



Research Activities



U.S. Department of Health and Human Services • No. 294, February 2005

Agency for Healthcare Research and Quality

February 2005

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Task Force recommends screening for abdominal aortic aneurysm for male smokers and former smokers ages 65 to 75

Men between the ages of 65 and 75 who are or have been smokers should have a one-time ultrasound to screen for abdominal aortic aneurysm, according to a new recommendation from the U.S. Preventive Services Task Force. Nearly 70 percent of men in this age group have smoked and would benefit from routine screening to check for aneurysms. The recommendation is published in the February 1 issue of the *Annals of Internal Medicine*.

This is the first time the Task Force has recommended screening for abdominal aortic aneurysms. When the Task Force last reviewed the topic in 1996, the group found insufficient evidence to recommend screening for such aneurysms. New evidence shows that screening and surgery to repair large abdominal aortic aneurysms are effective at reducing the number of aneurysm-related deaths in men. Estimates indicate that between

59 percent and 83 percent of patients with ruptured abdominal aortic aneurysms die before they reach the hospital and have surgery.

Men ages 65 and older who currently are or have been regular smokers are at the highest risk for abdominal aortic aneurysm. Although few studies have been conducted in women, the published research indicates that women are at low risk for aneurysms. Death from an aneurysm is a rare event in women, and most of these deaths occur in women older than 80. The Task Force found no evidence of benefit from routine screening for abdominal aortic aneurysm in all women and concluded that potential harms of screening, from mortality and complications of surgery for aneurysms, outweighed potential benefits.

Because abdominal aortic aneurysm is significantly less likely to occur in people who have never smoked, the Task

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Abdominal aortic aneurysm

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Force also found that screening those who have never smoked for abdominal aortic aneurysm would have little net benefit. Therefore, the Task Force made no recommendation either for or against routine screening for abdominal aortic aneurysm in men between the ages of 65 and 75 who have never smoked.

Abdominal aortic aneurysm is an abnormal ballooning of the aorta—the major artery from the heart—that occurs in the abdomen. Each year, such aneurysms cause approximately 9,000 deaths in the United States. This number may be an underestimate since the majority of people with ruptured aneurysms die before they reach a hospital, and their deaths may be attributed to other causes.

The Task Force found evidence that surgery to repair the aorta in

people with an aortic diameter of at least 5.5 centimeters is effective to reduce the number of deaths caused by abdominal aortic aneurysm. Elective open surgery has an in-hospital mortality rate of 4.2 percent. Endovascular repair (EVAR) of abdominal aortic aneurysms has been shown to have short-term benefits comparable with open surgical repair, but the long-term effectiveness and harms of EVAR are not known. EVAR is a less-invasive procedure in which the surgeon repairs the aneurysm through a small incision in the patient's groin. The Agency for Healthcare Research and Quality (AHRQ) is sponsoring an evidence review to compare EVAR with open surgical repair of abdominal aortic aneurysms. The review should be completed and published in 2006.

The Task Force, which is supported by AHRQ, is the leading independent panel of private-sector experts in prevention and primary care. Task Force members conduct rigorous, impartial assessments of the scientific evidence for a broad range of preventive services. For this recommendation, the Task Force based its conclusions on a

report from a research team led by Craig Fleming, M.D., at AHRQ's Oregon Evidence-based Practice Center in Portland, OR.

Details are in "Screening for abdominal aortic aneurysm: Recommendation statement," by the U.S. Preventive Services Task Force, in the February 1, 2005 *Annals of Internal Medicine*, 142(3), pp. 198-202. See also "Screening for abdominal aortic aneurysm: A best-evidence systematic review for the U.S. Preventive Services Task Force," by Craig Fleming, M.D., Evelyn P. Whitlock, M.D., M.P.H., Tracy L. Bell, M.S., and Frank A. Lederle, M.D., in the same journal, pp. 203-211.

Editor's note: Task Force recommendations and materials for clinicians are available on the AHRQ Web site. Go to www.ahrq.gov and select "Preventive Services." Previous Task Force recommendations, summaries of the evidence, easy-to-read fact sheets explaining the recommendations, and related materials are available from the AHRQ Publications Clearinghouse. See the back cover of *Research Activities* for ordering information. Clinical information is also available from AHRQ's National Guideline Clearinghouse™ at www.guideline.gov. ■

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Adding a breakfast portion to home-delivered meals can improve the lives of frail, homebound older adults

Traditionally, home-delivered meal programs provide a hot, nutrient-dense lunch 5 days per week for frail, homebound older adults. Adding a breakfast portion to the home-delivered meal program could further improve the lives of these vulnerable individuals, according to a study supported in part by the Agency for Healthcare Research and Quality (HS10787). Elizabeth A. Gollub, Ph.D., M.P.H., R.D., formerly with Florida International University and currently an independent contractor, and Dian O. Weddle, Ph.D., R.D., F.A.D.A., of Florida International University, compared two groups of individuals who were recruited from five elderly nutrition programs involved in the Morning Meals on Wheels breakfast service demonstration project.

The breakfast group (167 men and women) received a home-delivered breakfast and lunch 5 days a week. The comparison group (214 participants) received a home-delivered lunch 5 days per week. The investigators obtained participants' 24-hour food recall, demographics, malnutrition risk, functional status, and perceptions of quality of life (health, loneliness, food enjoyment, food security, and depression). The geographically and racially/ethnically diverse participants were aged 60 to 100 years, functionally limited, and at

high nutritional risk. Most individuals were low income, lived alone, and had difficulty grocery shopping and preparing food.

The breakfast group had greater energy/nutrient intakes; less worry about whether they would be able to get food, run out of food, or be able to eat a good meal; and fewer depressive symptoms than the comparison group. Members of the breakfast group consumed about 300 kcal, 14 g protein, 36 g carbohydrate, 12 g fat, and 4 g fiber more than the comparison group, all significant differences. They also consumed significantly greater amounts of potassium, folate, calcium, iron, magnesium, and zinc and tended to consume more of vitamins A, B-6, B-12, and D. In addition, those in the breakfast group were significantly less bothered than those in the comparison group by dietary restrictions, money problems, or problems with cooking, and they tended to maintain their sense of taste. They also were happier, more hopeful, and less bored.

For more details, see "Improvements in nutritional intake and quality of life among frail homebound older adults receiving home-delivered breakfast and lunch," by Drs. Gollub, and Weddle, in the August 2004 *Journal of the American Dietetic Association* 104, pp. 1227-1235. ■

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Following up on abnormal test results is challenging for busy doctors who view hundreds of results a week

Failure to follow up on an abnormal test result not only jeopardizes a patient's health, it also may lead to malpractice claims. This presents a serious and challenging problem for busy doctors, some of whom review as many as 800 pieces of chemistry or hematology data, 40 radiology reports, and 12 pathology reports a week. For example, in a recent survey, 83 percent of doctors said that they had reviewed at least one test result in the preceding 2 months that they wished they had known about earlier. Nearly one in five primary care doctors said that this type of delay had happened five or more times during the previous 2 months.

Despite spending an average of 74 minutes per day reviewing test results, informing patients about results, and developing followup plans (and in many cases designating a staff member to screen test results for abnormalities), only 41 percent of doctors were satisfied with how they managed test results. Only 52 percent of physicians surveyed kept a record of tests ordered, and just 32 percent reported having a system to detect whether a patient had missed a test. For instance, only 39 percent had a mechanism to ensure that a patient with a marginally abnormal mammogram received a followup mammogram within 6 months.

Most physicians said they would welcome tools to help them generate test result letters to patients, prioritize their workflow, and track test orders to completion, according to researchers from Brigham and Women's Hospital, Nashville VA Medical Center, and Massachusetts General Hospital.

In the study, which was supported in part by the Agency for Healthcare Research and Quality (HS11046), the researchers surveyed 168 physicians working in 15 internal medicine practices affiliated with two large urban teaching hospitals about their test result review systems, time spent and satisfaction with managing test results, delays in reviewing results, and desired features in a new test result management system. Brigham and Women's Hospital and Massachusetts General Hospital now use an electronic system that collects patients' test results in one place, similar to an e-mail in-box. The system highlights abnormal results, so that the doctor can review them first.

For more information, see "I wish I had seen this test result earlier!" by Eric G. Poon, M.D., M.P.H., Tejal K. Gandhi, M.D., M.P.H., Thomas D. Sequist, M.D., and others, in the November 8, 2004 *Archives of Internal Medicine* 164, pp. 2223-2228. ■

Studies offer guidance to help physical therapists identify and refer patients at risk of deep vein thrombosis

Physical therapists often see patients who have just suffered a major trauma or had major orthopedic surgery such as knee or hip replacement. These patients are at high risk of developing deep vein thrombosis (DVT, blood clot in the deep vein of the leg) after hospital discharge. Because DVT, particularly proximal DVT (PDVT, affecting the popliteal and thigh veins) is a potentially life-threatening disorder (the clot can travel to the lung and cause pulmonary embolism),

physical therapists should be highly skilled at identifying outpatients who are at risk for the condition.

A recent study suggests how physical therapists can identify high-risk patients who should be immediately referred to a physician. A second study shows that the majority of physical therapists underestimate the probability of DVT in their patients. Both studies, which are summarized here, were supported by the Agency for Healthcare Research and Quality (HS13059)

and led by Daniel L. Riddle, P.T., Ph.D., F.A.P.T.A., of Virginia Commonwealth University.

Riddle, D.L., and Wells, P.S. (2004, August). "Diagnosis of lower-extremity deep vein thrombosis in outpatients." *Physical Therapy* 84(8), pp. 729-735.

Because most physical therapists cannot prescribe formal diagnostic tests for PDVT, such as compression ultrasound, they need

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Deep vein thrombosis

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a method for determining when a patient with symptoms suggestive of PDVT (lower-extremity pain and swelling or calf tenderness) should be referred to a physician for a diagnostic workup. Researchers recently compiled a clinical decision rule (CDR) to diagnose PDVT from risk factors, signs, and symptoms. They assigned a numerical score to nine factors based on clinical examination or medical history to develop the CDR. These factors ranged from active cancer, paralysis, recently bedridden, lower-extremity swelling, and calf swelling over 3 cm (all given a score of one) to alternative diagnosis as likely or greater than that of PDVT (given a score of -2).

Patients who had a score of 0 or less had a probability of PDVT of 3 percent, those with a score of 1 or 2 had a 17 percent probability, and those with a score of 3 or higher had a 75 percent probability of PDVT. By using the CDR, physical therapists can judge the urgency of referring the patient to a physician. For example, if a patient is found to have a high probability of PDVT (a score of 3 or higher on the CDR), the physical therapist should call the referring physician immediately

and encourage a diagnostic workup that day to reduce the risk of pulmonary embolism.

Riddle, D.L., Hillner, B.E., Wells, P.S., and others. (2004, August). "Diagnosis of lower-extremity deep vein thrombosis in outpatients with musculoskeletal disorders: A national survey study of physical therapists." *Physical Therapy* 84 (8), pp. 717-728.

In this national survey of physical therapists, the majority of those surveyed underestimated the probability of PDVT in two vignettes (87 and 64 percent, respectively) of outpatients with musculoskeletal disorders who had a high probability of PDVT. The survey results also suggest that about 25 percent of physical therapists would likely not contact the referring physician when seeing a patient with a high probability of PDVT. The survey, which presented six vignettes, was sent to a nationally representative random sample of 1,500 physical therapists (969 completed the survey). The clinical decision rule served as the gold standard for PDVT probability.

In four of six vignettes, a majority of therapists either overestimated or underestimated PDVT probability. Perhaps more

troubling was the proportion of therapists (15 to 90 percent depending on the vignette) who reported that they would not have contacted the referring physician about the patient's condition. For the two high-probability cases, 32 percent and 27 percent of the physical therapists reported that they would not have contacted the referring physician. For the two moderate-probability cases, 15 percent and 30 percent of the physical therapists would not have contacted the referring physician.

Physical therapists generally did not agree on which patients were at risk. Overall, 24 percent of them agreed on the two low-probability cases, 16 percent on the two moderate-probability cases, and only 6 percent on the two high-probability cases. Therapist experience, certification status, place of practice, and region of the country did not explain the findings. The researchers conclude that the care of physical therapy outpatients could be improved by use of the clinical decision rule employed in this study to diagnose risk of PDVT in outpatients. ■

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Computed tomography may be more accurate than ultrasound for diagnosing appendicitis in adults and adolescents

About 250,000 appendectomies are performed for acute appendicitis in the United States each year. Clinicians commonly use computed tomography (CT) or ultrasonography to diagnose acute appendicitis. However, CT is probably more accurate than ultrasound for diagnosing appendicitis in adults and adolescents, concludes a review of studies on the topic, which was supported in part by the Agency for Healthcare Research and Quality (K08 HS11291). C. Craig Blackmore, M.D., M.P.H., of the University of Washington, Seattle, and his colleagues conducted a meta-analysis of data from 22 prospective studies that compared results of CT, ultrasound, or both with surgical findings or clinical followup in patients 14 years of age or older with suspected appendicitis.

CT findings increased the certainty of diagnosis more than ultrasound. CT had a positive likelihood ratio of 13.3, indicating a large and often conclusive increase in the likelihood that patients with a positive test had appendicitis, versus ultrasound's positive likelihood ratio of 5.8, indicating a moderate increase in the likelihood that patients with a positive test had appendicitis. CT had an overall sensitivity of 0.94,

meaning that 94 percent of patients with appendicitis had a positive test result, and a specificity of 0.95, meaning that 95 percent of patients who did not have appendicitis had a negative test result. Ultrasonography had an overall sensitivity of 0.86 and a specificity of 0.81.

The authors caution, however, that all studies had significant limitations that probably inflated estimates of diagnostic accuracy, such as inadequate blinding of the reference standard and pathologic verification of disease only in patients with positive test results. They call for prospective studies that apply gold standard diagnostic testing to all study participants to more reliably estimate the true diagnostic accuracy of these tests.

For more information, see "Systematic review: Computed tomography and ultrasonography to detect acute appendicitis in adults and adolescents," by Teruhiko Terasawa, M.D., Dr. Blackmore, Stephen Bent, M.D., and R. Jeffrey Kohlwes, M.D., M.P.H., in the October 2004 *Annals of Internal Medicine* 141, pp. 537-546. ■

Physicians often change their clinical decisions about management of cancer patients based on results of PET scans

Studies on positron emission tomography (PET) using 18-F fluorodeoxyglucose (FDG) suggest that PET has an improved sensitivity and specificity for staging cancer patients compared with other imaging methods, such as CT scans. Research also suggests that PET may be useful in predicting response to treatment and detecting residual tumors. However, few studies demonstrated whether using PET leads to meaningful changes in treatment decisions or patient outcomes. A study supported in part by the Agency for Healthcare Research and Quality (HS13244) investigated the impact of PET on physician decisionmaking and found that physicians do often

change their clinical decisions about management of cancer patients based on the results of PET scans.

Bruce E. Hillner, M.D., F.A.C.P., of Virginia Commonwealth University, and his colleagues studied the impact of PET on the clinical decisions of 71 physicians who were managing a group of patients undergoing PET at the university's medical center. The physicians completed a questionnaire before and after PET to obtain information regarding each physician's preceding actions, intended management of the patient, and probability estimates (for example, of metastatic disease).

Of the 248 patients, 40 percent had new or suspected cancer, and 60 percent were undergoing restaging (determination of whether the cancer is local, regional, or has metastasized to distant parts of the body) or had a suspected recurrence. Lung, lymphoma, and head/neck cancers accounted for two-thirds of cases. Following PET results, physicians changed their intended management in 61 percent of patients, and they retained the same management plan for 39 percent of patients.

In 32 percent of cases, physicians changed to a treatment from a nontreatment strategy. They changed the therapeutic goal

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Use of PET scans

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(curative or palliative) and mode of treatment (for example, surgical resection, radiation, or chemotherapy) in 7 percent and 8 percent of cases, respectively. In about 25 percent of cases, patients who would have had additional testing or biopsy switched to treatment. Conversely, about 10

percent of patients went from additional testing or biopsy to watchful waiting.

The mean estimated probability of metastasis increased from 45 percent pre-PET to 58 percent post-PET. After PET, the physician summary impression was that 47 percent had more advanced disease, 41 percent had no change, and just 12 percent had less extensive

disease than they thought before PET.

See “Clinical decisions associated with positron emission tomography in a prospective cohort of patients with suspected or known cancer at one United States center,” by Dr. Hillner, Renuka Tunuguntla, M.B., and Melvin Fratkin, M.D., in the October 15, 2004 *Journal of Clinical Oncology* 22(20), pp. 4147-4156. ■

Following protocols for managing hypertension and metabolic syndrome can reduce cardiovascular risk factors

Obesity is driving the growing prevalence of risk and disease from hypertension and metabolic syndrome. Using a treatment protocol based on research evidence to manage hypertension and metabolic syndrome (which includes abdominal obesity, hypertension, diabetes mellitus, and high levels of cholesterol and triglycerides) can reduce blood pressure, low-density lipoprotein cholesterol (LDL-C), and blood sugar to target levels among a majority of primary care patients. These are the findings of a recent study by researchers at the Low Country Medical Group, Beaufort, SC, and the Medical University of South Carolina in Charleston. Their work was supported in part by the Agency for Healthcare Research and Quality (HS10871).

The researchers obtained longitudinal data on three cardiovascular risk factors: blood pressure, LDL-C (so-called “bad” cholesterol because it builds up and clogs arteries), and hemoglobin A1C (HbA1c, an indicator of blood-sugar levels), as well as coexisting cardiovascular and renal disease and treatment medications on study participants. Data were gathered on all 817 hypertensive patients (55 percent of whom were considered high-risk) seen from January 1, 2000 to June 30, 2003, in a rural primary care practice. Most patients were managed in quarterly office visits of 15 to 25 minutes each.

The physician changed therapy at every visit if any risk factor was not at goal, beginning with the medication recommended at the top of the list for each risk factor. Patients received educational materials on diet, exercise, medications, and insulin titration. This approach achieved better rates of cardiovascular risk factor control than are generally reported in primary care practices. Blood pressure was less than 140/90 mm Hg in 77 percent of all patients. Among the high-risk patients, mean blood pressure was 126/71 on 2.8 antihypertensive medications. Among those with hypertension and high cholesterol, LDL-C was controlled to less than 130 mg/dL in 84 percent of patients overall and to less than 100 mg/dL in 70 percent of patients in the high-risk group. Among those patients with both diabetes and hypertension, the mean HbA1c was 6.8 percent, and 64 percent were less than the target 7 percent.

For more details, see “A systematic approach to managing hypertension and the metabolic syndrome in primary care,” by William H. Bestermann, M.D., Daniel T. Lackland, Dr.P.H., Jessica E. Riehle, and Brent M. Egan, M.D., in the October 2004 *Southern Medical Journal* 97(10), pp. 933-938. ■

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Immediate postoperative ECG helps identify non-cardiac surgery patients at risk for cardiac complications

Current guidelines recommend a postoperative electrocardiogram (ECG) to monitor patients who have undergone major noncardiac surgery and are at relatively high risk of developing postoperative cardiac complications. These usually are patients who have known or suspected coronary artery disease. However, an immediate postoperative ECG is useful in identifying even low-risk patients who warrant closer observation, according to findings from a recent study that was supported in part by the Agency for Healthcare Research and Quality (HS06573). The study was led by Stephane Rinfret, M.D., M.Sc., of the University of Montreal, Quebec, and included researchers from San Francisco and Boston in the United States, and from the Hospital of Porto Alegre in Brazil.

The researchers recommend that clinicians perform a routine early postoperative ECG after major noncardiac surgery in adults 50 years or older, regardless of the patients' preoperative cardiac risk. They prospectively studied 3,570 patients who underwent major noncardiac procedures at a single hospital and had ECGs performed in the recovery room.

Regardless of patients' preoperative cardiac risk (based on the Revised Cardiac Risk Index), rates of major cardiac complications (heart attack, pulmonary edema, ventricular fibrillation or primary cardiac arrest, and complete heart block) were higher in patients who had new postoperative ECG abnormalities consistent with blocked blood flow to the heart (ischemia) compared with those who

did not have ischemia (6.7 vs. 1.9 percent).

After adjusting for pre- and intraoperative clinical data, the presence of ischemia on the immediate postoperative ECG doubled the risk of major cardiac complications. When patients were stratified by a preoperative Revised Cardiac Risk Index, ischemia on the immediate postoperative ECG identified patients with higher risk of major cardiac complications in both low- and high-risk subsets.

For more information, see "Value of immediate postoperative electrocardiogram to update risk stratification after major noncardiac surgery," by Dr. Rinfret, Lee Goldman, M.D., M.P.H., Carisi A. Polanczyk, M.D., Sc.D., and others, in the October 15, 2004 *American Journal of Cardiology* 94, pp. 1017-1022. ■

Diagnosis of celiac disease can be an exercise in clinical problem-solving

In celiac disease, which affects nearly 1 percent of the population, the lining of the small intestine is damaged due to ingestion of gluten and similar proteins found in wheat. In the United States, iron-deficiency anemia is the most common presentation of celiac disease. However, symptoms can range from joint pain, fatigue, and diarrhea to depression and stomach pain and bloating.

Doctor's lack of awareness of these diverse clinical manifestations of celiac disease may lead them to miss the diagnosis, suggests Sanjay Saint, M.D., M.P.H., of the University of Michigan Medical School. In a recent description of a clinical case, Dr. Saint and his colleagues illustrate how celiac disease can lead to diagnostic confusion, especially if the patient doesn't have chronic diarrhea and fat malabsorption.

A 42-year-old white man recently released from prison had a history of 8 months of pain in his low back, hips, ankles, and feet. Therapy with nonsteroidal antiinflammatory medication provided no significant improvement. He otherwise felt well, but he had lost weight without a change in diet. He had no fever, night

sweats, diarrhea, anorexia, vomiting, abdominal distension, or difficulty swallowing. In this case, the patient did not report two of the symptoms—abdominal pain and diarrhea—widely believed to be essential to the diagnosis of celiac disease.

Nevertheless, the man's history would have suggested celiac disease to the experienced clinician. For instance, only about one-third of patients with celiac disease present with either abdominal pain or diarrhea, yet this patient had iron-deficiency anemia, which is typical of the disease. Add in weight loss, bone pain, and a history of hypothyroidism, and one could argue that celiac disease becomes the most likely possibility. The high prevalence of the disease (nearly 1 in 100 in the general population) provides additional support for this argument. This work was supported in part by the Agency for Healthcare Research and Quality (HS11540).

See "Special cure," by Robert J. Hoffman, M.D., Gurpreet Dhaliwal, M.D., Daniel J. Gilden, M.D., and Dr. Saint, in the November 4, 2004 *New England Journal of Medicine* 351(19), pp. 1997-2002. ■

People with diabetes who have chronic hyperglycemia are at increased risk for cardiovascular disease

A new study of adult diabetes patients links chronic hyperglycemia (high blood sugar levels) with an increased risk for cardiovascular disease, the most common cause of death among people with diabetes. Researchers at the Johns Hopkins University Schools of Medicine and Public Health performed a meta-analysis of observational studies. They pooled adjusted relative risk estimates for the relationship between glycosylated hemoglobin (which reflects long-term glycemic control) and cardiovascular disease events (coronary heart disease and stroke). Three studies involved 1,688 people with type 1 (insulin-dependent) diabetes, and 10 studies involved 7,435 people with type 2 (non-insulin-dependent) diabetes.

The pooled relative risk for coronary heart disease and stroke

among people with type 2 diabetes was a moderate 18 percent higher for each 1 percentage point increase in glycosylated hemoglobin, and for people with type 1 diabetes, it was 15 percent higher for coronary heart disease for each 1 percentage point increase in glycosylated hemoglobin. In some studies, this association seemed to be independent of other known risk factors for cardiovascular disease. No studies estimated the risk of stroke by level of glycosylated hemoglobin for type 1 diabetes.

The few studies suggested the possibility of an even stronger association between glycosylated hemoglobin levels and peripheral arterial disease, with increased relative risks of 32 percent for people with type 1 diabetes and 28 percent for people with type 2

diabetes for each 1 percentage point increase in glycosylated hemoglobin. Although this analysis suggests that improvements in glycosylated hemoglobin level might translate into reductions in cardiovascular events, confirmation from randomized trials is necessary, conclude the researchers. Their work was supported in part by the Agency for Healthcare Research and Quality (contract 290-97-0006).

See "Meta-analysis: Glycosylated hemoglobin and cardiovascular disease in diabetes mellitus," by Elizabeth Selvin, M.P.H., Spyridon Marinopoulos, M.D., M.B.A., Gail Berkenblit, M.D., Ph.D., and others, in the September 2004 *Annals of Internal Medicine* 141, pp. 421-431. ■

Women's Health

Women who are incontinent are more likely to complain about sexual problems than those with pelvic organ prolapse

Pelvic floor disorders, including urinary incontinence (UI) and pelvic organ prolapse, affect nearly one-third of adult women. Women who have UI are twice as likely as other women to have certain sexual problems, but pelvic prolapse is not associated with these problems, according to a recent study by researchers at Johns Hopkins University. With support from the Agency for Healthcare Research and Quality (HS06865), they investigated a possible association between pelvic floor disorders and sexual complaints using data from the Maryland Women's Health Study of women scheduled to undergo hysterectomy for benign gynecologic disorders.

Victoria L. Handa, M.D., and her colleagues analyzed data collected in 1992-1993 from in-home interviews of 1,299 women scheduled to undergo

hysterectomy in the near future. Most of the women were between the ages of 30 and 50. The researchers studied whether UI or pelvic organ prolapse was associated with four sexual complaints: decreased libido, vaginal dryness, difficult or painful sexual intercourse (dyspareunia), and inability to achieve orgasm (anorgasmia). Among these women who were already planning to undergo hysterectomy, 38 percent had evidence of pelvic floor disorders. Sexual complaints were significantly more common among women with pelvic floor disorders than those without such disorders (53 vs. 40 percent). UI was associated with twice the likelihood of low libido, vaginal dryness, and dyspareunia, independent of a woman's age, education, and race.

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Pelvic floor disorders

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In contrast, pelvic organ prolapse was not associated with any sexual complaint, even though worse sexual impairment has been associated with worsening prolapse in some prior studies. The women in this study may have had relatively mild prolapse that did not affect sexual function. Questions remain about the association between UI and sexual dysfunction. If UI causes sexual dysfunction (for example, through altered self-esteem or

embarrassment), then sexual function should be restored by treatments that cure incontinence. On the other hand, some studies have found that successful UI treatment may not improve sexual function.

For more information, see “Sexual function among women with urinary incontinence and pelvic organ prolapse,” by Dr. Handa, Lynn Harvey, B.S., Geoffrey W. Cundiff, M.D., and others, in the September 2004 *American Journal of Obstetrics and Gynecology* 191, pp. 751-756. ■

Drug regimens for treating pelvic inflammatory disease should include metronidazole

Pelvic inflammatory disease is an infection and inflammation of a woman’s fallopian tubes (salpingitis) and uterine lining (endometritis), which can lead to pelvic pain, infertility, and tubal pregnancies. Even though only one-third to one-half of cases of PID are due to infection with *Chlamydia trachomatis* or *Neisseria gonorrhoeae*, most women with PID are treated with antibiotics directed toward these bacteria. However, in a recent study of women with clinically suspected PID, researchers frequently isolated gram-negative and anaerobic gram-positive bacteria, which were strongly associated with endometritis. Due to this finding, the researchers recommend that all women with PID be treated with medication regimens that include

the broad-spectrum antibiotic, metronidazole.

This approach could potentially reduce the frequency of infertility, chronic pelvic pain, recurrent PID, and ectopic pregnancy after treatment, according to the researchers. Current guidelines from the Centers for Disease Control and Prevention recommend treatment of PID with ofloxacin, levofloxacin, ceftriaxone plus doxycycline, or cefoxitin plus doxycycline, all with or without the addition of metronidazole for full coverage against anaerobes and bacterial vaginosis.

The researchers investigated the associations of endometritis with *N. gonorrhoeae*, *C. trachomatis*, bacterial vaginosis, anaerobic bacteria, facultative bacteria, and lactobacilli among 278 women

with complete endometrial histology and culture. Women with acute endometritis were less likely to have lactobacilli but much more likely to be infected with *C. trachomatis*, *N. gonorrhoeae*, diphtheroids, black-pigmented gram-negative rods, and anaerobic gram-positive cocci and to have bacterial vaginosis. This study is part of the PID Evaluation and Clinical Health (PEACH) study and was supported in part by the Agency for Healthcare Research and Quality (HS08358).

Details are in “Bacterial vaginosis and anaerobic bacteria are associated with endometritis,” by Catherine L. Haggerty, Ph.D., Sharon L. Hillier, Ph.D., Debra C. Bass, M.S., and others, in the October 1, 2004 *Clinical Infectious Diseases* 39, pp. 990-995. ■

Minority Health/Disparities

Study confirms underuse of lipid-lowering agents by Medicaid-insured minority patients with cardiovascular disease

People who are diagnosed with cardiovascular disease (CVD, including coronary heart disease, stroke, and peripheral vascular disease) can reduce their risk of complications and death in

several ways. These include proper diet, regular exercise, weight control, and in some instances, use of beta-blockers and lipid-lowering agents (LLA).

Minority patients younger than age 65 who are insured by Medicaid and have full medication prescription benefits are less likely than their white counterparts to

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Underuse of lipid-lowering agents

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benefit from use of LLA both before or after a CVD diagnosis, according to a study supported in part by the Agency for Healthcare Research and Quality (T32 HS00059). This disparity results in part from providers' failure to initiate LLA therapy and in part from patients' failure to continue it.

Strategies that target LLA underuse by minorities throughout the process of CVD care are needed, according to David Litaker, M.D., Ph.D., and Siran M. Koroukian, Ph.D., of Case Western Reserve University. They analyzed

Ohio Medicaid claims and LLA pharmacy claims for Medicaid-insured individuals younger than 65 who had a new medical claim for 1 of 15 CVD-related diagnoses or procedures from 1993 to 1998. They assessed the independent effect of minority status on new and ongoing LLA use, while controlling for clinical and demographic characteristics.

Overall, 26.4 percent of individuals (3,668 of 4,668) submitted LLA pharmacy claims, and 78.6 percent of previous or new users of LLA obtained one or more refills. Compared with whites, minorities were 36 percent less likely to have previously used

an LLA, 38 percent less likely to receive a new LLA prescription, and 26 percent less likely to continue use, as evidenced by subsequent refill claims. Racial disparities in cardiovascular outcomes are unlikely to be reduced in the future without considerable and concerted efforts that target both the patient and health care provider, conclude the researchers.

See "Racial differences in lipid-lowering agent use in Medicaid patients with cardiovascular disease," by Drs. Litaker and Koroukian, in the October 2004 *Medical Care* 42(10), pp. 1009-1018. ■

Differences in coexisting illness do not explain racial/ethnic disparities in inpatient deaths from aspiration pneumonia

More than 20 percent of patients hospitalized for aspiration pneumonia die in the hospital. This type of pneumonia results from inflammation and infection of the lungs following inhalation of food, drink, or vomit (for example, when a person is unconscious, has had too much to drink, or has a seizure). Minority patients are more likely than white patients to die in the hospital from aspiration pneumonia, but this disparity is not because of differences in coexisting (comorbid) diseases, which can influence the risk of hospital death from some other causes, according to researchers led by George J. Stukenborg, Ph.D., of the University of Virginia.

The researchers used patient records to study 41,581 patients admitted to California hospitals for aspiration pneumonia from 1996 through 1998. They examined the independent effects of race and ethnicity on in-hospital death, while controlling for comorbid diseases.

Overall, 22 percent of the patients died during their hospitalization; half of patients in the study group were 80 years of age or older. After adjusting for baseline characteristics, including comorbid disease,

blacks suffered similar in-hospital deaths as whites. Asians had a significant 17 percent lower odds of dying in the hospital than whites, and Hispanics had a significant 10 percent lower odds of dying in the hospital than non-Hispanics.

Seven of the ten most commonly occurring coexisting diseases were more prevalent among blacks and Asians than among whites, and among Hispanics compared with non-Hispanics, but these differences did not significantly affect mortality risk. Optimal adjustment for comorbid disease will better illuminate the reasons for racial and ethnic disparities in inpatient mortality, suggest the researchers. Their study was supported by the Agency for Healthcare Research and Quality (HS10134 and HS11419).

See "Comorbid disease and the effect of race and ethnicity on in-hospital mortality from aspiration pneumonia," by M. Norman Oliver, M.D., Dr. Stukenborg, Douglas P. Wagner, Ph.D., and others in the November 2004 *Journal of the National Medical Association* 96(11), pp. 1462-1469. ■

Study finds racial disparities in receipt of state-of-the-art care for HIV disease

A recent study conducted by researchers at the University of California, Los Angeles, found that in 1996, black patients with HIV who were treated by white doctors were less likely than white patients treated by the same doctors to receive life-saving HIV medication. In the study, which was funded in part by the Agency for Healthcare Research and Quality (HS08578), the researchers analyzed data on a national probability sample of 1,241 adults receiving HIV care with linked data from 287 providers. They examined the association between patient-provider racial concordance and time from first FDA approval of the first protease inhibitor to the time when individual patients first received a protease inhibitor.

Results of the analysis show that black patients treated by white doctors received their HIV medications nearly 4 months later than black patients who were treated by black doctors. There was no correlation between the delayed treatment and the patients' income levels, years of education, or insurance coverage. Similarly, doctors' knowledge, specialty, extent of training, and years of experience did not affect the results. In the end, black patients seen by black doctors received better care than black patients seen by white doctors.

These findings are significant for several reasons, according to the study's lead investigator, William D. King, M.D., J.D. of the UCLA Robert Wood Johnson

Clinical Scholars Program. First, this study advances prior research in the field by demonstrating that patient-provider racial concordance can impact access to medical treatment. It is the first study to demonstrate this effect. Second, the study findings underscore the importance of incorporating patient-provider racial concordance in analyses of patient-provider relationships, particularly analyses involving racial disparities.

Since the time of this study (1996), HIV treatment strategy has moved away from early antiretroviral use and toward a "wait and see" approach to initiating treatment. However, at the time when participants were enrolled in the study, the prevailing opinion among HIV experts was that protease inhibitors were crucial in reducing HIV-related illnesses and deaths and should be started as soon as possible in patients who could tolerate them. Dr. King and his colleagues note that regardless of their clinical implications, these study findings indicate that race concordance influences the delivery of state-of-the-art care.

For more details, see "Does racial concordance between HIV-positive patients and their physicians affect the time to receipt of protease inhibitors?" by Dr. King, Mitchell D. Wong, M.D., Ph.D., Martin F. Shapiro, M.D., Ph.D., and others, in the November 2004 *Journal of General Internal Medicine* 19, pp. 1147-1153. ■

Acute Care/Hospitalization

Out-of-hospital endotracheal intubation found to be associated with adverse outcomes for traumatic brain injury patients

Current guidelines call for treating traumatic brain injury patients with aggressive measures to prevent hypoxia (insufficient oxygen reaching the body's tissues), including the use of endotracheal intubation. Controversial advanced airway management techniques, including use of neuromuscular blockade-assisted endotracheal intubation, make it possible for paramedics to perform out-of-hospital intubation of these patients.

According to a recent study, individuals suffering from traumatic brain injury who are intubated by paramedics out of the hospital are four times as likely to die and nearly twice as likely to be functionally impaired as those who undergo the procedure in a hospital emergency department (ED). The study was supported by the Agency for Healthcare Research and Quality (HS13628) and led by Henry E. Wang, M.D., M.P.H., of

the University of Pittsburgh School of Medicine.

Dr. Wang and his colleagues used a registry of patients treated at Pennsylvania trauma centers from 2000 to 2002 to examine the outcomes of 4,098 patients with a head/neck Abbreviated Injury Scale score of 3 or greater, who underwent out-of-hospital or ED endotracheal intubation. They examined the following outcomes:

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Endotracheal intubation

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death, neurologic outcome (good versus poor, inferred from discharge to home versus a long-term care facility), and functional outcome.

In examining the impact of intubation site on outcomes, the researchers adjusted for other factors that might affect outcome. These

included mode of transport to the hospital (ground versus helicopter), use of out-of-hospital neuromuscular blocking agents, and severity of injury. Overall 44 percent of patients were intubated out of the hospital, and 56 percent were intubated in the ED. Odds of death were 4 times higher for patients intubated out of the hospital. These patients also had higher odds of poor neurologic

outcome and/or moderate or severe functional impairment.

Details are in “Out-of-hospital endotracheal intubation and outcome after traumatic brain injury,” by Dr. Wang, Andrew B. Peitzman, M.D., Laura D. Cassidy, Ph.D., and others, in the November 2004 *Annals of Emergency Medicine* 44(5), pp. 439-450. ■

New study sheds light on substantial injuries and deaths due to motorcycle accidents

While only 20 percent of car crashes result in injury or death, that number increases to 80 percent for motorcycle crashes. Unfortunately, the number of motorcyclist fatalities has risen dramatically over the last 7 years. This trend coincides with an increase in the number of States repealing laws making motorcycle helmet use mandatory and a dramatic reduction in helmet use from 71 percent in 2000 to 58 percent in 2002.

The first national study of the prevalence and impact of motorcycle-related injuries leading to hospitalization reveals their substantial medical and financial impact. The study was conducted by Jeffrey H. Coben, M.D., of the Agency for Healthcare Research and Quality and West Virginia University, and Claudia A. Steiner, M.D., M.P.H., and Pamela Owens, Ph.D., of AHRQ’s Center for Delivery, Organization, and Markets.

The researchers calculated that on average, for each day in 2001, there were about 25 new lower extremity fractures, 10 new intracranial injuries, and one new spinal cord injury resulting from motorcycle crashes. They estimated that 30,505 individuals were discharged from the hospital in 2001 due to motorcycle-related injuries. Nearly two-thirds (62 percent) of these individuals were 30 years of age or older, and males

accounted for 89 percent of cases. Over half of the patients were diagnosed with fractures of the lower limb (29 percent), fractures of the upper limb (13 percent), and intracranial injuries (12 percent). Those with intracranial injuries were much more likely to die than those with other principal diagnoses (10.6 vs. 0.8 percent).

Patients stayed in the hospital a mean of 5 days. Median hospital charges were \$15,404, with estimated hospital charges totaling over \$841 million for this group of patients. Most of the patients (56.5 percent) were admitted to large urban teaching hospitals, which accounted for nearly 70 percent of all hospital charges. About one-fourth of cases (26 percent) were self-pay or had public insurance as the expected payer, and 67 percent had private or HMO insurance as the primary expected payer. These findings are based on an analysis of the 2001 Nationwide Inpatient Sample (NIS) of the Healthcare Cost and Utilization Project (HCUP).

See “Motorcycle-related hospitalizations in the United States, 2001,” by Drs. Coben, Steiner, and Owens, in the *American Journal of Preventive Medicine* 27(5), pp. 355-362, 2004. Reprints (AHRQ Publication No. 05-R015) are available from AHRQ.** ■

Evidence-Based Medicine

Organizational research can help clinicians make decisions about staff and IT systems

Two recently published articles by Irene Fraser, Ph.D., director of the Center for Delivery, Organization, and Markets, Agency for Healthcare Research and Quality, focus on

using evidence to improve health care quality and safety. Dr. Fraser notes that in order to improve the quality of care, changes will be necessary in the organization of care and the payment systems that

shape organizational priorities and behavior. By bringing potential users (hospital, health plan, and clinical leaders) into the research

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Organizational research

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process, organizational research can help shape priorities and behavior at the organizational level, explains Dr. Fraser. AHRQ currently has three delivery-based networks that follow this approach: the Primary Care Practice-Based Research Network, the HIV Research Network, and the Integrated Delivery System Research Network.

Organizational research in nursing has already demonstrated that higher nurse staffing levels can improve care quality, improved information technology (IT) can free up nursing time, and use of dedicated AIDS units in hospitals can improve care for that patient group. Similar organizational research is needed to inform other high-priority questions, such as how to ensure good chronic care, how systems can best collaborate in the

event of a bioterrorism attack, how to successfully implement a new IT system to reduce errors, and which kinds of financial and other incentives can improve quality of care.

AHRQ held six meetings between 2001 and 2003 with researchers and stakeholders (hospital, health plan, and provider leaders) to identify ways in which organizational, management, and policy research could be improved to maximize the likelihood that it will be translated into clinical practice. Stakeholders recommended designing studies to answer user questions with a focus on the “why” and “what if” rather than just the “what.” Findings should be presented in leaders’ time and space, defining evidence as they do, and identifying the generalizability of findings.

The incentive system for researchers should be changed to

reward them for activities that maximize impact on decisionmaking. User-researcher collaborations and dialogue should be built. Finally, the way evidence is disseminated should change, with dissemination going through “early adopters,” trade association meetings, consultants, and other avenues. In a second article, Dr. Fraser identifies steps to advance translation research and to achieve broader translation and use of evidence.

For details of both articles, see “Organizational research with impact: Working backwards,” and “Translation research: Where do we go from here?” by Dr. Fraser, in the *Third Quarter 2004 Worldviews on Evidence-Based Nursing* 1(S1), pp. S52-S59, S78-S83. Reprints of both articles (AHRQ Publication Nos. 05-R013 and 05-R014) are available from AHRQ.** ■

Mentors may help accelerate the shift toward evidence-based nursing practice

Less than half (46 percent) of nurses say that their practices are based on clinical research evidence, according to a survey supported in part by the Agency for Healthcare Research and Quality (HS13817). The survey of 160 nurses who were attending evidence-based practice (EBP) conferences or workshops in four Eastern States revealed that the nurses believed in the benefit of EBP, but their knowledge about it was relatively weak. Fortunately, some nurses do have EBP mentors who may play a key role in accelerating the shift toward evidence-based nursing practice, suggests Bernadette Melnyk, R.N., Ph.D., C.P.N.P., F.A.A.N., of the Arizona State University College of Nursing.

Dr. Melnyk and her colleagues used the survey to explore the level of nurses’ knowledge and beliefs about EBP, the extent to which their practices are evidence-based, and the relationship between the two. Although the nurses surveyed strongly believed that practice rooted in evidence improved the clinical care of patients and patient outcomes, their knowledge about EBP was weak. Overall, 42 percent of nurses surveyed reported

barriers to EBP implementation, including insufficient time, lack of access to resources (for example, current literature, Internet), lack of financial support, closed minds (“we have always done it this way”), lack of knowledge, lack of support (for example, from management or physicians), and the need for a mentor.

Fortunately, 44 percent of nurses surveyed reported that there were facilitators (for example, faculty or clinical nurse specialists) who helped them to integrate research evidence into practice for specific initiatives. Forty-nine percent of the nurses indicated that they had mentors (nursing faculty, national nursing leaders or speakers, advanced practice nurses, nursing administrators, and physician colleagues) who facilitated their EBP endeavors.

See “Nurses’ perceived knowledge, beliefs, skills, and needs regarding evidence-based practice: Implications for accelerating the paradigm shift,” by Dr. Melnyk, Ellen Fineout-Overholt, R.N., Ph.D., Nancy F. Feinstein, R.N., C.S., Ph.D., and others, in *Worldviews on Evidence-Based Nursing* 1(3), pp. 185-193, 2004. ■

Adoption of medical innovation, which is driving much of health care costs, is largely outside the control of health plans

After a brief respite, health care spending is again growing much more rapidly than the economy as a whole. This growth in spending is driven primarily by the costs associated with diffusion of new medical technology. A recent study by Michael E. Chernew, Ph.D., of the University of Michigan School of Public Health, and his colleagues suggests that it is unlikely that managed care health plans will significantly constrain this technology-driven growth in costs.

Based on a series of interviews with health plan administrators, medical group administrators, and physicians in two distinct geographic markets, the authors conclude that market forces are not sufficient to motivate health plans to strongly oppose the external forces driving technology diffusion. Thus, managed care, as historically practiced, will not dramatically slow health care cost growth. Their study was supported by the Agency for Healthcare Research and Quality (HS09838).

Respondents of all types agreed that physicians drove use of medical

innovations, with limited interference from managed care organizations. The primary motivation for adoption was the potential for improved patient outcomes. This was particularly salient in cases where existing treatments were not regularly achieving desired outcomes, even if solid evidence supporting the new innovations was not yet available. The coronary artery disease example most commonly cited by plan administrators was the rapid adoption of intracoronary stents, which are mesh tubes that expand like scaffolding inside an artery to keep it open. Anecdotal evidence quickly indicated that rates of restenosis (reclosing or renarrowing of the artery) following coronary angioplasty were reduced with placement of stents. Thus, there was immediate pressure for diffusion of stents and coverage by health plans.

A range of other factors contribute to physician adoption of new technology including competition for patients and professional status. These forces are augmented by manufactures promoting new techniques and in

some cases, consumer demand. Plans try to influence technology adoption via coverage decisions and other managerial initiatives (such as education campaigns). However, the plans generally are hesitant to alienate physicians, consumers, or employers, and they want to avoid the appearance of restricting access to important innovations.

Plan administrators generally seemed satisfied to keep cost growth within range of the overall trends and were unwilling to try to strongly limit access to any particular technology because the risks to the plan were much greater than potential gains associated with limiting access to a technology advocated by the medical community. Physician professional norms and culture appear more important to the diffusion of new technologies than health plan initiatives.

See "Barriers to constraining health care cost growth," by Dr. Chernew, Peter D. Jacobson, J.D., M.P.H., Timothy P. Hofer, M.D., M.Sc., and others, in the November 2004 *Health Affairs* 23(6), pp. 122-128. ■

Study documents cost-effectiveness of targeted chlamydia screening

Annual chlamydia screening of all sexually active women 15 to 29 years of age and semiannual screening of those with a history of chlamydial infection is the most effective and cost-effective screening strategy, concludes a study supported by the Agency for Healthcare Research and Quality (T32 HS00020). Genital infection with *Chlamydia trachomatis*, the most widespread bacterial sexually transmitted disease in the United States, can lead to pelvic inflammatory disease (PID), chronic pelvic pain, ectopic pregnancy, and infertility due to

tubal scarring. Since most chlamydial infections are asymptomatic and are 100 percent curable if caught early, screening and early treatment are the most promising approaches to preventing infection-related problems.

Delphine Hu, M.D., M.P.H., and colleagues at the Harvard School of Public Health assessed the cost-effectiveness of four recently proposed strategies for chlamydia screening targeted to three age groups (15 to 19 years, 15 to 24 years, and 15 to 29 years) of

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Chlamydia screening

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sexually active women: no screening, annual screening for all women, annual screening followed by one repeated test within 3 to 6 months after a positive test result, and annual screening followed by selective semiannual screening for women with a history of infection.

The researchers examined the impact of these strategies on clinical events (for example, PID, chronic pelvic pain, ectopic pregnancy, and infertility), lifetime

costs, quality-adjusted life years (QALYs), and cost-effectiveness. Annual screening in women 15 to 29 years of age followed by semiannual screening for those with a history of infection consistently had a cost-effectiveness ratio less than \$25,000 per QALY gained compared with the next most effective strategy.

See "Screening for *Chlamydia trachomatis* in women 15 to 29 years of age: A cost-effectiveness analysis," by Dr. Hu, Edward W. Hook III, M.D., and Sue J. Goldie, M.D., M.P.H., in the October 5, 2004 *Annals of Internal Medicine* 141, pp. 501-513. ■

Policies that have a deductible inserted in the middle instead of at the front expose enrollees to more risk

The new Medicare prescription drug benefit, to be phased in by January 1, 2006, as well as the latest "consumer-directed" health benefits offer coverage with a deductible inserted in the middle rather than at the traditional front end. These policies reflect the growing trend toward what Meredith B. Rosenthal, Ph.D., of the Harvard School of Public Health, calls doughnut-shaped insurance policies.

A deductible is a dollar amount below which the insurance plan does not share in the cost of health care. Plans use deductibles as a way to reduce the premium cost of an insurance plan and to a lesser degree the demand for health care services. In doughnut-hole plans, the enrollee enjoys (with coinsurance in the case of Medicare) coverage up to a point, bears full risk up to another cut-off (when the deductible kicks in), and

then shares with the insurer costs incurred thereafter, typically limited to an annual out-of-pocket maximum.

Critics note that doughnut-shaped "consumer-directed" plans will save money in part by attracting healthier people who don't expect to spend enough money to reach the point when the deductible begins. Dr. Rosenthal, whose work is supported in part by the Agency for Healthcare Research and Quality (HS10803), notes that these plans will be more risky than traditional plans.

Dr. Rosenthal uses a few simple examples from the economic literature on insurance to show that for a given premium, first-dollar deductibles always offer more protection from financial risk than doughnut-hole deductibles. For example, many doughnut-hole plans include sizable deductibles of

\$1,000 to \$2,000 that begin around the mean annual health spending for enrollees. The plans may cover the first \$500 or so of health care spending to pay for a set of services that the sponsor is concerned will be forgone by consumers facing a sizable deductible, such as recommended immunizations and other preventive care. However, plans could choose to pay for the highly valued services separately instead of providing an initial lump-sum account that could just as easily be used by the enrollee for therapies of low value, suggests Dr. Rosenthal.

For more information, see "Doughnut-hole economics: Insurance often serves purposes other than risk protection," by Dr. Rosenthal, in the November 2004 *Health Affairs* 23(6), pp. 129-134. ■

Policies are being considered to extend medical malpractice tort reforms to the nursing home sector

With encouragement from the nursing home industry, policymakers are considering extending conventional medical malpractice tort reforms to the nursing home sector. However, Harvard University researchers David M. Studdert, L.L.B., Sc.D., M.P.H., and David G. Stevenson, Ph.D., caution in a recent article that nursing home litigation has distinctive features that make medical malpractice approaches unfeasible. Their work was supported in

part by the Agency for Healthcare Research and Quality (K02 HS11285).

In a typical medical malpractice claim, the plaintiff is the patient who alleges harm due to negligence on the part of the primary defendant, who is usually the physician. In contrast, personal injury claims against nursing homes are rarely initiated by the injured

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Medical malpractice

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residents themselves (85 percent are initiated by their children or spouses), and the primary defendant is the nursing home itself. The allegations tend to center on abuse and neglect (resulting in problems ranging from bedsores, dehydration, and falls to death), rather than procedural mistakes and errors.

The formulation of equitable and fair approaches hinges, to some extent, on recognition of the unique aspects of nursing home litigation, note the authors. For instance, caps on noneconomic damages (rather than economic damages, such as loss of income) are the favored policy strategy for “containing” the malpractice crisis. Yet, noneconomic damages comprise 80 percent of

nursing home residents’ awards nationwide, roughly double that of medical malpractice awards. Also, older nursing home residents do not incur significant economic losses such as loss of income due to medical harm.

Although punitive damages play a negligible role in medical malpractice suits (less than 1 percent of awards), they are quite common (one in five payments) in nursing home litigation, in which abuse and neglect play a prominent role. Finally, the potential of tort reforms to curb nursing home litigation may be undercut if the reforms trigger a “compensating” increase in suits based on State residents’ rights statutes.

See “Nursing home litigation and tort reform: A case for exceptionalism,” by Drs. Studdert and Stevenson, in the *Gerontologist* 44(5), pp. 588-595, 2004. ■

Agency News and Notes

AHRQ releases second national reports on health care quality and disparities

The Agency for Healthcare Research and Quality has released the second edition of two annual reports, one on the quality of health care in America and the other on health care disparities. *The 2004 National Healthcare Quality Report* finds both evidence of improving quality and specific areas in which major improvements can be made. *The 2004 National Healthcare Disparities Report* indicates that there are disparities related to race, ethnicity, and socioeconomic status in America's health care system. Both reports extend the baseline data on quality and disparities within health care delivery that were provided in AHRQ's 2003 reports.

The reports measure quality and disparities in four key areas of health care: effectiveness, safety, timeliness, and patient centeredness. They also present data on the quality of and differences in access to services for clinical conditions—including cancer, diabetes, end-stage renal disease, heart disease, and respiratory diseases—and in nursing homes and home health care.

Quality Report. This report identifies three key themes important to policymakers, clinicians, health system administrators, community leaders, and others who work in health care services. The report indicates that:

- Quality is improving in many areas, but change takes time.
- The gap between the best possible care and actual care remains large. Quality of care remains highly variable across the country.

- Further improvement in health care is possible. Best practices have been identified, and collaborative, focused efforts among key stakeholders have produced impressive and inspiring gains.

In comparison to data presented in the 2003 report, modest improvement has been noted in many of the quality measures. Across the entire set of measures included in the report, quality has improved by approximately 3 percent versus data presented in the 2003 report. These include selected measures used by HHS' Centers for Medicare & Medicaid Services, the Joint Commission on Accreditation of Healthcare Organizations, the National Committee for Quality Assurance, and others for quality reporting on hospitals, nursing homes, home health agencies, and other settings. In addition, since the 2003 report on quality, improvements have been made in specific measures related to health care delivery.

The greatest changes were in the following:

- A decrease of 37 percent from 2002 to 2003 in the percentage of nursing home patients who have moderate or severe pain.
- A decrease of 34 percent from 1994 to 2001 in the hospital admission rate for uncontrolled diabetes.
- A decrease of 34 percent from 1996 to 2000 in the percentage of elderly patients who were given potentially inappropriate medications.

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Reports on health care quality and disparities

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Although quality remains variable across the country, improvements were seen in many areas at the State level. Some of these notable improvements are:

- Minnesota - Largest improvement in State rank for mammogram testing rates.
- New Jersey - Largest improvement in State rank for administering beta-blockers within 24 hours of hospital admission.
- Alabama - Only State to significantly increase screening rates for two recommended tests for colorectal cancer.

Data for all States are available in the report's Tables Appendix and Measure Specifications Appendix.

Disparities Report. The *2004 National Healthcare Disparities Report* presents data on the same clinical conditions and other measures as the Quality Report, but it focuses on priority populations, including women, children, the elderly, racial and ethnic minority groups, low-income groups, residents of rural areas, and individuals with special health care needs, specifically children with special needs, people in need of long-term care, and people who need end-of-life care.

The 2004 report identifies three key themes:

- Disparities are pervasive
- Improvement is possible.
- Gaps in information exist, especially for specific conditions and populations.

A subset of measures with the comparable data for 2000 and 2001 is highlighted in the *2004 Disparities Report*. In both years:

- Blacks received poorer quality of care than whites for about two-thirds of quality measures and had worse access to care than whites for about 40 percent of access measures.
- Asians received poorer quality of care than whites for about 10 percent of quality measures and had worse access to care than whites for about a third of access measures.
- American Indians and Alaska Natives received poorer quality of care than whites for about one-third of quality measures and had worse access to care than whites for about half of access measures.
- Hispanics received lower quality of care than non-Hispanic whites for half of quality measures and

had worse access to care than non-Hispanic whites for about 90 percent of access measures.

- Poor people received lower quality of care for about 60 percent of quality measures and had worse access to care for about 80 percent of access measures than those with high incomes.

The 2004 Disparities Report shows there has been improvement in the care provided to the nation's poor, uninsured, and minorities through federally supported health centers. These centers, which are administered by HHS' Health Resources and Services Administration, focus specifically on providing care to vulnerable populations. In 2004, over 3,600 health center sites delivered primary and preventive care to 13.2 million people. The FY 2006 budget will complete the President's commitment to create 1,200 new or expanded health center sites resulting in the delivery of primary and preventive health care services to 6.1 million additional people, many of whom face multiple barriers to receiving health care. In addition, the President has established a new goal to help every poor county in America that lacks a health center and can support one. Forty new health center sites will be funded in FY 2006 for this new effort.

In addition, AHRQ has recently announced a new partnership designed to help reduce disparities in health care for people with diabetes and other conditions. The National Health Plan Learning Collaborative to Reduce Disparities and Improve Quality is the first national effort of its kind to go beyond research and actively tackle racial and ethnic inequities in health care service delivery. Over the next 3 years, the collaborative will test ways to improve the collection and analysis of data on race and ethnicity, match those data to existing Health Plan Employer Data and Information Set quality measures, develop quality improvement interventions that close the gaps in care, and produce results that can be replicated by other health insurers and providers serving Medicare, Medicaid, and commercial populations.

The *National Healthcare Quality Report* and *National Healthcare Disparities Report* are available on AHRQ's Quality Tools Web site at www.qualitytools.ahrq.gov. The site serves as a Web-based clearinghouse to make it easier for health care providers, policymakers, purchasers, patients, and consumers to take effective steps to improve quality. Print copies of the reports (AHRQ Publication numbers 05-0013, Quality; and 05-0014, Disparities) are available from AHRQ's Clearinghouse. See the back cover of *Research Activities* for ordering information. ■

Journal focuses on evidence-based medicine

The January/February 2005 issue of *Health Affairs* is devoted to evidence-based medicine. It presents a series of articles that provide an in-depth discussion of evidence-based medicine and the use of evidence in clinical practice. Support for publication of this issue of the journal was provided by the Agency for Healthcare Research and Quality.

The volume is introduced by David Eddy, M.D., Ph.D., a physician and independent health care consultant based in Aspen, CO, who is one of the leading

architects in the field of evidence-based medicine. Dr. Eddy presents a historical view of the subject and sets the stage for an eclectic collection of papers that provide context for the discussion of evidence-based medicine, focus on its evolution, present case studies exemplifying its use, discuss ways to evaluate evidence, and offer ideas on how to implement evidence-based medicine into everyday clinical practice.

An article by AHRQ director Carolyn M. Clancy, M.D., and Kelly Cronin, M.P.H., a senior advisor in the Office of the

National Coordinator for Health Information Technology, HHS, discusses the challenge now before us to further develop and translate the worldwide evidence base for local application.

We have a limited number of copies of the January/February 2005 issue of *Health Affairs* (AHRQ Publication No. OM05-0001). Single free copies are available from the AHRQ Clearinghouse. Please see the back cover of *Research Activities* for ordering information. ■

Correction

We announced the availability of an evidence report on end-of-life care on page 25 of the January 2005 issue of *Research Activities*. The report was incorrectly cited as AHRQ Evidence Report/Technology Assessment No. 10; it should have been cited as report number 110. We apologize for any confusion this error may have caused. ■

Grant final reports now available from NTIS

The following grant final reports are now available from the National Technical Information Service (NTIS). Each listing identifies the project's principal investigator, his or her affiliation, grant number, and project period and provides a brief description of the project. See the back cover of *Research Activities* for ordering information.***

Records of all 750,000 documents archived at NTIS—including many AHRQ documents and final reports from all completed AHRQ-supported grants—can now be searched on the new NTIS Web site. For information about findings from the projects described here, please access the

relevant final reports at the NTIS Web site. Also, all items in the database from 1997 to the present can be downloaded from the Web site. Go to www.ntis.gov for more information.

Editor's note: In addition to these final reports, you can access information about these projects from several other sources. Most of these researchers have published interim findings in the professional literature, and many have been summarized in *Research Activities* during the course of the project.

To find information presented in back issues of *Research Activities*, go to the AHRQ Web site at www.ahrq.gov and

click on "Research Activities Online Newsletter" and then "Search Research Activities." To search for information, enter either the grant or contract number or the principal investigator's last name in the query line. A reference librarian can help you find related journal articles through the National Library of Medicine's PubMed®.

Computer System to Support Alzheimer's Decisionmaking. David H. Gustafson, Ph.D., University of Wisconsin, Madison. AHRQ grant HS09567, project period 9/30/97-9/29/98.

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The goal of this project was to develop and test a new Internet-based decision aid for an existing computer module, the Dementia Caregiver Module, to help caregivers successfully implement decisions regarding care for Alzheimer's patients. The researchers identified caregiver needs and designed a decision aid component designed to enhance implementation. Caregivers (n=100) were recruited to test the system, and their reactions and satisfaction were tracked. About two-thirds of participants used the system. Users averaged 5 fewer hours per week in caregiving than nonusers, and 60 percent reported increased coping and caregiving knowledge. (Abstract, executive summary, and appendixes, NTIS accession no. PB2005-100589; 82 pp, \$34.00 paper, \$14.00 microfiche)***

Consumer-led Conference to Advance Patient Safety. Jonathan C. Peck, M.S., Institute for Alternative Futures, Alexandria, VA. AHRQ grant HS13927, project period 3/1/03-2/29/04.

This project provided support for a workshop on advancing patient safety through consumer involvement. The workshop participants developed a vision, mission, goals, and action steps toward improving health care through Federal, State, and local initiatives. As a result of the workshop, a new organization was created: Consumers Advancing Patient Safety. (Abstract, executive summary, and appendixes, PB2005-100587; 50 pp, \$29.50 paper, \$14.00 microfiche)***

Evaluation of Ischemic Heart Disease in Monroe County. Alvin I. Mushlin, M.D., University of Rochester, Rochester, NY. AHRQ grant HS09358, project period 9/30/96-9/29/98.

This project examined the patterns and outcomes of health service use

for coronary artery disease (CAD) in Monroe County, NY, an upstate metropolitan community with about 730,000 residents. In addition, the researchers quantified the burden of CAD in the area and identified corresponding community needs. They conducted a multi-level analysis of CAD mortality and procedure rates (bypass surgery and angiography) in the community. The study found substantial racial and socioeconomic variations in access to care and outcomes related to CAD in this geographic area. In general, blacks and those of lower SES received fewer cardiac procedures. Further, these groups had higher premature incidence and mortality rates related to CAD. (Abstract, executive summary, and final report, NTIS accession no. PB2005-100588; 60 pp, \$31.50 paper, \$14.00 microfiche)***

Health Services Training for the 21st Century. Jeffrey Prottas, Ph.D., Brandeis University, Waltham, MA. AHRQ grant HS09798, project period 7/1/98-6/30/00.

This project provided support for development of 11 different short-format courses at the Heller Graduate School that will extend and enrich the school's doctoral program. Over the 2-year project, 152 students enrolled in the courses, and a survey of the students provided very positive feedback. The Heller School has decided to institutionalize and lengthen the program. (Abstract, executive summary, and final report, NTIS accession no. PB2005-101293; 12 pp, \$26.50 paper, \$14.00 microfiche)***

Impact of Organizational and Operational Structure on Living Donation. Rebecca P. Winsett, Ph.D., University of Tennessee, Memphis. AHRQ grant HS11472, project period 6/1/01-5/31/03).

These researchers evaluated transplant center and individual barriers and facilitators of living

organ donation by interviewing living donors and personnel in certain transplant centers. Centers were selected because they had greater than the national average in living donor transplants. The study found that well-integrated systems were more effective in increasing the number of living donors. For the donors, a positive experience with the health care system meant having their needs met and respectful treatment. The perception of a smooth, integrated system that is responsive to the needs of the organ donor appears to be the most important factor for donors. In general, living donors understood the importance of donation, but they were disappointed in how they were treated during the process. Organizational changes can resolve this barrier. (Abstract, executive summary, and final report, NTIS accession no. PB2005-101295; 22 pp, \$26.50 paper, \$14.00 microfiche)***

Improving Heart Failure Care in Minority Communities. Jane E. Sisk, Ph.D., Mount Sinai School of Medicine, New York, NY. AHRQ grant HS10402, project period 9/30/99-9/29/03.

Congestive heart failure (CHF) is associated with high disability and mortality, and it disproportionately affects blacks and people older than age 65. Proven therapies can improve functioning and survival, but many patients do not receive them. To examine the effectiveness of nurse management of patients with CHF, these researchers enrolled 406 patients with documented CHF from ambulatory practices in four hospitals in east and central Harlem, NYC. The effectiveness of nurse management compared with usual care was assessed over a 12-month trial. Nurses followed a structural protocol to counsel patients on self-management of their condition and interaction with clinicians to improve

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drug therapy. The researchers are disseminating their findings to quality improvement organizations, within the local communities, and more broadly across the State and the Nation. (Abstract, executive summary, and final report, PB2005-100586; 33 pp, \$29.50 paper, \$14.00 microfiche)***

Institutional Training Innovation Incentive Program. Roger D. Feldman, Ph.D., University of Minnesota, Minneapolis. AHRQ grant HS09795, project period 9/1/98-8/31/02.

This project supported the establishment of a doctoral training program in managed care at the University of Minnesota. The purpose was to better prepare

doctoral students to conduct health services research in and with managed care organizations. A number of lessons were learned over the course of this 4-year project, including the need for training programs to have a minimum size and to partner with stable organizations. The lessons learned from this experience have been incorporated into a new master of science degree program in health services research, policy, and administration. (Abstract, executive summary, and final report, NTIS accession no. PB2005-101296; 26 pp, \$26.50 paper, \$14.00 microfiche)***

Program in Clinical Effectiveness/Evaluation Sciences. Mark S. Roberts, M.D., University of Pittsburgh, Pittsburgh, PA.

AHRQ grant HS09784, project period 5/1/98-4/30/02.

This project provided support for the development of a broadly based, multidisciplinary health services research training program designed to provide trainees with the skills necessary to meet the rapidly changing demands of health care systems. This program provides health services research training for general medicine fellows and greatly expands the pool of physicians who are receiving such training. Ultimately, the program will increase the capacity for health services research at the University of Pittsburgh and in the surrounding region. (Abstract, executive summary, and final report, NTIS accession no. PB2005-101294; 22 pp, \$26.50 paper, \$14.00 microfiche)*** ■

Research Briefs

Ammar, K.A., Kors, J.A., Yawn, B.P., and Rodeheffer, R.J. (2004). "Defining unrecognized myocardial infarction: A call for standardized electrocardiographic diagnostic criteria." (HS10239). *American Heart Journal* 148, pp. 277-284.

Unrecognized myocardial infarctions (UMIs) are detected by surveillance electrocardiograms (ECGs). In epidemiologic studies, different sets of ECG criteria have been used to define MI, possibly contributing to significant differences in prevalence estimates and risk factor associations. The authors summarize the rationale behind the various UMI-ECG definitions and suggest an approach to develop uniform criteria. They conclude that the most cost-effective and valid method for detecting UMI in epidemiologic studies is computerized ECG analysis using major Q waves in middle-aged white men. They note the need for further

studies to validate ECG-UMI criteria and identify the influence of age, sex, and race on ECG-UMI criteria.

Fryback, D.G., and Craig, B.M. (2004). "Measuring the economic outcomes of cancer." (AHRQ grant T32 HS00083). *Journal of the National Cancer Institute Monographs* 33, pp. 134-141.

This article provides an introduction to the nature and measurement of economic outcomes in cancer and introduces the reader to a considerable literature on measuring economic endpoints in health and medicine. Economic outcomes data are defined here as measures of resources consumed in prevention, detection, and treatment of cancer and its sequelae. The authors first discuss questions addressed by economic outcomes. Second, they present a typology of and introduction to measurement of economic outcomes. Third, they discuss important measurement

issues and call for development and validation of standardized protocols and questionnaires to measure economic outcomes, especially at the patient level.

Hirdes, J.P., Fries, B.E., Morris, J.N., and others. (2004). "Home care quality indicators (HCQIs) based on the MDS-HC." (AHRQ grant HS09455). *The Gerontologist* 44(5), pp. 665-679.

The goal of this study was to develop home care quality indicators (HCQIs) to be used by consumers, home care agencies, regulators, and policymakers to support evidence-based decisionmaking related to the quality of home care services. The investigators used data from 3,041 Canadian and 11,252 U.S. home care clients assessed with the Minimum Data Set-Home Care (MDS-HC) to evaluate a series of indicators suggested by international experts

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and by focus groups conducted in Canada and the United States. They retained 22 of the 73 original candidate HCQIs for the final list of recommended indicators. These HCQIs are new tools providing a first step along the path of quality improvement for home care. They can provide high-quality evidence on performance at the agency level and on a regional basis.

Hsu, E.B., Jenckes, M.W., Catlet, C.L., and others. (2004 July). “Effectiveness of hospital staff mass-casualty incident training methods: A systematic literature review.” (AHRQ contract 290-97-0006). *Prehospital and Disaster Medicine* 19(3), pp. 191-199.

Current evidence on the effectiveness of mass-casualty incident (MCI) training for hospital staff is limited, concludes this study. The researchers reviewed the existing evidence on the effectiveness of disaster drills, technology-based interventions, and tabletop exercises in training hospital staff to respond to an MCI. Of 243 potentially relevant citations, 21 met the defined criteria. The existing evidence suggests that hospital disaster drills are effective in allowing hospital employees to become familiar with disaster procedures, identify problems in different components of response (for example, incident command, communications, triage, patient flow, materials and resources, and security), and provide the opportunity to apply lessons learned to disaster response. However, the strength of evidence on other training methods is insufficient to draw recommendations.

Mandelblatt, J., Armetta, C., Yabroff, K.R., and others. (2004). “Descriptive review of the literature on breast cancer

outcomes: 1990 through 2000.” (AHRQ grant HS08395). *Journal of the National Cancer Institute Monographs* 33, pp. 8-44.

Despite the recent explosion of quality of life (QOL) measures for breast cancer, routine incorporation of QOL outcomes into cancer research has been slow, and when used, outcomes have often been poorly measured. These researchers reviewed the relevant literature published from 1990 through 2000. Their review included studies that spanned all phases of breast cancer care, including primary prevention, early detection, diagnosis, local treatment, adjuvant treatment, treatment of metastatic disease, survivorship, and the dying experience. Of the 230 articles selected, most focused on survivorship followed by screening. The most frequently reported outcomes were health-related quality of life (54 percent) followed by economic analyses (38 percent) and patient satisfaction (14 percent); only 9 percent measured patient preferences. Few studies included more than 10 percent minority populations or focused on the elderly, and methodologic flaws were prevalent. Thus, more research is needed to develop practical approaches that are reliable, valid, and feasible in routine practice and applicable in diverse populations.

Martikainen, P., Lahelma, E., and Marmot, M. (2004). “A comparison of socioeconomic differences in physical functioning and perceived health among male and female employees in Britain, Finland, and Japan.” (AHRQ grant HS06516). *Social Science and Medicine* 59, pp. 1287-1295.

Different social structural contexts and historical settings may shape the pattern of socioeconomic inequalities in health among men and women, according to this study. The researchers found that Britain, Finland, and Japan—representing

liberal, social democratic, and conservative welfare State regimes—produce broadly similar patterns of socioeconomic differences in health among men. In general, men employed in higher grade non-manual work in all three countries perceive their health and physical functioning to be better than that of their manual worker counterparts. Similarly, British and Finnish women employed in lower grade jobs had consistently worse perceived health and poorer physical function than women in higher grade jobs. Yet, the same was not true for Japanese women, possibly because the Japanese conservative welfare regime is characterized by low female attachment to paid work. Few Japanese women are in the labor force, and part-time work is common. Also, they earn much lower wages than Japanese men. In contrast, Finland’s social democratic welfare system is characterized by exceptionally high full-time employment among women, and universal social benefits (day care and parental leave arrangements) that enable women to combine motherhood and paid employment. In Britain, publicly funded day care facilities are modest, and female labor force participation is much lower than in Finland.

Morris, J.N., Jones, R.N., Fries, B.E., and Hirdes, J.P. (2004, November). “Convergent validity of minimum data set-based performance quality indicators in postacute care settings.” (AHRQ grant HS09455). *American Journal of Medical Quality* 19(6), pp. 242-247.

U.S. patients who are candidates for rehabilitation are quickly discharged from acute care hospitals, where their stays have been shortened, into institutional and community-based post-acute care (PAC) settings. However, little is

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known about how such patients fare once discharged. This article describes an approach for quantifying quality performance measurements within two PAC settings: skilled nursing homes and home-care based PAC. It specifically describes the validation of a focused set of summary scales that reflect patient outcomes. The summary scales can be implemented practically. They were created from data collected with standardized patient assessment instruments, the Resident Assessment Instrument for Home Care, and the Minimum Data Set for Post-Acute Care.

Sherman, K.E., Sherman, S.N., Chenier, T., and Tsevat, J. (2004, November). “Health values of patients with chronic hepatitis C infection.” (AHRQ grant HS10366). *Archives of Internal Medicine* 164, pp. 2377-2382.

Patients with hepatitis C virus (HCV) infection report a reduction in health status, but it is not known how they value their state of health. These researchers assessed health utilities directly from 124 patients with chronic HCV infection. They administered a disease-specific version of the Medical Outcomes Study 36-item Short-Form Health Survey, the Beck Depression Inventory, and three direct health value measures. They found that although quality of life is compromised in patients with chronic HCV infection, patient-derived health utilities are not strongly associated with health status or clinical measures. The utility measures they obtained from patients with HCV differ significantly from previous surrogate measures of health values. The researchers conclude that such differences could affect decision analyses and cost-effectiveness analyses of treatment interventions for individuals with HCV infection.

Tamariz, L.J., Eng, J., Segal, J.B., and others. (2004). “Usefulness of clinical prediction rules for the diagnosis of venous thromboembolism: A systematic review.” (AHRQ contract 290-97-0006). *American Journal of Medicine* 117, pp. 676-684.

About half of outpatients diagnosed with deep vein thrombosis have a major risk factor for venous thrombosis, such as immobilization, trauma, or recent surgery. However, symptoms alone are not sensitive or specific for the diagnosis, and individual physical findings have limited predictive value. Clinical prediction rules have been developed to aid in diagnosis. These authors review the evidence on the predictive value of clinical prediction rules for the diagnosis of venous thromboembolism. They conclude that the Wells prediction rule is useful in identifying patients at low risk of being diagnosed with the condition. The addition of a rapid latex D-dimer assay improved overall performance of the rule.

Tamayo-Sarver, J.H., and Baker, D.W. (2004, August). “Comparison of responses to a \$2 bill versus a chance to win \$250 in a mail survey of emergency physicians.” (AHRQ grants HS11948 and T32 HS00059). *Academic Emergency Medicine* 11(8), pp. 888-892.

Attempts to conduct mail surveys of physicians are often frustrated by low response rates. Mailing a \$2 bill incentive produces a better response rate with lower survey cost per participant than offering a chance to win \$250, according to this study. The researchers evaluated whether or not small monetary incentives would improve physicians' responses to surveys. The investigators mailed a survey to two groups of 288 emergency physicians. Within each group of 288, half received a \$2 bill and the other half received an offer that respondents would be entered into a drawing to win \$250. Of the

301 physicians who participated in the survey, the \$2 bill arm had a substantially higher response rate: 56 percent of those receiving it participated versus 44 percent of those receiving a chance to win \$250.

Tien, P.C., Kovacs, A., Bacchetti, P., and others. (2004, November). “Association between syphilis, antibodies to herpes simplex virus type 2, and recreational drug use and hepatitis B infection in the Women's Interagency HIV Study.” (Cosponsored by AHRQ, NIH, and CDC). *Clinical Infectious Diseases* 39, pp. 1363-1370.

Liver disease has become a leading cause of death in HIV-infected men and women, in many cases due to coinfection with hepatitis B virus (HBV) or hepatitis C virus. This study found that women with a history of drug use who have or are at risk for HIV infection are more likely to be coinfecting with HBV if they also have a history of genital ulcer disease, specifically genital herpes or syphilis. The researchers analyzed the seroprevalence of HBV infection among 2,132 women with or at risk for HIV infection, who were enrolled in the Women's Interagency HIV Study during the periods 1994-1995 and 2001-2002. After excluding women with evidence of past HBV vaccination, 43 percent of 1,500 HIV-infected and 22 percent of 461 HIV-uninfected women had HBV infection. Women using injection drugs were nearly three times as likely as others to be coinfecting with herpes simplex virus 2, while women using other illicit drugs were nearly three times as likely as others to have a history of syphilis. The authors conclude that antibodies to genital herpes, a history of syphilis, and high-risk sexual behaviors are important risk factors for HBV infection. ■

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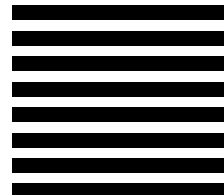


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