



Research Activities



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Real-time safety audits can detect a broad range of errors in neonatal intensive care units

Real-time safety audits performed during routine hospital neonatal intensive care unit (NICU) work can quickly detect a broad range of medical errors, concludes a study supported in part by the Agency for Healthcare Research and Quality (HS11583). The audit system, implemented in a 20-bed NICU, detected significant safety problems promptly (usually at the patient's bedside) leading to rapid changes in policy and practice.

Researchers at the Vermont Center for Patient Safety in Neonatal Intensive Care developed a 36-item patient safety checklist. The checklist included errors associated with delays in care, equipment failure, diagnostic laboratory and radiological tests, information transfer, and non-compliance with hospital policy. A research nurse used the checklist to perform safety audits during and after morning work rounds three times a week. Clinical personnel were involved in the design and implementation of the study where they helped detect gaps in performance. This limited the burden of data collection and

helped clinical personnel accept and support the safety audits.

Safety audits detected 338 errors during the 5-week study period such as unlabeled medication at the patient's bedside, missing or inappropriately placed identification bands, improper alarm settings on pulse oximeters (which measure blood oxygen saturation), ineffective communication, and delays in appropriate care. Overall, 17 errors were associated with laboratory or radiology studies, 9 with ineffective communication or delays in patient care, 8 with medical devices, 1 with pain management, 260 with deviation from ICU or hospital policy, and 43 with deviation from known safe practices. Errors were usually detected at the patient's bedside, which allowed immediate notification of clinical staff.

See "Real time patient safety audits: Improving safety every day," by Robert Ursprung, M.D., James E. Gray, M.D., M.S., William H. Edwards, M.D., and others in *Quality and Safety in Health Care* 14, pp. 284-289, 2005, which can be obtained online from qhc.bmjournals.com. ■



Physician knowledge and skills and team communication improve safety in intensive care units

Communication errors contribute to the occurrence of adverse events (injury or harm due to care) in intensive care units (ICUs). Communication errors are common factors in medical mistakes; however, according to a study supported by the Agency for Healthcare Research and Quality (HS11902 and HS14246), morning briefings conducted with staff can improve ICU safety. A second study supported by AHRQ (HS11902) indicates that clinician knowledge and skills are more likely to reduce ICU incidents involving invasive lines, tubes, and drains than factors related to team communication. Both studies, conducted at the Johns Hopkins University School of Medicine, are summarized here.

Thompson, D., Holzmüller, C., Hunt, D., and others. (2005, August). "A morning briefing: Setting the stage for a clinically and operationally good day." *Journal on Quality and Patient Safety* 31(8), pp. 476-479.

Researchers found that morning briefings with ICU staff can improve communication which then improves patient safety in the ICU. The goal of the ICU morning briefing is to focus on clinical safety in real time and integrate the safety perspective into the daily ICU routine. The briefing includes the attending physician who directs ICU rounds (usually a specialist in intensive care), the clinical fellow (if applicable), and the night- and day-shift charge nurses.

The briefing is conducted before morning rounds, typically at 7:30 A.M. during the shift change from night to morning. Change of shift is a critical time for exchange of information between teams and often a time when information is missed or forgotten which can result in adverse events or near misses. Three questions are answered during the briefing. First, what happened overnight that the team needs to be aware of, such as adverse events, near misses, and admissions and

discharges? This discussion helps prioritize which patients should be seen first during rounds and highlights the need to investigate adverse events or near misses while the facts are still fresh. Second, where should morning rounds begin and how can information on new admissions, discharges, and work flow pressures be clarified? Caregivers address high-acuity patients first to provide immediate intervention and to set daily goals for optimum patient care. Next, they take care of patients ready for discharge to free up beds for new admissions. Third, what are the potential problems for the day, such as patient scheduling, equipment availability, outside patient testing, staffing, and provider skill mix? A staff member can be assigned to follow up on these concerns and inform the team about action taken.

Needham, D.M., Sinopoli, D.J., Thompson, D.A., and others. (2005, August). "A system factors analysis of 'line, tube, and drain' incidents in the intensive care unit." *Critical Care Medicine* 33(8), pp. 1701-1707.

ICU patients often have feeding tubes, chest drainage tubes, and central venous catheters. The most common types of incidents in the ICU involve invasive line, tube, and drain (LTD) placement, maintenance, or removal. This study found that over 60 percent of LTD incidents are considered preventable, and that they occur more often during holidays, among children, and among patients with medically complex conditions.

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Safety in intensive care units

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Clinicians' knowledge and skills helped prevent LTD incidents while team communication was less likely to prevent them (probably because LTD procedures usually depend on a single individual).

The researchers used an anonymous Web-based ICU Safety

Reporting System to report unsafe conditions and events in ICUs that could or did lead to patient harm. During a 12-month period, researchers identified LTD incidents at 18 ICUs in the United States. Of the 114 reported LTD incidents, over 60 percent were considered preventable. One patient death was attributed to an LTD incident. Of patients who suffered LTD incidents, 56 percent

sustained physical injury and 23 percent had either an actual or anticipated longer hospital stay. LTD incidents were 3 to 4 times more likely to occur in the operating room, on a holiday, or in patients with medically complex conditions. They were nearly 8 times more likely to occur in patients aged 1 to 9 years than in older patients. ■

Web-based patient safety education curriculum incorporates suggestions from physicians, nurses, and patients

Suggestions from physicians, nurses, and patients have been incorporated into a new Web-based patient safety education curriculum. Development of the curriculum was supported by the Agency for Healthcare Research and Quality (HS12043) and led by William R. Hendee, Ph.D., of the National Patient Safety Foundation and Medical College of Wisconsin.

In focus groups, physicians and nurses suggested that the curriculum target concerns such as the increasing complexity of the health care system, the culture of tolerance toward medical error, the hierarchy of professional authority in health care settings, and the historically punitive reaction toward medical errors. Physicians identified medication safety, the medical/legal/ethical aspects of patient safety, error reporting systems, safety practices, patient safety in hospital-based settings, and models reducing medical errors as the most important topics for inclusion in a patient safety curriculum. Nurses identified similar concerns, and also stressed

work safety and models for constructively dealing with unsafe practices. Patients believed that patient safety education should cover concerns about hospital coordination and staffing, as well as patient empowerment, safety in hospital and non-hospital settings, identification and reporting of errors, methods to deal with unsafe practices, risk of medical error, and strategies for communicating with providers.

Patient safety experts drafted the detailed content of the education modules, which were peer-reviewed and compiled into the Web-based program. The online modules for Physicians; Nurses; Patients and Families; and Patients and Families Anticipating Anesthesia are available at www.npsf.org.

See "Development of a patient safety Web-based education curriculum for physicians, nurses, and patients," by Dr. Hendee, Collette Keating-Christensen, M.A., and Yik H. Loh, M.B.B.S., M.Med., in the June 2005 *Journal of Patient Safety* 1(2), pp. 90-99. ■

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Written reminders can reduce the length of time patients have urinary catheters

The longer a hospitalized patient has an indwelling urinary catheter, the greater the risk of developing a urinary tract infection. Treating these infections costs at least \$500 per episode. Yet, over one-third of attending physicians are unaware that their own hospitalized patients have indwelling urinary catheters. These “forgotten” catheters are frequently unnecessary and could have been taken out earlier. For hospitals in the United States currently without computerized order-entry systems, a simple written reminder can reduce the average time that patients are catheterized and, thus, reduce their risk of infection.

Researchers, supported in part by the Agency for Healthcare Research and Quality (HS11540), designed a simple reminder, similar to an antibiotic stop-order, to remind physicians and nurses that the patient had a urinary catheter. Physicians of patients in two hospital wards at one medical center received the written reminder, which was attached to the charts of patients

who had been catheterized for 48 hours. The physicians of patients in two other wards served as controls and did not receive the reminder.

A total of 5,678 patients were evaluated. The average amount of time patients were catheterized decreased by 7.6 percent in the reminder group but increased by 15.1 percent in the control group over their respective pre-intervention baselines. There was no significant difference in urethral re-catheterizations between reminder and control groups. Also, the hospital cost savings provided by the written reminders offset the necessary costs.

More details are in “A reminder reduces urinary catheterization in hospitalized patients,” by Sanjay Saint, M.D., M.P.H., Samuel R. Kaufman, M.A., Maureen Thompson, R.N., M.S.N., and others, in the August 2005 *Journal on Quality and Patient Safety* 31(8), pp. 455-462. ■

Study discusses the legal aspects of providers sharing information on medical errors

Several health care institutions in the United States have formed patient safety consortia to share information and analyze data on medical errors. Lessons learned regarding effective safety practices are disseminated to the consortia members to improve patient safety in their facilities. However, this exchange of information about medical errors may make health care institutions vulnerable in legal proceedings. In a recent paper, supported in part by the Agency for Healthcare Research

and Quality (HS11905 and HS11521), researchers discuss legislation that could help address these concerns and the liability issues of the Health Insurance Portability and Accountability Act (HIPAA).

The authors suggest that Federal and State legislation could be extended to include protection for data and discussions related to safety and quality improvement used internally by health care organizations. At present, only Federal research protection under

the Agency for Healthcare Research and Quality (AHRQ) appears sufficient, and then only if the information exchange is confined to the intended safety efforts. Without AHRQ protection, discovery rules and privilege laws could likely allow such information to be used in lawsuits.

HIPAA privacy rules, which ensure patient confidentiality, also create issues of liability. To avoid the need to obtain authorization

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Medical errors

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from all patients whose clinical information is used or disclosed in the safety consortia, both consortia members and the information repository must ensure that all appropriate identity markers and

indicators are removed from patient records so that patients cannot be identified. It is equally important to remove identifiers of providers and institutions in data submitted to the repository or shared among consortium members.

See “Learning from others: Legal aspects of sharing patient safety data using provider consortia,” by Bryan A. Liang, M.D., Ph.D., J.D., Matthew B. Weinger, M.D., and Steven Suydam, M.D., J.D., in the June 2005 *Journal of Patient Safety* 1(2), pp. 83-89. ■

Patient safety problems increase when hospital profit margins decline over time

Since the mid-1990s, the financial disparity between rich and poor hospitals in the United States has widened. According to a new study of Florida hospitals, patient safety suffers as hospital profit margins decline over time. These results suggest that financial pressures limit a hospital’s ability to make costly investments to improve patient safety, conclude William E. Encinosa, Ph.D., and Didem M. Bernard, Ph.D., senior economists at the Agency for Healthcare Research and Quality.

The researchers used the Healthcare Cost and Utilization Project State Inpatient Data to analyze Florida hospital discharges from 1996 to 2000, and Florida hospital cost reports from 1995 to 2000. Their goal was to determine whether hospital financial pressures were associated with increased rates of patient safety problems for major surgeries. Many of the measures for the patient safety problems were constructed using the Patient Safety Indicator Module of AHRQ’s Quality Indicators released in 2003. The total sample consisted of 1,054,281 major surgeries performed in 176 hospitals over a 5-year period. During the study period, the average profit margin ranged from -10 percent for hospitals in the lowest financial

performance quartile to +15 percent for those in the highest financial performance quartile.

Overall, the rate of likely preventable patient safety events, including both surgery-related and nursing-related events, was nearly 9 percent in major surgeries. A set of 24 likely preventable patient safety events occurred with 12 percent higher frequency when the hospital was in the lowest compared with the highest profit margin quartile. The effect of a hospital’s financial performance on safety outcomes was more likely to be manifest in the following year. This was probably due to the time it takes for cost-cutting changes in staffing and quality control to affect patient safety. The financial pressures underlying these detrimental changes were due to low reimbursements rather than to high costs. For example, the hospitals in the highest profit quartile had 7 percent higher costs per patient but 42 percent higher payments per patient compared to the hospitals in the lowest profit quartile.

See “Hospital finances and patient safety outcomes,” by Drs. Encinosa and Bernard, in the Spring 2005 *Inquiry* 42, pp. 60-72. Reprints (AHRQ Publication No. 05-R070) are available from AHRQ.* ■

Women’s Health

Younger women are more satisfied with their healthcare when a reproductive health specialist is their primary provider

Most women visit generalist physicians for some or all of their primary health care, and a large proportion of them pair this provider with an obstetrician/gynecologist (ob/gyn). A less common pattern is seeing a reproductive health specialist (either an ob/gyn or a Certified

Nurse Midwife) as their sole regular provider of primary care. Younger women who use a reproductive health specialist as their sole provider are more satisfied with their health care coordination and completeness than women who use both a generalist physician and an ob/gyn according

to a study supported in part by the Agency for Healthcare Research and Quality (HS10237).

Jillian T. Henderson, Ph.D., M.P.H., of the University of California, San Francisco, and

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Reproductive health specialist

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Carol S. Weisman, Ph.D., of the Penn State College of Medicine, surveyed a sample of 1,197 women aged 18 to 87 who made primary health care visits in 2001. Women aged 18 to 34 were more satisfied with health care coordination and comprehensiveness when their

regular provider was a reproductive health specialist, primarily an ob/gyn.

The odds of satisfaction for these young women were reduced by 62 percent when they had a generalist physician as a regular provider, 53 percent with a generalist as a regular provider plus an ob/gyn, and 48 percent when they had no regular provider. The pattern of regular

provider use was not significantly associated with satisfaction for women in other age categories.

See “Women’s patterns of provider use across the lifespan and satisfaction with primary care coordination and comprehensiveness,” by Drs. Henderson and Weisman, in the August 2005 *Medical Care* 43(8), pp. 826-833. ■

Uterine artery embolization for uterine fibroids is a low-risk procedure

Uterine fibroids, which account for 30 to 40 percent of hysterectomies in the United States, can cause heavy menstrual bleeding, pain, and uterine pressure. Uterine artery embolization, a relatively new procedure to treat uterine fibroids, is a low-risk procedure, concludes a study supported in part by the Agency for Healthcare Research and Quality (HS09760). During the procedure, a catheter is threaded, usually from a leg artery, into selective uterine arteries. Small particles are injected into the arteries to block blood flow to the fibroids. As a result, the fibroids shrink, leading to resolution of symptoms.

Researchers examined the outcomes of 3,160 women sampled from the Fibroid Registry for Outcomes Data who had undergone uterine artery embolization at 72 sites throughout the United States. Overall, 0.66 percent of women studied suffered from major in-hospital complications, and 4.8 percent suffered from major events (mostly inadequate pain relief) within the first 30 days after hospital discharge.

Thirty-one women required additional surgical intervention within 30 days of treatment, 3 of whom

required a hysterectomy (0.1 percent). There were no deaths. Researchers found no difference in length of procedure, length of stay, or incidence of adverse events based on site experience. There were few predictors of adverse events related to patient demographics; however, black women, smokers, and those with prior fibroid procedures had modestly increased odds of suffering from an adverse event.

More details are in “The fibroid registry for outcomes data (FIBROID) for uterine embolization,” by Robert Worthington-Kirsch, M.D., James B. Spies, M.D., Evan R. Myers, M.D., M.P.H., and others, in the July 2005 *Obstetrics & Gynecology* 106(1), pp. 52-59.

Editor’s note: A related paper by the same researchers describes the FIBROID Registry and the demographics of women included in it. For more details, see Myers, E.R., Goodwin, S., Landow, W., and others. (2005, July). “Prospective data collection of a new procedure by a specialty society.” (AHRQ HS09760). *Obstetrics & Gynecology* 106(1), pp. 44-51. ■

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

More high-quality studies are needed to gauge the safety of induced labor in women who have had prior cesarean deliveries

Vaginal birth for women who have previously undergone cesarean section has been actively promoted as a way to reduce the rising cesarean delivery (CD) rates in the United Kingdom and the United States. A systematic review of studies on the topic concludes there is little high-quality evidence to guide clinical or health policy decisions regarding the safety of inducing labor in women who have had a prior CD. The study, supported by the Agency for Healthcare Research and Quality (HS11338), was conducted by the Oregon Health and Science University Evidence-based Practice Center.

Researchers reviewed 162 articles, identified 14 fair-quality studies, and found no good-quality

studies reporting outcomes data for women with induced labors and prior CD. Compared with spontaneous labor, induction was more likely to result in CD. Of women undergoing spontaneous labor, 20 percent had CD compared with 32 percent receiving oxytocin to induce labor. In studies of prostaglandin E2 (PGE2), 24 percent of women undergoing spontaneous labor had CD compared to 48 percent whose labor was induced with PGE2.

There was a nonsignificant increase in uterine ruptures among women whose labors were induced compared with those who had spontaneous labors. There were no maternal deaths and other maternal complications, such as bleeding or infection, were infrequently

reported. Four studies reported on infant deaths, and other infant outcomes were inadequately reported. The researchers indicate that better quality studies are needed that consider potential confounding factors, such as dose of induction medicine and reasons for induction, as well as appropriate comparison groups.

See “The benefits and risks of inducing labor in patients with prior cesarean delivery: A systematic review,” by Marian S. McDonagh, Pharm.D., Patricia Osterweil, and Jeanne-Marie Guise, M.D., M.P.H., in the August 2005 *International Journal of Obstetrics and Gynaecology* 112, pp. 1007-1015. ■

Some State-level policies are associated with women’s mortality rates for certain diseases

The four leading causes of death for women in the United States are heart disease, lung cancer, stroke, and breast cancer. According to researchers from the Oregon Health & Science University, some State-level policies are associated with women’s mortality rates for these diseases. Researchers, supported by the Agency for Healthcare Research and Quality (T32 HS00069), worked with experts in women’s health and health policy to examine State policies affecting women’s health in four areas: reproductive issues (for example, State requirements for private insurers to cover Pap and cervical cancer screening), economic issues (for example, child support payments), access to care (for example, Medicaid eligibility and expansion efforts), and ensuring healthy communities (for example, gun control, aid to women who are victims of violence, and tracking hazardous environmental exposures).

Researchers also examined the relationships between policies and six State-level health outcomes:

heart disease, lung cancer, breast cancer, stroke mortality, infant mortality, and mental health. Medicaid eligibility policies accounted for 66 percent of the variance in heart disease mortality across States. Policies affecting violence against women and gun control, family medical support, efforts to expand Medicaid, and environmental tracking accounted for 50 percent of the variance in lung cancer mortality. Policies on chlamydia screening, Medicaid eligibility, and safety net services accounted for 70 percent of variance in breast cancer deaths. Gun control, environmental tracking, patient protection, and expanded State insurance policies accounted for 68 percent of variance in stroke mortality.

See “Relating health policy to women’s health outcomes,” by Jennifer P. Wisdom, Ph.D., M.P.H., Michelle Berlin, M.D., and Jodi A. Lapidus, Ph.D., in the October 2005 *Social Science & Medicine* 61, pp. 1776-1784. ■

Many pregnant women support abortion availability, but half would consider only a first-trimester procedure

Many pregnant women receiving prenatal care in the San Francisco Bay area support abortion availability. However, half would consider an abortion only in the first trimester, according to a study supported in part by the Agency for Healthcare Research and Quality (HS10214 and HS10856).

Researchers interviewed 1,082 demographically diverse pregnant women (nearly half were 35 years or older) in the San Francisco Bay area, who were enrolled in prenatal care at less than 20 weeks' gestation. About 25 percent had undergone expanded serum screening, 15 percent had an

amniocentesis performed in the second trimester, and 6 percent had received chorionic villus sampling performed at 9 menstrual weeks to detect fetal chromosomal disorders.

Most women (92 percent) supported abortion availability. Half (50 percent) were willing to consider an abortion, but would do so only in the first trimester. Among pregnant women willing to consider an abortion in the first or second trimester, 84 percent would do so after rape or incest or if their life was endangered and 76 percent would if their fetus had Down syndrome. Pregnant women considering abortion were more likely to be white, older, have had a

previous abortion, and to express distrust in the health care system. Women who would not consider abortion were more likely to have several children, be married or living with a partner, and express greater faith and fatalism about their pregnancy outcome.

More details are in "Abortion attitudes of pregnant women in prenatal care," by Lee A. Learman, M.D., Ph.D., Eleanor A. Drey, M.D., Elena A. Gates, M.D., and others, in the June 2005 *American Journal of Obstetrics and Gynecology* 192, pp. 1939-1947, 2005. ■

Child/Adolescent Health

Low-dose insulin does not affect weight or physical development of children at risk for developing type 1 diabetes

Low-dose insulin treatment over 2 years does not affect the weight, body mass index (BMI), or physical development of children and adolescents at risk for developing type 1 (insulin-dependent) diabetes, according to a study supported in part by the Agency for Healthcare Research and Quality (HS00063). The study did not find that insulin, at the low dose that was used, either promotes or protects against weight gain.

Harvard Medical School researcher, Erinn T. Rhodes, M.D., M.P.H., and colleagues compared differences in weight change, BMI, and physical development between two groups of predominantly white children and adolescents (aged 4 to 19) who had more than a 50-percent risk of developing type 1 diabetes within 5 years. They randomized 100 children and adolescents into 2 groups. The first group (55 children) received injections of low-dose insulin twice daily and an annual intravenous insulin infusion. The

second group (45 children) were closely monitored and did not receive either insulin or a placebo.

The researchers found no differences over 2 years between the 2 groups for changes in weight, height, BMI, or Tanner stage (child's stage of growth and development). One explanation for the lack of change is that the central nervous system effects of insulin (weight loss) and peripheral nervous system effects (weight gain) may be mutually offset because of the low dose of insulin used in the study. More research is needed to validate these findings in other pediatric groups.

See "Effect of low-dose insulin treatment on body weight and physical development in children and adolescents at risk for type 1 diabetes," by Dr. Rhodes, Joseph I. Wolfsdorf, M.B., B.Ch., David D. Cuthbertson, M.S., and others in the August 2005 *Diabetes Care* 28(8), pp. 1948-1953. ■

Clinicians are more likely to counsel youth diagnosed with obesity about diet and exercise

About 15 percent of children and adolescents in the United States are either overweight or obese. A new study finds that when obesity is diagnosed in children aged 2 to 18 years, clinicians are more likely to counsel them and their parents about diet and exercise.

Researchers, supported in part by the Agency for Healthcare Research and Quality (HS13901), examined blood pressure screening and diet and exercise counseling for children aged 2 to 18 years who were diagnosed with obesity during well-child visits. They used data from the National Ambulatory Medical Care Survey and the National Hospital Ambulatory

Medical Care Survey from 1997-2000. Of the 39,930 ambulatory visits by this group during the study period, clinicians diagnosed obesity at less than 1 percent of all visits. When patients were diagnosed with obesity at well-child visits, clinicians assessed their blood pressure and counseled them about diet and exercise more often than they did for patients at visits where obesity was not diagnosed (61 vs. 44 percent, 88 vs. 36 percent, and 69 vs. 19 percent, respectively).

Factors associated with diet counseling at well-child visits were diagnosis of obesity, being seen by pediatricians, ages 2 to 5 years compared with 12 to 18 years, and

self-pay compared with private insurance visit. Factors associated with exercise counseling were similar to those for diet counseling, but exercise counseling occurred half as often in visits by black youths than it did in visits with white youths.

See "Screening and counseling associated with obesity diagnosis in a national survey of ambulatory pediatric visits," by Stephen Cook, M.D., Michael Weitzman, M.D., Peggy Auinger, M.S. and Sarah E. Barlow, M.D., M.P.H., in the July 2005 *Pediatrics* 116(1), pp. 112-116. ■

Elderly/Long-Term Care

Diagnosing dementia is difficult and expensive for primary care practices

Dementia afflicts from 3 to 11 percent of people aged 65 and over. Sixty percent of people with dementia have Alzheimer's disease. A study supported by the Agency for Healthcare Research and Quality (HS10884) found that diagnosing patients with dementia is difficult and expensive.

Researchers screened 3,340 elderly patients for dementia who had no cognitive symptoms during a routine visit to 1 of 7 Indianapolis urban primary care practices. Based on a positive score on a 6-item screening instrument and a score of 24 points or fewer on the Community Screening Interview for Dementia, 434 people were considered to have dementia and were eligible for diagnostic assessment.

Of the 227 people who agreed to a formal diagnostic assessment, 107 (47 percent) were diagnosed with dementia, 74 (33 percent) had cognitive impairment without dementia, and 46 (20 percent) were considered to have no cognitive deficit. After adjusting for patients who refused the diagnostic

assessment, 6 percent of the overall primary care older population had dementia. However, physicians documented dementia in the medical records of only 19 percent of all patients identified with dementia by the diagnostic assessment.

The overall estimate of the program cost was \$128 per patient screened for dementia and \$3,983 per patient diagnosed with dementia. Screening instruments alone have insufficient specificity to establish a valid diagnosis of dementia when used in a comprehensive screening program. Thus, clinicians must rely on detailed diagnostic assessments before making a dementia diagnosis.

More details are in "Implementing a screening and diagnosis program for dementia in primary care," by Malaz Boustani, M.D., M.P.H., Christopher M. Callahan, M.D., Frederick W. Unverzagt, Ph.D., and others, in the July 2005 *Journal of General Internal Medicine* 20, pp. 572-577. ■

Very elderly patients are more likely to need skilled nursing care after coronary bypass surgery

Coronary artery bypass graft (CABG) surgery can improve function and reduce symptoms of disease in people aged 80 years and older. However, after CABG surgery, these elderly patients are at higher risk for admission to a skilled nursing facility or readmission to the hospital than patients aged 65 to 69 years.

Researchers, supported in part by the Agency for Healthcare Research and Quality (HS11540), used Michigan Medicare data to retrospectively study skilled care requirements of elderly Medicare patients who underwent CABG from 1997 to 1998. Their analyses indicate that patients aged 80 years and older were 3 times more likely than those aged 65 to 69 to require admission to a skilled nursing facility within 100 days after hospital discharge. Patients aged 75 to 79 were 2.2 times more likely, and those aged 70 to 74 were 1.5 times more likely, to require similar admissions after CABG surgery than those aged 65 to 69.

Researchers also found that the time spent in skilled care facilities significantly increased with age, ranging

from an average stay of 13.3 days for those aged 65 to 69, 16.9 days for those aged 70 to 74, 19.6 days for those aged 75 to 79, and 22.9 days for those 80 and older. Overall, 50 percent of patients aged 80 and older required some skilled care after hospital discharge following CABG surgery and 27 percent stayed longer than 30 days at skilled nursing facilities. Very elderly patients may require more skilled nursing care than younger elderly persons following CABG surgery due to their higher risk of postoperative complications, prevalence of cognitive dysfunction after the surgery, and poorer social support systems, such as the absence of an independent spouse to assist them, suggest the researchers.

See "Skilled care requirements for elderly patients after coronary artery bypass grafting," by Brahmajee K. Nallamothu, M.D., M.P.H., Mary A.M. Rogers, Ph.D., M.S., Sanjay Saint, M.D., M.P.H., and others in the July 2005 *Journal of the American Geriatric Society* 53, pp. 1133-1137. ■

Men's Health

Psychological distress increases the risk of angina in men

P psychological distress in men can increase their risk of future heart attacks or angina (crushing chest pain) by 70 to 80 percent. Recent psychological distress, such as anxiety or sleep disturbance, nearly doubles their risk of angina that is not caused by coronary heart disease (CHD). These results indicate that anxiety may contribute to the development of CHD, note authors of the Whitehall II Study, who were supported in part by the Agency for Healthcare Research and Quality (HS06516).

Researchers used the General Health Questionnaire-30 to

examine the psychiatric health of 5,449 male British civil servants (aged 35 to 55 years) 3 times over a period of 7 years: phase 1 from 1985 to 1988; phase 2 from 1989 to 1990; and phase 3 from 1991 to 1993. CHD events were collected until the end of 1999. The researchers correlated the onset of psychological distress with CHD events such as death from CHD, heart attack, and angina.

Men suffering from psychological distress were more likely to have indications of underlying CHD. Indications of new distress at phase 3 nearly doubled the risk for future CHD

events. Persistent distress during phase 3 was also significantly associated with future CHD events. The effect of distress was stronger for angina than it was for either a nonfatal heart attack or death from CHD.

See "Psychological distress as a predictor of CHD events in men: The effect of persistence and components of risk," by Amanda Nicholson, Ph.D., Rebecca Fuhrer, Ph.D., and Michael Marmot, Ph.D., in the July/August 2005 *Psychosomatic Medicine* 67, pp. 522-530, 2005. ■

Black and Hispanic patients are more likely to be readmitted to hospitals for complications associated with diabetes

Black and Hispanic patients with diabetes are more likely than white patients to be readmitted to the hospital within 6 months after their initial hospitalization for complications associated with diabetes. These complications are potentially preventable with effective postdischarge care, according to a study by researchers at the Agency for Healthcare Research and Quality. Study findings suggest that disparities in diabetes-related outcomes are more likely due to differences in outpatient management of the disease than to the quality of inpatient care.

Researchers analyzed the likelihood of readmission within 6 months for adult black, Hispanic, and white patients with diabetes in 5 States who had been hospitalized for conditions related to diabetes. The patients were identified from the 1999 State Inpatient Databases of the Healthcare Cost and Utilization Project. After adjusting for hospital and patient characteristics, the likelihood of readmission to the hospital within 6 months was significantly higher for Hispanics than for whites across the three payer

groups: Medicare, Medicaid, and private insurance. Black patients insured by Medicare were more likely than white patients to be readmitted within 6 months.

In the Medicare subgroup, blacks and Hispanics had higher percentages of readmissions for acute and microvascular complications (for example, lower extremity and renal disease), while whites had higher percentages of readmissions for macrovascular conditions (for example, heart attack and stroke). This pattern was less evident in the private or Medicaid groups. Across all payers, blacks were more likely to be readmitted for acute complications, Hispanics for diabetes-related renal disease, and whites for heart disease.

More details are in “Racial/ethnic disparities in potentially preventable readmissions: The case of diabetes,” by H. Joanna Jiang, Ph.D., Roxanne Andrews, Ph.D., Daniel Stryer, M.D., and Bernard Friedman, Ph.D., in the September 2005 *American Journal of Public Health* 95(9), pp. 1561-1567. Reprints (AHRQ Publication No. 05-R071) are available from AHRQ.* ■

Studies examine rates of morbid obesity and bariatric surgery and risk of death after the surgery

An estimated 6 million people in the United States were considered morbidly obese in 2001. Morbid obesity is defined as having a body mass index of 40 kg/m² or more or of 35 kg/m² with medical problems related to obesity. Bariatric surgery remains the most effective therapy for certain patients with morbid obesity. Bariatric surgery reduces the size of the stomach to a tiny pouch and usually bypasses the small intestine so that stomach contents empty directly into the large intestine. About 75 percent of patients lose 50 to 75 percent of their body weight within 2 years and keep it off.

Two studies supported by the Agency for Healthcare Research

and Quality (T32 HS13833) examined regional differences in morbid obesity and bariatric surgery rates and risk factors for patient death after surgery. The first study concluded that regional bariatric surgery rates do not reflect the rates of morbid obesity in individual regions. The second study found that men, older people, those insured by Medicaid, and those who required re-operation were more likely to die in the hospital after the surgery. Both studies are briefly discussed here.

Poulose, B.K., Holzman, M.D., Zhu, Y., and others. (2005, July). “National variations in morbid obesity and bariatric surgery use.” *Journal of the American*

***College of Surgeons* 201, pp. 77-84.**

According to this study, national estimates indicate that bariatric surgery rates do not parallel the burden of morbid obesity by region or age. Researchers identified 69,490 patients who underwent bariatric surgery from the 2002 Health Care Cost and Utilization Project National Inpatient Sample. Regional rates of people with morbid obesity were estimated using the Centers for Disease Control and Prevention 2002 Behavioral Risk Factor Surveillance System. The researchers estimated regional rates of bariatric surgery based on the

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number of people in each region who were obese and potentially eligible for the surgery.

Over 5 million (nearly 2 percent) of people in the United States were morbidly obese in 2002; 60 percent were women, and 63 percent of these women were between the ages of 18 to 49. The rates of bariatric surgery procedures per 100,000 morbidly obese individuals ranged from a low of 139 in men aged 60 years and older in the Midwest to a high of 5,156 in women aged 40 to 49 years in the Northeast.

For both men and women, bariatric surgery rates in the West and Northeast were nearly 2 to 4 times higher than they were in the South, respectively. Rates in the Midwest were similar to those in the South. However, the rate of morbid obesity was lowest in the

Northeast and West and highest in the Midwest and South among people aged 60 years or younger. The researchers suggest that these findings underscore the need to improve access to bariatric surgery in regions with higher rates of morbid obesity and lower rates of the surgery.

Poulose, B., Griffin, M.R., Moore, D.E., and others. (2005, July). "Risk factors for post-operative mortality in bariatric surgery." *Journal of Surgical Research* 127, pp. 1-7.

From 0.5 to 1.5 percent of patients who undergo bariatric surgery die in the hospital after the operation. Being male, older than 39 years, insured through Medicaid, or requiring re-operation during the initial hospitalization places a person at a higher risk of dying postoperatively than other bariatric surgery patients, according to this study. The

researchers identified 54,878 adults who underwent bariatric surgery from the 2001 Nationwide Inpatient Sample (NIS) of U.S. hospital discharges. They examined the effect of sex, age, insurance status, and need for re-operation on postoperative mortality.

The average length of hospital stay (LOS) was nearly 4 days and overall mortality after the surgery was 0.4 percent. The average LOS of those who died was nearly 18 days. After adjusting for coexisting medical problems and demographics, the researchers found that men were twice as likely as women to die in the hospital after bariatric surgery. Patients aged 39 and older were nearly 3 to 4 times more likely to die than younger patients. Patients insured through Medicaid had nearly 5 times the risk of dying than privately insured patients, and those requiring re-operation were at 22 times higher risk of dying. ■

Hypothermia increases the chances of dying among people admitted to the hospital with major trauma

Current trauma resuscitation guidelines call for aggressive pre-hospital and in-hospital measures to prevent hypothermia in severely injured patients (for example, use of warming blankets and warmed intravenous fluids). However, these guidelines are based on limited patient series, and some studies suggest that applying hypothermia as a therapeutic measure may benefit selected trauma patients. A new study, supported in part by the Agency for Healthcare Research and Quality (HS13628), clarifies the role of hypothermia in the outcomes of trauma patients. Henry E. Wang, M.D., M.P.H., University of Pittsburgh School of Medicine, and colleagues found that patients with major trauma who were admitted to the hospital with hypothermia were more likely to die than those who were admitted without hypothermia.

Researchers retrospectively analyzed deaths among all trauma patients 16 years and older who were seen at trauma centers in Pennsylvania in between 2000 and 2002. Of 38,520 patients, 1,921 (5 percent) were hypothermic upon hospital admission. Overall, hypothermia independently tripled the chances of death for all these patients. Among patients with isolated severe head injury, hypothermia was associated with more than twice the risk of death.

More details are in "Admission hypothermia and outcome after major trauma," by Dr. Wang, Clifton W. Callaway, M.D., Ph.D., Andrew B. Peitzman, M.D., and Samuel A. Tisherman, M.D., in the June 2005 *Critical Care Medicine* 33(6), pp. 1296-1301. ■

Rural residents lack timely access to trauma centers that could save their lives

Severely injured patients who wait longer than an hour for medical care are at higher risk of death than those who receive medical care sooner. According to a study supported in part by the Agency for Healthcare Research and Quality (HS10914), 46.7 million Americans who live in mostly rural areas do not have access to either a level I or II trauma center within an hour's travel distance. In contrast, 42.8 million Americans who live in mostly urban areas have access to 20 or more level I or II trauma centers within an hour.

Level I and II trauma centers provide comprehensive care for the most critically injured patients and provide immediate access to trauma surgeons, anesthesiologists, and

other physician specialists. Level III trauma centers provide prompt assessment, resuscitation, surgery, and stabilization, and can transfer patients to a level I or II center when necessary.

Researchers used data from two national databases to geographically analyze trauma centers, base helipads, and block group population for all 50 states and the District of Columbia, as of January 2005. The purpose of this analysis was to estimate the proportion of U.S. residents who have access to trauma centers that can be reached within 45 and 60 minutes. Results showed that an estimated 69.2 percent and 84.1 percent of all U.S. residents had access to a level I or II trauma center that could be reached within

45 and 60 minutes, respectively. About 27 percent of U.S. residents had access to level I or II trauma centers accessible that could be reached only by helicopter within 45 to 60 minutes.

The researchers suggest that access to trauma care in the United States can be improved by selecting trauma centers based on geographic need, appropriately locating medical helicopter bases, and establishing formal agreements for sharing trauma care resources across States.

See "Access to trauma centers in the United States," by Dr. Branas, Ellen J. MacKenzie, Ph.D., Justin C. Williams, Ph.D., and others, in the June 1, 2005 *Journal of the American Medical Association* 293, pp. 2626-2633. ■

Clinical Decisionmaking

Patient preferences for participating in clinical decisionmaking vary by sex, ethnicity, and age

Physicians are advised to encourage patients to actively participate in medical decisions affecting their care. However, a study supported by the Agency for Healthcare Research and Quality (HS09982) found that while most people want to participate in decisionmaking, at least 50 percent want final decisions to be made by their physicians.

Researchers surveyed 2,765 adults in U.S. households in conjunction with the 2002 General Social Survey and examined associations between respondents' demographics and health status and their preferences for participation in medical decisions. Nearly all respondents (96 percent) preferred to be offered choices and to be asked their opinions; however, 52 percent preferred to leave final decisions

to their physicians, and 44 percent preferred to rely on physicians for medical knowledge rather than seeking out information themselves.

Women were more likely than men to prefer a patient-directed, active role in decisionmaking. Blacks and Hispanics were more likely to prefer that physicians make the decisions. Preferences for taking a more active role in decisionmaking increased with age up to 45 years, but then declined.

More details are in "Not all patients want to participate in decision making: A national study of public preferences," by Wendy Levinson, M.D., Audiey Kao, M.D., Ph.D., Alma Kuby, M.B.A., and Ronald A. Thisted, Ph.D., in the June 2005 *Journal of General Internal Medicine* 20, pp. 531-535. ■

Educating patients with asthma on avoiding allergens is suboptimal

People with asthma can improve their airway functioning and reduce their symptoms such as coughing and wheezing by avoiding allergens (substances to which they are allergic). A study supported in part by the Agency for Healthcare Research and Quality (HS09973) found that 60 percent of inner-city adults with persistent asthma had been evaluated for allergen sensitivity; however, only about half of adults who were allergic to dust mites or mold were advised on how to minimize their exposure to those allergens.

Researchers examined the responses of 169 inner-city adults to a questionnaire that assessed

tests for allergen sensitization, allergen avoidance education, and patient adherence to recommendations. The adults studied had been hospitalized for asthma during a 12-month period. Overall, 60 percent of these adults had been evaluated for allergen sensitivity. Allergy testing was 3 times more likely among women, 7 times more likely for those who used oral steroids most or all of the time, and 74 percent less likely among smokers.

Among those who were evaluated, 94 percent were sensitized to at least one allergen: 91.5 percent to dust mites, 90.5 percent to outdoor allergens, 77.9 percent to cats, 69.5 percent to

dogs, 68.4 percent to molds, and 61 percent to cockroaches. About half of the patients sensitized to dust mites (55 percent) or mold (53 percent) were given advice on how to minimize exposure to these allergens. Patients varied greatly as to how well they followed this advice.

See “Allergen sensitization evaluation and allergen avoidance education in an inner-city adult cohort with persistent asthma,” by Paula J. Busse, M.D., Jason J. Wang, Ph.D., and Ethan A. Halm, M.D., M.P.H., in the July 2005 *Journal of Allergy and Clinical Immunology* 116, pp. 146-152. ■

Generalist physicians with appropriate experience and expertise can provide high-quality care to patients with HIV

Patients with human immunodeficiency (HIV) disease require specialized care in managing complex medication regimens and treating other medical conditions such as hepatitis C infection or high cholesterol and insulin resistance that result from highly active antiretroviral therapy (HAART). Generalist physicians with appropriate experience and expertise in HIV care can provide these patients with the same quality of care as infectious disease specialists.

Researchers, supported by the Agency for Healthcare Research and Quality (HS10408), assessed the relationship between physician specialty training and expertise and quality of care delivered to patients with HIV who received care at 64 Ryan White CARE (Comprehensive AIDS Resources Emergency) Act-funded clinics. The patients' medical records were reviewed to determine the quality of care based on measures such as use of HAART for eligible patients, screening and prophylaxis for HIV-related conditions, and measurement of CD4 cell counts and viral loads.

Of the 177 responding physicians caring for these patients, 58 percent were general medicine physicians and 42 percent were infectious disease specialists. Nearly two-thirds (63 percent) of generalists considered themselves experts in HIV care. More than 80 percent of patients with HIV being treated by infectious disease specialists and expert generalists were receiving HAART compared with 73 percent of patients of nonexpert generalists. Similarly, about 40 percent of patients who received care from infectious disease specialists or expert generalists had their viral load controlled compared with 31 percent of patients receiving care from nonexpert generalists.

See “Physician specialization and the quality of care for human immunodeficiency virus infection,” by Bruce E. Landon, M.D., M.B.A., Ira B. Wilson, M.D., M.Sc., Keith McInnes, M.S., and others, in the May 23, 2005 *Archives of Internal Medicine* 165, pp. 1133-1139. ■

Studies detail the impact of costs on drug and health care use

A new study supported by the Agency for Healthcare Research and Quality (HS09622) found that the proportion of Medicare beneficiaries who skipped medications and treatments because of costs increased nearly 4 percent in 2000. A second AHRQ-supported study (HS11434) revealed that when faced with an emergency department copayment, Medicare and other patients most commonly sought care from other available alternatives, but rarely avoided medical care altogether. According to a third study by AHRQ and other researchers, privately and publicly insured individuals with low incomes or functional impairments encounter significant financial barriers to care, despite having health insurance. The three studies are discussed briefly here.

Wilson, I.B., Rogers, W.H., Chang, H., and Safran, D.G. (2005, August). "Cost-related skipping of medications and other treatments among Medicare beneficiaries between 1998 and 2000." *Journal of General Internal Medicine* 20, pp. 715-720.

The proportion of people aged 65 and older who skipped medications due to cost burden increased from 9.5 percent in 1998 to 13.1 percent in 2000, according to this study. However, the cost-related skipping rate was estimated to be 81 percent when using a model representing a person age 65, who was in poor health, had no prescription drug coverage, had out-of-pocket costs of over \$50 per month, had a low income, and had a poor physician-patient relationship.

Increases in out-of-pocket medication costs (far in excess of the Consumer Price Index between 1998 and 2000) and HMO membership (which had limited drug benefits during this period) explained most of the increase in cost-related skipping. Having a low income and lacking prescription drug coverage were also associated with more skipping. Having a better physician-patient relationship, better physical and mental health, and greater age were associated with less cost-related skipping.

This is the first study to show the important role of the physician-patient relationship in cost-related medication skipping. The findings were based on data from the Study of Choice and Quality in Senior Health Care, a longitudinal study of Medicare beneficiaries aged 65 and older in 13 States.

Reed, M., Fung, V., Brand, R., and others. (2005, August). "Care-seeking behavior in response to emergency department copayments." *Medical Care* 43(8), pp. 810-816.

When patients are faced with out-of-pocket costs such as an emergency department (ED) copayment, they often seek care from other available alternatives, but rarely avoid medical care altogether, according to this study. Researchers conducted telephone interviews with a random sample of 932 adult members of a large health delivery system about knowledge of their copayment level for ED services and how cost-sharing affected their decisions about where or when to seek care.

Overall, 82 percent of adults surveyed had a copayment for ED services that ranged between \$5

and \$100, and 41 percent correctly reported the amount of this copayment. Concerns about the ED copayment led nearly one in five patients (19 percent) to alter how they sought care in the past year. Twelve percent sought care from an alternate delivery site (such as an urgent care or primary clinic), 12 percent contacted a provider by telephone or the Internet, 9 percent delayed going to the ED, and 2 percent avoided medical care altogether.

After adjusting for other factors associated with care-seeking behavior, the ED copayment amount was significantly associated with reported changes in care-seeking behavior. Patients with lower annual household income or lower health status were more likely to change their behavior because of the ED copayment. These findings suggest that modest levels of cost sharing for emergency care can encourage patients to seek alternative forms of care without leading them to avoid care altogether.

Weinick, R.M., Byron, S.C., and Bierman, A.S. (2005, June). "Who can't pay for health care?" *Journal of General Internal Medicine* 20, pp. 504-509.

Researchers found that privately and publicly insured individuals who have low incomes or functional impairments encounter significant financial barriers to care despite having health insurance. Using data from the Commonwealth Fund 2001 Health Care Quality Survey of U.S. adults, researchers examined measures of avoiding health care due to cost. These included delaying or not

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seeking care, not filling prescriptions for medicine, and not following a recommended treatment plan.

The proportion of Americans surveyed who had difficulty affording health care varied by

income and health insurance coverage. Overall, 16.9 percent reported at least 1 financial barrier to care. Independent of insurance coverage and other demographic characteristics, the poor, near poor, and middle-income respondents, as well as those with functional impairments, were significantly more likely than others to avoid care due to cost. Among those with

private insurance, the poor (28.4 percent), near poor (24.3 percent), and functionally impaired (22.9 percent) were more likely to report avoiding care due to cost. In models that accounted for several factors affecting use of care, the uninsured were over twice as likely to have trouble paying for care. ■

Agency News and Notes

AHRQ announces audio newscast series: Healthcare 411

AHRQ has a new service to help keep you informed of the Agency's latest health care research findings, news, and information. It's Healthcare 411- a weekly audio newscast that features synopses of our latest findings and information on current health care topics. This innovative tool will provide AHRQ researchers with an opportunity to be heard beyond the research community. Go to www.healthcare411.org to hear the newscasts through your computer or download them to a portable digital player such as an iPod®.

The first audio newscast was a Special Report with AHRQ Director Dr. Carolyn Clancy answering questions about health care quality. She discussed preventive care, medical errors, and what people can do to ensure they

get quality health care. Regular newscasts include short audio reports on a variety of AHRQ-supported research and always include an interview with one of the researchers. Each Healthcare 411 newscast is about 10 to 15 minutes long. All new and archived newscasts remain available on the Healthcare 411 site.

The technology of this newscast is often called podcasting, which is a way of making a radio-type broadcast available on demand. If your computer has a sound card and speakers and can play mp3 audio files, you will be able to listen to the audio on your computer. But if you want to receive all AHRQ newscasts automatically, you will need subscription software. The AHRQ subscription is free.

In addition to our Healthcare 411 Web site, the weekly newscasts will be distributed through Apple® iTunes®, Yahoo® PodCasts, and other Web sites that provide health information to their customers, patients, students, employees, or health care personnel. Parts of the audio newscasts also are being used by the Department of Health and Human Services' new radio service, Healthbeat, and are being distributed to radio stations across the country as well as audio networks within stores such as Giant Food and Wal-Mart.

Additional information on our newscasts, podcasting, and subscriber software can be found on the Healthcare 411 Web site (www.healthcare411.org). ■

New Electronic Grant Application Process

AHRQ is transitioning to a new electronic grant application process that will replace the current PHS 398 grant application form with the Standard Form (SF) 424 Research and Related Grant Application. The conversion to the new form and electronic submission process will be phased in over the next two years. The first funding mechanism to make the transition will be AHRQ's small conference grants (R13), starting with the December 20, 2005 submission date. To help guide applicants through this transition, AHRQ has created an information pathway page on the Agency's Web site at www.ahrq.gov/path/egrants.htm. For additional information, also see the Announcements section of the October 2005 issue of *Research Activities* at www.ahrq.gov/research/oct05. ■

Save the date: Translating Research Into Practice 2006 Conference

The fourth annual Translating Research Into Practice (TRIP) conference will be held on July 10-12, 2006, at the Omni Shoreham Hotel in Washington, DC. Co-sponsored by the Agency for Healthcare Research and Quality and the National Cancer Institute, this year's conference title is *TRIP: Optimizing the Medium and the Message*.

Plenary sessions will highlight strategies and tools for designing TRIP interventions to effectively reach different audiences and settings. The conference will provide an opportunity for health services researchers, clinicians, health care managers, payers, patient and consumer representatives, industry representatives, and policy makers to share innovative TRIP research and implementation methods, case studies, and other experiences.

Current working session titles include:

- Implementing Actionable Research in "Real World" Settings
- Organizational Transformation at the Practice Level: Tools and Strategies
- Organizational Transformation at the System Level: Tools and Strategies
- Translating Evidence into Clinical Practice Guidelines

- Translating Evidence into Coverage Policies
- Communicating Public Health Messages
- Promoting Cultures of Patient Safety and High-Reliability Organizations
- Health Information Technology/e-Health Tools for TRIP
- Lessons from Mass Media Advertising
- TRIP Tools for Health Literacy
- TRIP to Reduce Health Disparities
- Does Research Translate Into Practice or Practice into Research?
- Is Changing Practice Cost-Effective?
- Networking Research into Practice
- TRIP Model of Partnerships Between "Real World" and "Academics"
- Singular Sensations: The Role of Champions and Opinion Leaders in TRIP
- The Collaborative Model as a Medium for TRIP

Additional conference information, including the Call for Abstracts and conference website, will be available in early 2006. ■

AHRQ launches new Effective Health Care Program

AHRQ has launched its new Effective Health Care Program to help clinicians and patients determine which drugs and other medical treatments work best for certain health conditions. Thirteen new research centers, as well as an innovative center for communicating findings, were named as part of the three-part program.

The \$15 million program will support the development of new scientific information through research on the outcomes of health care services and therapies, including drugs. By reviewing and synthesizing published and unpublished scientific studies, as well as identifying important issues where existing evidence is insufficient, the program will help provide clinicians and patients with better information for making treatment decisions.

The new program includes three components:

- **Comparative Effectiveness Reports.** The program builds on the existing network of 13 Evidence-based Practice Centers (EPCs). The EPCs will focus on comparing the relative effectiveness of different treatments, including drugs, and identifying gaps in knowledge where new research is needed.
- **Network of Research Centers.** A new network of 13 Developing Evidence to Inform Decisions about Effectiveness (DEcIDE) research centers will carry out accelerated studies, including research aimed at filling knowledge gaps about treatment effectiveness. Operating under strict procedures to guarantee privacy and security, DEcIDE centers will use de-identified data available through insurers, health plans and other

partner organizations to answer questions about the use, benefits and risks of medications and other therapies. Collectively, the DEcIDE centers will have access to de-identified medical data for millions of patients, including Medicare's 42 million beneficiaries.

- **Making Findings Clear for Different Audiences.** A new Clinical Decisions and Communications Science Center, named the Eisenberg Center in honor of the late AHRQ director, John M. Eisenberg, M.D., is an innovative effort aimed at improving communication of findings to a variety of audiences, including consumers, clinicians, payers, and health care policy makers. The center will translate findings in ways appropriate for the needs of the different stakeholders. It also will conduct its own program of research into effective communication of research findings, in order to improve usability and rapid incorporation of findings into medical practice.

The new program was authorized under Section 1013 of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003. An initial set of 10 priority conditions of special importance for Medicare was announced last December, including ischemic heart disease, cancer, stroke, arthritis and others. A hallmark of the program will be the transparency of the data and processes used to arrive at findings.

More information on the Effective Health Care Program can be found on its Web site www.effectivehealthcare.ahrq.gov. ■

Research Briefs

Asada, Y. (2005, April). "Medical technologies, nonhuman aids, human assistance, and environmental factors in the assessment of health states." (AHRQ grant HS13116). *Quality of Life Research* 14, pp. 867-874.

Researchers have developed various health state measures, which focus on functionality and general symptoms, to quantify a variety of possible health states between full health and death. A

person's functionality and general symptoms can be assessed either with or without medical technologies (for example, a pacemaker), nonhuman aids (for example, a wheelchair), human assistance (meaning the help of another person), and accommodating environmental factors (for example, a barrier-free environment). This paper explores the implications these distinctions have for the construction and

application of health status measures. The author concludes that it is reasonable to include medical technologies and nonhuman aids in health assessment, but not human assistance or accommodating environmental factors.

Clarke, P., Evans, S.H., Shook, D., and Johanson, W. (2005). "Information seeking and

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compliance in planning for critical care: Community-based health outreach to seniors about advance directives.” (AHRQ grant HS09232). *Health Communication* 18(1), pp. 1-22.

This study, a field experiment in three States, investigated factors that encourage older adults to explore critical-care choices such as preferences for life-sustaining treatment and end-of-life decisions and to complete an advance directive. Researchers developed a program that offered a detailed guide to critical-care choices and telephone counseling. Results indicated that cognitive variables such as participants’ sense of their vulnerability in the future and having confidence in their ability to prepare now for future care helped determine which older adults requested a guide. Compliance in completing an advance directive, however, depended solely on their pattern of reading the guide and talking about critical care. Neither information seeking nor completing an advance directive correlated with participants’ actual health status.

Crampton, P., Davis, P., Lay-Vee, R., and others. (2005). “Does community-governed nonprofit primary care improve access to services? Cross-sectional survey of practice characteristics.” (AHRQ grant HS00003). *International Journal of Health Services* 35(3), pp. 465-478.

This study’s findings support the shift from private, for-profit primary care practices to nonprofit community-governed primary care practices in New Zealand and elsewhere. Researchers used data from a nationally representative cross-sectional survey of general

practitioners to compare certain characteristics of community-governed nonprofit and private for-profit primary care practices in New Zealand. Community-governed nonprofit practices charged lower patient fees per visit and employed more Maori and Pacific Islanders as staff members, thus reducing financial and cultural barriers to health care access compared with for-profit practices. Nonprofit practices also provided a different range of services and were more likely than for-profit practices to have written policies on quality management, complaints, and critical events, and to carry out locality service planning and community needs assessments.

Crawford, M.A., Harrington, T.M. Russell, T.V., and others. (2005, July). “Practice extenders and PDA-based counseling for smoking and unhealthy diet.” *Annals of Family Medicine* 3(S2), pp. S41-S43.

In this study, 8 family physicians in 5 Alabama practices delivered personal digital assistant (PDA)-based behavioral smoking and obesity interventions to more than 200 adult patients during routine clinic visits over a 9-month period. PDA value-added features included an automatic body mass index calculation and behavior modification tips to personalize each intervention. Patients who indicated readiness to change at the “assess” step were informed of the availability of practice extender services to “assist” them and “arrange” interventions to support their efforts to change unhealthy behaviors. The authors indicate that a PDA-based behavior change intervention and referral system has the potential to be successfully implemented in the clinical setting.

Flanders, S.A., Kaufman, S.R., and Saint, S. (2005, June). “Hospitalists as emerging leaders in patient safety: Targeting a few to affect many.” (AHRQ grant HS11540). *Journal of Patient Safety* 1(2), pp. 78-82.

An increasingly large number of hospitalized patients are cared for by a relatively small cadre of physicians known as hospitalists. The authors of this article suggest that hospitalists have the potential to emerge as leaders in patient safety and propose a consortium of nine regional hospitalist programs as a way to enhance patient safety. The Hospitalists as Emerging Leaders in Patient Safety (HELPS) Consortium of Southeastern Michigan is a first-of-its-kind program designed to identify proven patient safety practices and facilitate their widespread dissemination to consortium members. The authors discuss the HELPS Consortium structure, barriers to translating patient safety research into practice, and challenges to implementing this project.

Kelleher, T.B., Mehta, S.H., Bhaskar, R., and others. (2005, July). “Prediction of hepatic fibrosis in HIV/HCV co-infected patients using serum fibrosis markers: The SHASTA index.” (AHRQ grant HS07809). *Journal of Hepatology* 43, pp. 78-84.

Chronic hepatitis C is characterized by slowly progressive liver fibrosis. Among patients coinfecting with human immunodeficiency virus (HIV) and hepatitis C virus (HCV), serum testing for hyaluronic acid (HA), albumin, and aspartate aminotransferase can accurately stage mild and advanced liver fibrosis, according to this study. The researchers compared serum fibrosis biomarkers in 95 people

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infected with both HIV and HCV who had indications of liver fibrosis on liver biopsy. Fibrosis scores of F3 or greater were found 27 times more often in people with HA levels greater than 86 ng/ml and 5.5 times more often in people with HA levels 41-86 ng/ml.

Ko, M., Edelstein, R.A., Heslin, K.C., and others. (2005, September). "Impact of the University of California, Los Angeles/Charles R. Drew University medical education program on medical students' intentions to practice in underserved areas." (AHRQ grant HS14022). *Academic Medicine* 80(9), pp. 803-808.

According to this study, a medical education program can have a positive effect on medical students' goals to practice in underserved areas. The researchers examined the relationships between participating in the University of California, Los Angeles/Charles R. Drew University (UCLA/Drew) Medical Education Program, a comprehensive, inner-city-based program, and medical students' intentions to practice in underserved areas. Compared with students in the UCLA School of Medicine, UCLA/Drew students were more likely to report intention to work in underserved communities at graduation.

Kralewski, J., Dowd, B.E., Kaissi, A., and others. (2005, July). "Measuring the culture of medical group practices." (AHRQ Contract No. 290-00-0017). *Health Care Management Review* 30(3), p. 184-193.

There is growing agreement that the culture of medical group practices is one of the most

important factors influencing the cost and quality of care. Yet, efforts to understand and manage these cultures have been limited by the lack of a measurement instrument. This paper presents an instrument that successfully differentiates the cultures of different types of practices. To develop the instrument, the investigators used questionnaires to collect practice culture statements from primary care physicians. A process involving 500 physicians in 267 medical group practices in 22 States was eventually refined into 39 statements that correlated with 9 cultural dimensions of group practices. A test of the instrument found that it successfully identified differences in medical group cultures.

Meyerhoefer, C.D., Ranney, C.K., and Sahn, D.E. (2005, August). "Consistent estimation of censored demand systems using panel data." *American Journal of Agricultural Economics* 87(3), pp. 660-672.

Analysis of data for policy purposes is often hampered by the arduous econometric techniques required to extract vital information. Many approaches provide a way to obtain consistent estimates of disaggregated demand models, but these approaches are designed for cross-sectional data, which suffer from a number of shortcomings. Chief among these shortcomings are the limited ability to control for heterogeneous preferences and the lack of significant real price variation. This article presents a method for consistently estimating large, theoretically plausible, longitudinal censored demand systems using a generalized method of moments framework.

Parsons, S.K., Shih, M.C., Mayer, D.K., and others. (2005, August). "Preliminary psychometric evaluation of the Child Health Ratings Inventory (CHRIs) and disease-specific impairment inventory-hematopoietic stem cell transplantation (DSII-HSCT) in parents and children." (AHRQ grant HS06897). *Quality of Life Research* 14, pp. 1613-1635.

The Child Health Ratings Inventory (CHRIs) generic health-related quality of life (HRQL) instrument and its Disease Specific Impairment Inventory-Hematopoietic Stem Cell Transplantation (DSII-HSCT) module is a promising measure of HRQL after pediatric HSCT, conclude the authors of this article. Although parent and child reports were moderately correlated and revealed complementary results, the unique perspectives of both raters provide a more complete picture of HRQL. A total of 122 children who underwent HSCT completed the questionnaire and 74 parents completed a parallel version of it. The instrument satisfactorily discriminated among several clinically important groups: those early in the transplant process (less than 6 months), those later in the process (more than 12 months), and those with different provider-assigned clinical severity ratings.

Robinson, J.D., and Heritage, J. (2005, July). "The structure of patients' presenting concerns: The completion relevance of current symptoms." (AHRQ grant HS10922). *Social Science & Medicine* 61, pp. 481-493.

This article uses conversation analysis to examine the problem-presentation phase of 302 visits between primary care physicians and patients with acute problems such as recent injuries or infection.

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The authors analyze how physicians inquire about patients' health status and how patients present their health problems, focusing on how both physicians and patients recognize and negotiate the completion of this part of their interaction. They argue that physicians and patients mutually orient to the presentation of current symptoms as a point of transition between the problem-presentation phase of the visit that the patient controls and the information-gathering phase that the physician controls. Physicians can use this as a resource to help them distinguish complete from incomplete presentations.

Rost, K., Dickinson, L.M., Fortney, J., and others. (2005, June). "Clinical improvement associated with conformance to HEDIS-based depression care." (AHRQ grant HS08349). *Mental Health Services Research* 7(2), pp. 103-112.

Employers have indicated that they are prepared to negotiate with health care plans to improve the quality of care for depression if a valid indicator of depression treatment quality can be developed. Such an indicator needs to measure the proportion of people in need of treatment who will receive high-quality care and predict clinical improvement.

Researchers constructed an administrative database indicator derived from Health Plan Employer Data and Information Set (HEDIS) criteria for antidepressant medication management, and tested it in 230 employed patients in 5 health plans. Seven percent of these patients were positive on the indicator, meaning that they met

the criteria of having started antidepressant medication, were continuing to take antidepressant medication, and receiving follow-up visits. Conformance to indicator criteria in this population was associated with 23 percent lessening of depression severity over 1 year. The authors conclude that calculating depression indicators for the population in treatment can be done with pre-existing administrative databases. Calculating depression indicators for the population in need is more cumbersome, but may be needed to provide a valid indicator for employer purchasers.

Shiffman, R.N., Dixon, J., Brandt, C., and others. (2005). "The guideline implementability appraisal (GLIA): Development of an instrument to identify obstacles to guideline implementation." (AHRQ grant HS10962). *BMC Medical Informatics and Decision Making* 5(23), available online at www.biomedcentral.com.

Clinical practice guidelines do not always succeed in persuading clinicians to use the best clinical practices. These researchers developed and validated a tool to evaluate the implementability of clinical guidelines, the Guideline Implementability Appraisal (GLIA). They identified indicators of implementability from the research literature to develop a GLIA that includes 31 items, arranged into 10 dimensions. Dimensions range from guideline validity and executability to novelty/innovation and effect on process of care. They conclude that GLIA may be used by guideline developers to remedy defects in their guidelines or by guideline implementers to devise implementation strategies.

Wosinska, M. (2005, August). "Direct-to-consumer advertising and drug therapy compliance." (AHRQ grant HS11600). *Journal of Marketing Research* 42, pp. 323-332.

A patient's noncompliance with drug regimens can render treatment ineffective. Drug companies have limited ability to directly influence patients' compliance with therapy which has generated an interest in direct-to-consumer advertising (DTCA) to improve compliance. Contrary to many drug industry surveys, the author of this paper found the impact of DTCA was small in economic terms, the effect spilled over to other drug brands, and, in certain cases, the effect may have decreased average compliance rates. The findings were based on a study of prescription claims data for 19,618 patients with cholesterol problems who began their cholesterol-lowering therapy during a 4-year study period. The researchers compared cholesterol-lowering prescription data with monthly brand-level advertising expenditures.

Zhao, J.H., Brunner, E.J., Kumari, M., and others. (2005, July). "APO polymorphism, socioeconomic status, and cognitive function in mid-life." (AHRQ grant HS06516). *Social Psychiatry and Psychiatric Epidemiology* 40, pp. 557-563.

The aim of this study was to investigate the association of the common apolipoprotein E gene (APOE) variants with cognitive function and cognitive decline in adult mid-life and explore the possibility that APOE genotype mediates the link between socioeconomic status (SES) and cognitive function. The researchers

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obtained data on the cognitive function and APOE genotype from 6,004 middle-aged British civil servants participating in the Whitehall II study. SES based on

civil service employment grade was strongly related to cognitive function. There was no association between APOE genotype and employment grade. There were marginal associations between APOE-E4 genotypes and semantic

fluency and relative decline as the group aged. The authors conclude that APOE-E4 has little influence on cognitive decline in mid-life, whereas SES is a strong determinant. ■

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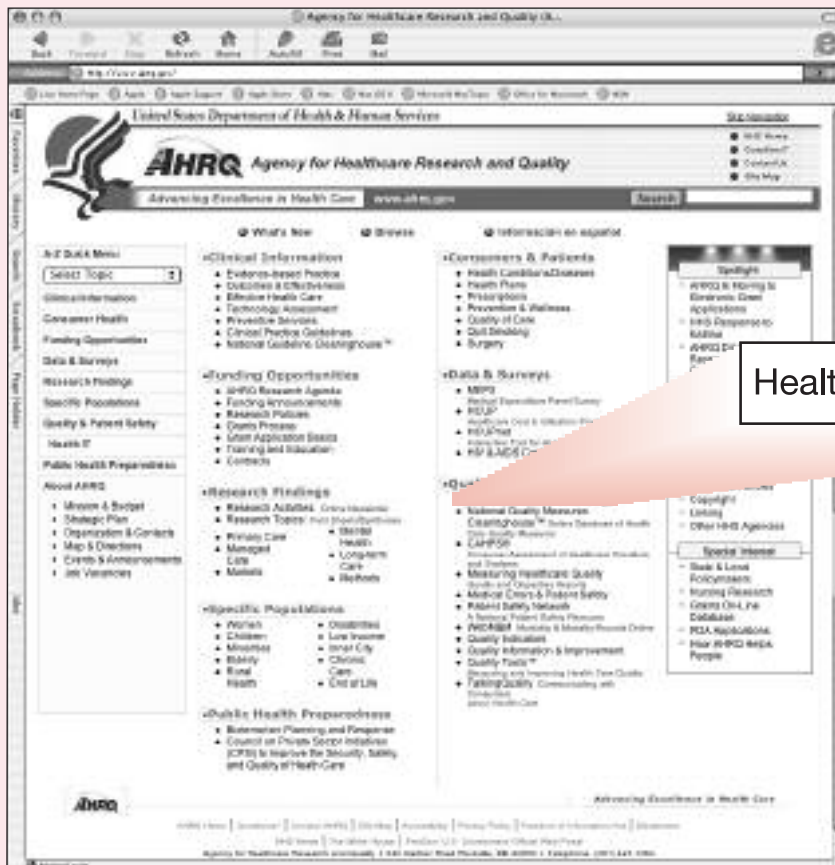
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