



RESEARCH ACTIVITIES

U.S. Department of Health and Human Services • No. 363, November 2010

Highlights

Topics

Safety and Quality of Care . . . 4

**Outcomes/Effectiveness
Research 8**

Disparities/Minority Health . 12

Women's Health 12

Chronic Disease 13

**Public Health
Preparedness 14**

Primary Care 15

HIV/AIDS Research 16

Regular Features

Agency News and Notes . . . 16

Announcements 20

Research Briefs 23

Plenary sessions at AHRQ annual meeting focus on connecting the dots between research and practice

With interest in the Nation's health care system at an historic high, 1,823 participants from 20 countries gathered at the Agency for Healthcare Research and Quality's annual conference September 26-29 in Bethesda, Maryland, to explore how health services research can improve care for all Americans.

"We believe data can reveal new knowledge otherwise invisible to individual observation, and execution of that new knowledge can save lives and save resources," said Dr. Atul Gawande during the conference's keynote address on September 28. The surgeon, professor, *New York Times* bestselling author, *New Yorker* contributor, and AHRQ-funded researcher spoke to a packed ballroom about "Transformation and Change: Making a Complex System Safe and Right."

Dr. Gawande's speech, the conference's second plenary session, provided examples of how U.S. Army researchers harnessed trauma registry data to discover patterns in battlefield deaths. Col. John Holcomb, a U.S. Army trauma surgeon, found that injuries that



Dr. Atul Gawande, keynote speaker

should have been prevented by body armor weren't, because soldiers weren't wearing it. Using research to initiate changes in troop behavior and battlefield surgery, the military has been able to reduce battlefield death rates that stubbornly remained at 25 percent since World War II to less than 10 percent today. "The key to all of this was the willingness to treat failures like scientific problems and to pursue innovations wherever that took them," said Dr. Gawande. "They're saving people who have never been saved before."

continued on page 2

AHRQ annual meeting

continued from page 1

Now in its fourth year, the AHRQ conference is where “we try to connect the dots between research and practice, said Health and Human Services Secretary Kathleen Sebelius in a video address at the opening plenary session on September 27. “Translating the purity of the scientific investigation into the daily demands of a doctor’s office is not an easy thing to do.”

Panelists at the opening plenary session agreed. The panel, moderated by AHRQ Director, Dr. Carolyn Clancy, was convened to gather feedback from those practicing in the field on what is needed to improve 21st century health care. Dr. Maulik Joshi of the Health Research and Educational Trust, Debra Ness of the National Partnership for Women and Families, and Dr. James Mold of the University of Oklahoma Health Sciences Center “model the kind of collaboration we need to see across the country,” Dr. Clancy said.

Tailoring solutions at the local level

Some of the solutions for fulfilling the conference’s theme of



Dr. Carolyn Clancy, Director of AHRQ

“Better Care, Better Health: Delivering on Quality for All Americans” may find purchase if they are tailored for delivery at the local level, according to the plenary speakers. For example, Dr. Mold said the family physicians he visits in rural Oklahoma could benefit from a structure similar to the U.S. Department of Agriculture’s local network of extension offices, which advise local farmers on improved practices and share farming innovations. “They (physicians) need a dissemination and implementation infrastructure, something that’s local but connected to each other,” he said. “It’s all about relationships.”

Solutions must also be patient-centered, asserted Ms. Ness. Although the current health care system appears to be provider-centric, consumer preferences must be a “game-changing force” in transforming the health care system, she said. “Patients want care from somebody who knows them. They want coordinated care. More than anything else, they want their docs to talk to each other.” She added that patients also want tools to help them participate as partners in their care and access to care when they need it.

Moving from identifying problems to providing solutions

Research must move beyond identifying problems to providing realistic solutions that meet both physician and consumer needs, noted Dr. Gawande. He told the audience that after “two decades chronicling the patterns and recording the symptoms and pathologies of our systems of health care delivery,” it is now time to move from being “diagnosticians” to providing solutions.

Health services research has shown that solutions are within

continued on page 3

Research Activities is a digest of research findings that have been produced with support from the Agency for Healthcare Research and Quality. *Research Activities* is published by AHRQ’s Office of Communications and Knowledge Transfer. The information in *Research Activities* is intended to contribute to the policymaking process, not to make policy. The views expressed herein do not necessarily represent the views or policies of the Agency for Healthcare Research and Quality, the Public Health Service, or the Department of Health and Human Services. For further information, contact:

AHRQ
Office of Communications
and Knowledge Transfer
540 Gaither Road
Rockville, MD 20850
(301) 427-1360

Gail Makulowich
Managing Editor

Kevin Blanchet, Karen Fleming-
Michael, David I. Lewin,
Mark W. Stanton,
Contributing Editors

Joel Boches
Design and Production

Karen Migdail
Media Inquiries

Also in this issue:

**Oral chemotherapy drugs
and medical errors, page 4**

**Drug-related bleeding risk in
cardiac patients with stents,
page 8**

**Impact of 9/11 attacks on
miscarriages, page 12**

**Treatment of cystic fibrosis with
human growth hormone, page 17**



Dr. Carolyn Clancy, Dr. Maulik Joshi, Debra Ness, and Dr. James Mold

AHRQ annual meeting

continued from page 2

reach. For example, Dr. Gawande's AHRQ-funded research showed that when surgical team members introduce themselves and use safety checklists before and after surgery, error rates plummet. He believes research can also help local health care systems reduce overuse of inappropriate services, such as imaging and surgery, and reduce inappropriate emergency department and hospital use. Research may also provide answers for how to improve care for the terminally ill and chronically disabled, he added.

Providing solutions that will work at the local level is challenging, because communities and their needs differ widely. Using the statistic that 1 percent of patients account for 30 percent of costs, Dr. Gawande gave three examples of communities and the problems that cost them the most. The 1 percent of patients in Camden, New Jersey, suffer from severe disabilities with drug and alcohol addiction, homelessness, and poverty. Massachusetts General Hospital's 1 percent struggles with terminal illness. Finally, a self-insured

company's 1 percent contends with chronic back pain and musculoskeletal injuries.

Implementation of evidence-based solutions is also a challenge. Dr. Joshi remarked that hospital staff often quiz him on implementation issues. "I hear the 'how to' question all the time," he said, adding that he commends AHRQ for investing in implementation and dissemination in addition to research.

One solution for disseminating innovations may be found in AHRQ's Medicaid Medical Directors Learning Network, noted Dr. Clancy. The network provides a forum where clinical leaders of State Medicaid programs can discuss their

most pressing issues. Learning network participants often use AHRQ products, such as evidence reports comparing the effectiveness of different treatments for a condition, to tackle these issues. "The idea that they have these resources at their disposal and that we could in some way hook them up with someone who could help them make sense of all these data is pretty remarkable," Dr. Clancy said.

Conducting research, developing solutions, and providing answers to the "how to" falls squarely on the shoulders of those who attended the conference, concluded Dr. Gawande. "Close attention to the patterns of our failures, of our system failures, can be contentious but absolutely necessary. And we'll need to couple that with a kind of creativity to try new solutions on the smallest level, based on these patterns. That is the challenge that all of us face, and this is the room where there are the people who will do it. And this is the Agency that will help drive it. And this is the time."

Editor's Note: Webcasts of the two plenary sessions are available at <http://www.ahrq.gov/about/annlconf10.htm>. Session speaker presentations will be posted on the AHRQ Web site later this fall. The 2011 conference is September 18-21. ■ KFM

AHRQ Conference Snapshot

- 1,823 participants from 20 countries
- 70 sessions: Presentations available later this fall at www.ahrq.gov/about/annualconf10
- Webcasts of plenary sessions available later this fall at www.ahrq.gov/about/annualconf10
- Session topics
 - Transforming health care delivery
 - Developing new patient care models
 - Strengthening preventive care and reducing health disparities
 - Improving quality and patient safety
 - Measuring and reporting on provider and system performance

Safety and Quality of Care

Oral chemotherapy drugs not immune to medication errors

Oral chemotherapy drugs are as susceptible to medication errors as other prescription medications, a new study finds. Saul N. Weingart, M.D., Ph.D., of the Dana-Farber Cancer Institute, and colleagues studied 508 medication error incidents that occurred with oral chemotherapy drugs. They identified 99 adverse drug events; 20 were serious or life-threatening and 52 were significant. The researchers also found 322 near misses and 87 errors that posed a low risk of harming patients.

Errors occurred at every stage of the process, but most often occurred during medication ordering (47.2 percent) and dispensing (31.1 percent). Pharmacists were most likely to catch the errors (69.5 percent).

Common errors included patients receiving the wrong dose (38.8 percent) or the wrong drug (13.6 percent). Another type of error, supplying patients with

the wrong number of days of medication (11 percent), resulted in nearly 40 percent of incidents in which patients suffered an injury. Oral chemotherapy is especially susceptible to this type of dispensing error because of the week-on, week-off schedules and pill combinations required to deliver the correct dose. Standardizing chemotherapy regimens and improving the functionality of computerized order entry so it can be used for oral chemotherapy drugs may help curb these errors, the authors suggest. This study was funded in part by the Agency for Healthcare Research and Quality (HS17123).

See "Medication errors involving oral chemotherapy," by Dr. Weingart, Julio Toro, R.N., B.S.N., Justin Spencer, M.P.A., and others in the May 15, 2010, *Cancer* 116 (10), pp. 2455-2464. ■ *KFM*

Whistleblowers in pharmaceutical fraud cases pursue Federal lawsuits for moral reasons, not money

Whistleblowers who help the U.S. Department of Justice (DOJ) identify and win health care fraud cases can reap large financial awards. However, a new study finds that money is not a motivator for the individuals who launch these lawsuits. Instead, integrity, altruism, public safety, justice, and self-preservation prompt them to file lawsuits under the Federal False Claims Act.

Aaron S. Kesselheim, M.D., J.D., M.P.H., of Brigham and Women's Hospital and Harvard Medical School, and his colleagues identified all individuals who had filed lawsuits leading to settlements against pharmaceutical companies under the Federal False Claims Act from 2001 to March 2009. These "qui tam" actions let individuals who have direct knowledge of a fraud initiate a lawsuit on the government's behalf. If the DOJ

pursues the claim, the whistleblower can receive between 15 and 25 percent of the judgment. The researchers found 42 unique whistleblowers, and 26 agreed to participate in semi-structured long-form interviews (62 percent). Among the sample, 5 received awards under \$1 million, 13 received between \$1 and \$5 million, and 7 received more than \$5 million (1 chose not to disclose the amount).

None of the respondents cited money as a reason for going forward with a lawsuit. In fact, the most common reason, cited by 11 whistleblowers, was integrity. According to the authors, these individuals described strong personal ethical standards that inspired the whistleblowers to come forward with evidence of wrongdoing.

More than 80 percent of the whistleblowers described some

form of retribution related to their behaviors. Five reported loss of employment, five reported being blackballed from subsequent jobs in the pharmaceutical industry, and five reported some form of direct intimidation, including possibly being implicated in the wrongdoing. Whistleblowers also felt that their involvement in the qui tam lawsuits led to financial turmoil, personal stress, and health problems, and some whistleblowers reported conflicts with DOJ personnel about the speed of the process or the ability of DOJ investigators to share information about the stage of the investigation.

The authors suggest that the toll these lawsuits take on their filers may limit the effectiveness of the False Claims Act in combating health care fraud, for example, by making prospective whistleblowers reluctant to come forward. Greater

continued on page 5

Whistleblowers

continued from page 4

recognition by the government of the hardship associated with this process, such as offering whistleblowers temporary financial help or medical benefits, could help promote responsible whistleblowing. Additionally, because financial awards were not always proportionate to the whistleblowers'

contribution in the case (e.g., those who work inside a company were likely to bring the most relevant evidence to light and were also more likely to experience professional or personal stress), the DOJ should develop better approaches to equitable distribution of the whistleblower portion of the settlement. This study was funded in part by the Agency for

Healthcare Research and Quality (HS18465).

See "Whistle-blowers' experiences in fraud litigation against pharmaceutical companies," by Dr. Kesselheim, David M. Studdert, LL.B., Sc.D., M.P.H., and Michelle M. Mello, J.D., Ph.D., M.Phil., in the May 13, 2010 *New England Journal of Medicine* 362(19), pp. 1832-1839. ■ KFM

MRSA can spread slowly but surely in households

Methicillin-resistant *Staphylococcus aureus* (MRSA) was once a bacterium found only in health care settings, but more often is now being found in communities. In households, the bacteria can spread from family member to family member through casual contact. Researchers at the University of Pennsylvania School of Medicine identified eight individuals with MRSA infections and asked all family members of these patients to swab their noses, armpits, throats, groins, and perineum every 2 weeks for 3 months and send the samples to a laboratory to be tested for MRSA colonies. Among the eight MRSA-infected patients, it took an average of 33 days to clear MRSA colonization. Among the seven family members, three (43 percent) were also colonized with MRSA. One was found to be positive for MRSA colonies at the first test; two others became colonized after they were enrolled in the study. Among these three patients, it took an average of 54 days for MRSA to

clear. Having a MRSA-colonized family member was associated with a longer duration of MRSA colonization in the individual with the original MRSA infection.

These results suggest the colonization for community-acquired MRSA occurs within households. Further, when a second family member becomes colonized with MRSA, the duration of MRSA colonization increases for the patient who originally brought the MRSA into the home. This study was funded in part by the Agency for Healthcare Research and Quality (H16946).

See "The impact of household transmission on duration of outpatient colonization with methicillin-resistant *Staphylococcus aureus*," by Ebbing Lautenbach, M.D., M.P.H., M.S.C.E., Pam Tolomeo, M.P.H., C.C.R.P., Irving Nachamkin, Dr.P.H., M.P.H., and others in the May 2010 *Epidemiology and Infection* 138(5), pp. 683-685. ■ KFM

Electronic medical record boosts documentation of test results, but still falls short for patient notification and test followup

The electronic medical record (EMR) can do a great deal to improve office-based care, including reducing medical errors. However, while physicians believe that the EMR will greatly impact test result procedures, this is not always the case. A recent study found that while the EMR does increase the documentation of patient test results, it still falls short when it comes to notifying patients,

documenting the interpretation of results, and following up on abnormal test results.

Researchers examined patient charts from eight primary care offices in Ohio. They reviewed a total of 461 test results in 200 charts. Of these, 274 were managed by EMR at 4 offices, with the others managed by standard paper-based procedures. There were significant differences between

EMR vs. paper charts in the way test results were documented. Both did well at ensuring that the results were in the proper location in the chart. However, while 86 percent of paper test results had a clinician signature, all of the EMR results did. Also the EMR was better at documentation of test result interpretation and patient notifications.

continued on page 6

Electronic medical records

continued from page 5

However, the success rate declined greatly for both EMR and paper charting when it came to writing a results interpretation in the chart and documenting patient notification. There were also low rates of documentation regarding

needed followup of abnormal test results for both the EMR and paper systems. The researchers concluded that the EMR is not being used to its fullest potential when it comes to steps involving the active input of staff and clinicians. They note that an important unresolved issue is whether an EMR really increases test result management quality or just documentation. The study was

supported in part by the Agency for Healthcare Research and Quality (HS13914).

See “The management of test results in primary care: Does an electronic medical record make a difference?” by Nancy C. Elder, M.D., M.S.P.H., Timothy R. McEwen, M.S., John Flach, Ph.D., and others in the May 2010 *Family Medicine* 42(5), pp. 327-333. ■ KB

Various factors affect providers' ability to identify spoken drug names

A number of drugs have similar sounding names. This can create confusion among health care providers, particularly when using the telephone for medication orders. In a new study, researchers found several factors that can affect how a provider hears, understands, and identifies drug names. These include voice signal-to-background noise ratios, familiarity with the drug name, prescribing frequency, and the similarity of drug names.

A total of 62 pharmacists, 74 family physicians, and 70 nurses were recruited for this study from annual meetings held during 2005. In addition, 43 nonmedical consumers from the general public also participated. The researchers selected 99 brand and 99 generic drug names to be used in the study. These names were then recorded using correct, clinical pronunciation. Participants sat at a computer with headphones. They were asked to repeat back the name of the drug they had heard. These were presented against a background of multitalker noise at three different signal-to-noise conditions. The responses were recorded. In a second step, they went to a different computer where they read aloud all of the drug names from words presented on the screen. They were also asked to rate how familiar they were with each drug name.

The ability of providers to accurately identify spoken drug names increased significantly as the signal-to-noise ratio increased (i.e., as the noise decreased). A provider's subjective familiarity with a name also increased their accuracy in identifying the correct drug name. If a drug was frequently prescribed at the national level, participants were more often able to identify it. In the case of clinicians but not lay people, the existence of similar sounding drug names decreased their ability to accurately identify a particular target drug name. The researchers recommend that providers receiving telephone orders have the ability to increase the voice signal volume to minimize errors. Using noise-cancelling headphones or being in a quiet area can also help. Other strategies, such as reading back the name, spelling it out, and using both brand and generic names can assist in reducing confusion over spoken drug names. The study was supported in part by the Agency for Healthcare Research and Quality (HS11609).

See “Listen carefully: The risk of error in spoken medication orders,” by Bruce L. Lambert, Ph.D., Laura Walsh Dickey, Ph.D., William M. Fisher, Ph.D., and others in the 2010 *Social Science & Medicine* 79, pp. 1599-1608. ■ 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.

AHRQ patient safety indicator can be used to identify cases of hospital-acquired collapsed lung

Pneumothorax (collapsed lung) is a relatively frequent and potentially serious complication of hospital procedures performed near the lung. The complication is most commonly associated with central vein catheter (CVC) placement, nasogastric tube insertion, and other procedures involving the neck or chest wall that introduce air into the space between the pleural membrane and the lung. Symptoms include sudden chest pains, shortness of breath, and rapid heart beat. A new study shows that the Agency for Healthcare Research and Quality (AHRQ) Patient Safety Indicator (PSI) 6, Iatrogenic (hospital-acquired) Pneumothorax, can identify this complication from administrative data. It also suggests that many of these complications could have been prevented with use of real-time ultrasound guidance

when performing CVC insertion and other procedures.

AHRQ has developed PSIs of potentially preventable complications using readily available administrative data. The indicators are based on diagnostic codes and have become a widely used tool to assess, monitor, and compare safety-related aspects of hospital performance. The study found that PSI 6 software, used to analyze hospital administrative data for 200 randomly selected cases of suspected pneumothorax from 28 hospitals, correctly identified 78 percent of cases that were confirmed on the basis of chart-abstracted data.

CVC placement was found to be associated with 44 percent of the pneumothorax events (59 events). However, only five of these procedures used ultrasound guidance, which is known to reduce

the risk of pneumothorax by more than half. The findings were based on a retrospective study of a cross-section of records that met criteria for PSI 6 from a voluntary group of 47 hospitals in 29 States. However, only 28 of the hospitals had pneumothorax cases involving a hospital discharge between October 2005 and March 2007. The study was funded in part by the Agency for Healthcare Research and Quality (Contract No. 290-04-0020).

More details are in “Cases of iatrogenic pneumothorax can be identified from ICD-9-CM coded data,” by Banafsheh Sadeghi, M.D., Ph.D., Ruth Baron, R.N., Patricia Zrelak, Ph.D., and others in the March 2010 *American Journal of Medical Quality* 25(3), pp. 218-224. ■ *DIL*

Cesarean delivery rates may not be a useful measure of obstetric quality

There are currently no uniformly accepted measures of obstetrical quality. The risk-adjusted cesarean delivery rate historically has been a proposed quality measure. Earlier studies have suggested that both higher-than-expected and lower-than-expected rates may be associated with adverse maternal and neonatal outcomes. However, a new study suggests that risk-adjusted cesarean delivery rates may not be a useful measure of obstetric quality. The researchers correlated risk-adjusted cesarean delivery rates with important maternal and neonatal outcomes in a study of 845,000 women from 401 hospitals in California and Pennsylvania.

Their study found that 60 percent of 107 hospitals with lower-than-expected risk-adjusted cesarean delivery rates had a higher-than-expected rate of at least one of six adverse outcomes. This compared with 36.1 percent of the as-expected group and 19.6 percent of hospitals with higher-than-expected risk-adjusted cesarean delivery rates. On the other hand, hospitals

with higher-than-expected cesarean delivery rates had similar rates of adverse outcomes as the as-expected hospitals on the other six delivery outcome measures.

The researchers stress that the lack of a correlation between a higher-than-expected cesarean delivery rate and adverse outcomes should not suggest that a higher-than-expected rate is desirable. Instead, it likely reflects an overuse of medical care and the performance of unnecessary procedures. What's more, the higher rate of c-sections did not result in improved outcomes. The study evaluated all the women from the hospitals and a smaller subset of women delivering single babies for the first time with no history of prior cesarean delivery. The results for the smaller group were similar to those of the larger group.

The outcome measures were a composite maternal outcome measure, a composite neonatal outcome measure, and four patient safety indicators from the

continued on page 8

Cesarean delivery rates

continued from page 7

Agency for Healthcare Research and Quality (AHRQ): birth trauma, injury with instrumented vaginal delivery, injury with noninstrumented vaginal delivery, and injury with cesarean delivery. This study was

supported in part by the Agency for Healthcare Research and Quality (HS15696).

See “Evaluating risk-adjusted cesarean delivery rate as a measure of obstetric quality,” by Sindhu K. Srinivas, M.D., Corinne Fager, M.S., and Scott A. Lorch, M.D. in the May 2010 *Obstetrics and Gynecology* 115(5), pp. 1007-1013. ■ MWS

Outcomes/Effectiveness Research

Clopidogrel increases bleeding risk in cardiac patients with drug-eluting stents

Patients suffering from a blockage in their coronary arteries usually undergo coronary angioplasty. In this procedure, a balloon-tipped catheter is inserted through the groin into the blocked artery along with a drug-eluting stent (wire mesh tube), which expands when the balloon is inflated to provide a scaffold to keep the coronary artery open. The stent remains once the balloon catheter is withdrawn. After this procedure, patients may be placed on clopidogrel, a blood-thinning agent, to prevent clots from forming on the stent. However, a new study finds that patients placed on clopidogrel have an increased risk of bleeding, although their risk for a heart attack decreases.

A total of 7,689 patients were evaluated for this study. All had received drug-eluting stents, with

just under half (49.1 percent) receiving clopidogrel for more than 6 months. Patients were followed for up to 18 months for signs of major bleeding, a heart attack, or death. Particular attention was paid to the time interval from 0 to 6 months, the recommended time for clopidogrel therapy from the drug's manufacturer.

After a mean follow-up of 418 days, 3.6 percent of patients experienced a major bleeding event. The percentage of patients who suffered a heart attack or died was 3.7 percent and 2.9 percent, respectively. Even when the researchers adjusted for various factors, there was still a significant association between clopidogrel and an increase in major bleeding for all time intervals. These included 0 to 6 months, 7 to 12 months, and 13 to 18 months. However, patients on

clopidogrel had a decreased risk of having a heart attack for all time intervals while on the therapy. There was also a decrease in death rate for clopidogrel patients during the 7- to 12-month time interval. The researchers call for more randomized clinical trials to determine the optimal time patients should be on clopidogrel in order to reduce bleeding risks and increase the benefits of therapy. The study was supported in part by the Agency for Healthcare Research and Quality (HS00331).

See “Increased risk of bleeding in patients on clopidogrel therapy after drug-eluting stents implantation,” by Thomas T. Tsai, M.D., M.Sc., P. Michael Ho, M.D., Ph.D., Stanley Xu, Ph.D., and others in the June 2010 *Circulation Cardiovascular Interventions* 3, pp. 230-235. ■ KB

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.

Higher risk of death or heart attack in first 90 days after cardiac patients stop taking clopidogrel

Earlier studies suggest that cardiac patients may experience problems after they stop taking the blood-thinning drug, clopidogrel, due to a potential rebound effect that may be caused by increased activation of blood platelets (cells involved in blood clotting). A new study has found a twofold increase in the risk of death or heart attack in the first 90 days after acute coronary syndrome patients stopped taking clopidogrel compared with later time intervals (91-360 days) and compared with patients remaining on clopidogrel therapy. It also demonstrated that the adverse outcomes occurred across multiple patient groups: women vs. men, percutaneous coronary intervention vs. medical therapy without stents, drug-eluting stents vs. bare metal stents, and duration of clopidogrel treatment before cessation (>6 months vs. <6 months).

The study also highlighted the incidence of bleeding events around the time of clopidogrel cessation (~7%) and showed that the clustering of adverse events was specific to clopidogrel discontinuation. The fact that there was a clustering of adverse events after stopping

clopidogrel but not after stopping an angiotensin converting enzyme inhibitor medication (while staying on clopidogrel) suggests that the clustering of events is not a general effect of stopping medications, note the researchers.

Their findings suggest an urgent need to develop strategies to attenuate the observed clustering of events after the end of a prescribed clopidogrel treatment course. The study population included 1,656 patients with postacute coronary syndrome patients who stopped clopidogrel and had been event-free before stopping the drug. This study was funded by the Agency for Healthcare Research and Quality (Contract No. 290-05-0033).

See “Adverse events after stopping clopidogrel in post acute coronary syndrome patients: Insights from a large integrated healthcare delivery system” by P. Michael Ho, M.D., Ph.D., Thomas T. Tsai, M.D., M.Sc., Tracy Y. Wang, M.D., M.H.S., and others in *Circulation: Cardiovascular Quality and Outcomes* 3, pp. 303-308, 2010. ■ DIL

Hospital report cards on coronary bypass surgery are more accurate when based on 2-year data

The public reporting of hospital outcomes data is becoming increasingly popular, particularly with the availability of the Internet. Patients and their doctors can now find information on how hospitals do when it comes to various conditions and treatments. One area where these “mortality report cards” have become popular is for coronary artery bypass graft (CABG) surgery. However, these data may not be accurate for predicting subsequent hospital performance depending on how old the data are. A new study finds that patients and doctors can rely on risk-adjusted outcomes reports based on 2-year-old data for CABG surgery as a strong predictor of future hospital performance. However, mortality

report cards based on 3-year-old data are not that useful when it comes to identifying low-performance hospitals.

Researchers looked at hospital mortality measures at 37 hospitals in New York State that perform CABG surgery. Patients and doctors can access such data from the State’s health department Web site. At the moment, CABG mortality report cards are based either on 2- or 3-year old data. An observed-to-expected mortality rate (O-to-E ratio) was used to determine the association between a hospital’s past quality ranking and its future performance.

The subsequent performance of hospitals classified as low-performance in their 3-year-old report cards was no different than

that of hospitals classified as average hospitals. Hospitals identified as high-quality using 3-year-old data had a subsequent O-to-E ratio that was 19.4 percent lower than intermediate-quality hospitals. At the same time, hospitals identified as low-quality hospitals based on 3-year-old data had subsequent O-to-E ratios nearly identical to intermediate-quality hospitals. On the other hand, high-quality hospitals identified by using 2-year-old data had O-to-E ratios that were 16.8 percent lower than intermediate-quality hospitals. Also, there was a 31.8 percent higher O-to-E ratio for low-quality hospitals compared with intermediate-quality hospitals. Based on these findings, the researchers recommend that

continued on page 10

Coronary bypass surgery

continued from page 9

New York State base its CABG surgery mortality rates on 2-year-old data. The study was supported in part by the Agency for Healthcare Research and Quality (HS16737).

See “How well do hospital mortality rates reported in the New York State CABG report card predict subsequent hospital performance?” by Laurent G. Glance, M.D., Andrew W. Dick, Ph.D., Dana B. Mukamel, Ph.D., and others in the May 2010 *Medical Care* 48(5), pp. 466-471.

■ KB

Colonoscopy is best at diagnosing lower intestinal bleeding

When it comes to lower intestinal bleeding (LIB), identifying the source is critical for effective diagnosis and treatment. This can be difficult, particularly at the time a patient presents with the problem. There are a number of currently available radiological procedures available to diagnose and manage LIB. Despite these newer strategies, a recent review of studies on the topic supports the use of colonoscopy as the preferred approach in most patients with LIB.

According to the researchers, colonoscopy provides clear advantages over other radiological procedures. Not only can it provide a diagnosis, but it can also provide an opportunity to stop the bleeding. According to the literature, colonoscopy can diagnose LIB in 75 to 100 percent of patients. Other radiographic tests require active bleeding at the time of the procedure. As such, colonoscopy has a higher diagnostic yield compared with these other tests.

In patients with severe bleeding, it is advantageous to perform colonoscopy as soon as possible after a patient presents with LIB, preferably within 12 hours. Urgent colonoscopy can also identify low-risk patients

who may be candidates for early discharge. In fact, the time to colonoscopy strongly predicts the length of stay for the patient.

Angiography and other radiologic strategies are best reserved for patients with significant bleeding who cannot be stabilized for a colonoscopy and for patients with obscure bleeding sources. They are not designed for routine cases in that they require active bleeding at the time they are performed. When angiography is used, elderly patients and those with coexisting illnesses may have serious complications. The researchers conclude that colonoscopy remains the preferred strategy for most patients, owing to its high diagnostic yield, low complication rate, and the ability to identify and treat the source of bleeding immediately. The study was supported in part by the Agency for Healthcare Research and Quality (HS14062).

See “The role of colonoscopy and radiological procedures in the management of acute lower intestinal bleeding,” by Lisa L. Strate, M.D., and Christopher R. Naumann, M.D., in *Clinical Gastroenterology and Hepatology* 8, pp. 333-343, 2010. ■ KB

Most adults with lactose intolerance can tolerate the amount of lactose in a cup of milk

Most adults with presumed lactose intolerance can tolerate 12-15 grams of lactose, the amount in a cup of milk, concludes a review of studies on the topic. Doses of 24 grams or more of lactose, the primary carbohydrate in milk, could produce gastrointestinal symptoms, such as diarrhea, bloating, flatulence, and abdominal discomfort. Individuals with lactose

malabsorption have reduced levels of the enzyme lactase, which breaks down lactose in the digestive system. Levels of this enzyme decline dramatically after infancy in humans and can result in lactase deficiency. While both adult lactase deficiency and lactose malabsorption can be measured directly, a diagnosis of lactose intolerance depends on the patient's self-reported symptoms after

consuming foods containing lactose. The review authors analyzed 36 studies on lactose intolerance and ways to reduce its symptoms. The trials, which were of generally poor quality, failed to find significant reduction of lactose intolerance in individuals given lactose-reduced milk or lactase supplements with 0-2 grams of lactose. Evidence was also

continued on page 11

Lactose intolerance

continued from page 10

insufficient to show reduced lactose intolerance with probiotics such as bacterial yogurt cultures, attempts to produce colon adaptation through increasing lactose doses, and other agents.

The review authors searched a number of health- and food-related databases for articles that dealt with

either the maximum tolerated lactose intake in patients diagnosed as having lactose intolerance or evaluated strategies to manage lactose intolerance in individuals. Most of the studies used evidence of lactose malabsorption, rather than of actual lactose intolerance. The study was funded in part by the Agency for Healthcare Research

and Quality (Contract No. 290-07-10064).

More details are in “Systematic review: Effective management strategies for lactose intolerance,” by Aasma Shaukat, M.D., M.P.H., Michael D. Levitt, M.D., Brent C. Taylor, Ph.D., M.P.H., and others in the June 15, 2010 *Annals of Internal Medicine* 152(12), pp. 797-803. ■ DIL

Pharmacy intervention for patients with limited literacy evokes positive responses from patients and pharmacists

Over 90 million Americans have low health literacy, meaning that they struggle to understand and act on health information, such as that provided on prescription drug labels and pharmacy information leaflets. Previous research has shown that reminder telephone calls and patient education materials, coupled with verbal counseling, may improve medication adherence. A new study shows that this type of approach is also well received by pharmacists and patients.

Researchers from Emory University’s Rollins School of Public Health examined reactions to a Pharmacy Intervention for Limited Literacy (PILL) intervention that included an automated telephone reminder system, a computer-generated illustrated medication guide, and pharmacist training in clear health care communications. They gathered responses to the intervention by interviewing the 4 participating pharmacists and conducting 4 focus groups consisting of 23 predominantly poor patients from 3 outpatient pharmacies of an inner-city health system in Atlanta. Two focus groups were held 1 month after the intervention began and two focus groups were held at the conclusion of the 6-month PILL study. Results showed the reactions by both patients and

pharmacists were generally positive. Most pharmacy patients experienced few difficulties with the intervention. The illustrated medication guide, known as the PictureRx, received the most comments and was praised for its design and usefulness. The automated telephone reminder, which presented initial technological challenges, was also well-received by patients. Overall, the key elements leading to positive reactions were ease of comprehension, accessibility, and personalization to the special needs of the target population. The pharmacists were pleased with the communications skills training. Also, after some early glitches with the PictureRx, they felt it was easy to use and provided an important counseling tool for their patients. This study was partly supported by the Agency for Healthcare Research and Quality (Contract No. 290-00-0011).

See “A qualitative evaluation of a health literacy intervention to improve medication adherence for underserved pharmacy patients,” by Sarah C. Blake, M.A., Karen McMorris, and Kara L. Jacobson, M.P.H., in the *Journal of Health Care for the Poor and Underserved* 21(2), pp. 559-567. ■ MWS

Disparities/Minority Health

Black and Hispanic Medicare patients with hip fracture wait longer for surgery than white patients

Delayed surgery after admission to the hospital for hip fracture is linked to subsequent complications ranging from pressure sores to sometimes life-threatening blood clots. Black and Hispanic Medicare patients with hip fractures experienced approximately a half-day delay in obtaining hip stabilization surgery compared with white patients, according to a team of researchers from the University of Texas and the University of South Alabama. The mean number of days to surgery was 1.2 for non-Hispanic whites, 1.6 for blacks, and 1.7 for Hispanics.

The complications following delayed hip surgery may be related to the longer period of immobilization brought about by the delay. In the majority of cases, the delay of stabilization surgery is due to the need to evaluate and stabilize such medical problems as chest pain and hypertension. One explanation for the longer preoperative time might be that preoperative management took longer for minorities because of the

higher prevalence in blacks and Hispanics of undiagnosed and uncontrolled medical conditions such as diabetes and hypertension. Minority patients may need better access to primary care providers who could diagnose and manage these and other medical problems.

Another possible explanation is delayed transportation to the hospital that could lead to an afternoon admission and surgery deferred to the next day, note the researchers.

Included in the study were 40,321 Medicare patients receiving hip surgery between 2001 and 2005. This study was supported in part by the Agency for Healthcare Research and Quality (HS11618).

See "The impact of race/ethnicity on preoperative time to hip stabilization procedure after hip fracture" by Tracy U. Nguyen-Oghalai, M.D., Ph.D., Yong-fang Kuo, Ph.D., Helen Wu, Ph.D., and others in the *Southern Medical Journal* 103(5), pp. 414-418. ■ MWS

Women's Health

9/11 attacks may have caused miscarriages of male fetuses

The odds of having a male baby tend to fall after a natural or social disaster, research has shown. The communal bereavement hypothesis may be one explanation for this drop. It asserts that the widespread distress that occurs after a disaster can also affect individuals, like pregnant women, who have never met the victims of the disaster. For pregnant women, this stress can lead to production of corticosteroids that adversely affect male more than female fetuses, suggests a new study. Researchers from the University of California at Irvine found that the events of September 11, 2001,

led to a rise in miscarriages of male fetuses.

Using 1996 to 2002 fetal death data files from the National Vital Statistics System, which records fetal deaths at 20 weeks or more, and birth certificate data from the National Vital Statistics System, the authors found that the odds of male fetal death increased unexpectedly in the United States (except for California) in September 2001. Further, the ratio of males expected to be born in December 2001 fell below expected values.

These findings suggest that the physiological response pregnant women experience after tragedies

can threaten the gestation of male fetuses and serve as an indicator of how pregnant women react to societal stressors, the authors state. This study was funded in part by the Agency for Healthcare Research and Quality (T32 HS00086).

See "Male fetal loss in the U.S. following the terrorist attacks of September 11, 2001," by Tim A. Bruckner, Ph.D., Ralph Catalano, Ph.D., M.R.P., and Jennifer Ahern, Ph.D., M.P.H., in the May 25, 2010 *BMC Public Health* 10, pp. 273. ■ KFM

One-fifth of mothers do not receive recommended antenatal corticosteroids before delivery of premature infants

Strong evidence demonstrates that antenatal corticosteroids during preterm labor reduce the incidence of respiratory distress syndrome and other secondary complications associated with prematurity. Yet, 20 percent of eligible mothers failed to receive indicated antenatal corticosteroid therapy, according to a study at three New York City hospitals. Of these women, 43 percent delivered more than 2 hours after admission and 33 percent delivered more than 4 hours after admission, indicating sufficient time to have treated them.

The failure to administer recommended steroids was related strongly to how long after admission the delivery took place. Seventy-nine women delivered within 2 hours of admission and 73 percent of them did not receive the therapy. By contrast, only 8 percent of those who delivered between six and eight hours after admission did not receive recommended corticosteroids. This may be because the National Institutes of Health (NIH) Consensus Statement (1994) supporting the use of antenatal corticosteroids excludes from its recommendation women for whom immediate delivery was anticipated. Many of the women who delivered within 2 hours of admission were probably expected to deliver immediately, note the researchers.

In this study, women whose cervixes were at a more advanced stage were also less likely to receive steroids, suggesting that physicians chose to withhold steroids

from women for whom they anticipated immediate delivery. They were generally correct (if imprecise), but wrong one-third of the time, note the researchers. They state that incorporating a physician's capacity to predict the immediate future regarding the time of delivery may have inadvertently subverted the capacity of the NIH guideline to guide practice. They recommend that the NIH guideline may have been more effectively implemented had the statement suggested that steroids should be provided to all eligible women who do not deliver within a specific time period, such as 1 hour after admission. The other factors associated with failure to receive recommended therapy were lack of prenatal care, longer gestation, advanced cervical exam, and intact membranes at admission. The study included 515 women eligible for antenatal corticosteroids, of whom 70 percent were black or Hispanic. Most were insured through Medicaid or a Medicaid HMO. This study was supported, in part, by the Agency for Healthcare Research and Quality (HS10859).

See "Approaching NIH guideline recommended care for maternal-infant health: Clinical failures to use recommended antenatal corticosteroids" by Elizabeth A. Howell, M.D., Joanne Stone, M.D., Lawrence C. Kleinman, M.D., and others in the 2010 *Maternal and Child Health Journal* 14, pp. 430-436. ■ MWS

Chronic Disease

Stroke recurrence rates vary by U.S. region

Recurrent ischemic stroke is a common event and a major cause of disability and death. A national study of 895,916 Medicare patients with stroke found that 9.4 percent experience another ischemic stroke necessitating rehospitalization within a year. The Southeastern, Atlantic, and Central United States all had higher rates of recurrent stroke, while lower rates were present in the Western and Northeastern regions, according to a new study. Regional variation was present for all racial/ethnic

subgroups and persisted after adjustment for individual patient characteristics.

Prior to this study, regional variation for stroke mortality and stroke hospitalization rates had been demonstrated, but little was known about the geographic pattern of recurrent stroke. The researchers looked at county-level data for elderly Medicare fee-for-service beneficiaries between 2000 and 2002. Patients with recurrent stroke were more often male, younger, black, had more illnesses, higher

rates of diabetes, and were more likely to have two or more hospitalizations in the prior year. However, risk factors and population demographics do not appear to account for the increased risk of recurrent stroke in the Southeast and other regions.

The reasons why high stroke incidence and recurrence are higher in certain parts of the United States remain unclear. Future research is need to determine if other factors such as genetic variation,

continued on page 14

Stroke recurrence

continued from page 13

environmental factors, health care services, and infectious disease exposure might be associated with regional patterns in stroke

outcomes. This study was supported by the Agency for Healthcare Research and Quality (HS16959).

See “Geographic variation in one-year recurrent ischemic stroke rates for elderly Medicare

beneficiaries in the U.S.A.,” by Norrina B. Allen, Ph.D., M.P.H., Theodore R. Holford, Ph.D., Michael B. Bracken, Ph.D., and others in *Neuroepidemiology* 34, pp. 123-129. ■ MWS

A simple test can help assess how accurately patients report colorectal cancer screening

Clock drawing, a simple test of cognitive skills, can help predict whether an older patient's self-report about having been screened for colorectal cancer (CRC) or being up-to-date with CRC screening is accurate, a new study reports. By identifying patients likely to have impaired thinking, the clock drawing test can help clinician-researchers avoid using inaccurate information from patients in their research. The researchers reported that 493 patients participating in the study drew a clock, completed a questionnaire about their CRC screening, and had their questionnaire responses checked via chart review.

The patients, from practices that were part of the Iowa Practice-based Research Network, were asked to draw a clock showing “10 minutes after 11” on a preprinted circle. The researchers scored the clock drawings for the remaining 493 patients on a 0–7 scale (0–3 = normal, 4–7 = abnormal). The sensitivity of self-report for ever having had a colonoscopy was 82 percent for patients who drew normal clocks and 63

percent for those drawing abnormal clocks. The specificity for self-report of being up-to-date with colonoscopy screening was 79 percent for patients who drew normal clocks and 60 percent for patients who drew abnormal clocks.

In a model that included multiple variables, only abnormal clock drawing significantly predicted higher disagreement between self-report and chart review. Income, marital status, and age were not useful predictors of such disagreement. The study was funded in part by the Agency for Healthcare Research and Quality (HS14490).

More details are in “Patient clock drawing and accuracy of self-report compared with chart review for colorectal cancer (CRC) screening,” by Jeanette M. Daly, Ph.D., Barcey T. Levy, M.D., Ph.D., Mrinalini Joshi, M.D., M.P.H., and others in the May/June 2010 *Archives of Gerontology and Geriatrics* 50(3), pp. 341-344. ■ DIL

Public Health Preparedness

Heart-lung machine may be considered for certain patients with H1N1 influenza with acute respiratory failure

Many young adults who contracted the novel 2009 influenza H1N1 virus were admitted to intensive care units with severe respiratory failure. A review of studies comparing different methods of getting oxygen into the lungs of such patients suggests that clinicians should consider extracorporeal membrane oxygenation (ECMO) along with other salvage therapies in patients failing conventional therapy.

ECMO has been used for respiratory failure in different types of patients, but there are no clinical guidelines for its use in patients with the flu.

In this review of studies, the researchers found no randomized controlled trials of ECMO in flu patients. They did find an observational study of H1N1 flu patients in Australia and New Zealand that reported on 68 patients treated with ECMO, which uses a

modified heart-lung machine (a mechanical pump to oxygenate and circulate the patient's blood), and 133 treated with mechanical ventilation (via a breathing tube) during winter in those countries. However, the two groups were not comparable because one group had more severe lung damage than the other.

To get additional information, the researchers combined the

continued on page 15

H1N1 influenza

continued from page 14

findings from three randomized trials of ECMO therapy conducted over 30 years, regardless of the origin of respiratory distress. This meta-analysis found a suggestive, but not statistically significant, reduction in deaths compared with patients not receiving ECMO. A more recent study randomly

assigned 90 patients to ECMO therapy and 90 to conventional management (control group). The risk of death or severe disability at 6 months was a significant 31 percent less for the ECMO than the control group. However, the risk of death by 6 months just missed statistical significance. The study was funded in part by the Agency for Healthcare Research and Quality (HS18406).

More details are in “A systematic review to inform institutional decisions about the use of extracorporeal membrane oxygenation during the H1N1 influenza pandemic,” by Matthew D. Mitchell, Ph.D., Mark E. Mikkelsen, M.D., M.S.C.E., Ingi Lee, M.D., M.S.C.E., and others in the June 2010 *Critical Care Medicine* 38(6), pp. 1398-1404. ■ DIL

Primary Care

Medical home concept not well defined in 2007 legislation

Policymakers, payers, primary care doctors, and health system administrators have been buzzing about “patient-centered medical homes” in recent years. A new study finds that because the concept is not yet well defined, implementing medical homes may prove difficult. Robert Stenger, M.D., M.P.H., and Jennifer E. Devoe, M.D., D.Phil., of Oregon Health & Science University, reviewed pieces of legislation proposed in 2007 that mentioned medical homes. They also reviewed interviews conducted with key stakeholders from Oregon after health care reform legislation passed in 2007.

The authors found that one of the greatest barriers to implementing the medical home concept is lack of an operational definition. In fact, three-quarters of the enacted State bills in 2007 lacked precise language on medical homes. Additionally, States view the concept differently. For example, California’s definition viewed it as a single provider or facility, while Louisiana defined it as a system of care, and Vermont saw it as a primary care practice.

During the interviews, primary care physicians and health system administrators expressed reservations about the potential for medical homes to increase

their costs in light of ebbing reimbursements. Thus, they were less enthusiastic about the adoption of the medical home concept without a revamped payment structure. Payers and policymakers contemplating the medical home concept also expressed their worries about containing costs, either to protect their company’s bottom line or to ensure public funds were used efficiently. The authors suggest that current demonstration grants may be able to showcase ways to allay these parties’ concerns. However, because of the lack of a common definition, these grants could end up producing a myriad of results showcasing innovative approaches that cannot be replicated or that stymie the medical home concept altogether. This study was funded in part by the Agency for Healthcare Research and Quality (HS14645 and HS16181).

See “Policy challenges in building the medical home: Do we have a shared blueprint?” by Drs. Stenger and DeVoe in the May/June 2010 *Journal of the American Board of Family Medicine* 23(3), pp. 384-392. ■ KFM

HIV/AIDS Research

Internet-based personal health records helpful to most HIV/AIDS patients who used them

Public health records (PHRs) are a free, secure, Internet-based application that allows patients to retrieve comprehensive information such as laboratory test results and to share their health information with providers. Clinicians may use the application to document and verify demographics, diagnoses, medications, and laboratory data. A new study shows that the majority of HIV/AIDS patients who used the PHR at a San Francisco General Hospital HIV/AIDS clinic found it helped them manage their disease.

The researchers activated a session tracking tool in order to measure online PHR use and added a 25-item evaluation survey to the PHR. Session usage was tracked for 136 persons, with the median number of sessions being 7 and the median session length being 4

minutes. Thirty-eight percent of this group completed the 25-item survey. Of these, more than 80 percent agreed that the PHR helped them manage their medical problems, prepared them better for their visits, and helped them take charge of their health care.

The most popular page contained laboratory values, lists of medical conditions, medication lists, and links to information about health conditions. The finding that nearly a third of patients did not agree that the information in their PHR was confidential was surprising. It is not clear whether this concern impacted patients' PHR use. The PHR, known as "myHERO," was made available at the HIV/AIDS clinic between March 2007 and December 2008. In this period, 221 of 3,760 patients registered for their online PHR account. Compared

with the entire clinic, these initial users were more likely to be white, male, non-Hispanic, on antiretroviral medications, and have better control of their HIV infection. The researchers believe that this project demonstrated that HIV/AIDS patients receiving care in a safety-net setting will choose to create, activate, and use a PHR. The study was supported in part by the Agency for Healthcare Research and Quality (HS17787).

See "Personal health records in a public hospital: Experience at the HIV/AIDS clinic at San Francisco General Hospital," by James S. Kahn, M.D. Joan F. Hilton M.D., T. Van Nunnery, and others in the *Journal of the American Medical Informatics Association* 17, pp. 224-228, 2010. ■ MWS

Agency News and Notes

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

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

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

- The portion of family plan premiums paid by the employee for 1 in 10 workers nationwide was \$6,700 or more, compared with the national average of \$3,394.
- However, 10 percent of workers in Arizona, Colorado, New Mexico, and Washington spent at least \$8,100 to get family coverage.
- Some 3.1 million workers nationwide with single coverage were in plans with annual premiums totaling \$6,200 or more, or at least 41 percent higher than the national average of \$4,386.
- For workers who were enrolled in single-coverage plans, 1 in 10 paid at least \$1,900—more than double the national average of \$882.

continued on page 17

Insurance premiums

continued from page 16

Health insurance premiums vary within and between the States. The survey provides estimates of the range of premium costs within each State and across the nation, in addition to average premiums. The data in this AHRQ News and Numbers summary are taken from the Insurance Component of the Medical Expenditure Panel Survey

(http://meps.ahrq.gov/mepsweb/survey_comp/Insurance.jsp), a source of detailed information on employer-sponsored health insurance coverage and costs at the national, State, and metropolitan area levels. For MEPS summary data on employer-based health insurance premiums, go to www.meps.ahrq.gov. For further information, contact Bob Isquith at Bob.Isquith@ahrq.hhs.gov or call 301-427-1539. ■

Use of diabetes pills up, insulin use down

The proportion of Americans reporting treatment for diabetes who took oral medications to treat their condition, increased from 60 percent in 1997 to 77 percent in 2007—a 28 percent increase—according to the latest *News and Numbers* from the Agency for Healthcare Research and Quality (AHRQ). During the same period, the proportion taking insulin to control their diabetes fell from 38 percent to 24 percent.

AHRQ's analysis also revealed a shift in the three most commonly prescribed oral medications between 1997 and 2007. The proportion of Americans using sulfonylureas, which stimulate the pancreas to produce more insulin, declined from 1997 to 2007. The proportion using biguanides, which

reduce the liver's excess glucose production, and thiazolidinediones, which increase insulin sensitivity, rose during the period.

Specifically, the proportions of people who were treated for diabetes who used the three most commonly prescribed oral medications were as follows:

- Sulfonylureas declined from 51 percent to 40 percent.
- Biguanides rose from 21 percent to 55 percent.
- Thiazolidinediones increased from 5 percent to 25 percent.

The data in this AHRQ News and Numbers summary 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. For more information, see *Trends in the Pharmaceutical Treatment of Diabetes: A Comparison of Utilization and Expenditures, 1997 and 2007* at www.meps.ahrq.gov. For more information, or to speak with an AHRQ data expert, please contact Bob Isquith at Bob.Isquith@ahrq.hhs.gov or call (301) 427-1539. For information on comparisons of the effectiveness and side effects of oral antidiabetic medicines, see *Pills for Type 2 Diabetes: A Guide for Adults* (www.effectivehealthcare.ahrq.gov/index.cfm). ■

Human growth hormone shows promise in treating cystic fibrosis symptoms

Human growth hormone can be used successfully to treat some symptoms of cystic fibrosis, but its impact on the disease itself remains unknown, according to a new report funded by the Agency for Healthcare Research and Quality (AHRQ).

Cystic fibrosis is an inherited chronic multi-organ disease, caused by a defective gene, in which the body produces thick mucus that clogs the lungs and leads to life-threatening lung infections. The disease also makes it difficult for the pancreas to work, hampering the ability to absorb food. Common signs are salty tasting skin, difficulty breathing, chronic lung infections, poor weight gain, and shorter height. The disease typically is

detected in childhood, stunting the patient's growth and usually leading to early death.

The report, *Effectiveness of Recombinant Human Growth Hormone (rhGH) in the Treatment of Patients with Cystic Fibrosis*, finds that the use of human growth hormone increases height and weight, may improve lung functioning, and may strengthen the bones of patients with cystic fibrosis. Researchers found evidence suggesting that human growth hormone therapy reduces the need for hospitalizations, but could find no evidence that the therapy prolongs life or improves health-related quality of life. The use of

continued on page 18

Human growth hormone

continued from page 17

human growth hormone was also found to raise blood sugar, which over time may lead to the development of diabetes in some patients.

“Patients with cystic fibrosis and their families have long looked for ways to manage this disease,” said AHRQ Director Carolyn M. Clancy, M.D. “This report gives patients and their families excellent information that they can use, in consultation with their doctors, to make decisions about care.”

The report was produced by the University of Connecticut/Hartford Hospital Evidence-based Practice Center for AHRQ. Results of the report were published online in the October issue of *Pediatrics*. Researchers examined published evidence from 53 unique studies of the effect of human growth hormone in cystic fibrosis

patients as well as patients who did not have cystic fibrosis.

Effectiveness of Recombinant Human Growth Hormone (rhGH) in the Treatment of Patients with Cystic Fibrosis is the newest comparative effectiveness review from AHRQ’s Effective Health Care Program. The Effective Health Care Program represents a leading Federal effort to compare alternative treatments for health conditions and make the findings public to help doctors, nurses, pharmacists, and others work together with patients to choose the most effective treatments.

In conjunction with the new report, AHRQ will soon publish plain-language summary guides about human growth hormone in cystic fibrosis for patients, clinicians, and policymakers. Summary guides on numerous clinical topics and other information and background on the Effective Health Care Program can be found at www.effectivehealthcare.ahrq.gov. ■

Potentially avoidable hospitalizations high among Medicare and Medicaid patients

Americans who were eligible for coverage under both Medicare and Medicaid in 2008 were hospitalized for bed sores, asthma, and diabetes at more than twice the rate of other Medicare beneficiaries, according to the latest *News and Numbers* from the Agency for Healthcare Research and Quality (AHRQ).

These “dual eligibles” also were 52 percent more likely than other Medicare patients to be hospitalized for urinary tract infections and more than a third more likely to be admitted for bacterial pneumonia and chronic obstructive pulmonary disease.

AHRQ’s analysis of hospital stays of dual-eligible and other Medicare patients for these and three other conditions—congestive

heart failure, dehydration, and falls—also found that:

- Dual-eligible patients accounted for roughly one of every three Medicare hospital stays primarily involving bed sores, asthma, and diabetes, and one of every four stays for urinary tract infection, chronic obstructive pulmonary disease, and bacterial pneumonia.
- Dual-eligible patients aged 65 to 74 years were two to four times more likely than other Medicare patients the same age to have potentially preventable hospitalizations for most of the conditions studied.
- Among the nine potentially preventable hospitalizations, stays for bed sores had the highest average hospital cost—

\$15,000—regardless of whether the Medicare patients had or did not have dual eligibility.

This AHRQ *News and Numbers* is based on statistics in Potentially Preventable Hospitalizations among Medicare-Medicaid Dual Eligibles, 2008 (www.hcup-us.ahrq.gov/reports/statbriefs/sb96.pdf). The statistics are drawn from HCUP State Inpatient Databases for 27 States. These States were selected for this analysis because they provided information to identify Medicare patients also covered by Medicaid. For other information, or to speak with an AHRQ data expert, please contact Bob Isquith at Bob.Isquith@ahrq.hhs.gov or call (301) 427-1539. ■

Prostate cancer deaths drop, but blacks still most likely to die

American men with prostate cancer were 45 percent less likely to die from the disease in 2006 than they were in 1999, according to the latest *News and Numbers* from the Agency for Healthcare Research and Quality (AHRQ). The Agency found that the rate at which American men died from prostate cancer declined from 23.5 deaths to 13 deaths per 100,000 males during the period.

The analysis also shows that following changes:

- Compared with white men, black men were still more than twice as likely to die from prostate cancer in 2006 just as they were in 1999, 69 to 50.5 deaths and 29 deaths to 22 deaths per 100,000 males, respectively, during the period.
- The rate for Hispanics and Asian-American Pacific Islanders declined from 23 to 18 and from 17 to 14, respectively, per 100,000 males.

- Men aged 65 and older were 20 percent less likely to succumb to prostate cancer in 2006 compared with 1999. Their rate plummeted from 205 deaths to 164 deaths per 100,000 males.

This AHRQ *News and Numbers* is based on information in “Prostate Cancer Deaths per 100,000 Male Population per Year,” table 1_4_2 appendix in AHRQ’s *2009 National Healthcare Disparities Report* (www.ahrq.gov/qual/qdr09.htm). The report examines the disparities in Americans’ access to and quality of health care, with breakdowns by race, ethnicity, age, income, education, and other factors. For more information, contact

Bob.Isquith@ahrq.hhs.gov (301) 427-1539. ■

Most public hospitals are in rural areas

Two-thirds of the nation’s 1,131 public hospitals were in rural areas in 2008, according to the latest *News and Numbers* from the Agency for Healthcare Research and Quality (AHRQ).

However, these rural hospitals—which on average have only 59 beds—accounted for just 20 percent of the 5.6 million patients discharged from public hospitals in 2008, while their larger urban counterparts accounted for 43 percent. Urban hospitals were nearly 5 times larger, averaging 285 beds.

The Agency also found that:

- The average occupancy rate of rural public hospitals was just 47 percent compared with 61

percent for urban public hospitals.

- Patients in rural hospitals were older (42 percent were 65 plus) than those in urban public hospitals (23 percent were 65 plus).
- Rural public hospital patients were twice as likely to be from the poorest communities in their areas than those in urban public hospitals (52 percent vs. 26 percent).
- Rural public hospitals had fewer high-technology services than urban public hospitals. For example, rural hospitals were less likely to have intensive care units, magnetic resonance imaging, cardiac surgery, and

advanced types of radiation therapy.

This AHRQ *News and Numbers* is based on data in *Public Hospitals in the United States, 2008* (www.hcup-us.ahrq.gov/reports/statbriefs/sb95.pdf) from the 2008 Nationwide Inpatient Sample, a database of 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 patients, regardless of insurance type, as well as the uninsured. For more information, contact Bob.Isquith@ahrq.hhs.gov (301) 427-1539. ■

Announcements

HHS awards \$473 million in patient-centered outcomes research funding

The Agency for Healthcare Research and Quality (AHRQ) announced the award of \$473 million in grants and contracts to support projects that will help people make health care decisions based on the best evidence of effectiveness. This funding covers all of AHRQ's allocation and \$173 million administered by AHRQ for the Secretary of the Department of Health and Human Services (HHS).

The projects will support patient-centered outcomes research, also known as comparative effectiveness research, with efforts in many areas, including health care interventions in real-world settings, advanced use of the research findings by diverse populations, development of effective patient registries, and training and career development for the next generation of researchers.

The awards are part of the investments made under the American Recovery and Reinvestment Act of 2009, which included \$1.1 billion to support patient-centered outcomes research. Of that total, \$300 million was designated to AHRQ and \$400 million was designated to be allocated at the discretion of the HHS Secretary for a variety of patient-centered outcomes research and related activities. An additional \$400 million was directed to the National Institutes of Health.

Patient-centered outcomes research is designed to inform health care decisions by providing evidence and information on the effectiveness, benefits, and harms of different treatment options. The evidence is generated

from research studies that compare drugs, medical devices, tests, surgeries, or ways to deliver health care in real world settings.

"Patient-centered outcomes research will give patients the information they need to talk with their doctors about their options for medical treatment," said AHRQ Director Carolyn M. Clancy, M.D. "The findings of this research also will strengthen our health care system by ensuring that the care that is delivered is based on the best possible evidence and informed decisions."

The funded grants and contracts fall into several categories. For the awards funded by the Office of the Secretary, they are: data infrastructure; dissemination, translation and implementation; research; and inventory and evaluation. The awards funded by the AHRQ allocation are categorized under: horizon scanning; evidence synthesis; evidence gap identification; translation and dissemination; evidence generation; training and career development; and the community forum.

These awards are one part of the overall HHS Recovery Act strategy, as described at <http://www.hhs.gov/recovery/>. To learn more about this research you may want to visit: <http://www.hhs.gov/recovery/programs/cer/index.html>.

For a complete list of awards by category, go to <http://www.ahrq.gov/fund/recoveryawards/>. ■

AHRQ releases new Spanish language guides on women's health, cholesterol treatment, and other topics

The Agency for Healthcare Research and Quality (AHRQ) recently released a series of free evidence-based guides designed to help Spanish speakers understand and compare the risks, benefits, and side effects of treatments for eight health conditions.

The guides provide valuable information that patients can use in talking with their clinicians. Half of

the topics cover health issues specifically for women, including guides on controlling gestational diabetes during pregnancy, deciding to induce labor, and comparing core needle biopsy to surgical biopsy for breast lesions. Other guides cover treatments for high cholesterol, osteoarthritis of the knee, and the use of insulin analogues for treating type 2 diabetes.

"Many Spanish speakers don't have access to credible, easy-to-understand information about health care conditions and their treatment options, and that can be a significant barrier to seeking medical care," said Carolyn M. Clancy, M.D., AHRQ director. "These guides represent important resources that will help encourage patients to seek care and work with

continued on page 21

Spanish language guides

continued from page 20

their doctors to discuss all of their treatment options.” Dr. Clancy added that AHRQ’s 2009 *National Healthcare Disparities Report* shows that while the quality of health care is slowly improving for the nation as a whole, for many measures the report tracks, it is getting worse for Hispanics.

The new publications are part of AHRQ’s growing inventory of plain-language, English and Spanish guides that summarize the scientific evidence on various health conditions so that consumers can learn more about the effectiveness and risk of different treatment options. The guides are produced by AHRQ’s Effective Health Care Program, a leading Federal effort to conduct comparative effectiveness research. That program, authorized by the Medicare Prescription Drug, Improvement, and Modernization Act of 2003, represents an important Federal effort to compare treatments for health conditions and make the findings public. The program is intended to help

patients, doctors, nurses, pharmacists, and others choose the most effective treatments for individual patients.

The titles of the eight guides are:

- *Insulina premezclada para la diabetes tipo 2. Guía para adultos* (Premixed Insulin for Type 2 Diabetes: A Guide for Adults);
- *Tratamientos para el colesterol alto. Guía para adultos* (Treating High Cholesterol: A Guide for Adults);
- *Osteoartritis de la rodilla. Guía para adultos* (Osteoarthritis of the Knee: A Guide for Adults);
- *Diabetes gestacional. Guía para la mujer embarazada* (Gestational Diabetes: A Guide for Pregnant Women);
- *Cuando se tiene una biopsia del seno. Guía para las mujeres y sus familias* (Having a Breast Biopsy: A Guide for Women and Their Families);
- *Ablación con radiofrecuencia para tratar la fibrilación auricular. Guía para adultos* (Radiofrequency Ablation for Atrial Fibrillation: A Guide for Adults);

- *Reduzca el riesgo de cáncer del seno con medicamentos. Guía para la mujer* (Reducing the Risk of Breast Cancer with Medicine: A Guide for Women); and
- *¿Está pensando que le induzcan el parto? Guía para la mujer embarazada* (Thinking about Having Your Labor Induced? A Guide for Pregnant Women).

In addition to the new guides, AHRQ previously released Spanish-language guides on nine other topics, including oral medicines for type 2 diabetes, pain medicines for osteoarthritis, medications for adults with depression, and treatments for osteoporosis and prostate cancer. To access all of AHRQ’s Spanish-language comparative effectiveness guides for patients and consumers, go to <http://effectivehealthcare.ahrq.gov/index.cfm/informacion-en-espanol> or call AHRQ’s Publications Clearinghouse at (800) 358-9295. For AHRQ’s entire inventory of free Spanish-language consumer health information products, go to www.ahrq.gov/consumer/espanoix.htm. ■

New guide available on the AHRQ Health Care Innovations Exchange

The Agency for Healthcare Research and Quality (AHRQ) Health Care Innovations Exchange Web site features a new guide to help mobilize local community organizations to coordinate appropriate medical care and social services for at-risk individuals. *Connecting Those at Risk to Care: A Guide to Building a Community “Hub,”* outlines a step-by-step process for community-based organizations and health care services to work together to improve the quality and coordination of medical care and social services for the most vulnerable groups, including blacks, Hispanics, women, and older adults.

Identifying at-risk individuals and connecting them to appropriate care can improve health outcomes and reduce health disparities. To access the guide, go to www.innovations.ahrq.gov/resources/resources.aspx. The AHRQ Health Care Innovations Exchange Web site features innovations and quality tools that focus on the implementation of evidence-based clinical practice guidelines. Has your organization adopted an innovation described on the Health Care Innovations Exchange Web site? We would appreciate hearing from you at info@innovations.ahrq.gov. ■

AHRQ releases new and improved Registries for Evaluating Patient Outcomes

The Agency for Healthcare Research and Quality (AHRQ) Effective Health Care program released the second edition of *Registries for Evaluating Patient Outcomes: A User's Guide* available at www.effectivehealthcare.ahrq.gov.

Originally published in 2007, the handbook has been completely updated with four new sections addressing emerging topics in registry science:

- “When to Stop a Registry”
 - “Linking Registry Data”
 - “Technical and Legal Considerations”
 - “Interfacing Registries and Electronic Health Records”
- Important updates to existing chapters include: “Principles of Registry Ethics, Data Ownership, and Privacy,” which now addresses recent developments affecting the privacy rule and discusses new laws including the HITECH Act and the Genetic Nondiscrimination Act. The updated guide contains 38 case studies examining real challenges in the development, use, and analysis of registries. To order printed copies of the handbook, call 1-800-358-9295. To learn more about the AHRQ Effective Health Care Program, visit www.effectivehealthcare.ahrq.gov. ■



Healthcare 411

AHRQ's Audio Podcast Series

Healthcare 411 is a free, online resource featuring AHRQ research in critical health care areas, such as:

- Comparative effectiveness
- Patient safety
- Preventive health Care

One-minute consumer podcasts are available in both English and Spanish. Listen online or subscribe to have podcasts sent directly to you.

For more information, visit healthcare411.ahrq.gov.

Subscribe to AHRQ's Electronic Newsletter

AHRQ's free notification service brings news and information to your e-mail inbox! This service allows subscribers to receive automatic e-mail updates about AHRQ's research, data, publications, events and meetings, and many other announcements.

You also can **customize your subscription** and receive other AHRQ topics of interest.

To subscribe:

1. Go to www.ahrq.gov and select “E-mail Updates” next to the red envelope icon.
2. Enter your e-mail address.
3. On the “Quick Subscribe” page, select *AHRQ Electronic Newsletter* under the “AHRQ News and Information” heading.

Questions? Please send an e-mail to Nancy.Comfort@ahrq.hhs.gov.



Research Briefs

Aragon, S.J., McGuinn, L., Bavin, S.A., and Gesell, S.B. (2010). "Does pediatric patient-centeredness affect family trust?" (AHRQ grant T32 HS00032). *Journal of Healthcare Quality* 32(3), pp. 23-31.

According to Primary Provider Theory, physicians with higher magnitudes of patient-centeredness are concerned first and foremost with their patients' best interests; careful to understand their patients' feelings, perspectives and needs; and approachable, tactful, and skilled in relationships. The researchers measured whether patient-centeredness is an underlying ability of pediatricians that increases family trust. Data used in this study were from the Press Ganey Medical Practice Survey, which captures patients' ratings of physician care performance. The study found that pediatric patient-centeredness influenced family trust and explained 89 percent of its variability. Indirectly, through family trust, it also influenced family's confidence and likelihood to recommend the pediatrician. Patient-centeredness also significantly affected family ratings of their pediatrician's care behavior performance.

Carle, A.C., and Simpson, L. (2010, May/June). "Identifying child health priorities for comparative effectiveness research from the IOM's report." (AHRQ grant HS16957). *Academic Pediatrics* 10, pp. 155-158.

The Institute of Medicine's report on "Initial National Priorities for Comparative Effectiveness Research" developed a list of 100

research priorities, and identified 10 recommendations to develop and maintain a national comparative effectiveness research (CER) program. The authors describe the report and discuss its implications for pediatric research, teaching, and practice. The list of priority topics emphasizes population diversity and disparities; however, only 20 of the topics are specific to children. There are substantial hurdles to overcome in creating a robust CER workforce to research these various topics. For example, it is unclear where future pediatric CER investigators will go to acquire training. The authors conclude by making several recommendations, one of which is for the Academic Pediatric Association to develop specific strategies to engage parents and families and other stakeholders throughout the process of priority setting for CER research.

Clancy, C.M. (2010, March). "Comparative effectiveness research for pharmacists." *Pharmacy Today*. Reprints (AHRQ Publication No. 10-R076) are available from AHRQ.*

The author, Director of the Agency for Healthcare Research and Quality (AHRQ), discusses AHRQ's Effective Health Care Program and emphasizes its relevance to pharmacists. The Program oversees the Federal government's largest ongoing work in comparative effectiveness research (CER). Recent CER products of interest to pharmacists are on topics such as lipid-modifying agents, catheter-based radiofrequency ablation compared with anti-arrhythmic drugs used for atrial fibrillation, medications to reduce risk of primary breast

cancer, and insulin analogues in premixed formulations for adults with type 2 diabetes. These reports focus on providing clinicians with the best evidence-based information on treatment options, but are not prescriptive in terms of making recommendations. The reports on lipid-modifying agents and insulin analogues are each supplemented by summary guides for the consumer and the clinician.

Clancy, C.M. (2010). "Getting to zero: New resources aim to reduce health care-associated infections." *American Journal of Medical Quality* 25(4), pp. 319-321. Reprints (AHRQ Publication No. 10-R079) are available from AHRQ.*

Health care-associated infections (HAIs) have an unacceptable effect on patient safety, in addition to imposing a heavy cost burden on patients and payers. Building on the federally funded Keystone Project, which helped hospital intensive care units in Michigan to sharply reduce the rate of bloodstream infections from intravenous lines, the Comprehensive Unit-Based Safety Program provides organizations with a structured strategic framework for safety improvement. It improves care practices by incorporating a number of key elements, including staff education in the science of safety training and assessment of each unit's patient safety culture. This expansion of the Keystone Project is part of a broader Federal effort by the Department of Health and Human Resources to significantly reduce HAIs within 5 years.

continued on page 24

Research briefs

continued from page 23

Cook, A.J., Elmore, J.G., Miglioretti, D.L., and others. (2010, April). “Decreased accuracy in interpretation of community-based screening mammography for women with multiple clinical risk factors.” (AHRQ grant HS10591). *Journal of Clinical Epidemiology* 63(4), pp. 441-451.

The researchers assessed the impact of clinical risk factors for breast cancer (use of hormone therapy, family history of breast cancer, previous breast biopsy) on radiologists’ interpretations of mammograms and whether the influence of these risk factors varies according to radiologists’ characteristics. They found that women with clinical risk factors for breast cancer were more often asked to return for additional mammograms and biopsies than women who had no risk factors. The study included 638,947 screening mammograms performed by 134 radiologists in 101 facilities. Increased recall rates for women with risk factors did not lead to a higher probability of detecting cancer. Recall rates were higher when the radiologist was younger, had interpreted more mammograms per year, and was affiliated primarily with a teaching institution.

Gibbons, R.D., Amatya, A.K., Brown, C.H., and others. (2010, April). “Post-approval drug safety surveillance.” (AHRQ grant HS 16973). *Annual Review of Public Health* 31, pp. 419-437.

Once new drugs are approved and introduced into the marketplace, concerns remain regarding their safety. Rare adverse events cannot be determined during the approval process due to the

short duration of the study and the relatively small size of the test population. The authors reviewed various methods for determining the possibility of adverse drug reactions, once the drugs are in the marketplace. These include spontaneous reports, meta-analysis of randomized controlled clinical trials, ecological studies, and analysis of medical claims data. Following their review of experimental and statistical methods for the analysis of postmarketing drug surveillance, they conclude that: shifting from spontaneous reports to longitudinal medical claims/records data is needed; more advance design and statistical methods are required to make better use of large observational databases; and coherence of results across many different databases, experimental design strategies, and statistical methodologies is key.

Krishnan, J.A., and Mularski, R.A. (2010, June). “Acting on comparative effectiveness research in COPD.” (AHRQ grant HS17894). *Journal of the American Medical Association* 303(23), pp. 2409-2410.

Current guidelines for treatment of exacerbations from chronic obstructive pulmonary disease (COPD) recommend low doses of oral corticosteroids. The authors offer comments on a newly published comparative effectiveness study which found that although clinicians were much more likely to administer high-dose intravenous systemic corticosteroids than low-dose oral corticosteroids, there was no evidence that high doses were better. The authors suggest two alternatives for moving forward: either conduct a large-scale, pragmatic clinical trial to provide further evidence or advocate for translating these research findings

into clinical practice now. The latter option could be combined with conducting further comparative effectiveness research (CER) within linked registries, potentially enabling ongoing surveillance of care quality and patient outcomes.

Lakshminarayana, K., Borbos, C., McLaughlin, B., and others. (2010, 18 May). “A cluster-randomized trial to improve stroke care in hospitals.” (AHRQ grant HS11073). *Neurology* 74(20), pp. 1634-1642.

The researchers studied the effect of a quality-improvement (QI) intervention that used clinical opinion leaders and management leaders as agents of change on the care of patients with acute ischemic stroke in 17 hospitals with a neurologist on staff. All of the hospitals underwent a baseline evaluation of adherence to the quality measures for 1,211 patients treated for stroke before the intervention (discharged during July–December 2000) and 1,094 patients treated after the intervention (discharged July–December 2003). The study found no significant difference in 10 quality measures between the 7 reporting hospitals out of 9 randomly assigned to the QI intervention and the 10 non-intervention hospitals. In addition, the researchers found evidence of increased quality of care over time, regardless of whether the hospital received the intervention or not. Based on the findings, the researchers concluded that it is problematic to use historical controls in quality-improvement studies.

Lien, H.-M., Lu, M., Ma, C.-T.A., and others. (2010, March). “Progress and compliance in alcohol abuse treatment.”

continued on page 25

Research briefs

continued from page 24

(AHRQ grant HS10803) *Journal of Health Economics* 29(2), pp. 213-225.

Using data from alcohol abuse outpatient treatment programs in Maine, the researchers used a set of statistical models (basic, random-effect, fixed-effect, and finite-mixture) to examine the relationship between treatment progress and patient compliance with treatment recommendations. Unlike other studies, patient compliance and progress were looked at on a visit-by-visit basis, defined as attending a scheduled treatment visit and noted as progressing in the clinician's treatment notes. Patient records rarely indicated progress when a patient relapsed between visits. Patients who were making progress were less likely to drop out of treatment. However, the observation that a patient was progressing at a particular visit did not increase the likelihood of the patient attending the next scheduled visit.

Meissner, H.J., Tiro, J.A., Yabroff, K.R., and others. (2010, March). "Too much of a good thing? Physician and patient willingness for less frequent Pap test screening intervals." (Interagency agreement between AHRQ and the Centers for Disease Control and Prevention). *Medical Care* 48(3), pp. 249-259.

Increased understanding of cervical cancer and the human papillomavirus has led professional organizations to revise clinical guidelines to allow for Pap test intervals of 2 to 3 years after the age of 30 if the woman has had 3 consecutive normal Pap tests. Recent reports suggest that physicians and patients may not be adopting these recommendations and continue to screen annually.

The researchers used national surveys to identify physician and practice characteristics associated with recommending a less frequent interval and patient characteristics associated with a willingness to accept longer Pap intervals. They found that 32 percent of physicians had adopted a 3-year Pap test interval. Characteristics associated with using the longer test interval were: serving a higher proportion of Medicaid patients; white, non-Hispanic race; fewer years since graduation from medical school; and the U.S. Preventive Services Task Force being very influential in physician clinical practice. Women over 65 were more willing to follow a 3-year interval.

Rosko, M.D., and Mutter, R.L. (2010, June). "What have we learned from the application of stochastic frontier analysis to U.S. hospitals?" *Medical Research and Review*, online at <http://mcr.sagepub.com/content/by/year>. Reprints (AHRQ Publication No. 10-R073) are available from AHRQ.*

This article focuses on lessons learned from stochastic frontier analysis studies of U.S. hospitals on correlates of hospital inefficiency. They found that consensus has begun to emerge about the efficiency impact of a number of environmental forces, including Medicaid and Medicare share of discharges, HMO penetration, and the unemployment rate. Conflicting findings continue to be reported about the efficiency impact of other factors, such as hospital ownership and competition. Disparate results could occur because of the use of different data sources and methodological approaches or because of changes in the underlying impacts of these disparate approaches.

Saraiya, M., Berkowitz, Z., Yabroff, R., and others. (2010, June). "Cervical cancer screening with both human papillomavirus and Papanicolaou testing vs. Papanicolaou testing alone." (Interagency agreement between AHRQ, the Centers for Disease Control and Prevention, and the National Cancer Institute). *Archives of Internal Medicine* 170(11), pp. 977-986.

Increased understanding of cervical cancer and the human papillomavirus (HPV) infection has led to the addition of the HPV DNA test along with the Pap test (known as HPV cotesting). To assess current cervical cancer screening practices, the researchers conducted a national survey of 1,212 primary care physicians (PCPs). They used three clinical vignettes to discover the physicians' recommendations for extending screening intervals with Pap test-based screening only or with the addition of HPV cotesting. Among Pap test providers who recommended HPV testing, 31.8 percent reported that they would conduct the next Pap test in 3 years for a 35-year-old woman with 3 normal Pap test results. Most PCPs did not recommend a second HPV test nor did they recommend the next HPV test at the same frequency as the Pap test.

Schmittiel, J.A., Grumbach, K., and Selby, J.V. (2010, May/June). "System-based participatory research in health care: An approach for sustainable translational research and quality improvement." (AHRQ grant HS17031). *Annals of Family Medicine* 8(3), pp. 256-259.

The term "translational research" describes the translation of promising results from clinical studies into day-to-day medical

continued on page 26

Research briefs

continued from page 25

practice. This type of research is still developing, and if it fails to adequately engage patients, clinicians, and other key stakeholders within health care systems through over-reliance on a traditional investigator-driven approach, it may lead to interventions that are not sustainable, note the authors. They are convinced that this pitfall may be avoided by applying the conceptual model and methods of community-based participatory research (CBPR) to translational research. They discuss the four key principles used by CBPR in engaging the community: (1) engage in collaboration and equitable partnerships in all phases of research; (2) build on the resources and goals already present in the community; (3) create and invest in long-term and robust partnerships; and (4) engage in research as a cyclical, iterative process.

Singh, H., Graber M. (2010). “Reducing diagnostic error through medical home based primary care reform.” (AHRQ

grant HS17820). *Journal of the American Medical Association* 304(4), pp. 463-464.

If implemented correctly, the patient-centered medical home (PCMH) can potentially address many current safety concerns in primary care. One underemphasized safety concern is diagnostic error, possibly the leading type of error in primary care. Among the leading causes of diagnostic error are breakdowns in information management, including communication and coordination of care. If information management problems are not addressed, they are likely to worsen in an era placing increased demands on the PCMH. Reducing diagnostic error will require performance-monitoring strategies that use refined metrics of processes and outcomes to address key indicators of diagnostic performance. Electronic surveillance and monitoring techniques using the “trigger” approach, followed by feedback to clinicians, could help local emergency departments and inpatient clinicians to promote mutual reporting of errors.

Snyder, R. and Fields, W. (2010, June). “A model for medication

safety event detection.” (AHRQ grant HS13131). *International Journal for Quality in Health Care* 22(3), pp. 179-186.

The researchers outline a system-focused model for detecting medication safety events that uses standardized measurement and data collection methodologies to collect preventable and nonpreventable adverse drug events (ADEs) as well as potential ADEs—whether or not they were intercepted by hospital staff. Traditional event detection relies on voluntary self-report, while the system-focused detection model also included data from computerized monitoring triggers, chart review, and diagnosis medical record codes. The researchers conclude from a 20-day preliminary trial at two community hospitals that patient safety event-reporting methods that take advantage of routine data collection (for example, retrospective reviews of 5 percent of patient charts, pharmacist surveillance, Pyxis[®] dispensing station trigger reports, laboratory value trigger reports) are much more effective in detecting MSEs than voluntary self-report methods. ■

Follow AHRQ news on Twitter



AHRQ uses Twitter to broadcast short health messages (“tweets”) that can be accessed by computer or mobile phone. You can follow AHRQ’s news releases on twitter at <http://twitter.com/AHRQNews>.

To view all of AHRQ’s social media tools, including e-mail updates, podcasts, and online videos, go to www.ahrq.gov/news/socialmedia.htm.

Don’t Forget— Visit AHRQ’s Web Site

AHRQ’s Web site—www.ahrq.gov—makes practical, science-based health care information available in one convenient location. You can tap into the latest information about the Agency and its research findings and other initiatives, including funding opportunities and job vacancies. *Research Activities* is also available and can be downloaded from our Web site. Do you have comments or suggestions about the site? Send them to info@ahrq.hhs.gov.

www.ahrq.gov



**U.S. Department of
Health and Human Services**

Agency for Healthcare Research and Quality

P.O. Box 8547

Silver Spring, MD 20907-8547

Official Business

Penalty for Private Use \$300



AHRQ Pub. No. 11-RA002

November 2010

ISSN 1537-0224

Ordering Information

Most AHRQ documents are available free of charge and may be ordered online or through the Agency's Clearinghouse. Other documents are available from the National Technical Information Service (NTIS). To order AHRQ documents:

**(*) Available from the AHRQ
Clearinghouse:**

Call or write:

AHRQ Publications Clearinghouse

Attn: (publication number)

P.O. Box 8547

Silver Spring, MD 20907

800-358-9295

703-437-2078 (callers outside the
United States only)

888-586-6340 (toll-free TDD service;
hearing impaired only)

To order online, send an e-mail to:
ahrqpubs@ahrq.hhs.gov

() Available from NTIS:**

Some documents can be downloaded from the NTIS Web site free or for a nominal charge. Go to www.ntis.gov for more information.

To purchase documents from NTIS,
call or write:

National Technical Information Service
(NTIS)

Springfield, VA 22161

703-605-6000, local calls

800-553-6847

**Note: Please use publication numbers
when ordering**

To subscribe to *Research Activities*:

Send an e-mail to ahrqpubs@ahrq.hhs.gov with "Subscribe to *Research Activities*" in the subject line. Be sure to include your mailing address in the body of the e-mail.

**Access *Research Activities* online at
www.ahrq.gov/research/resact.htm**