to assist them in informing their patients of drug risks but said they would still have difficulty finding time to go over the information with their patients.

The authors hope that pinpointing these barriers and gathering suggestions from PCPs will assist in ensuring women receive timely information on the risks of birth defects caused by medicines. They also note a toll-free information service from the Organization of Teratology Information Specialists that may assist PCPs in finding the information they seek on these drugs. This study was funded in part by the Agency for Healthcare Research and Quality (HS17093).

See “Perspectives of primary care clinicians on teratogenic risk counseling,” by Dr. Schwarz, Aimee Santucci, Ph.D., Sonya Borrero, M.D., and others in the October 2009 *Birth Defects Research (Part A) Clinical and Molecular Teratology* 85(10), pp. 858-863. ■ KFM

## Disparities/Minority Health

### Older black women with breast cancer do not receive beneficial chemotherapy as often as white women

Older women (65 to 69 years old) with operable breast cancer that has spread to one or more lymph nodes often benefit from receiving chemotherapy to battle their cancer, clinical trials show. However, black women in this age group do not receive chemotherapy as often as white women, a new study finds. Researchers at the University of

Texas used data from Medicare, the U.S. Census, and the National Cancer Institute’s Surveillance, Epidemiology, and End Results cancer registry. They identified 14,177 white women and 1,277 black women who were diagnosed with operable stage II or IIIA breast cancer with positive lymph nodes between 1991 and 2002.

For the 65-69 age group, 66 percent of white women received chemotherapy within 6 months of being diagnosed compared with 56 percent of black women. However, this racial disparity diminished with age. For instance, after age 74 there were no significant differences between the percentages of white and black women receiving

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## Breast cancer

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chemotherapy, despite the lack of evidence or guidelines for providing chemotherapy for women 75 and older.

When researchers adjusted the results to include socioeconomic status for women aged 65 to 69, poverty appeared to be at the root of the racial differences in who

received chemotherapy. In fact, racial differences in receipt of chemotherapy were mediated by census tract poverty rates. Despite being insured by Medicare, out-of-pocket costs and copayments may be burdensome for women without means, and women who live in poor areas may also have poor health, other health conditions, and employment difficulties. This study

was funded in part by the Agency for Healthcare Research and Quality (HS16743).

See “Racial and socioeconomic disparities in adjuvant chemotherapy for older women with lymph node-positive, operable breast cancer,” by Alessia Bhargava and Xianglin L. Du, M.D., Ph.D., in *Cancer* 115(13), pp. 2999-3008, 2009. ■ KB

## Many minority patients do not receive or complete colorectal cancer screening tests in urban, primary care settings

Colorectal cancer is a preventable and treatable disease if people take advantage of appropriate screening tests such as colonoscopies. Despite the encouraging news on prevention and treatment, the condition remains the second leading cause of death from cancer in the United States. Those most vulnerable are minority and poor populations who are usually diagnosed at an advanced stage of colorectal cancer. Troubling findings from a new study found that the majority of such patients are not receiving appropriate testing and are failing to complete such tests when they are prescribed.

Researchers looked at 246 Hispanic and 50 black patients aged 50 years and older receiving care at a large outpatient primary care clinic in Los Angeles. They reviewed patients’ medical records and logbooks of colorectal screening procedures undergone by patients. In addition, they interviewed patients for 20 minutes. More than 70 percent of participants received a recommendation from a health care provider to undergo colorectal cancer screening. However, approximately 24 percent with risk factors for the disease reported never receiving a physician recommendation for testing. The majority of patients with risk factors never scheduled testing (66 percent) or actually completed it (74 percent).

In addition, 74 percent of all participants had never received a colonoscopy, sigmoidoscopy, or a barium enema. Nearly three out of four patients had a fecal occult blood test within the last 2 years; 5 percent had a positive result.

Of the patients scheduled for either a colonoscopy or a sigmoidoscopy, only around half completed the procedure. In the case of 39 participants with a family history for colorectal cancer, 31 received a recommendation for screening, but only 10 were scheduled. Health care providers need to communicate better with patients about the importance of following through with recommended colorectal cancer testing, conclude the researchers. Their study was supported in part by the Agency for Healthcare Research and Quality (HS14022).

See “Colorectal cancer screening among underserved minority population: Discrepancy between physicians’ recommended, scheduled, and completed tests,” by Mohsen Bazargan, Ph.D., Chizobam Ani, M.D., Shahrzad Bazargan-Hejazi, Ph.D., and others in the 2009 *Patient Education and Counseling* 76, pp. 240-247. ■ KB

## Homeless recent immigrants are healthier than other homeless individuals

Recent arrivals to Canada who are homeless are generally healthy and less likely to suffer from chronic conditions, mental health problems, and alcohol/substance abuse compared with nonrecent immigrants and Canadian-born natives. They also tend to have better mental and physical health, according to a study of 1,189 homeless individuals in Toronto,

Canada. The researchers interviewed each homeless person to determine their demographic characteristics and information on various health conditions, including drug and alcohol abuse.

Ten percent of this homeless group were recent immigrants, 22 percent nonrecent immigrants, and 68

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## Immigrants

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percent Canadian-born. Recent immigrants were not as likely to have mental health problems or symptoms of alcohol/drug abuse. The rate of mental health problems was 40 percent for Canadian-born, 35 percent for nonrecent immigrants, and 23 percent for recent immigrants. Compared with the two other groups, recent immigrants were found to have fewer chronic conditions and better physical health scores. Lack of financial resources and adequate housing were most often cited by recent immigrants as the chief reasons for being homeless. They were less likely to report mental health or addiction problems as reasons

compared with the other two groups. According to the researchers, effective interventions designed to address the needs of this distinct group of homeless persons may revolve around their housing and financial needs. Interventions focusing on job skills, training, and employment may be especially beneficial. The study was supported in part by the Agency for Healthcare Research and Quality (HS14129).

See “The health of homeless immigrants,” by Shirley Chiu, M.A., Donald A. Redelmeier, M.D., M.S.H.S.R., George Tolomiczenko, Ph.D., M.P.H., M.B.A., and others in the *Journal of Epidemiology and Community Health* 63, pp. 943-948, 2009. ■ KB

## Elderly/Long-Term Care

### Aging causes changes in the brain's white matter, which is worsened by hypertension and other vascular problems

All older adults show brain changes as they age. These include the shrinking of various brain regions as well as a decrease in cerebral white matter. As one grows older, along with these changes is an increased risk for vascular events, such as stroke. A new study has found a link between age-related brain changes and vascular risks, such as high blood pressure. Specifically, the increase in vascular risk exacerbates age-related declines in the brain.

Researchers studied brain changes in 77 healthy adults ranging in age from 19 to 84. The sample included men and women with and without high blood pressure. Nine white matter regions of the brain were

examined using imaging techniques and measurements. The study found widespread reductions in white matter in the older individuals. Two areas of the brain most susceptible to such changes were the prefrontal and occipital regions.

Changes were most notable in individuals who were 55 years of age and older. However, the presence of vascular risk factors, such as hypertension, caused changes in white matter regardless of age. According to the researchers, as vascular risk increased, age-related damage in white matter also expanded from the anterior to the posterior regions of the brain. Selective deterioration of regional white matter may result in impaired

connectivity among cortical brain-associated regions and contribute to the cognitive decline seen in aging, suggest the researchers. The aggressive treatment of high blood pressure and other vascular problems may help reduce the cognitive signs of aging in the brain caused by these changes. The study was supported in part by the Agency for Healthcare Research and Quality (HS13819).

See “Pattern of normal age-related regional differences in white matter microstructure is modified by vascular risk,” by Kristen M. Kennedy, Ph.D., and Naftali Raz, Ph.D., in *Brain Research* 1297, pp. 41-56, 2009. ■ KB

## Medication review technique may help identify drug-related problems in the elderly

Elderly adults experience more drug-related problems, because they are more likely than younger persons to take multiple prescription and over-the-counter medications. Pharmacists need effective ways to identify medication errors in this patient population so that adverse consequences, such as hospital admission and death, can be avoided. This is particularly true for enrollees in the Medicare part D prescription drug program, which requires medication therapy management for those with high usage rates. A new technique called TIMER (Tool to Improve Medications in the Elderly via Review) may help pharmacists identify more drug-related problems in the elderly, suggests a new study. TIMER is a systemic approach to conducting medication reviews that is evidence-based and offers advice for medication management.

In a recent study, 87 pharmacists and 108 third-year pharmacy students received hypothetical geriatric patient cases for review. Each case was specifically created by experts for the study and contained a number of drug-related problems, some of which could be identified by using TIMER. The pharmacists were asked to review one case, with half randomized to receive the TIMER tool for use. Pharmacy students

were asked to review two cases, one with TIMER and the other without.

By using TIMER, pharmacists were able to identify more drug-related problems (3.4) compared to not using it (3.0). Pharmacy students were able to identify an average of 3.30 drug-related problems using the TIMER tool compared with only 2.96 when TIMER was not used. Although training was not part of the study, providing such educational programs on TIMER may help pharmacists and students embrace using the tool to conduct their medication reviews, note the researchers. Their study was supported by a grant from the Agency for Healthcare Research and Quality (HS16094) to the University of Iowa's Older Adults Center for Education and Research on Therapeutics (CERT). For more information on the CERTs program, visit [www.certs.hhs.gov](http://www.certs.hhs.gov).

See "Pharmacists' and pharmacy students' ability to identify drug-related problems using TIMER (Tool to Improve Medications in the Elderly via Review), by Sarah Snyder Lee, Pharm.D., Ann K. Schwemm, Pharm.D., Jeffrey Reist, Pharm.D., and others in the *American Journal of Pharmaceutical Education* 73(3), pp. 1-10, 2009. ■ KB

## Many older adults with mental health problems do not believe they need help

Mental health problems, including alcohol and substance abuse, are common in older adults. Yet only half of these individuals actively seek treatment and use mental health services. A new study has found that many older adults with mental health problems don't feel the need for treatment. Those who do perceive the need for care tend to have more symptoms of depression and other chronic health conditions.

The researchers collected data from a national sample of 1,339 individuals 65 years of age and older living in the community. Their ethnicity and gender matched that

found in the general population. When a person was identified as receiving mental health care in the past 12 months, they were asked if they sought out the care voluntarily. Those who had not sought out care were asked if they felt a need to seek out treatment for an emotional or substance abuse issue. The researchers determined the prevalence and severity of depression, anxiety, and alcohol abuse in the sample. Participants were also asked if they had certain health conditions to determine the levels of physical health and cognitive functioning.

Only 7.3 percent of the entire sample perceived a need for mental

health care during the past year. Among those who did feel a need, 82.8 percent received services voluntarily from either a primary care or mental health specialist. Another 17.2 percent perceived a need for mental health care but did not receive care. Those older adults most likely to feel a need for care tended to have more severe mental illness. They also had histories of depression, anxiety, chronic physical illness, and alcohol abuse. Perceived need for care was less likely as age increased. Men were half as likely as women to report perceived need for care. The study was supported in part by the

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## Mental health problems

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Agency for Healthcare Research and Quality (T32 HS00036).

See “Perceived need for mental health care among community-dwelling older adults,” by Melissa M. Garrido, Ph.D., Robert L. Kane, M.D., Merrie Kaas, D.N.Sc., R.N.,

C.S., and Rosalie A. Kane, Ph.D., in the November 2009 *Journal of Gerontology: Psychological Sciences* 64(6), pp. 704-712. ■ KB

## A guided care approach helps curb health care costs of elderly patients with chronic conditions

Care for the elderly with chronic health conditions can be very expensive. One way to help provide high-quality, cost-effective care to these individuals is by employing an approach known as guided care (GC). This care is delivered by a team consisting of a practice-based, specially trained, GC nurse who works with two to three physicians and office staff. The goal is to offer eight important clinical services that are needed by 50 to 60 percent of the highest-risk older patients in a practice. This innovative approach to care improves health, reduces care use, and nets savings in health care costs, reveals a new study.

The researchers implemented GC in eight community-based primary care practices located in urban and suburban areas. The study involved 14 primary care teams, 49 physicians, and 904 elderly patients with chronic illnesses insured by Medicare or managed care plans. The researchers reviewed health insurance claims to compare the services used by patients receiving GC with services used by those

receiving usual care during a period of 8 months. GC patients used fewer hospital, skilled nursing facility, emergency, and home health care services compared with their usual care counterparts. However, they did tend to use slightly more specialist care, durable medical equipment, tests, and treatments.

The researchers looked at the financial impact GC had on health care costs and savings in a subset of 55 high-risk patients during a 1-year period. GC produced a net savings of \$75,000. Two-thirds of this amount was the result of reduced hospital utilization. According to the researchers, these cost savings are enough to offset the expense of providing GC and the slight increase in use of specialist care. The study was supported in part by the Agency for Healthcare Research and Quality (HS14580).

See “Guided care and the cost of complex healthcare: A preliminary report,” by Bruce Leff, M.D., Lisa Reider, M.H.S., Kevin D. Frick, Ph.D., and others, in *The American Journal of Managed Care* 15(8), pp. 555-559, 2009. ■ KB

## Caregiver dissatisfaction affects outpatient care for the elderly with dementia

Taking care of family members with dementia and Alzheimer’s disease can place a great strain on family caregivers. Most individuals with some form of dementia (7 out of 10) live at home and receive 75 percent of their care from their families and friends (informal care). However, how satisfied family caregivers feel with their lives can have a direct impact on their loved one’s receipt of professional outpatient care, reveals a new study. It found that low levels

of caregiver satisfaction were linked with less likelihood that patients with dementia received outpatient primary, specialty, and mental health care.

A sample of 1,269 veterans participating in the National Longitudinal Caregiver Survey was used for the study. All were men with dementia who received care from a primary female informal caregiver. The researchers analyzed 12 months of outpatient claims to determine visits to primary care providers, specialists, and mental

health practitioners. The family caregivers were surveyed to determine how much care they delivered, their financial situation, and how much the veteran’s daily life was affected by other medical conditions.

Only 17 percent of the caregivers surveyed reported finding life “very satisfying.” The majority (68 percent) felt they were fairly satisfied and 15 percent were not satisfied. Veterans with caregivers who reported being dissatisfied

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## Caregiver dissatisfaction

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with life were 56 percent less likely to receive a primary care visit and 47 percent less likely to receive a mental health visit. Other factors also affected receipt of outpatient care. Those with black caregivers were 50 percent less likely to receive mental health visits. Veterans living with their caregiver

were 2.8 times more likely to receive a specialty care visit. Greater impairment in veterans' abilities to carry out activities of daily living was associated with a decreased likelihood of receiving primary care. Finally, veterans with caregivers who reported needing much more help with care were less likely to receive a mental health visit than caregivers who wanted just somewhat more help. The study was supported in part by the

Agency for Healthcare Research and Quality (T32 HS00032).

See "Barriers to outpatient care in community-dwelling elderly with dementia: The role of caregiver life satisfaction," by Joshua M. Thorpe, Ph.D., Courtney Harold Van Houtven, Ph.D., and Betsy L. Sleath, Ph.D., in the *Journal of Applied Gerontology* 28(4), pp. 436-460, 2009. ■ KB

## Health Information Technology

### Nursing home users of information technology start to see its benefits

Compared with other health care institutions, nursing homes lag behind in their adoption of sophisticated health information technology (health IT) systems. However, those who do embrace these high-level systems are starting to recognize just how beneficial they are to improving patient care, according to a new study. They are also finding that such systems can have a positive impact on clinical support and even administrative activities.

University of Missouri researchers Gregory L. Alexander, Ph.D., R.N., and Douglas S. Wakefield, Ph.D., interviewed 12 key individuals at 4 different nursing homes. All had a vested interest in the clinical and administrative success of health IT systems and their implementation. During four interviews and three focus groups, the researchers collected information on the individuals' perceptions of their health IT systems, existing issues, and types of systems in use. The four participating nursing homes used two different electronic health record systems and a variety of software programs designed to manage clinical and administrative support.

Although all four nursing homes had advanced health IT systems in place, the degree of functional sophistication differed. For example, some of the

facilities did not use the system to manage their dietary departments. Only one nursing home used the health IT to document and archive digital photographs, particularly for wound care. Three of the homes integrated internal charting for nurse assistants to access. While clinical alerts were available at three of the four homes, these were not used on a consistent basis to warn of patient hydration status or skin integrity. Although all of the homes had Internet access, the access was limited to management in all but one home.

However, administrators were interested in building upon their health IT knowledge. Although the benefits of health IT are being recognized in nursing homes, more attention is needed to enhance integrity and connectivity of such systems, suggest the researchers. Their study was supported in part by the Agency for Healthcare Research and Quality (HS16862).

See "Information technology sophistication in nursing homes," by Drs. Alexander and Wakefield in the *Journal of the American Medical Directors Association* 10, pp. 398-407, 2009. ■ KB

## Computer display helps reduce the rates of ventilator-associated pneumonia in surgical intensive care units

Patients in surgical intensive care units (SICU) often have their breathing assisted by a ventilator. However, such patients run the risk of developing ventilator-associated pneumonia (VAP), which can result in death as well as a longer hospital stay and higher costs. Using an innovative computer screensaver can help SICU personnel monitor these patients more effectively, suggests a new study. The real-time “dashboard” promotes compliance with the ventilator bundle, a set of patient care practices designed to prevent VAP.

The setting for this study was a 21-bed SICU at a large academic tertiary care center. Every desktop computer in the SICU was equipped with the electronic VAP dashboard. It graphically displays compliance with the ventilator bundle parameters for each patient at various time intervals for each item. Each measure is highlighted green for compliance, red for being out of compliance, or yellow for a parameter that is due for attention.

Compliance with the ventilator bundle significantly improved with the VAP dashboard, increasing from 39

percent in August 2007 to 89 percent in July 2008. After the dashboard was introduced, the rate of VAP decreased from 15.2 events to 9.3 events per 1,000 ventilator days. The researchers point out that complete compliance with the ventilator bundle parameters has also increased. Currently, nearly 90 percent of all SICU patients receive every parameter simultaneously and continuously. Despite the lower rate of VAP after implementing the dashboard, further reductions are needed, note the researchers. Additional measures, such as specially designed endotracheal tubes, may help lower the rate of VAP even further. The study was supported in part by the Agency for Healthcare Research and Quality (HS13833).

See “Implementation of a real-time compliance dashboard to help reduce SICU ventilator-associated pneumonia with the ventilator bundle,” by Victor Zaydfudim, M.D., M.P.H., Lesly A. Dossett, M.D., M.P.H., John M. Starmer, M.D., and others in the *Archives of Surgery* 144(7), pp. 656-662, 2009. ■ KB

### HIV/AIDS Research

## HIV patients with psychiatric disorders are less likely to discontinue HAART

Patients with HIV infection and psychiatric disorders are significantly less likely to discontinue highly active antiretroviral therapy (HAART) during the first and second years of treatment. A partial explanation for this may be the advantage of their mental health visits, suggests a new study. The researchers examined time to HAART discontinuation among a sample of 4,989 patients with HIV infection, who sought care at five outpatient HIV sites. About one-fourth were diagnosed with depressive disorder and 9 percent were diagnosed with a serious mental illness.

During the first and second years of HIV therapy, patients with

serious mental illness were significantly less likely to discontinue their HIV medications when compared with those without any psychiatric disorders. Those suffering from depression were significantly less to discontinue their HIV medications during the first year compared with those without any mental health disorders.

Having six or more mental health visits each year was also associated with significantly less likelihood of discontinuing HIV therapy compared with having no mental health visits among those with mental illness. The findings support ongoing and consistent mental health treatment for patients

with HIV infection, particularly those suffering from various mental health disorders, note the researchers. Their study was supported in part by a grant from the Agency for Healthcare Research and Quality (HS16097) to the Rutgers University Center for Research and Education on Mental Health Therapeutics (CERT). For more information on the CERTs program visit [www.certs.hhs.gov](http://www.certs.hhs.gov).

More details are in “HIV patients with psychiatric disorders are less likely to discontinue HAART,” by Seth Himelhoch, M.D., M.P.H., Clayton H. Brown, Ph.D., James Walkup, Ph.D., and others in *AIDS* 23, pp. 1735-1742, 2009. ■ KB

## New report shows vaginal birth after cesarean is safe for most women

A new report issued by the Agency for Healthcare Research and Quality (AHRQ) found that vaginal birth after cesarean section (VBAC) is a safe and reasonable choice for the majority of women. Each year, more than 1 million cesarean surgeries are performed. Nearly one in three births was cesarean in the United States in 2007. A steady increase in repeat cesarean births over the past decade has been attributed, in part, to studies that suggested there may be significant harms associated with VBAC.

Investigators at the AHRQ-sponsored Oregon Health and Science University Evidence-based Practice Center found evidence that showed that, while rare for both

trial of labor and elective repeat cesarean, maternal mortality was significantly higher for elective repeat cesarean. Risks for uterine rupture and perinatal death remain rare but elevated for trial of labor.

Other important outcomes such as hemorrhage/transfusion, adhesions, surgical injury, and wound complications remain uncertain due to lack of consistent definition and reporting. Investigators also found increasing evidence that women with multiple cesarean deliveries were at significant risk of life-threatening conditions. You can view the report, *Vaginal Birth After Cesarean: New Insights*, at [www.ahrq.gov/downloads/pub/evidence/pdf/vbacup/vbacup.pdf](http://www.ahrq.gov/downloads/pub/evidence/pdf/vbacup/vbacup.pdf). ■

## Cholesterol and diabetes drugs lead drug spending for the elderly

Purchases of cholesterol and diabetes prescription drugs by elderly Medicare beneficiaries reached nearly \$19 billion in 2007—about one-fourth of the approximately \$82 billion spent for medications for the elderly, according to the latest data from the Agency for Healthcare Research and Quality (AHRQ).

Metabolic drugs, which are used to lower cholesterol levels, keep diabetes under control, and for weight and thyroid problems, topped the list of the five leading categories of drugs purchased by

the elderly. The other four drug classes in the top five in 2007 were:

- Cardiovascular drugs, including blood pressure medicines, diuretics, and drugs to control abnormal heart rhythms, such as atrial fibrillation (\$15 billion).
- Central nervous system drugs, such as arthritis and other pain medications (\$8 billion).
- Gastrointestinal drugs, which include anti-acid medications (\$7 billion).
- Hormones to treat osteoporosis, cancer, and other conditions (\$5 billion).

These data are taken from the Medical Expenditure Panel Survey (MEPS), a detailed source of information on the health services used by Americans, the frequency with which they are used, the cost of those services, and how they are paid. To view *Expenditures for the Top Five Therapeutic Classes of Outpatient Prescription Drugs, Medicare Beneficiaries, Age 18 and Older*, go to [www.meps.ahrq.gov/mepsweb/data\\_files/publications/st280/stat280.pdf](http://www.meps.ahrq.gov/mepsweb/data_files/publications/st280/stat280.pdf). ■

## Two-thirds of State and local government workers get their health plans from their employers

About 66 percent of the nearly 20 million State and local government employees were enrolled in employer-sponsored health plans in 2008 compared with 54 percent of private-sector workers, according to the latest data from the Agency for Healthcare Research and Quality (AHRQ). The Agency's analysis of State and local government employee health plan data, broken down by the nine Census divisions, found that:

- The highest average annual total premiums (\$6,631) for plans that only covered the employee (single-coverage) were in the New England division of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut, while the lowest premiums (\$4,560) were in the West South Central division of Arkansas, Louisiana, Oklahoma, and Texas.

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## Health plans

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- New England employees also had the highest average annual total premium (\$16,965) for plans that covered families with the lowest (\$12,068) in the South Atlantic division of Delaware, the District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia.
- Workers in New England with single-coverage plans contributed more on average (\$1,097) to the cost of that premium than workers in the neighboring Middle Atlantic division - New Jersey, New York, and Pennsylvania (\$291).
- In contrast, State and local government workers in the West South Central division contributed the most on average (\$4,048) to the family plan premium and those in the Middle Atlantic division contributed the least (\$957).

These data are taken from AHRQ's Medical Expenditure Panel Survey, a detailed source of information on the health services used by Americans, the frequency with which they are used, the cost of those services, and how they are paid. For more information, view *Employer-Sponsored Health Insurance for Employees of State and Local Governments*, by Census Division, 2008 at [www.meps.ahrq.gov/mepsweb/data\\_files/publications/st273/stat273.pdf](http://www.meps.ahrq.gov/mepsweb/data_files/publications/st273/stat273.pdf). ■

## Announcements

### AHRQ launches new HCUP databases and tools webinar series

**A**HRQ will host a two-session webinar series on the Healthcare Cost and Utilization Project (HCUP) databases, products, and tools. Registration is now open for each session. The first 1-hour webinar, offered on Monday, April 12, 2010 at 2:00-3:00 p.m., will introduce health services and policy

researchers to the HCUP databases and related resources that can enhance their research studies by providing a general overview of the HCUP databases. The second 1-hour webinar, offered on Monday, May 10, 2010 at 2:00-3:00 p.m., will focus on the HCUP products and tools, with particular emphasis on

HCUPnet, the free online data query system. Registration information is available at [www.hcup-us.ahrq.gov/hcup\\_workshop.jsp](http://www.hcup-us.ahrq.gov/hcup_workshop.jsp). There is no registration fee. For more information, contact HCUP User Support at [hcup@ahrq.gov](mailto:hcup@ahrq.gov). ■

### AHRQ releases supplemental files for tracking repeat visits to different hospital settings

**A**HRQ has released Revisit Files, the newest addition to the supplemental files created under the Healthcare Cost and Utilization Project (HCUP). The Revisit Files are designed to facilitate analyses for tracking patients across time and hospital settings in the HCUP State Inpatient Databases (SID), State Ambulatory Surgery Databases (SASD), and State Emergency Department Databases (SEDD) while adhering to strict privacy guidelines. These files enhance the value of the HCUP State databases by allowing for a variety of interesting analyses such as evaluating repeat emergency department use,

readmissions to the hospital, admissions to the hospital after ambulatory surgery, or patterns of emergency department and hospital utilization for chronic conditions.

Currently 12 HCUP partners have authorized the release of their State revisit files through the HCUP Central Distributor, restricted-access public-release databases. For more information about the HCUP Supplemental Revisit Files, please visit the HCUP-US website, [www.hcup-us.ahrq.gov/tools\\_software.jsp](http://www.hcup-us.ahrq.gov/tools_software.jsp) or contact HCUP User Support at [hcup@ahrq.gov](mailto:hcup@ahrq.gov). ■

## Register for AHRQ's April 26 HCUP hands-on training workshop

The Agency for Healthcare Research and Quality (AHRQ) will sponsor a full-day, intermediate level, hands-on workshop for health services researchers interested in learning more about Healthcare Cost and Utilization Project (HCUP) data resources. Participants will gain exposure to HCUP databases and related tools (including HCUPnet) through hands-on manipulation of

the data, including file construction, production of national estimates, creation of State-level output, and application of critical methods to produce correct standard deviations.

Access to the HCUP Nationwide Inpatient Sample (NIS) and State Inpatient Databases (SID) will be provided during the workshop. The course will be held at the AHRQ

headquarters in Rockville, Maryland. Registration is open until April 15 or until the class size reaches 35. Thereafter, registrants will be waitlisted. Registration and additional information are available at [www.hcup-us.ahrq.gov/hcup\\_workshop.jsp](http://www.hcup-us.ahrq.gov/hcup_workshop.jsp). For more information, contact HCUP User Support at [hcup@ahrq.gov](mailto:hcup@ahrq.gov). ■

## Research Briefs

**Aujesky, D., McCausland, J.B., Whittle, J., and others (2009, November). "Reasons why emergency department providers do not rely on the pneumonia severity index to determine the initial site of treatment for patients with pneumonia." (AHRQ grant HS10049). *Clinical Infectious Diseases* 49, pp. e100-e108.**

Community-acquired pneumonia (CAP) causes 4 million cases of illness and leads to more than 1 million hospital admissions in the U.S. every year. Evidence suggests that physicians tend to overestimate the risk of death among patients with CAP and these overestimates are associated with the decision to hospitalize low-risk patients. The researchers conducted a trial to implement a Pneumonia Severity Index (PSI) guideline for the initial site of treatment of patients with CAP. They used data on 1,306 patients (689 were low-risk and 617 higher-risk) from 12 emergency departments (EDs) in two states. ED physicians admitted 37.4 percent of low-risk patients to the hospital while treating 3.2 percent of higher-risk patients on an

outpatient basis. The reasons given by ED physicians for admitting low-risk patients included presence of another illness (71.5 percent); abnormal laboratory values, vital signs, or symptoms (29.3 percent); and recommendation for admission from a primary care or consulting physician (19.3 percent).

**Barr, W. B., Bender, H. A., Morison, C., and others (2009). "Diagnostic validity of a neuropsychological test battery for Hispanic patients with epilepsy." (AHRQ grant HS16819). *Epilepsy & Behavior* 16, pp. 479-483.**

The Neuropsychological Screening Battery for Hispanics (NeSBHIS) is sensitive to cognitive impairments commonly observed in populations with epilepsy, but it is limited in its ability to identify lateralized neuropsychological impairment in patients with temporal lobe epilepsy, concludes this study. The researchers sought to examine the diagnostic validity of the NeSBHIS in identifying relevant cognitive impairment in Spanish-speaking Hispanic patients with epilepsy and in predicting

seizure lateralization in surgical candidates. Their final study sample included 115 Hispanic patients with epilepsy who had completed neuropsychological evaluations. Decreased scores on tests of naming and processing speed were identified in more than 40 percent of the sample and 30 percent of the subjects had low scores on memory testing. Deficits in verbal and visual recall were exhibited by 29 and 26 percent of the sample, respectively. The study failed to find any marked difference in neuropsychological test performance on group comparisons made in 82 patients with EEG evidence of partial seizures located to the left or right temporal lobes.

**Beckett, M. K., Elliott, M. N., Richardson, A., and others. (2009, October). "Outpatient satisfaction: The role of nominal versus perceived communication." (AHRQ grant HS13299) *HSR: Health Services Research* 44(5 Part I), pp. 1735-1749.**

Attempts to correlate successful parent-pediatrician

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communications with parent satisfaction are limited by differences in reports from parents and from trained observers, a recent study found. Parents were also asked to rate the child's care based on the current pediatrician visit (six choices, ranging from "excellent" to "very poor"). The researchers analyzed 517 encounters involving 38 pediatricians in 27 community pediatric practices in Los Angeles County, Calif. All of the visits were for children, aged 6 months to 10 years, seen for upper respiratory tract infections. The four communication events compared between parent report and coder report of the pediatrician visit were discussion of: (1) the child's symptoms; (2) what the parents could do to make the child feel better; (3) the parent's ideas about the cause of the child's illness; and (4) the parent's ideas about how to manage the child's illness. Each visit was videotaped and communication events were coded by one of two trained research assistants. For all four communication events, parent and coder assessments were uncorrelated. Parent perception of three or four of the communication events occurring was correlated with greater satisfaction, but any coded events not reported by parents did not contribute to parental satisfaction.

**Casale, C. R. and Clancy, C. M. (2009). "Commentary: Not about us without us." *Academic Medicine* 84(10), pp. 1333-1335. Reprints (AHRQ Publication No. 10-R022) are available from AHRQ.\***

Solutions to eliminate disparities in health care must be customized to address the specific circumstances of each community.

Community-based participatory research (CBPR) offers an appealing strategy to develop the requisite evidence while care is being improved. These authors comment on an article in the same issue of the journal that presents case studies from the University of California Los Angeles' CBPR experience with minorities in the Sun Valley area of Los Angeles County. They believe that the UCLA-Sun Valley experience highlights the importance of partnering with community leaders and residents in all aspects of the research process. This includes discovery, planning, development, implementation, and evaluation of a research proposal, as well as research dissemination and adoption activities. The authors offer insights for community leaders, researchers, and funders such as the importance of training and education for community leaders and residents and the inclusion of CBPR in medical school curricula.

**Castaldi, P. J., DeMeo, D. L., Kent, D. M., and others (2009, October). "Development of predictive models for airflow obstruction in alpha-1-antitrypsin deficiency." (AHRQ grant T32 HS00060) *American Journal of Epidemiology* 170(8), pp. 1005-1013.**

In this paper, researchers identified characteristics of patients with a genetic inability to synthesize the enzyme inhibitor alpha-1-antitrypsin, who are likely to develop respiratory problems, such as chronic obstructive pulmonary disease (COPD). The researchers used two approaches to create predictive models, one for predicting the volume of air exhaled from the lungs in 1 second and the other for predicting the presence of severe COPD.

Predictive factors in both models included the patient's age, sex, a measure of the patient's smoking intensity and length of time he or she smoked, the patient's responsiveness to medicines for bronchitis (bronchodilators), and whether the patient had symptoms of chronic bronchitis. The presence of certain markers in the genes for two inflammation-related proteins (interleukin-10 and tumor necrosis factor) appeared to improve the predictive ability of the models slightly. The models were based on data collected on 372 individuals from 167 families from 2002 through 2005.

**Cegala, D. J. and Post, D. M. (2009). "The impact of patients' participation on physicians' patient-centered communication." (AHRQ grant HS90110). *Patient Education and Counseling* 77, pp. 202-208.**

The concepts of patient-centered communication and patient participation are central to current views of the ideal physician-patient relationship. Even so, little attention has been given to the interplay of physicians' and patients' communication. The researchers studied 25 physicians who interacted with both high- and low-participation patients. High participation was related to the frequency of information seeking/verifying, information provision, assertive utterances, and expressed concerns. On one dimension of patient-centeredness, exploring both the disease and illness, the high-participation patients evoked more communication from their physicians, but on the other two dimensions (understanding the whole person, finding common ground) there were no significant differences in communication from

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physicians of high- or low-participation patients. One explanation for the lack of difference on the dimension of “understanding the whole person” is that around 80 percent of both high- and low-participation patients were return patients.

**Chapman, B. P., Franks, P., Duberstein, P. R., and Jerant, A. (2009). “Differences between individual and societal health state valuations. Any link with personality?” (AHRQ grant HS13603). *Medical Care* 47(8), pp. 902-907.**

Health status measures may be based on community or societal preferences for some health states over others (as measured by the EuroQoL-5D, a preference-based health status measure used across patient groups) or they may be based simply on an individual’s opinion (as measured by the EuroQol Visual Analogue Scale, a companion health status measure). These researchers investigated the role of personality in contributing to these differences by using the Five Factor Model personality traits of neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness. The 370 patients studied all had a chronic disease accompanied by a basic activity impairment and/or depression. Higher levels of conscientiousness appeared to be the principal personality factor responsible for persons reporting less disutility from poor health states than the societal valuations used in reference case analysis. In fact, social preference measures may undervalue the health states of more conscientious individuals, suggest the researchers.

**Chibnall, J. T. and Tait, R. C. (2009). “Long-term adjustment to work-related low back pain: Associations with socio-demographics, claim processes, and post-settlement adjustment.” (AHRQ grants HS13087 and HS14007). *Pain Medicine* 10(8), pp. 1378-1388.**

This study investigated sociodemographic, claim process, and short-term adjustment predictors of long-term (6 years post-settlement) clinical adjustment among Workers Compensation claimants with low back pain (171 blacks and 203 whites). Poorer long-term adjustment (higher levels of pain, catastrophizing, and pain-related disability) was significantly predicted by relatively poorer adjustment at baseline, lower socioeconomic status, and black race. Pain intensity, catastrophizing, and interference with role functioning assessed 6 years after claim closure were comparable with those assessed more than 4 years earlier (at baseline). The associations of race were somewhat attenuated 6 years after claim settlement, whereas the significance of the socioeconomic status association remained, although at a somewhat reduced magnitude.

**Clancy, C. M. (2009, November). “Tools to alleviate safety concerns.” *Trustee Magazine* November 2009. Reprints (AHRQ Publication No. 10-R028) are available from AHRQ.\***

As stewards of America’s hospitals, trustees have the moral imperative and leverage to drive patient safety and quality improvements. The author, Director of the Agency for Healthcare Research and Quality (AHRQ), offers four pieces of advice that, in conjunction with implementing AHRQ toolkits and using AHRQ

resources, can help hospitals navigate patient safety challenges: (1) view safety, quality, and financial goals as interdependent; (2) advocate for a culture of safety; (3) consider safety and quality when making major capital investments; and 4) facilitate transitions between the hospital and other health care settings. The author next describes several of AHRQ’s key patient safety tools: the Hospital Survey on Patient Safety Culture; the Hospital Consumer Assessment of Healthcare Providers and Systems; Inpatient Quality Indicators; and Project RED (Re-engineered Hospital Discharge). Also available from AHRQ is a DVD on “Transforming Hospitals: Designing for Safety and Quality,” which makes the case that evidence-based design results in a positive return on investment. The author encourages trustees to partner with AHRQ to use these tools to provide Americans with high-quality care.

**Clancy, C. M. (2009, December). “Where we are a decade after *To Err is Human*.” *Journal of Patient Safety* 5(4), pp. 199-200. Reprints (AHRQ Publication No. 10-R029) are available from AHRQ.\***

A decade ago, the Institute of Medicine’s report, *To Err is Human: Building a Safer Health System*, emphasized that medical harm results from the systemic problems in health care. Despite the challenges, some organizations have improved their culture, communications, and teamwork. The Agency for Healthcare Research and Quality (AHRQ), along with others, has been making progress on building an evidence-based foundation and tools to make it easier for organizations to reduce

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medical harm. One example of this is in the reporting of adverse events. Today, more than half of the States have instituted mandatory reporting of serious events. During the past decade, AHRQ has been working to discover the causes of preventable errors. It has also been designing, testing, and evaluating evidence-based tools and solutions to reduce errors. This work has focused on creating a culture of safety, encouraging teamwork, reducing hospital-acquired infections (especially methicillin-resistant *Staphylococcus aureus*), reducing hospital readmissions, and understanding resident fatigue.

**Curtis, J. R., Taylor, A. J., Matthews, R. S., and others (2009). “Pathologic fractures: Should these be included in epidemiologic studies of osteoporotic fractures?” (AHRQ grant HS16956). *Osteoporosis International* 20, pp. 1969-1972.**

Many studies of the epidemiology and outcomes associated with osteoporotic fracture exclude pathologic fractures. The rationale is that a pathologic fracture is due to a localized process such as a malignancy or an infection and is not related to osteoporosis. However, excluding persons with pathologic fractures in epidemiologic studies that use administrative claims data substantially underestimates the burden of fractures due to osteoporosis, concludes this study. The researchers examined pathologic fractures of the vertebrae and hip in an elderly Medicare population. They identified 44,120 individuals with a vertebral fracture and 60,354 with a hip fracture. Approximately 48 percent of

vertebral fractures and 3 percent of hip fractures were coded as pathologic. Evidence for a possible cancer diagnosis was found for 66 percent of those with pathologic hip fracture but for only 25 percent of those with pathologic vertebral fracture.

**Denham, C. R., Angood, P., Berwick, D., Clancy, C., and others (2009). “The chasing zero department: Making idealized design a reality”; “Chasing zero: Can reality meet the rhetoric?” *Journal of Patient Safety* 5(4), pp. 211-215, 216-222. Reprints (AHRQ Publication Nos. 10-R030 and 10-R031) are available from AHRQ.\***

Leaders from the quality, purchasing, and certifying sectors of health care convened at a national leadership meeting held in Washington, D.C. in September 2009 to address the issue of hospital-acquired infections (HAIs). The authors of these two papers summarized the meeting and its conclusions. The objective of the meeting was to determine if zero HAIs should be the improvement target for hospitals and what a Chasing Zero Department (CZD) should be like. Participants addressed the key design issues of CZDs: leadership, resources, and systems. They concurred that hospital CEOs and boards must communicate to the organization that the typical Infection Control Group might be restructured into a CZD. Also, funding for these efforts must be provided, with chief financial officers understanding that zero HAIs will preserve revenue. With respect to systems, change can be made through leaders' championship, use of safe practices, and use of the Automated Infection Identification and Mitigation System. The participants agreed that it is possible to get to

zero HAIs, that rhetoric can meet the reality of frontline care, and that the national community can recalibrate its expectations of hospitals.

**Flores, C. and Newcomer, R. (2009). “Monitoring quality of care in residential care for the elderly: The information challenge.” (AHRQ grant HS16541). *Journal of Aging and Social Policy* 21, pp. 225-242.**

The increasing prevalence of physical and cognitive frailty among residential care and assisted living residents provides a compelling public health incentive for a comprehensive residential care/assisted living (RC/AL) data system. The researchers sought to assess the completeness and availability of administrative data compiled on California residential care facilities for the elderly (RCFE). They considered the quality and performance oversight indicators that could be derived from public or other information. After performing a 5-year retrospective review of forms and documents used in 340 California facilities, they found that information from RCFEs, if appropriately compiled and maintained, would produce a comprehensive quality assurance system.

**Gallagher, T. H., Cook, A. J., Brenner, R. J., and others (2009, November). “Disclosing harmful mammography errors to patients.” (AHRQ grant HS10591). *Radiology* 253(2), pp. 443-452.**

To assess radiologists' attitudes about disclosing harmful mammography errors to patients, the researchers surveyed radiologists at seven geographically distinct Breast Cancer Surveillance

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Consortium sites. The survey included a hypothetical vignette involving an error interpreting a patient's mammogram. Of the 243 responding radiologists, 9 percent reported that they would "definitely not" disclose the error, 51 percent "only if asked by the patient," 26 percent "probably," and 14 percent "definitely." Neither the level of concern about the effect that malpractice is having on the practice of mammography nor having been sued previously were associated with disclosure willingness or disclosure content. The researchers believe that disclosing errors can educate patients that no one, including their physician, is perfect and that errors happen in all professions, including medicine.

**Gray, B. H., Schlesinger, M., Siegfried, S. M., and Horwitz, E. (2009).** "Racial and ethnic disparities in the use of high-volume hospitals." (AHRQ grant HS14074). *Inquiry* 46, pp. 322-338.

This study examined racial and ethnic disparities in the use of high-volume hospitals in the New York metropolitan area during 1995-1996 and 2001-2002. It specifically examined the use of 17 services for which a positive volume-outcome relationship has been documented in previous research: five types of cancer surgery, six cardiovascular services, three orthopedic procedures, two prostate procedures, and admission for AIDS. The researchers found many large racial and ethnic differences in the use of high-volume hospitals for the volume-sensitive services studied. For example, black patients were significantly less likely than white patients to use a high-volume hospital for 16 of 17 services (the

exception was AIDS). The same was true for Hispanic patients for 15 of 17 services (the principal exception was AIDS). These disparities were not attributable to differences in socioeconomic status, insurance coverage, or neighborhood of residence.

**Hellinger, F. J. (2009, October).** "The effect of certificate-of-need laws on hospital beds and healthcare expenditures: An empirical analysis." *American Journal of Managed Care* 15(10), pp. 737-744. Reprints (AHRQ Publication No. 10-R023) are available from AHRQ.\*

Certificate-of-need programs are intended to curtail the construction of unnecessary hospitals and limit the acquisition of costly medical equipment by compelling health care entities to acquire prior approval from a government agency. In 1967, New York became the first State to institute a certificate-of-need program. Since then, all States have created such programs. Some states have repealed their certificate-of-need laws or portions of the laws, and several have dismantled their programs and created new programs later. Currently, 34 States have certificate-of-need laws. This researcher used State-level data at four points in time (1985, 1990, 1995, and 2000) to estimate the effect of certificate-of-need legislation on hospital bed supply and health care expenditures. He found that certificate-of-need laws have reduced the number of hospital beds by about 10 percent and health care spending at the State level by nearly 2 percent. He also found that States with more stringent certificate-of-need programs have experienced greater reductions in the number of hospital beds and health care expenditures.

**Kawamoto, K., Honey, A., and Rubin, K. (2009).** "The HL7-OMG healthcare services specification project: Motivation, methodology, and deliverables for enabling a semantically interoperable service-oriented architecture for healthcare." (AHRQ grants HS10472, HS15057, HS10814). *Journal of the American Medical Informatics Association* 16, pp. 874-881.

The health care industry could benefit by realigning its information technology (IT) assets around a service-oriented architecture (SOA) in which business needs are fulfilled through the orchestration of platform-neutral, network-accessible software services that provide core business functions through well-defined interfaces. To address this need, the Healthcare Services Specification Project (HSSP), a joint initiative of a private company and a computer industry consortium, was launched. Its purpose was to generate a comprehensive framework for the specification of standard service interfaces, known as the HSSP Service Specification Framework (SSF). The authors describe the SSF, outline how it has been used to specify two HSSP services, and discuss implications and future directions.

**Khoury, J. J., Rich, E. C., Randhawa, G., and others (2009, October).** "Comparative effectiveness research and genomic medicine: An evolving partnership for 21st century medicine." *Genetics in Medicine* 11(10), pp. 707-711. Reprints (AHRQ Publication No. 10-R033) are available from AHRQ.\*

Concerns have been raised that evidence-based medicine principles embodied in comparative

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effectiveness research (CER) are only relevant to “average” patients and not as much to individuals with unique combinations of genes, risks, and disease outcomes intrinsic in genomic medicine (GM). In their commentary, the authors argue that CER and GM not only can and should coexist, but they will also increasingly benefit from each other. The promise and success of GM will depend on rigorous CER methods to compare outcomes for genome-based applications with traditional non-genome-based approaches. The success of CER will depend on developing new approaches and building the capacity to integrate genome-based personalized perspectives into point-of-care decisions by patients and providers.

**LaVeist, T. A., Isaac, L. A., and Williams, K. P. (2009, December). “Mistrust of health care organizations is associated with underutilization of health services.” (AHRQ grant HS13274). *HSR: Health Services Research* 44(4), pp. 2093-2105.**

There is a lack of empirical research on mistrust in medical care settings and its impact on use of health care services. One problem has been the lack of a generalized measure of mistrust in health care that is suitable for inclusion in both patient-based and community studies. The authors report on the validation of an instrument to measure mistrust of health care organizations. They then use that instrument, the Medical Mistrust Index, a 17-item scale, to examine the relationship between mistrust and racial disparities in use of health care services. After surveying a random sample of 327 persons in Baltimore households,

the researchers found that mistrust was associated with greater odds of failing to take medical advice, failing to keep a followup appointment, postponing receiving needed care, and failing to fill a prescription. However, mistrust was not associated with failing to get needed care.

**Meyers, D. (2009). “Breastfeeding and health outcomes.” *Breastfeeding Medicine* 4 (Suppl 1), pp. S13-S15. Reprints (Publication No. 10-R034) are available from AHRQ.\***

The author summarizes a report published in 2007 on outcomes of breastfeeding on maternal and child health in developed countries, which was prepared for the Agency for Healthcare Research and Quality by the Evidence-Based Practice Center of the Tufts-New England Medical Center. The report summarized evidence on breastfeeding in maternal and child health through May 2006. It concluded that breastfeeding provided short-term benefits, including lower rates for common illnesses such as ear infections and vomiting and diarrhea. Longer-term benefits for breast-fed infants included lower rates of eczema and obesity and decreased rates of serious illnesses such as type 2 diabetes and childhood leukemia. Finally, the evidence indicates that exclusive breastfeeding has greater health benefits than mixed feeding which, in turn, has produced better outcomes than formula feeding.

**Pronovost, P. J., Goeschel, C. A., Olsen, K. L., and others (2009). “Reducing health care hazards: Lessons from the commercial aviation safety team.” *Health Affairs* April 7, 2009 Web exclusive, pp. 479-489. Reprints (Publication No. 10-R021) are available from AHRQ.\***

The authors contrast the success of the Commercial Aviation Safety Team (CAST), an industry/government partnership, in reducing fatal aviation accidents with the slow progress made in improving patient safety in health care. They describe how CAST was formed following a fatal plane crash in 1995 and then proceed to outline its organization and procedures. They next point to CAST’s record of having completed 48 of 70 safety projects since 1995, almost all without administrative action by the Federal Aviation Administration. By contrast, when the Joint Commission calls for a standard for medication reconciliation to prevent medical errors, it has had limited success. Health care needs a routine mechanism such as CAST in order to develop and broadly implement strong interventions to improve patient safety. This could be called a Public Private Partnership to Promote Patient Safety, suggest the authors. They call on the Agency for Healthcare Research and Quality to be the driving force in creating such a group.

**Shaw, S. J., Huebner, C., Armin, J., and others (2009). “The role of culture in health literacy and chronic disease screening and management.” (AHRQ grant HS14086). *Journal of Immigrant Minority Health* 11, pp. 460-467.**

Cultural beliefs around health and illness are an integral part of a patient’s ability to understand and act on a doctor’s instructions. Thus, efforts to improve health literacy that fail to consider these beliefs are unlikely to fully address the needs of those populations suffering from very low health literacy. The authors reviewed social science and medical literature to explore the

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impact of cultural differences and low health literacy on chronic disease outcomes and use of preventive screening tests. They found that many societies have explanatory models for acute illness conditions that lack an understanding of the idea of chronic disease. With respect to screening utilization, one study reported that stigma associated with “non-normative” sexual behavior may keep unmarried Latinas from seeking out Pap smears. The authors call for well-rounded programs to address cultural and linguistic barriers and low health literacy simultaneously in primary care and prevention settings.

**Utter, G. H., Zrelak, P. A., Baron, R., and others (2009).** “Positive predictive value of the AHRQ accidental puncture or laceration Patient Safety Indicator.” (AHRQ Contract No. 290-04-0020). *Annals of Surgery* 250(6), pp. 1041-1046.

The National Quality Forum recently endorsed the Agency for Healthcare Research and Quality’s Patient Safety Indicator (PSI) 15 on Accidental Puncture or Laceration (APL). To determine the positive predictive validity (PPV) of PSI 15, the researchers conducted a retrospective cross-sectional study of hospitalization records that met criteria for this indicator. They found 249 cases from 32 geographically diverse hospitals that met PSI 15 criteria and 226 of the 249 cases represented true APL.

Included among these true positive cases were 56 (25 percent) with “inconsequential” APL that did not require a subsequent visit to the operating room for repair. Another 170 of the cases involved a potentially consequential APL, 132 of which involved some reparative procedure immediately after the occurrence. From the standpoint of clinical relevance, the PPV of PSI 15 was 68 percent.

**Vilhauer, R. P. (2009).** “Perceived benefits of online support groups for women with metastatic breast cancer.” (AHRQ grant HS10565). *Women & Health* 49, pp. 381-404.

This study examined the helping processes in online groups for women with metastatic breast cancer (MBC) by looking for the presence of therapeutic factors described in earlier research. The six factors theorized to be helpful were: universality, information exchange, instillation of hope, catharsis, altruism, and group cohesiveness. Then 20 white women with MBC, recruited for a larger study, were assigned to one of three online support groups. Each woman was e-mailed a monthly questionnaire and then interviewed for 30-90 minutes after participating in a group for at least 4 months. All six helpful factors mentioned were present in the groups studied. For example, group cohesiveness seems to have benefited women by directly alleviating their anxiety, helping them to get better medical care, reducing their need for social support, and increasing their openness to others.

**Yabroff, K. R., Saraiya, M., Mesisner, H. T., and others (2009, November).** “Specialty differences in primary care physician reports of Papanicolaou test screening practices: A national survey, 2006-2007.” (AHRQ grant HS10565). *Annals of Internal Medicine* 151(9), pp. 602-611.

Following the substantial revisions to cervical cancer screening guidelines in 2002 and 2003, the researchers used a large, nationally representative sample of primary care physicians to identify current Pap test screening practices in the United States during 2006 to 2007. They used clinical vignettes describing women by age and by sexual and screening history to elicit physicians’ recommendations for Pap test screening. Fewer than one-fourth of physicians reported guideline-consistent recommendations for Pap test screening across vignettes. Guideline-consistent recommendations varied by specialty (obstetrics/gynecology, 16.4 percent; internal medicine, 27.5 percent; and family or general practice, 21.1 percent). The researchers conclude that the overuse of Pap test screening revealed by this survey is expensive for the health care system and may result in unnecessary followup testing and increased risk of colposcopy-associated illnesses and adverse birth outcomes. ■



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