



RESEARCH ACTIVITIES

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Advanced type of cancer radiation reduces side effects, but impact on cancer control is unclear

An advanced type of cancer radiation is more successful than traditional radiation in avoiding “dry mouth” when treating head and neck cancers. However, it is unknown whether the treatment is better or worse at reducing the size of tumors, according to a new comparative effectiveness review funded by the Agency for Healthcare Research and Quality (AHRQ).

The report finds that intensity-modulated radiation therapy (IMRT) leads to fewer cases of xerostomia, commonly known as dry mouth, than other types of radiation. Xerostomia occurs from damage to the salivary glands, and can affect basic functions like chewing, swallowing, and breathing; senses such as taste, smell, and hearing; and can significantly alter a patient’s appearance and voice.

However, the report did not find evidence that IMRT is more successful than any other kind of radiation therapy in reducing tumors. Many scientists consider IMRT to be theoretically better able to target cancerous cells while sparing healthy tissues, but more research is needed, the report said.

Comparative Effectiveness and Safety of Radiotherapy Treatments for Head and Neck Cancer examines treatment for cancers to the head and neck, including the mouth, larynx, and sinuses. (Tumors in the brain are considered a separate type of cancer and are not discussed in this report.) Nonbrain head and neck cancers account for up to 5 percent of cancers that are diagnosed in the United States, with an estimated 47,560 new cases and 11,260 deaths in 2008.

Standard radiation therapy has evolved over the past 20 years and now provides doctors with two- or three-dimensional images that simulate a patient’s treatment area on a computer screen. IMRT, which has been implemented over the past 10 years, also employs three-dimensional imaging and further technological and treatment enhancements that tightly control and target the amount of radiation delivered to the target area.

The report also examined the evidence regarding proton beam radiation therapy, a technology that some clinicians believe targets radiation even more precisely than

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Cancer radiation

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IMRT. However, researchers did not find enough evidence to draw any conclusions regarding the benefits or potential side effects of proton beam therapy, which is more commonly used to treat prostate cancer and pediatric tumors. In an AHRQ Technical Brief published last fall,

researchers found limited evidence regarding whether proton beam radiation therapy is safer or more effective than other types of radiation to treat cancer.

The report is part of AHRQ's Effective Health Care Program. AHRQ will also soon publish plain-language summary guides about radiation therapy for head and neck cancer treatment for

patients, clinicians, and policymakers. Summary guides on numerous clinical topics such as medicines to reduce the risk of breast cancer and choosing pain medicine for osteoarthritis, as well as other information and background on the Effective Health Care Program, can be found at www.effectivehealthcare.ahrq.gov. ■

Safety/Quality of Care

Emergency physicians suggest ways to reduce errors in patient handoffs during shift changes

Emergency departments (EDs) are one of the most vulnerable areas in a hospital for high rates of patient care errors. There is a particularly high risk of medical errors when nurses and physicians come and go during shift changes and “hand off” patients. Recently, a group from the American College of Emergency Physicians interested in patient safety published insights into the patient handoff process and advice on how to improve safety during these transitions.

Errors can occur during one of four care transition stages: preturnover (current provider organizes and updates patient information), arrival (current provider stops patient care tasks and prepares to hand off care), meeting (outgoing and incoming providers meet face-to-face to exchange patient information), and postturnover (incoming provider integrates new information and begins caring for both patients handed off and newly arriving patients). The meeting stage can be

fraught with potential errors. For example, the departing physician could pass along incomplete or incorrect information to the physician taking over. This individual can also misunderstand conveyed information or be distracted by shift change stressors.

The ED physicians' group offers a number of ways to make patient handoffs safer. One way is to reduce handoffs by completing discharges that are close to shift changes. Another approach is to

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Patient handoffs

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have ED personnel provide succinct overviews of patients in a quiet, dedicated space to minimize distractions and interruptions. Lab and other study reports should be readily available for the receiving team to review. A cross-checking procedure is encouraged, where receiving physicians ask questions

and engage in discussion of outstanding tasks yet to be done. All patients should be accounted for, even if they are in another department at the time of the shift change. Future research should concentrate on characterizing the high-risk handoff; defining the timing, location, and presentation order of handoffs; and identifying quality gaps in the process, suggest the researchers. Their study was

supported in part by the Agency for Healthcare Research and Quality (HS16640).

See “Improving handoffs in the emergency department,” by Dickson S. Cheung, M.D., M.B.A., John J. Kelly, D.O., Christopher Beach, M.D., and others in the February 2010 *Annals of Emergency Medicine* 55(2), pp. 171-180. ■ KB

Hospital risk managers more likely than physicians to recommend error disclosure, but less likely to apologize

Hospital physicians and risk managers have different attitudes towards disclosing medical errors, which could lead to conflict between these key players in communicating errors to patients and their families. More risk managers than physicians strongly agreed that serious errors should be disclosed to patients (70 percent vs. 49 percent). Presented with two error scenarios, the risk managers were more likely than physicians to definitely recommend that the error be disclosed (76 percent vs. 51 percent) and to provide details on how the error would be prevented in the future (62 percent vs. 51 percent). Physicians were more likely than the risk managers to provide the patient with a full apology recognizing the harm caused by the error (39 percent vs. 21 percent).

The researchers conducted an anonymous national Web survey of hospital risk managers who were members of the American Society for Healthcare Risk Management between November 2004 and May 2005, producing 1,673 responses from 2,988 members who were involved in error disclosure (56 percent response rate). The survey results were compared with those from an earlier survey (July 2003 through March 2004)

of 1,311 physicians in the States of Washington and Missouri (63 percent response rate). In addition to general questions, participants from both groups randomly received one of two medical cases that differed in the patient's awareness of the error. This factor is known to influence physician disclosure of errors.

Because of the potential differences in approach to communicating errors, health care institutions should promote greater collaboration between risk managers and physicians in disclosing errors to patients and their families. Otherwise, the differences in approaches to disclosure could lead to conflicts that could impair the disclosure of errors, the researchers note. Their study was funded in part by the Agency for Healthcare Research and Quality (HS11890 and HS14020).

More details are in “Risk managers, physicians, and the disclosure of harmful medical errors,” by David J. Loren, M.D., Jane Garbutt, M.B., Ch.B., W. Claiborne Dunagan, M.D., and others in the March 2010 *Joint Commission Journal on Quality and Patient Safety* 36(3), pp. 101-108. ■ DIL

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.

Patient preferences are important when making clinical decisions for those who can't, but other factors also play a role

Hospitalized patients may not be able to make important medical decisions for themselves for a variety of reasons. They may be unconscious, heavily sedated, or experiencing other factors that render them incapable of decisionmaking. In such cases, physicians are called upon as surrogates to make difficult decisions based on the patient's prior stated wishes and other factors. A recent study suggests that, while patient preferences are important, physicians also use other information to make appropriate treatment decisions.

Researchers surveyed 281 attending and resident physicians from an academic medical center and two community hospitals (one Catholic). All were asked if they had made any major decisions for incapacitated patients, details about the situation, and how they came up with their decision. They were also asked to rate a series of potential factors in order of importance

based on their decision for a particular patient. These included such things as the patient's prognosis, the level of pain and suffering, legal ramifications, and family burden.

Nearly three-fourths of the physicians (73.3 percent) reported having to make a surrogate decision recently. When asked to identify the most important ethical standard for surrogate decisionmaking, the majority of physicians chose a standard based on the patient's own preferences. For example, 61.2 percent cited written advance directives and 11.4 cited substituted judgment, which involves determining what the patient would have wanted. When making decisions for their most recent patient, a great majority (81.8 percent) felt the patient's own preferences were very important considerations in the decisionmaking process. However, only 29.4 percent considered the

patient's preferences to be the most important factor.

Decisions were most often likely based on patient preferences when the patient was in the intensive care unit. These became less important when making decisions for older patients. No association was found between relying on patient preferences and the physician's beliefs about ethical principles guiding surrogate decisionmaking or whether the patient had expressed such preferences through a living will or earlier discussions. The study was supported in part by the Agency for Healthcare Research and Quality (HS15699).

See "Physicians' views on the importance of patient preferences in surrogate decision-making," by Alexia M. Torke, M.D., M.S., Rachael Moloney, B.A., Mark Siegler, M.D., and others in the March 2010 *Journal of the American Geriatrics Society* 58(3), pp. 533-538. ■ KB

Consider local health care systems when designing services for the uninsured

Policymakers continue to be challenged to improve access to health care services by the uninsured. Individuals without insurance may be better or worse off depending on the community in which they live, concludes a new study. It found, for example, that Hispanic mothers living in a Minnesota community with a large insured population benefitted from the higher quality care demanded by those who were insured. In contrast, Hispanic mothers living in a Texas community with a nearly 25 percent uninsurance rate suffered poorer quality of care and often crossed the border into Mexico to get prescription drugs and treatment.

These findings suggest that policies created for the uninsured need to take into account the individual characteristics of the local health care system. For example, policies in the Minnesota community might

consider interventions to improve care access such as translators and interpreters that are not typically offered due to low demand. In the Texas community, policies might focus on reducing the number of individuals without coverage, which could have a substantial impact on the spillover-induced care quality, suggest the researchers.

Their study focused on uninsured Hispanic mothers residing in two communities located in Minnesota and Texas. At the time of the study, Minnesota had the lowest overall rate of residents without insurance; only 18 percent of its residents were uninsured. In Texas, however, nearly a quarter of residents were uninsured and 60 percent of the population was Hispanic. All of the 17 mothers from each community cared for at least one child. Focus groups conducted by the researchers

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Uninsured

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asked the participants about where they went for health care, how they paid for it, and their perceptions about quality. Demographic information was also collected.

The uninsured mothers residing in Minnesota gave higher marks for the quality of care services than their Texas counterparts. However, the Minnesota mothers also pointed to the high costs of such care in their State and the high price of insurance premiums. They also reported difficulty obtaining care from safety-net clinics or hospitals, as well as language barriers and

long wait times. Texas mothers described the health care they received from clinics, hospitals, and providers as poor overall. The mothers also admitted to crossing the border to Mexico to receive care and obtain medications. The study was supported in part by the Agency for Healthcare Research and Quality (HS17003).

See “Context matters: Where would you be the least worse off in the US if you were uninsured?” by Carolyn Garcia, Ph.D., M.P.H., R.N., José A. Pagán, Ph.D., and Rachel Hardeman, M.P.H., in *Health Policy* 94, pp. 76-83, 2010. ■ KB

Women's Health

Acupuncture helps with depression during pregnancy

For women who become depressed during pregnancy, acupuncture may offer a way to reduce symptoms in a safe and effective manner, suggests a new study. It found that women receiving 12 sessions of acupuncture treatment had good response rates and decreased severity of symptoms. The researchers enrolled 150 pregnant women who were diagnosed with major depressive disorder. The women were randomized to one of three groups. One group received acupuncture treatment specific for depression, while a second group received acupuncture that was not designed for depression. A third group received Swedish massage therapy. All groups received two 25-minute sessions each week for 4 weeks, followed by one session a week for another 4 weeks. All of

the women were assessed for depressive symptoms at baseline and then after 4 and 8 weeks of treatment.

Women receiving acupuncture specific for depression had a significantly greater reduction in symptoms compared with the other two groups combined. The group who received 8 weeks of depression-specific acupuncture had a 53 percent reduction in depression scores and a 29 percent remission rate. This compares well with one study that reported a 52 percent reduction rate and a 19 percent remission rate after 16 weeks of psychotherapy. Women receiving acupuncture specific for depression also had a significantly greater response rate (63 percent), defined as at least 50 percent reduction in depressive symptom severity, compared with the other

two groups combined (44.3 percent) or the non-depression-specific acupuncture group (37.5 percent).

There were no significant differences in symptom reduction or response rates between the massage and nonspecific acupuncture groups. The acupuncture treatment was well tolerated with relatively few side effects that were mild and transient. The study was supported in part by the Agency for Healthcare Research and Quality (HS09988).

See “Acupuncture for depression during pregnancy,” by Rachel Manber, Ph.D., Rosa N. Schnyer, D.A.O.M., Deirdre Lyell, M.D., and others in the March 2010 *Obstetrics & Gynecology* 115(3), pp. 511-520.

■ 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.

Women want clinicians to talk about the risk medications pose to an unborn child

When a woman is prescribed a medication that can cause birth defects, she wants her health care provider to tell her about that risk when the prescription is written, even if she does not plan to become pregnant, a new study finds. University of Pittsburgh researchers conducted four focus groups with 36 women whose ages ranged from 18 to 45. Of the 21 women taking medication for chronic conditions, some reported that their care providers directly addressed the concern that the medication could cause birth defects. However, many said their providers skirted the issue by advising them to use a backup method of birth control or by not addressing the risk at all.

Study participants all said they wanted to receive information from their care providers on the risk their medications posed to an unborn child, regardless of whether they intended to become pregnant. However, many said they often learned of the risk by reading material their pharmacies provided, researching the

medication on the Internet, or discussing the medication with friends and family members.

The authors suggest that because women want their care providers to be a primary source of medical information, care providers need to provide counseling whenever they prescribe a medication that could cause birth defects. Clinicians who want to discuss these risks with patients may find the hotline operated by the Organization of Teratology Information Specialists or Web-based resources, such as ReproTox or Toxnet, useful sources of up-to-date information. This study was funded in part by the Agency for Healthcare Research and Quality (HS17093).

See “Women’s perspectives on counseling about risks for medication-induced birth defects,” by Aimee K. Santucci, Ph.D., Melanie A. Gold, D.O., Aletha Y. Akers, M.D., M.P.H., and others in the January 2010 *Birth Defects Research (Part A)*, 88(1), pp. 64-69. ■ KFM

Domestic violence on the decline but young women are at highest risk

Although rates of domestic violence have declined in lockstep with overall crime rates, women are most vulnerable to becoming victims of abuse while they are in their mid-20s to early 30s, according to a new study. Given these findings, the authors suggest that women in their 20s and 30s who use college health clinics or family planning or obstetrical services be screened for domestic violence.

Of the 3,533 women aged 18 to 64 in Idaho and Washington who participated in telephone interviews, 42 percent reported having suffered abuse since they

were 18 years old. The risk of suffering abuse fell once women reached the age of 50. What’s more, women born after 1960 had a lower risk of experiencing domestic violence than women born before that decade.

The authors found a dramatic decrease in the occurrence of abuse in the past 5 to 10 years and cite several reasons for this decline. For example, overall awareness of domestic violence surged in the past several decades, resulting in more programs to support victims of violence. Stronger laws that result in more arrests and easier access to civil protection orders and

no-fault divorces may also have contributed to the waning numbers. Additionally, the feminist movement and the influx of women in the labor force may have led to a reduction in domestic violence. This study was funded in part by the Agency for Healthcare Research and Quality (HS10909).

See “Age, period, and cohort effects on intimate partner violence,” by Frederick P. Rivara, M.D., M.P.H., Melissa L. Anderson, M.S., Paul Fishman, Ph.D., and others in *Violence and Victims* 24(5), pp. 627-638, 2009. ■ KFM

Many homeless women are reluctant to get free Pap smears

Women who are homeless often have difficulty accessing quality health care and paying for it. Such is the case with cervical cancer screening, where homeless women have higher rates of the disease. Yet when barriers to access and cost are removed, homeless women remain reluctant to get a free Pap smear and decline the offer, reveals a new study. The researchers studied 205 women who were admitted to a medical care facility specifically designed to offer health care services to homeless people. Any woman receiving routine medical care was screened for eligibility for a Pap smear. The researchers collected a variety of medical and demographic information on participants. They interviewed each woman prior to screening and recorded all Pap smear results in the medical record. About half (55 percent) of the women were white; another 32 percent were black.

Out of the 205 participants, 129 needed a Pap smear at the time they were interviewed. All of these women were offered screening; however, only 80 (62 percent) accepted and 56 of these women (70 percent) had the test performed. Ten women (20 percent of the group

studied) were found to have atypical results requiring further investigation. Another 15 had benign results (for example, vaginitis without evidence of malignancy), but required followup. Forty-nine women (38 percent) declined to have a Pap smear. Women's reasons for refusing getting screened included not feeling hygienic enough or believing they were not at risk for cervical cancer.

While 20 percent of the homeless women studied required additional investigation of an atypical lesion, in the general population, this rate is only 2.3 percent. This suggests that homeless women may be more vulnerable to cervical cancer. The authors suggest that more creative screening methods need to be developed and offered to women in nontraditional settings. Their study was supported in part by the Agency for Healthcare Research and Quality (HS14010).

See "Disparities in cancer screening: Acceptance of Pap smears among homeless women," by Monica Bharel, M.D., Carolyn Casey, M.D., and Eve Wittenberg, M.P.P., Ph.D., in the *Journal of Women's Health* 18(12), pp. 2011-2016, 2010. ■ KB

Disparities/Minority Health

Minority patients are less likely to have surgery performed by high-volume surgeons and hospitals

When it comes to major surgical procedures, there is a widespread perception that experience is the key. Many believe that outcomes are better when these surgeries are performed by high-volume surgeons in high-volume hospitals. However, not all patients are receiving these surgical advantages. A new study found that minorities in New York City were significantly less likely to have their surgeries performed by high-volume surgeons at high-volume centers.

Researchers reviewed hospital discharge data from New York City hospitals between 2001 and 2004. The focus was on 10 surgical procedures where there is a direct

relationship between hospital/physician volume and reduced short-term patient mortality. Examples of such procedures include heart bypass surgery, total hip replacement, and various organ-specific cancer surgeries.

A total of 133,821 patients underwent one of the 10 procedures. Although the use of high-volume surgeons and hospitals varied widely across procedures, the researchers found that minority patients had a lower use of these providers and institutions. For 9 of the 10 procedures, black patients were significantly less likely to have their surgery performed by a high-volume surgeon in a high-

volume hospital. This was the case even after the researchers adjusted for such factors as insurance type and geographic proximity to high-volume providers. Instead, black patients were more likely to have a less-experienced surgeon perform the surgery at a low-volume hospital. Asian and Hispanic patients were also significantly less likely to use high-volume providers. Compared with white patients, high-volume treatment was lower by 11.8 percent for blacks, 8 percent for Asians, and 7 percent for Hispanics across all procedures. According to the researchers, these disparities may be explained by entrenched referral patterns that

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Minority patients

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vary by patient race/ethnicity, and poor patient access to information on report card ratings of hospitals and surgeons. The study was

supported in part by the Agency for Healthcare Research and Quality (HS14074).

See “Racial and ethnic differences in the use of high-volume hospitals and surgeons,” by

Andrew J. Epstein, Ph.D., Bradford H. Gray, Ph.D., and Mark Schlesinger, Ph.D. in the February 2010 *Archives of Surgery* 145(2), pp. 179-186. ■ KB

Rate of extrapulmonary TB highest among blacks

Although tuberculosis (TB) most often affects the lungs, it can infect other parts of the body such as the lymph nodes and various organs. This “extrapulmonary” type of the disease is usually a signal of a compromised immune system, such as from HIV infection, which increases the risk for this form of TB. A new study has found that black men and black women experience the highest incidence of extrapulmonary TB. They are also more likely than nonblacks to develop this form of the disease when they are infected with TB. Researchers compiled data on all TB cases reported in the State of Tennessee during a 6-year period from 2000 to 2006. They categorized patients into one of three TB groups: pulmonary, extrapulmonary, or both. They also collected information on race, sex, and risk factors for extrapulmonary TB.

A total of 2,142 cases of TB were reported to the State health department. More than a quarter of these (26.3 percent) were extrapulmonary in nature. Black men had the highest annual rate of extrapulmonary TB at 5.93 per 100,000 people. Next were black women

(3.21), followed by nonblack men (1.01), and nonblack women (0.58). Overall, blacks had higher rates of this form of TB compared with nonblacks at all ages. In addition, blacks with TB were more likely to be diagnosed with extrapulmonary TB (31.5 percent) than nonblacks (24.3 percent).

Factors independently associated with a higher risk for extrapulmonary TB were having HIV infection and being of foreign birth. Interestingly, alcohol use was significantly associated with lower odds for extrapulmonary TB. The researchers propose several reasons for why this form of TB is so prevalent among blacks. These include higher rates of TB complicating HIV infection, and differences in exposure to TB, access to medical care, and socioeconomic status. The study was supported in part by the Agency for Healthcare Research and Quality (HS13833).

See “Black race, sex, and extrapulmonary tuberculosis risk: An observational study,” by Christina T. Fiske, M.D., Marie R. Griffin, M.D., M.P.H., Holt Erin, and others in *BMC Infectious Diseases* 10(16), pp. 1-8, 2010. ■ KB

More stress means worse asthma in inner-city adults

Living in the inner city brings with it a host of problems, such as crime, poor housing, lack of access to needed services, and unemployment. These and other factors create a lot of stress for residents in these areas. On top of this, asthma is a major medical problem in the inner city, where its prevalence, morbidity, and mortality are higher than other areas. A new study has found a direct link between the level of stress and how much worse the asthma of inner-city adults is. Those who perceived higher stress levels were more likely to have

increased asthma-related problems compared with persons with low stress levels.

Juan P. Wisnivesky, M.D., Dr.P.H., of the Mount Sinai School of Medicine, and colleagues recruited adults with asthma being treated at two large urban internal medicine practices in Harlem, New York, and New Brunswick, New Jersey. All had moderate-to-severe asthma. Each patient was given a standardized questionnaire at the start of the study and then again at 1, 3, and 12 months after they enrolled. Items included questions about their asthma control,

medication use, personal information, quality of life, and measurements of perceived stress. The study’s findings are based on 326 participants, the majority of whom were either black or Hispanic of low socioeconomic status. They also had various conditions in addition to asthma, such as hypertension (46.8 percent) and diabetes (24.6 percent).

A participant’s perceived stress level was associated with increased asthma problems and a poorer quality of life. Those with the highest stress levels displayed

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Asthma

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decreased adherence to their asthma medications. According to the researchers, this resulting suboptimal self-management of asthma may partially explain the connection between increased stress and worse asthma outcomes. Given these findings, asthma programs

aimed at inner-city populations should assess stress levels and consider management and coping techniques, as well as appropriate referrals, for some patients with poorly controlled asthma, suggest the study authors. Their study was supported in part by the Agency for Healthcare Research and Quality (HS13312).

See “The relationship between perceived stress and morbidity among adult inner-city asthmatics,” by Dr. Wisnivesky, Jessica Lorenzo, M.P.H., Jonathan M. Feldman, Ph.D., and others in the *Journal of Asthma* 47, pp. 100-104, 2010. ■ KB

Child/Adolescent Health

Care setting affects likelihood that children with persistent asthma will receive inhaled steroids

Key components of quality care for children with persistent asthma include prescribing inhaled steroids, vaccinating the child against influenza, and discussing an asthma action plan with the child’s parent. These children are less likely to receive inhaled steroids if they receive care in community health centers or hospital clinics than in multispecialty group practices, according to a new study. The practice setting mediated initially observed disparities in inhaled steroid use by Latino children and those whose provider predominantly served minority patients.

For example, without adjusting for other factors affecting receipt of inhaled steroids, Latino children and those whose health care providers predominantly served minority patients were more likely to have never received

inhaled steroids. However, after adjusting for patient, provider, and practice characteristics there were no significant differences in receipt of inhaled steroids for children with minority-serving providers or for Latino versus white children. In contrast, children receiving care in community health centers or hospital clinics were more than four times as likely to have never received inhaled steroids than children seen in multispecialty practices. These differences were not seen for children’s receipt of influenza vaccinations or asthma action plans.

Based on the study’s findings, efforts to increase the use of inhaled steroids for children with persistent asthma should focus on settings such as community health centers and hospital clinics, conclude the researchers.

Their study included 563 children with persistent asthma, aged 2 to 12 years, who were part of a large, multispecialty group practice in metropolitan Boston or Neighborhood Health Plan (a Massachusetts health plan predominantly for Medicaid recipients). Parents of eligible children and the children’s primary care providers were surveyed. The study was funded in part by the Agency for Healthcare Research and Quality (T32 HS00063).

More details are in “Asthma care quality for children with minority-serving providers,” by Alison A. Galbraith, M.D., M.P.H., Lauren A. Smith, M.D., M.P.H., Barbara Bokhour, Ph.D., and others in the January 2010 *Archives of Pediatric and Adolescent Medicine* 164(1), pp. 38-43. ■ DIL

Outcomes/Effectiveness Research

Lower mortality rates after surgery at high-volume hospitals due to fewer complications and other factors

It is generally recommended that patients seek out high-volume hospitals to have complex surgeries, since greater volume means more experience by hospitals and surgeons. A new study did find that hospitals that performed a high volume of five complex surgical procedures had lower in-hospital mortality rates than low-volume hospitals. The lower rates were not just due to lower rates of surgery-related complications at high-volume hospitals. Instead, the researchers suggest that high-volume hospitals have a different patient mix than hospitals performing fewer of the procedures.

The new study looked at the association between surgical volume, complication rates, and mortality rates for five complex procedures: coronary artery bypass graft (CABG), percutaneous coronary intervention (PCI), electrical abdominal aortic aneurysm repair (AAA), pancreatectomy (PAN), and esophagectomy (ESO). High-volume hospitals for all of the procedures had significantly lower in-hospital mortality than lower-volume hospitals. High-volume hospitals had significantly lower odds for at least one complication following PCI, AAA, and PAN. Hospitals performing high volumes of CABG, AAA, and PAN were associated with significantly lower odds of respiratory complications. The researchers also noted reductions in digestive complications (following PAN), hemorrhage or hematoma (following PCI), and bloodstream infection or sepsis (following PCI and PAN) compared with low-volume hospitals.

However, the volume of procedures was not the sole factor influencing patient outcomes. Except for CABG, high-volume hospitals were more likely to have a greater proportion of elective or nonemergency admissions among patients undergoing complex surgeries than did low-volume hospitals. For PAN, high-volume hospitals tended to have younger patients with fewer coexisting conditions. The researchers found that patient characteristics alone were as useful as patient and hospital characteristics together in predicting outcomes. The findings were based on data from the Nationwide Inpatient Sample of the Agency for Healthcare Research and Quality's (AHRQ's) Healthcare Cost and Utilization Project for the years 2000 through 2003.

Finding pathways that lead to reduced mortality in high-volume hospitals, such as better procedures during the surgery and better postoperative care, is critical for identifying those processes that need to be improved in low-volume hospitals, suggest the researchers. Their study was funded in part by AHRQ (HS15009).

More details are in "Effect of meeting Leapfrog volume thresholds on complication rates following complex surgical procedures," by Veerasathpurush Allareddy, Ph.D., Marcia M. Ward, Ph.D., Veerajalandhar Allareddy, M.D., and others in the February 2010 *Annals of Surgery* 251(2), pp. 377-383.

■ DIL

Remote supervision of stroke therapy is safe and effective at smaller hospitals

Stroke patients have the greatest chance of survival and recovery if they receive intravenous tissue plasminogen activator (IV tPA). This medicine dissolves stroke-causing blood clots. But it must be given within 3 hours of the onset of a stroke in order for it to be most effective. Regional stroke center hospitals are well-equipped with the drug and stroke specialists to provide this

type of care immediately. Smaller, outlying hospitals, however, may not have a stroke specialist available onsite to administer the drug. The good news is that IV tPA can be given safely and effectively at outlying hospitals when a neurologist supervises the procedure using telemedicine or telephone guidance. The patient can then be moved to a regional stroke center.

Researchers reviewed a stroke database to identify 296 patients who had received IV tPA within 3 hours of the start of symptoms. Of these, 181 received care at outlying hospitals without a stroke specialist available 24/7. The other 115 received treatment at a regional stroke center. There were no differences between patients treated at outlying hospitals and regional

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Stroke therapy

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stroke centers in treatment complications, mortality, and discharge and functional outcomes.

Among survivors, patients receiving treatment with IV tPA at outlying hospitals did have shorter hospital stays than patients treated at stroke centers. However, their discharge status was similar and 75 percent of patients were able to

walk out of the hospital on their own. With only 4 neurologists per 100,000 persons in the United States, and recent evidence suggesting IV tPA is effective up to 4.5 hours after symptom onset, remote support of IV tPA will play a crucial role in caring for stroke victims, conclude the researchers. Their study was supported in part by the Agency for Healthcare Research and Quality (HS11392).

See “Remote supervision of IV-tPA for acute ischemic stroke by telemedicine or telephone before transfer to a regional stroke center is feasible and safe,” by Muhammad A. Pervez, M.D., Gisele Silva, M.D., Ph.D., Shibab Masrur, M.D., and others in the January 2010 *Stroke* 41, pp. e18-e24. ■ KB

Studies explore rapid treatment of sepsis and cardiac arrest

Two new studies investigate whether swift responses for treating sepsis and cardiac arrest are beneficial for patients. Both studies, led by Henry E. Wang, M.D., M.S., of the University of Alabama at Birmingham, and supported in part by the Agency for Healthcare Research and Quality (HS13628), are summarized below.

Wang, H.E., Weaver, M.D., Shapiro, N. I., and Yealy, D. M. (2010, February). “Opportunities for emergency medical services care of sepsis.” *Resuscitation* 81(2), pp. 193-197.

This new study finds that emergency medical services (EMS) personnel may serve as an important resource for early diagnosis and treatment of sepsis, which can lead to organ failure, shock, and death. Of the 4,613 patients suffering from infections who were treated for sepsis at a Boston hospital’s emergency department, more than a third were brought there by EMS crews. The EMS-transported patients were almost four times more likely

to have severe sepsis or septic shock. Further, two-thirds of the patients who died of sepsis were brought to the hospital via EMS. If EMS personnel added other life-saving services to their sepsis resuscitation protocols, they might be able to improve survival for patients who are severely ill from sepsis, the authors suggest. For example, EMS personnel could add taking a patient’s temperature and using a lactate detector to detect shock to the protocols that currently include providing intravenous fluids; administering medication to raise blood pressure, which can drop precipitously in septic shock; and ventilating the patient.

Wong, M.L., Carey, S., Mader, T.J., Patrick, A. R., and Wang, H.E. (2010, February). “Time to invasive airway placement and resuscitation outcomes after inhospital cardiopulmonary arrest.” *Resuscitation* 81(2), pp. 182-186.

When a patient experiences cardiopulmonary arrest (CPA) in a hospital, teams respond swiftly to

open an airway, provide chest compressions, and administer drugs to get the patient’s heart beating on its own again. A new study finds that opening an airway through endotracheal intubation, laryngeal mask airway placement, tracheostomy, or cricothyroidotomy within 5 minutes, as guidelines recommend, may not be necessary.

Researchers examined registry data for 25,006 cases of CPA that occurred in the United States, Canada, and Germany. They found that 10,956 patients had invasive airways placed within 5 minutes of CPA (early placement) and 14,050 had airways placed after 5 minutes (late placement). Neither early nor late placement was associated with the return of the patient’s heartbeat. The authors suggest that clinicians striving to revive a patient’s heart can delay or even avoid placing an airway. In fact, by trying to establish an airway, teams may actually be preventing the use of more important life-saving measures such as providing chest compressions or life-saving drugs.

■ KFM

Instrument that measures quality of life for breast cancer survivors can be used for other cancers

Survey instruments that measure cancer survivors' health-related quality of life can help researchers gauge the true impact of the disease as well as design interventions to assist these individuals. A new study finds that the 47-item Impact of Cancer, version 2, which was first tested with breast cancer survivors, may also be useful in measuring the effects other cancers have on survivors' quality of life.

Version 2, derived from the initial 81-item Impact of Cancer, measures both the negative and positive effects cancer has had on survivors. For example, some survivors report that being diagnosed with cancer helped them grow personally (a positive), and others report suffering from body image issues (a negative).

When researchers gave the survey to 1,188 breast cancer survivors and 652 non-Hodgkin lymphoma survivors, they found that version 2's scales measured important and common concerns both groups of survivors share. Further, because version 2 also pinpointed differences between the two groups, it is useful for differentiating the impacts specific cancers have on survivors. This study was funded in part by the Agency for Healthcare Research and Quality (T32 HS00032).

See "Measuring the impact of cancer: A comparison of non-Hodgkin lymphoma and breast cancer survivors," by Catherine M. Crespi, Ph.D., Sophia K. Smith, Ph.D., Laura Petersen, M.S., and others in the March 2010 *Journal of Cancer Survivorship*, 4(1), pp. 45-58. ■ KFM

Surgical simulation training improves speed and confidence in residents learning endoscopic sinus surgery

A study of otolaryngology (ear, nose, and throat) residents confirms the value of using a virtual reality simulator as part of learning to do sinus surgery with an endoscope. Endoscopic sinus surgery (ESS) is one of the most common procedures done by otolaryngologists, but is also the most frequent cause of litigation for these practitioners. Current training in ESS involves the use of instructional videos, cadaver dissection when available, and direct observation in the operating room. The researchers compared a group of residents who used standard training and a virtual reality training device, the Endoscopic Sinus Surgery Simulator (ES3), with a comparable group of residents who underwent only standard training.

The ES3 group performed mucosal injection in 3 minutes less than the control group (mean of 1.7

min. vs. 4.7 min.) and with less variability in performance. ES3-trained residents also spent half as much time doing dissection as residents in the control group (mean of 7.4 min. vs. 15.4 min.). When rated by experienced surgeons, the ES3-trained residents also showed much higher confidence and dexterity of instrument use during the dissection (6.6 and 6.8, respectively, on a 10-point scale) than did the control residents (2.7 and 2.8, respectively).

The researchers enrolled 25 residents who had no prior experience with ESS in the study and randomly assigned them to the experimental or control groups. The first procedure each resident performed on a live patient was video recorded and reviewed by three senior academic otolaryngologists. They later compared the recorded procedures standardized around the completion of a set of basic tasks (navigation,

injection, and dissection) between the two groups. For each task, the raters measured variables that included time to completion of task, case difficulty, tool manipulation, tissue respect (care in dealing with the sinus tissue), task completion rate, surgical confidence, and number of errors.

Based on this study and other studies of surgical simulators in medical education, the researchers recommend that advanced simulation technologies should be rapidly integrated into surgical training. Their study was funded in part by the Agency for Healthcare Research and Quality (HS11866).

More details are in "From virtual reality to the operating room: The endoscopic sinus surgery simulator experiment," by Marvin P. Fried, M.D., Babak Sadoughi, M.D., Marc J. Gibber, M.D., and others in the February 2010, *Otolaryngology—Head and Neck Surgery* 142(2), pp. 202-207. ■ DIL

Coronary risk information may improve prescribing practices

Calculating a person's 10-year and lifetime risk for developing heart disease can guide the physician on how to use aspirin and cholesterol-lowering drugs, suggests a new study. Researchers received survey information from 99 primary care physicians practicing within an academic medical center. They each received five patient scenarios that included details on cardiovascular risk factors as well as 10-year and lifetime risk estimates for developing heart disease. Physicians were asked about how they would prescribe aspirin and cholesterol-lowering drugs for each scenario.

Using risk-factor information alone, the physicians made appropriate aspirin therapy decisions 51 to 91 percent of the time. They often recommended aspirin when the short-term risk was low. Appropriate aspirin prescribing rose when they factored in 10-year risk estimates that indicated a moderately high coronary risk. Lifetime risk information tended to make physicians overtreat with aspirin. However, 20 percent did not recommend aspirin therapy in one scenario where a male patient had a 10-year risk of 15 percent (moderately high).

Risk-factor information alone produced guideline-appropriate decisions for starting cholesterol-lowering drugs 44 to 75 percent of the time. However, it was common for physicians to select too low or too high cutoffs for LDL-cholesterol levels to initiate treatment. Having 10-year risk information improved the ability to use proper cholesterol level limits when the risk was moderately high. High lifetime risk information prompted the physicians to prescribe cholesterol-lowering drugs for LDL-levels lower than those recommended when the 10-year risk was low but the lifetime risk was high. The researchers suggest that to maximize the benefits of risk-calculating tools, specific guideline recommendations should be provided along with risk estimates. The study was supported in part by the Agency for Healthcare Research and Quality (HS15647).

See "Potential use of 10-year and lifetime coronary risk information for preventive cardiology prescribing decisions," by Stephen D. Persell, M.D., M.P.H., Charles Zei, Kenzie A. Cameron, Ph.D., M.P.H., and others in the March 8, 2010 *Archives of Internal Medicine* 170(5), pp. 470-477. ■ KB

Using quitlines with physician support improves smoking cessation

Most people would agree that quitting smoking is not easy. Primary care physicians do their part by encouraging patients to quit, but they have little time to engage in lengthy interventions. Telephone quitlines have been found to be effective for counseling and helping smokers to quit. A new study shows that collaboration between physicians and quitlines can boost smokers' chances of getting the support they need to quit smoking.

A total of 1,817 smokers from 16 primary care practices participated in the study. Physicians used an expanded "vital sign" intervention that included asking patients if they smoke, advising tobacco cessation if they do, assessing their interest in quitting, and referring interested patients to a

quitline via fax. The quitline offered four telephone counseling sessions as well as contact with the physician for possible drug therapy and followup. Exit surveys given by trained research assistants asked patients who smoked about counseling they received in the office and if they were referred to a quitline. A control group of primary care practices just used the traditional tobacco use vital sign (identifying patients who never smoked, used to smoke, or currently smoke) without a system for patient assessment and referral.

The percentage of smokers receiving cessation support was 40.7 percent in the intervention group and 28.2 percent in the control group. Implementing the systematic process resulted in a significant increase of in-office

discussion of quitting smoking as well as referrals to quitlines. The researchers found a greater frequency of cessation support in patients aged 35-54 years, and with male and more experienced primary care physicians. Both physicians and office managers were satisfied with how the intervention worked and the comfort level of patients being asked about their smoking habits. The study was supported in part by the Agency for Healthcare Research and Quality (HS14854).

See "Promoting primary care smoking-cessation support with quitlines," by Stephen F. Rothemich, M.D., M.S., Steven H. Woolf, M.D., M.P.H., Robert E. Johnson, Ph.D., and others in the April 2010 *American Journal of Preventive Medicine* 38(4), pp. 367-374. ■ KB

Thoracic surgeons can help patients stop smoking with a brief smoking cessation program

Visits to a thoracic surgeon can be a productive time for helping patients who smoke to quit, according to a pilot study at a thoracic surgery clinic. The researchers found that a 10-minute smoking cessation intervention produced a quit rate at 3 months of 35 percent (14 of 40 patients). Half of the patients (20 of 40) used tobacco-cessation medication, including bupropion SR; nicotine gum or inhaler; or the nicotine patch. Only three of the patients (7.5 percent) called a toll-free quitline, but all three had quit smoking (for at least 7 days) at the 3-month follow-up.

Nineteen patients returned for an office visit at 3 months and verified their quitting status by measurement of exhaled carbon monoxide (CO). All 9 who said they had quit, and all 10 who had said they still smoked, had their status confirmed by the CO measurement. The two patient characteristics that had the strongest association with quitting smoking were having malignant disease (4.2 times more likely to quit) and being the only smoker in their household (6.1 times more likely to quit).

The study participants were recruited from adults smoking more than 5 cigarettes per week who were seen

at the University of Virginia thoracic surgery clinic from January to December 2008. The participants were either contemplating or trying to quit smoking. All of the participating patients had a brief (10 minutes or less) office intervention with a thoracic surgeon and a clinical research nurse. The intervention included discussing the patient's smoking history, previous attempts to quit, and the current motivation for quitting. The patients were offered pharmaceutical tobacco dependence treatment, use of a free telephone quitline, and related printed materials. Followup was either in person, at the 3-month postsurgical visit, or by a telephone survey at 3 months. The researchers caution that more studies need to be done to confirm the effectiveness of the intervention. The study was funded in part by the Agency for Healthcare Research and Quality (HS18049).

More details are in "A thoracic surgeon-directed tobacco cessation intervention," by Benjamin D. Kozower, M.D., M.P.H., Christine L. Lau, M.D., Jennifer V. Phillips, R.N., and others in the March 2010 *Annals of Thoracic Surgery* 89(3), pp. 926-930. ■ *DIL*

Challenges abundant for practices that use fax referrals to smoking cessation quitlines

Forty-nine States offer "quitlines" staffed with experts that aim to help smokers cease smoking and reduce the time medical office staff spend providing advice on kicking the habit. However, a new study finds that the fax referral method that links patients with quitlines can be burdensome for medical office staff and resisted by patients.

Donna Shelley, M.D., M.P.H., of New York University, and her colleague found that a faxable referral form for a quitline required extra steps for office staff. They had to locate the form, explain the quitline program, and fax the completed form, which providers considered too long. Generally, no specific staff member was given responsibility for completing the form, so this task was often

overlooked during appointments. And when fax referrals were made, quitline counselors reached only 41 percent of the patients, falling short of the quitline's 53 percent average.

Clinic staff were often unable to track patient progress after making a referral and found that progress reports from the quitline were not very useful. Finally, patients were not always receptive to receiving phone calls from strangers offering to counsel them on quitting smoking.

The authors offer several suggestions for improving the program, including simplifying the fax referral form or making it Web-based, to ease the data collection burden on clinic staff. Assigning responsibility for completing and faxing the form to specific staff members could make the referral

process run smoother. Clinics may also benefit from receiving improved progress reports that summarize progress on referred patients in order to reduce the paperwork burden of multiple individual progress reports. Finally, educating the public and clinic staff on the services the quitline provides may reduce the time clinic staff spend explaining the program and improve its uptake among patients. This study was funded in part by the Agency for Healthcare Research and Quality (HS16000).

See "Implementing a fax referral program for quitline smoking cessation services in urban health centers: A qualitative study," by Jennifer Cantrell, M.P.A., and Dr. Shelley in the December 17, 2009 *BMC Family Practice* 10 (81), pp. 1-11. ■ *KFM*

Mental Health

Trauma associated with mental health disorders but not substance abuse in homeless men

Mental health problems and substance abuse are common among the homeless. A new study finds that homeless men who experienced traumatic, life-threatening events may develop mental health problems, but these harrowing experiences do not necessarily prompt them to abuse alcohol or drugs.

Researchers surveyed homeless men in four North Carolina shelters to determine the role traumatic experiences played in their mental health or substance abuse problems. Of the 239 men surveyed, 68.2 percent had suffered physical abuse as children and 71.1 percent experienced physical abuse as adults. Nearly 56 percent of the men reported they were victims of childhood sexual abuse, and 53 percent reported being victims of adult sexual abuse. Childhood sexual and physical abuse were not as strongly associated with mental health problems as adult sexual and physical trauma, suggesting that abuse suffered as an adult poses a stronger risk for mental health problems than abuse in childhood.

No demographic or trauma variables were associated with the men's substance abuse problems. This lack of a relationship between mental health problems and substance abuse indicates that trauma plays an important role in homeless men's mental health problems but not their substance abuse.

The authors suggest that the survey tools used in this study could be useful for screening boys and men for abuse and mental health problems to prevent them from joining the ranks of the homeless. Additionally, interventions to assist homeless men should combine safe housing with social services and therapy that address traumatic events as a means for thwarting chronic homelessness. This study was funded in part by the Agency for Healthcare Research and Quality (HS13353).

See "Assessing trauma, substance abuse, and mental health in a sample of homeless men, by Mimi M. Kim, Ph.D., Julian D. Ford, Ph.D., Daniel L. Howard, Ph.D., and Daniel W. Bradford, M.D., M.P.H.," in the February 2010 *Health & Social Work* 35(1), pp. 39-48. ■ KFM

Health Literacy

Health literacy level has no impact on frequency of blood-glucose monitoring for inner-city patients with diabetes

Self-monitoring of blood-glucose levels is critical for diabetics to control their disease effectively. Individuals who have high health literacy levels often do better when it comes to managing their diabetes. But, what about those with low levels of health literacy? Can they be expected to successfully monitor their blood-glucose levels? According to findings from a recent study, the answer is yes.

Researchers enrolled 189 patients with diabetes who were

between the ages of 18 and 65. All were receiving care from a large, hospital-based diabetes subspecialty clinic. Each participant received a 1-hour in-person interview during which they were asked questions about rating their overall health, chronic conditions, use of health care services, and health behaviors. They were also given a short version of the Test of Functional Health Literacy in Adults. Most participants were black, female, with low incomes and a high-school education or less.

The researchers found no significant differences in blood-sugar monitoring rates according to health literacy level. More than 90 percent of those studied reported testing their blood sugar at least once a day; 75.6 percent did this twice a day or more. Overall, 22.9 percent of those studied had inadequate health literacy (unable to read and interpret health texts); another 16.2 percent had marginal literacy (difficulty reading and interpreting health texts).

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Blood-glucose monitoring

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Interestingly, patients with inadequate health literacy will monitor their blood sugar as often as literate patients, but are less likely to record the results in their diary. Factors associated with inadequate health literacy levels included being older, having less

education, not having insurance, and dealing with diabetes for a long time. In fact, patients who had diabetes for 10 years or longer were significantly less likely to perform self-monitoring of blood-glucose levels. The study was supported in part by the Agency for Healthcare Research and Quality (HS10875 and HS11617).

See “The impact of health literacy on self-monitoring of blood glucose in patients with diabetes receiving care in an inner-city hospital,” by Nkechi Mbaezue, M.D., M.S., Robert Mayberry, M.P.H., Ph.D., Julie Gazmararian, Ph.D., and others in the January 2010 *Journal of the National Medical Association* 102(1), pp. 5-9. ■ KB

Simple tool to measure health literacy in patients with HIV successfully predicts medication adherence

The ability to understand and act on medical information is at the crux of health literacy. However, current tools to measure health literacy may be off-putting because they require individuals to read lists of medical terms often unrelated to their health condition, while also assessing reading ability and not the ability to understand and act on health information. A new tool successfully overcomes that hurdle by asking patients with HIV about terms and practices they are familiar with. It also shows how well they stick to their medication regimen, a new study finds.

Researchers used the eight-item Brief Estimate of Health Knowledge and Action—HIV Version (BEHKA-HIV) to interview 204 patients with HIV in Chicago, Illinois, and Shreveport, Louisiana, in 2001. Three items test knowledge of

HIV, asking patients to explain the terms “CD4 count” and “viral load” and to list their HIV medicines. The remaining five items query patients’ actions regarding circumstances that affect their adherence to HIV medications. Also included in the study was a validated measure of HIV medication adherence. Results showed that patients who scored high on the BEHKA-HIV were adherent to their HIV medications. For example, 90.9 percent of patients who scored 6-8 on the BEHKA-HIV were classified as adherent, while just 51 percent of patients who scored 0-3 on the assessment were classified as adherent.

The authors suggest the BEHKA-HIV may better assess health literacy than other tools because it measures both knowledge of HIV and a patient’s actions to overcome potential

barriers to medication adherence. Further, it allows caregivers to identify gaps in a patient’s understanding and what may be the cause of nonadherence to treatment, providing a teachable moment around administration of the test. This study was funded in part by the Agency for Healthcare Research and Quality (T32 HS00078).

See “Health literacy in the context of HIV treatment: Introducing the brief estimate of health knowledge and action (BEHKA)—HIV version,” by Chandra Y. Osborn, Ph.D., M.P.H., Terry C. Davis, Ph.D., Stacy Cooper Bailey, M.P.H., and Michael S. Wolf, Ph.D., M.P.H., in the February 2010 *AIDS Behavior* 14(1), pp. 181-188. ■ KFM

Agency News and Notes

AHRQ and Ad Council encourage men to take preventive steps in their health care

Men are 24 percent less likely than women to have visited the doctor within the past year, according to new data recently released by the Agency for Healthcare Research and Quality (AHRQ). In addition, men are about 30 percent more likely than women to be hospitalized for preventable conditions such as congestive heart failure and complications from diabetes, according to new AHRQ data.

In an effort to raise awareness among middle-aged men about the importance of preventive medical testing, AHRQ recently joined with the Ad Council to launch a new series of public service advertisements (PSAs).

As an extension of a Men's Preventive Health campaign first launched in 2008, AHRQ and the Ad Council released new PSAs to encourage men over 40 to learn which preventive screening tests they need to get and when they need to get them. This campaign complements AHRQ's existing efforts toward improving the safety and quality of health care and promoting patient involvement in their own health care, including the "Questions Are the Answer" campaign launched with the Ad Council in 2007 and the "Superheroes" Spanish-language campaign launched in 2008.

Created pro bono for the Ad Council by Grey New York, the new television, radio, print, outdoor, and

Web ads incorporate family as a key motivating factor for men to take a more active role in preventive health. They show the target audience that they need to take care of themselves (and their health) in order to be there for their families now and in the future. To view the PSAs, visit www.ahrq.gov/healthymen.

The PSAs encourage men to visit that Web site, which provides the recommended ages for preventive testing (as well as a list of tests), a quiz designed to test knowledge of preventive health care, tips for talking with the doctor, a glossary of consumer health terms, and links to online resources to find more medical information. ■

Men shy away from routine medical appointments

Just over half of U.S. men (57 percent) see a doctor, nurse practitioner, or physician assistant for routine care, compared with nearly three-fourths (74 percent) of women, according to the latest News and Numbers from the Agency for Healthcare Research and Quality (AHRQ). Routine care is typically defined as a visit for assessing overall health rather than one prompted by a specific illness or complaint. AHRQ's 2007 survey asked respondents if they had made an appointment within the past 12 months for routine care, and it found that:

- Fewer Hispanic and black men made routine medical care appointments than white men (35.5 percent, 43.5 percent, and 63 percent, respectively).
- Uninsured people aged 18 to 64 were only about half as likely as those with private insurance to make an appointment for routine care (36 percent vs. 69 percent).

- About three-fourths of respondents who said they were in excellent health reported making an appointment for routine medical care versus half of those who said that their health was fair or poor (76 percent vs. 52 percent).
- A little over half of poor respondents reported making an appointment for routine medical care compared with three-fourths of those with higher incomes (54 percent vs. 75 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. You can view *Getting Routine Care, U.S. Adult Noninstitutionalized Population, 2007* at www.meps.ahrq.gov/mepsweb/data_files/publications/st284/stat284.pdf. ■

Deaths from hospital complications drop, disparities remain

Fewer hospital patients died from complications during their hospital stays between 2001 and 2006, but Asians/Pacific Islanders and Hispanics were less likely to survive than either whites or blacks, according to the latest News and Numbers from the Agency for Healthcare Research and Quality (AHRQ).

The overall death rate for patients aged 18 to 74, who during their hospitalization developed a complication such as pneumonia, blood clots, or blood infections decreased 23 percent (from 152

deaths to 117 deaths for every 1,000 patients with complications) from 2001 to 2006. AHRQ's data analysis also found that:

- Although the death rate for Asians and Pacific Islanders fell 24 percent during the period, they had the highest death rate of any group in both 2001 and 2006.
- The death rate for Hispanic patients declined by 21 percent—but by 2006, their rate was the second highest of any group (122 deaths per 1,000 patients).

- The death rate for black patients declined by 30 percent, the largest decrease. In 2001, blacks had higher rates than whites, but by 2006, their death rate was the lowest of any of the four groups of patients (111 deaths per 1,000 patients).

This AHRQ News and Numbers summary is based on data from page 96 in AHRQ's 2009 *National Healthcare Quality Report* (www.ahrq.gov/qual/qdr09.htm), which tracks the health care system through quality measures. ■

Cost of hospital treatment for blood infection surges

Hospital costs for treating patients with a blood infection (septicemia) surged 174 percent between 2001 and 2007, making it the condition with highest-rising treatment costs during that period, according to the latest News and Numbers from the Agency for Healthcare Research and Quality (AHRQ).

Although just 3 percent of \$12.3 billion in 2007 was spent treating blood infections in uninsured patients, they accounted for the highest average increase of 228 percent. By comparison, the average cost to hospitals of treating blood infections in Medicaid patients jumped by 192 percent, in Medicare patients by 172 percent, and in privately insured patients by 152.5 percent.

In addition, AHRQ found that other conditions with rapidly increasing cost, grouped by payer, included:

Medicare

- Intestinal infection
205 percent
- Acute kidney failure
154 percent

Uninsured

- Acute kidney failure
179 percent
- Respiratory failure
154 percent

Medicaid

- Acute kidney failure
160 percent
- Leukemia and other white blood cell disease
127 percent

Privately insured

- Osteoarthritis
120 percent
- Acute kidney failure
119 percent

This AHRQ News and Numbers is based on data in *Diagnostic Groups with Rapidly Increasing Costs, by Payer, 2001-2007* (www.hcup-us.ahrq.gov/reports/statbriefs/sb91.pdf). The report uses statistics from the 2007 Nationwide Inpatient Sample, a database of hospital inpatient stays that is nationally representative of inpatient stays in all short-term, non-Federal hospitals. The data are drawn from hospitals that comprise 90 percent of all discharges in the United States and include all patients, regardless of insurance type, as well as the uninsured. ■

Employees in small businesses more likely to have high-premium health plans

Nearly 13 percent of workers with employer-sponsored health plans who worked in firms with 10 or fewer employees had premiums of \$7,200 or more a year for single-coverage plans in 2008, according to the latest News and Numbers from the Agency for Healthcare Research and Quality (AHRQ). This amount was much higher than the \$4,704 average national premium for employer-sponsored single-coverage health plans that year. AHRQ's analysis also found that:

- By comparison, only about 4 percent of workers enrolled in plans sponsored by large businesses (1,000 or more workers) had premiums of

\$7,200 or more for employer-sponsored, single-coverage health plans. The national average premium in large businesses for this type of coverage was \$4,340.

- For family coverage, about 7 percent of enrolled workers in small businesses had premiums of at least \$19,000 in 2008 compared with 4.5 percent of employees in large companies. The national average premium for a family-coverage health plan in 2008 was \$11,650 (less than 10 employees) and \$12,595 (1000+ employees), respectively.
- Across all businesses, 5 percent of employees with single coverage had premiums of \$7,200 or more, while 5 percent

of employees with family coverage had premiums of \$19,000 or more.

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. You can read the full report, *Enrollment in High Premium Employer-Sponsored Health Insurance, Private Industry, 2008* at www.meps.ahrq.gov/mepsweb/data_files/publications/st283/stat283.pdf. ■

Announcements

New AHRQ guides offer hospitals advice on emergency evacuation, assessment, and recovery

Two new guides are now available to help hospital planners and administrators make important decisions about how to protect patients and health care workers and assess the physical components of a hospital when a natural or manmade disaster, terrorist attack, or other catastrophic event threatens the soundness of a facility. Published by the Agency for Healthcare Research and Quality (AHRQ), the guides examine how hospital personnel have coped under emergency situations in the past to better understand what factors should be considered when making evacuation, shelter-in-place, and reoccupation decisions.

Hospital Evacuation Decision Guide and *Hospital Assessment and Recovery Guide* are intended to supplement hospital emergency plans, augment guidance on determining how long a decision to evacuate may be safely deferred, and provide guidance on how to organize an initial assessment of a hospital to determine when it is safe to return after an evacuation.

The evacuation guide distinguishes between “pre-event evacuations”—which are undertaken in advance of an impending disaster, such as a storm, when the hospital structure and surrounding environment are not yet significantly compromised — and “post-event evacuations,” which are carried out after a disaster has damaged a hospital or the surrounding community. It draws upon past events including the 1994 Northridge, California earthquake; the 1979 Three Mile Island nuclear reactor incident in Pennsylvania; and Hurricanes Katrina and Rita in 2005. The guide offers advice regarding sequence of patient evacuation and factors to consider when a threat looms.

The assessment and recovery guide helps hospitals determine when to get back into a hospital after an evacuation. Comprised primarily of a 45-page checklist, the guide covers 11 separate areas of hospital infrastructure components, such as security and fire safety, information technology and communication, and

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New AHRQ guides

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biomedical engineering that should be evaluated before determining that it is safe to reoccupy a facility.

The *Hospital Evacuation Decision Guide* is available at www.ahrq.gov/prep/hospevacguide/ and the *Hospital*

Assessment and Recovery Guide is available at www.ahrq.gov/prep/hosprecovery/. Free copies of the guides are available by calling 800-358-9295 or e-mailing AHRQPubs@ahrq.hhs.gov. More than 60 other Public Health Emergency Preparedness tools and resources are available on the AHRQ Web site at: www.ahrq.gov/prep/. ■

Innovative software cuts costs and time for States to report hospital quality information to the public

The Agency for Healthcare Research and Quality (AHRQ) recently unveiled MONAHRQ—My Own Network Powered by AHRQ. It is a free, MS Windows-based software application that significantly reduces the cost and time a State, hospital, or other organization would need to spend to compile, analyze, and post data on quality of hospital care, its cost, and how that care is used. MONAHRQ allows users to create a customized Web site with data that can be used for internal quality improvement or reporting quality information to the public.

The cost of creating a Web site with this data is estimated to be \$300,000 or more, and the time required could be a year, according to States that tested MONAHRQ as it was being developed. With MONAHRQ, that time can be cut to a few days. Currently, many States require that quality data be reported publicly and other States are considering doing so.

A State, or other organization, referred to as the host user, can download MONAHRQ from AHRQ's Web site at monahrq.ahrq.gov and enter its own hospital administrative data, which includes such elements as patient characteristics, diagnoses, procedures, health insurance type,

and charges. MONAHRQ processes that information and then creates a Web site that the host user can customize by selecting a specific color scheme, inserting logos, and using other features.

A Web site created using MONAHRQ will provide information in four areas:

- Quality of care for specific hospitals—provides information about patient safety, patient deaths in the hospital, and other quality-related issues to answer questions such as, “Which hospitals have the lowest mortality rates after coronary bypass surgery?”
- Provision of services by hospital for health conditions and procedures—provides information about the number of patient discharges, charges, costs, and length of hospitalizations for specific hospitals to answer questions such as, “Which hospitals perform the largest numbers of hip replacement surgeries?” and “What is the cost?”
- Potentially avoidable hospitalizations—creates maps of county-by-county rates for potentially avoidable hospitalizations to answer questions such as, “Which counties have the highest rates of

hospitalization for uncontrolled diabetes, and how much could be saved if these rates were reduced?”

- Rates of health conditions and procedures—provides information about the prevalence of diseases or medical procedures through maps of county-by-county rates for selected conditions and procedures to answer questions such as, “Which counties have the highest rates of lung cancer?”

MONAHRQ users provide information on elements of care that are not offered by the Department of Health and Human Services' Hospital Compare Web site. These include outcome measures of quality by individual hospital, such as patient safety events and deaths; data on which high-volume procedures are associated with better outcomes; and preventable hospitalizations by county on conditions for which good outpatient care could avert the need for a hospital stay. MONAHRQ also generates the information in a completely different way. Using the MONAHRQ software, users generate a custom Web site they can host on hospital quality using a step-by-step approach to analyzing the data. ■

Free, innovative new online resource for hospital quality reporting now available

Local health leaders who need an evidence-based primer and decisionmaking framework to help them select measures for public reporting now have a new resource. The Agency for Healthcare Research and Quality recently released a new online resource, *Selecting Quality and Resource Use Measures: A Decision Guide for Community Quality Collaboratives*.

Developed by the University of California's Patrick Romano,

M.D., and Dominique Ritley, M.P.H., and the RAND Corporation's Peter Hussey, Ph.D., and based in part on input from Chartered Value Exchange leaders, the decision guide summarizes available empirical evidence and incorporates expert advice, best practices, and real-life case examples to illustrate the breadth of considerations and implementation options. The decision guide includes information on performance data;

measures of quality; resource use/efficiency measures; guidance on selecting quality and resource use measures; and guidance on interpreting quality and resource use measures. *The Decision Guide* is available at ahrq.gov/qual/perfmeasguide. For free printed copies, send an email to ahrqpubs@ahrq.gov or call 1-800-358-9295. ■

AHRQ announces patient safety and medical liability demonstration projects

The Agency for Healthcare Research and Quality (AHRQ)—part of the Department of Health and Human Services (HHS)—recently announced grants to support efforts by States and health systems to implement and evaluate patient safety approaches and medical liability reforms. This is the largest Federal investment connecting medical liability to care quality. The demonstration and planning grants are part of the patient safety and medical liability initiative that President Obama announced during a September 9, 2009 address to a joint session of Congress.

As part of his vision for a health care system that puts patient safety first and allows doctors to focus on practicing medicine, the President directed the Secretary of HHS to help States and health care systems test models that: (1) put patient safety first and work to reduce preventable injuries; (2) foster better communication between doctors and their patients; (3) ensure that patients are compensated in a fair and timely manner for medical injuries, while also reducing the incidence of frivolous lawsuits; and (4) reduce liability premiums.

Overall funding for the initiative is \$25 million, with \$23 million allocated to grants and \$2 million allocated to a final evaluation contract. The HHS Patient Safety and Medical Liability initiative supports the following:

- Grants to jump-start and evaluate efforts. These are 3-year grants of up to \$3 million to States and health systems for implementation and evaluation of patient safety and medical liability demonstrations.
- Planning grants. These are 1-year grants of up to \$300,000 to States and health systems in order to plan to implement and evaluate patient safety and medical liability demonstrations.
- Review of existing initiatives. In December 2009, AHRQ issued a review of reforms to the medical liability system and their impact on health care quality, patient safety, and medical liability claims.

Some of the reforms that are being planned and tested under HHS's initiative address limitations of the current medical liability system—such as costs, patient safety, and administrative burden for doctors. Grants support the creation of a judge-directed negotiation program, the development of “safe harbors” for state-endorsed evidence-based care guidelines, and early disclosure and offers of prompt compensation. Another component of the initiative is an evaluation of improvements in both patient safety and medical liability systems. The evaluation is designed to develop the evidence base that will inform long-term solutions to the medical liability problem. For details on each project go to: www.ahrq.gov/qual/liability/. ■

2008 Nationwide Inpatient Sample released

The Healthcare Cost and Utilization Project (HCUP) Nationwide Inpatient Sample (NIS) featuring 2008 data was recently released by the Agency for Healthcare Research and Quality (AHRQ). The NIS is the largest all-payer inpatient care database in the United States and is updated annually. It is available from 1988 to 2008, allowing analysis of trends over time. The data can be weighted to produce national estimates, allowing researchers and policymakers to use the NIS to identify, track, and analyze national trends in health care use, access, charges, quality, and outcomes.

The NIS is nationally representative of all short-term, non-Federal hospitals in the United States. It approximates a 20 percent stratified sample of hospitals in the United States and is drawn from the HCUP State Inpatient Databases, which include 90 percent of all

discharges in the United States. The NIS includes all patients from each sampled hospital, regardless of payer—including persons covered by Medicare, Medicaid, or private insurance, and the uninsured.

The vast size of the NIS enables analyses of infrequent conditions, such as rare cancers; uncommon treatments, such as organ transplantation; and special patient populations, like the uninsured. Its size also allows for the study of topics at both national and regional levels. In addition, NIS data are standardized across years to facilitate ease of use.

The 2008 NIS contains data from over 8 million hospital stays from more than 1,000 hospitals in 42 States. For most hospitals, the NIS includes identifiers that allow linkages to the American Hospital Association's Annual Survey Database and county identifiers that permit linkages to the Health

Resources and Services Administration's Area Resource File. The NIS contains clinical and resource use information included in a typical discharge abstract, with safeguards to protect the privacy of individual patients, physicians, and hospitals (as required by data sources).

As part of the HCUP database family, the NIS is considered by health services researchers to be one of the most reliable and affordable databases for studying important health care topics. The 2008 NIS can be purchased through the HCUP Central Distributor at www.hcup-us.ahrq.gov. Some 2008 NIS data are available in HCUPnet hcupnet.ahrq.gov, a free online query system. More information about the NIS and other HCUP products can be found on the HCUP-US Web site at www.hcup-us.ahrq.gov. ■

Register now for AHRQ's fourth annual conference

Register now for AHRQ's fourth annual conference, "Better Care, Better Health: Delivering on Quality for All Americans." It will be held September 27-29 at the Bethesda North Marriott Hotel & Conference Center in Bethesda, Maryland. Leading authorities in health care research and policy will hold sessions on transforming health care delivery; developing new patient care models,

strengthening preventive care, and reducing disparities; improving quality and patient safety; and measuring and reporting on provider and system performance. To register for the free conference, please visit the AHRQ annual conference web site at meetings.capconcorp.com/ahrq. You will also learn more about the agenda, lodging, ground transportation, and other details. ■



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Research Briefs

Al-Khatib, S.M., Calkins, H., Eloff, B.C., and others. (2010, January). "Planning the Safety of Atrial Fibrillation Ablation Registry Initiative (SAFARI) as a collaborative pan-stakeholder critical path registry model: A cardiac safety research consortium "incubator" think tank." *American Heart Journal* 159, pp. 17-24el. Reprints (AHRQ Publication No. 10-R054) are available from AHRQ.*

Atrial fibrillation (AF) is the most common arrhythmia seen in clinical practice. The treatment of AF by percutaneous catheter ablation is expanding rapidly. However, randomized clinical trials can only partially determine the safety and durability of the effect of the procedure in routine clinical practice. There is a need to address the limitations of such studies and other key concerns regarding the safety of AF ablation with the help of a national registry. This is the intention of the Safety of Atrial Fibrillation Ablation Registry Initiative (SAFARI). To consider the development of SAFARI, a "think tank" meeting was convened by a number of public and private bodies, including the Cardiac Safety Research Consortium, the Duke Clinical Research Institute, and the U.S. Food and Drug Administration. This report summarizes the issues and directions discussed at the meeting.

Berdahl, T.A., and Torres Stone, R.A. (2009). "Examining Latino differences in mental health use: The roles of acculturation and attitudes towards healthcare." *Community Mental Health Journal* 45, pp. 393-403. Reprints (Publication No. 10-R006) are available from AHRQ.*

The authors of this study analyzed differing patterns of use for mental health services by the three largest Latino groups (Mexicans, Cubans, and Puerto Ricans) to determine the influence of medical self-reliance and acculturation on mental health care use. Mexicans (4.5 percent) and Cubans (5.7 percent) were less likely than whites (9.3 percent) to use any mental health service, but Puerto Ricans' use (8.3 percent) was not significantly different from that of whites. Self-reliance regarding health care was associated with lower use of mental health services among all groups, but this finding did not explain the various gaps identified for each ethnic group. The lowest mental health use by Mexicans was partly explained by less English language proficiency and less time spent in the United States. The findings were based on data on 30,234 individuals taken from the 2002-2003 Medical Expenditure Panel Survey.

Bozikis, M.R., Braun, B.I., and Kritchevsky, S.B. (2010, March). "How accurately are starting times documented in the medical record? Implications for surgical infection prevention performance measurement." (AHRQ grant HS11331). *Infection Control and Hospital Epidemiology* 31(3), pp. 307-309.

Public reporting of hospital-level performance measure rates is an effective national strategy for improving care. Yet little is known about the reliability and validity of most efforts at performance measure data collection. Since 2007, public reporting of a surgical-site infection prevention measure that assesses the time interval

between administration of prophylactic antibiotics and surgical incision has been called for. The researchers undertook a prospective study to assess whether starting times of antimicrobial prophylaxis administration and surgical incision were being accurately documented in the medical record. Twenty-five hospitals participated in the study with at least two types of surgical procedures (cardiac procedure, hip or knee replacement, hysterectomy) being observed in each hospital. A total of 96 procedures were observed. Observer records were then compared with the patient record documented by operating suite personnel. Documented times exactly matched observed times in 50 cases. In only four cases were documented times different from observed times by 30 minutes or more.

Byrd, K.K., Holman, R.C., Bruce, M.G., and others. (2009, October). "Methicillin-resistant *Staphylococcus aureus*-associated hospitalizations among the American Indian and Alaska native population," *Clinical Infectious Diseases* 49(7), pp. 1009-1015. Reprints (AHRQ Publication No. 10-R016) are available from AHRQ.*

Methicillin-resistant *Staphylococcus aureus* (MRSA) infections, which can be deadly, have become prevalent in recent years. This study used data from the Nationwide Inpatient Sample of the Healthcare Cost and Utilization Project of the Agency for Healthcare Research and Quality to examine MRSA infection outbreaks among the American Indians and Alaskan Natives (AI/ANs). It found that nationwide hospitalization rates

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for MRSA swelled between 1996 and 2005 for AI/ANs. In fact, rates went from 4.6 to 51 hospitalizations per 100,000 AI/ANs from the 1996-1998 period to the 2003-2005 period. Hospitalization rates for MRSA were highest for young AI/AN children and nonelderly adults, and skin and soft tissue infections were the most commonly diagnosed. Indian Health Service regions with the highest prevalence of MRSA infections were Alaska and the Southwest.

Calonge, N., Green, N.S., Rinaldo, P., and others. (2010, February). "Committee report: Method for evaluating conditions nominated for population-based screening of newborns and children." *Genetics in Medicine* [Epub ahead of print]. Reprints (AHRQ Publication No. 10-R055) are available from AHRQ.*

The Advisory Committee on Heritable Disorders in Newborns and Children is charged with evaluating conditions nominated for addition to the uniform newborn screening panel and making recommendations to the Secretary of the U.S. Department of Health and Human Services. This report describes the framework the committee uses to approach its task. Initially, a condition is nominated for consideration via a structured nomination process. Once complete, the nomination package is assessed by a committee workgroup for the likelihood of sufficient information to conduct a systematic evidence review (SER). If the advisory committee agrees to move the nomination forward, the nomination package is assigned to an external review workgroup. Once the SER is completed, the workgroup's draft report is submitted to the decision process

workgroup and the full committee. After full discussion, including consideration of six key questions outlined in this report, the committee makes its recommendations to the Secretary.

Cannon, E.A., Bonomi, A.E., Anderson, M.L., and Rivara, F. P. (2009). "The intergenerational transmission of witnessing intimate partner violence." (HS10909). *Archives of Pediatric and Adolescent Medicine* 163(8), pp. 706-708.

Children whose mothers saw domestic violence during their childhoods may also be at risk for witnessing abuse. After conducting 1,288 telephone surveys in Seattle, researchers found that children of mothers who saw abuse up close had 1.29 higher odds of also viewing abuse than children whose mothers never witnessed abuse. They suggest that mothers who witnessed abuse may view violence as normal and may not shield their children from it. Just over 56 percent of the abused women reported that their children had never seen domestic violence firsthand. However, because mothers were answering questions on their children's behalf, they could have been mistaken about what their child had or had not seen. The researchers state that their findings support the need for domestic violence prevention strategies.

Christensen, K.L.Y., Holman, R.C., Steiner, C., and others. (2009). "Infectious disease hospitalizations in the United States." *Clinical Infectious Diseases* 49(7), pp. 1025-1035. Reprints (AHRQ Publication No. 10-R010) are available from AHRQ.*

Hospitalizations for infectious diseases rose slightly over a 9-year

period, particularly for patients aged 40 to 59, a new study finds. In fact, infectious diseases led to about 4.5 million days of hospitalizations at a cost of \$865 billion from 1998 to 2006. The most common infectious diseases were lower respiratory tract infections (34 percent), which often struck young children and older adults. Kidney, urinary tract, and bladder infections took second place (10 percent) and most often affected women. Men were hospitalized more frequently with bone, abdominal, and rectal infections; HIV/AIDS; and tuberculosis. Black patients had the highest hospitalization rates for infectious diseases. The authors suggest that socioeconomic factors and risk factors, such as smoking, may explain this disparity. The researchers used inpatient data from the Healthcare Cost and Utilization Project of the Agency for Healthcare Research and Quality.

Conway, P.H., and Clancy, C. (2010). "Charting a path from comparative effectiveness funding to improved patient-centered health care." *Journal of the American Medical Association* 303(10), pp. 985-986. Reprints (AHRQ Publication No. 10-R048) are available from AHRQ.*

The scientific basis of comparative effectiveness (CE) research has not been clearly defined. In this editorial, the authors argue that an article in the same issue represents an important step in articulating criteria for published studies that assess the CE of medications. That article analyzed CE research studies from six general and internal medicine journals. Only 32 percent of the 104 medication studies met their criteria for CE research. There are several next steps to disseminate and translate CE research into

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practice, suggest the authors. One is the construction of an inventory of CE research to be undertaken by the U.S. Department of Health and Human Services. Another is the dissemination of CE research to clinicians, patients, and others in a way that informs decisions, improves health, and enhances the performance of the health care system. Under the American Recovery and Reinvestment Act, CE research is included in the segment of the strategic framework entitled “Dissemination, Translation, and Adoption.”

Hasan, O., Meltzer, D.O., Shaykevich, S.A. “Hospital readmission in general medicine patients: A prediction model.” (HS10597). *Journal of General Internal Medicine* 25(3), pp. 211-219.

The researchers sought to identify predictors of early hospital readmission in a diverse patient population and derive and validate a simple model for identifying patients at high readmission risk. Using data gathered for the Multicenter Hospitalist Study, a prospective multi-center trial that assessed the impact of hospitalist care on patients admitted to the general medical services of six academic medical centers, they were able to identify seven easily available patient-level predictors of early readmission. Next, they derived and internally validated an easy-to-use model for assessing readmission risks in patients hospitalized for a variety of medical conditions. Using the predictors, the model was able to identify 5 percent of patients with an approximately 30 percent risk of readmission within 30 days of discharge. Among the predictors were the number of hospital

admissions in the previous year, the Charlson comorbidity index, marital status, having a regular physician, and having Medicare as primary insurance.

Ho, K., Moy, E., and Clancy, C. (2010, February). “Can incentives to improve quality reduce disparities?” *HSR: Health Services Research* 45(1), pp. 1-5.

Disparities associated with individual race, ethnicity, socioeconomic position, and other factors remain pervasive despite a continuing improvement in quality of care. Some quality improvement in preventive care, chronic care, and access to care significantly reduced disparities in mammography and counseling for smoking cessation. Yet much quality improvement tracked in the Agency for Healthcare Research and Quality’s *National Healthcare Quality Report* and *National Healthcare Disparity Report* is not associated with significant decreases in care disparities across populations. The authors of this editorial also discuss a paper in the same issue of this journal on the impact on disparities of a hospital-based pay-for-performance demonstration. This program had only a minimal impact on access to care for racial and ethnic minority Medicare beneficiaries. The authors conclude that explicitly recognizing disparities reduction as a quality metric under pay for performance and financially rewarding providers that achieve equity in health care may be the most direct path to ensuring high-quality health care for all Americans.

Ip, S., Chung, J., Raman, G., and others. (2009, October). “A summary of the Agency for Healthcare Research and Quality’s evidence report on breastfeeding in developed

countries.” (Contract No. 290-02-0022). *Breastfeeding Medicine* 4 (Suppl.1), pp. S17-S30, 2009.

A recent evidence report from the Agency for Healthcare Research and Quality finds that breastfeeding offers health benefits for both infants and mothers. Babies who are breastfed have lowered risks for ear infections; stomach problems; lower respiratory tract infections, such as pneumonia, croup, and bronchiolitis; asthma; dermatitis; obesity; diabetes; leukemia; and sudden infant death syndrome. However, the evidence did not support claims that breastfed babies have superior cognitive performance than formula-fed infants, nor did breast milk affect the rates of cardiovascular disease or infant mortality. Mothers who nurse their infants have a lowered risk of type 2 diabetes as well as breast and ovarian cancer. Further, women who did not breastfeed their babies or who breastfed for a short time had higher risks of postpartum depression. Researchers from the Tufts Medical Center Evidence-Based Practice Center reviewed more than 9,000 abstracts for the evidence report.

Landon, B.E., O’Malley, A.J., and Keegan, T. (2010). “Can choice of the sample population affect perceived performance: Implications for performance assessment.” (AHRQ grant HS13653). *Journal of General Internal Medicine* 25(2), pp. 104-109.

Identifying the appropriate patient population for performance assessment is crucial to the design and implementation of pay-for-performance systems, because using various methods of identifying patient populations might lead to large differences in observed performance that are, in

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fact, spurious, suggest these authors. They examined the potential impact of using three alternative algorithms to define accountable patient populations for performance assessment of cancer screening rates. Regardless of sample design, there were large numbers of individuals eligible for each of the screening tests (breast, cervical and colorectal cancer) at each of the nine community health centers (CHCs) included in the study. However, there was a wide variation in the proportion of health center patients that would be included in the denominator (from 18 to 62 percent). Also, simulated performance data demonstrated that variations in eligible patient populations could lead to the appearance of large differences in expected rankings of CHCs when no such differences exist.

Martinez, E.A., Marsteller, J.A., Thompson, D.A., and others. (2010, February). "The Society of Cardiovascular Anesthesiologists' FOCUS Initiative: Locating errors through networked surveillance (LENS) project vision." (AHRQ grant HS13904). *Anesthesia and Analgesia* 110(2), pp. 307-311.

The field of anesthesiology, although recognized for efforts to improve patient safety, has much work to do to reduce harm to patients having cardiac surgery. The Society of Cardiovascular Anesthesiologists (SCA) Foundation set the goal of attaining harm-free cardiac surgery through an initiative called Flawless Operative Cardiovascular Unified Systems (FOCUS). The authors describe a continuing collaboration between the Foundation and a research team at Johns Hopkins University. The approach of this

project was to integrate the wisdom of diverse disciplines, including organizational sociology, human factors engineering, industrial psychology, and clinical medicine. The prospective identification of hazards through direct observation was the richest and most labor-intensive part of the program. The project also prioritizes hazards and seeks to develop risk-reduction interventions along the lines of eliminating or preventing mistakes, making mistakes visible, mitigating harm should it occur, educating clinicians, and creating policies.

Pittas, A.G., Chung, M., Trikalinos, T., and others. (2010, March). "Systematic review: Vitamin D and cardiometabolic outcomes." (AHRQ Contract No. 290-07-1005). *Annals of Internal Medicine* 152(5), pp. 307-314.

The authors conducted a systematic review to determine if Vitamin D intake affected cardiometabolic outcomes (type 2 diabetes, hypertension, cardiovascular disease) in generally healthy adults. A total of 13 observational studies and 18 trials were eligible for the review. Some of the cohort studies reported that lower vitamin D status was associated with increased risk for hypertension and possibly cardiovascular disease. Data on associations with diabetes were unclear. Trials showed no consistent, statistically significant effect of vitamin D supplementation on blood pressure or glycemic or cardiovascular outcomes. Although lower vitamin D status seems to be associated with increased risk for hypertension and cardiovascular disease, it is not yet known whether vitamin D supplementation will affect clinical outcomes.

Rhee, M.K., Herrick, K., Ziemer, D.C., and others. (2010, January).

"Many Americans have pre-diabetes and should be considered for metformin therapy." (AHRQ grant HS07922). *Diabetes Care* 33(10), pp. 49-54.

The researchers sought to estimate the likelihood that Americans with previously unrecognized pre-diabetes would meet American Diabetes Association (ADA) consensus panel recommendations for the drug metformin in addition to change in lifestyle. They evaluated known risk factors for diabetes in a population of 1,581 relatively healthy patients who were recruited and screened for impaired glucose tolerance. Two additional groups of 2,014 and 1,111 respondents to the National Health and Nutrition Surveys (NHANES III and NHANES 2005-2006) were also evaluated. From one-quarter to one-third of the patients had pre-diabetes. Among those with impaired fasting glucose, nearly one-third met the criteria for consideration of metformin treatment to prevent diabetes in accordance with the recent ADA consensus statement. If these findings are representative of the U.S. population, close to 1 in 12 American adults may meet the recommended guidelines for consideration of metformin treatment for diabetes prevention or delay.

Weinger, M.B. (2010, February). "The pharmacology of simulation: A conceptual framework to inform progress in simulation research." (AHRQ grant HS16651). *Simulation in Healthcare* 5(1), pp. 8-15.

The author presents a framework for the design and evaluation of simulation research to assist pharmacologists in creating the empirical evidence on which to

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base decisions about curriculum design and implementation. Its purpose is to provide readers unfamiliar with pharmacology with the foundational knowledge of and an appreciation of the potential value of such an approach. Drawing on basic concepts in pharmacology, the author describes simulation learning experiences as analogous to a drug treatment. From this, he proceeds to a consideration of simulation pharmacokinetics (PK) and pharmacodynamics (PD), dose-time curves, dose-effect relationships, and drug-drug interactions. He concludes that the notions of simulation PK (the effects of an intervention on the knowledge, skills, abilities, and behaviors of trainees in the simulated environment) and simulation PD (effects on subsequent behavior during actual patient care) can help to guide the design simulation research.

Westrick S.C., and Mount, J.K. (2009). “Impact of perceived innovation characteristics on adoption of pharmacy-based in-house immunization services.” (AHRQ grant HS14512). *International Journal of Pharmacy Practice* 17, pp. 39-46.

U.S. pharmacists and pharmacies have ample opportunities to expand traditional pharmacist responsibilities of dispensing pharmaceuticals to engage in preventing diseases. Immunization services are one example of such an opportunity. The researchers examined the impact of three specific characteristics (perceived

benefit, perceived compatibility, and perceived complexity) of in-house immunization services on community pharmacies’ adoption decisions. The study found that perceived benefit, perceived compatibility, and perceived complexity each predicted adoptions of in-house immunization services individually. However, when all three characteristics were included in logistic regression analysis, perceived benefit was the only significant predictor of in-house immunization service adoption. Pharmacies in Washington State were included in the survey with between 204 and 506 of the 1,143 pharmacies completing survey forms during the study’s three stages.

Wu, A.W., Huang, I.-C., Stokes, S., and Pronovost, P. J. (2009). “Disclosing medical errors to patients: It’s not what you say, it’s what they hear.” (AHRQ grant HS11902). *Journal of General Internal Medicine* 24(9), pp. 1012-1017.

Physicians agree that disclosing errors to patients is the right thing to do, but they often shy away from doing so for fear of being sued. Sincerely apologizing to a patient after an error occurs does not reduce the likelihood of being sued, a new study finds. Researchers surveyed 200 volunteers who watched three videotaped scenarios during which physicians told patients about mistakes they made with their care. Volunteers indicated having more trust and a willingness to have as their own doctor those physicians who offered apologies and accepted responsibility for their mistakes. When doctors were vague

in taking responsibility or issuing apologies or when they offered neither apology nor acceptance of responsibility, patients’ and family members’ regard for the physician fell. Further, how volunteers perceived the physician turned out to be more important than what the doctor actually said.

Yan, M., Alejandro, G.D.V., Hui, W., and Tu, X.M. (2010). “A U-statistics-based approach for modeling Cronbach coefficient alpha within a longitudinal data setting.” (AHRQ grant HS16075). *Statistics in Medicine* 29, pp. 659-670.

Cronbach coefficient alpha (CCA) is a classic measure of item internal consistency of an instrument and is used in a wide range of behavioral, biomedical, psychosocial, and health-care-related research. Methods are available for making inference about one CCA or multiple CCAs from correlated outcomes. However, none of the existing approaches effectively address missing data. As longitudinal study designs become increasingly popular and complex in modern-day clinical studies, missing data have become a serious issue, and the lack of methods to systematically address this problem has hampered the progress of research in the aforementioned fields. The authors develop a novel approach to tackle the complexities involved in addressing missing data (at the instrument level due to subject dropout) within a longitudinal data setting. Their approach is illustrated with both clinical and simulated data. ■

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