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Research Activities

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Highlights

Departments

Regular Features

Lack of same-day access to a primary care provider prompts many HMO patients to seek more costly urgent care

Health maintenance organizations (HMOs) that employ their own staff typically are open from 9 am to 5 pm on weekdays, with an urgent care center open from 7 am to 9 pm 7 days a week. A recent study, which was supported in part by the Agency for Health Care Policy and Research (National Research Service Award T32 HS00020), found that unscheduled patient visits to the urgent care center of one such HMO were common. Although some urgent care visits occurred after regular office hours, others occurred at the same time HMO primary care physicians (PCPs) were seeing patients. Almost half of the patients (47 percent) said they were unable to get a primary care appointment and would have preferred to see their PCP within a day or two rather than going to the urgent care department.

Improvement in HMO organization and scheduling systems to facilitate same-day access to PCPs could reduce use of HMO urgent care services and increase patient satisfaction, according to the study. Anna E. Plauth, M.D., M.P.H., and Steven D. Pearson, M.D., M.Sc., of Harvard Medical School and Harvard Pilgrim Health Care, surveyed patients 18 years of age and older for their reasons for seeking care at the urgent care department of a large, urban health center of a staff-model HMO instead of with their HMO primary care physician.

When asked why they came to the urgent care department instead of the primary care offices, 64 percent said they needed to be seen immediately, 47 percent came because the primary care offices were closed, 27 percent cited the constraints of work or childcare, and 25 percent said they were unable to get an appointment with their PCP. Only 59 percent of patients said it was easy to get an appointment with their PCP when they were sick or needed medical advice.

See "Discontinuity of care: Urgent care utilization within a health maintenance organization," by Drs. Plauth and Pearson, in the November 1998 *American Journal of Managed Care* 4, pp. 1531-2537. ■

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Prevention

Physicians vary widely in providing heart disease prevention services to their patients

Cardiovascular disease (CVD) is the leading cause of death in the United States, accounting for 41 percent of all deaths. Physicians can play an important role in preventing CVD by screening, counseling, and/or suggesting medication to address the risk factors of smoking, hyperlipidemia, hypertension, obesity, and sedentary lifestyle. Yet, depending on their specialty, doctors vary dramatically in their provision of CVD prevention services, with cardiologists being the group most likely to offer them, concludes a study supported in part by the Agency for Health Care Policy and Research (HS07892 and HS09538).

Massachusetts General Hospital researchers Randall S. Stafford, M.D., Ph.D., and David Blumenthal, M.D., M.P.P., analyzed nearly 31,000 adult visits to a national random sample of 1,521 physicians and used mathematical models to estimate the independent effects of physician and patient characteristics on CVD prevention practices. CVD prevention services offered during these visits included blood pressure measurement (50 percent of visits); cholesterol testing (5 percent); counseling for exercise (12 percent), weight (6 percent), cholesterol (4 percent), and smoking (3 percent); and treatment with antihypertensives (12 percent) and lipid-lowering medications (2 percent).

Compared with general internists, cardiologists were more apt to provide CVD prevention services (odds ratio, OR, of 1.65; 1 is equal odds), while obstetricians/gynecologists were less likely to provide these services (OR, 0.68 to 0.82), as were family physicians (OR, 0.64 to 0.74), general practitioners (0.53 to 0.63), other medical specialists (OR, 0.59 to 0.72), and surgeons (0.05 to 0.06). The researchers conclude that primary care physicians vary widely in their practices with regard to CVD prevention and call for efforts to address these practice variations.

See "Specialty differences in cardiovascular disease prevention practices," by Drs. Stafford and Blumenthal, in the *Journal of the American College of Cardiology* 32, pp. 1238-1243, 1998. ■

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Researchers study screening for hemochromatosis in primary care

Hemochromatosis is a common and treatable genetic disease characterized by excessive absorption of dietary iron. It affects 2 to 5 of every 1,000 people in the United States and may cause tissue damage and dysfunction of the liver, pancreas, heart, and pituitary gland. A gene for hemochromatosis was discovered in 1996, but many questions remain about the accuracy of genetic testing for this condition.

Interest in including screening for hemochromatosis using serum transferrin saturation testing (even without DNA test results) in the routine medical care of adults has grown in recent years. The goal of screening programs is to diagnose iron status disorders, particularly hemochromatosis, before they lead to iron overload and chronic disease states.

Two recent papers, resulting from a study supported by the Agency for Health Care Policy and Research (HS07616), examine the prevalence of hereditary hemochromatosis among primary care patients and the practical issues involved when iron status screening for hemochromatosis is implemented. The AHCPR-supported study was led by Pradyumna D. Phatak, M.D., of the University of Rochester School of Medicine and Dentistry. The two papers are summarized here.

Phatak, P.D., Sham, R.L., Raubertas, R.F., and others. (1998, December). "Prevalence of hereditary hemochromatosis in 16,031 primary care patients." ***Annals of Internal Medicine*** **129(11), pp. 954-961.**

This study of 22 primary care practices in Rochester, NY, examined the prevalence of hemochromatosis among 16,031 outpatients without a previous diagnosis of the condition. The researchers screened patients with serum transferrin saturation screening tests and offered liver biopsies to confirm the diagnosis. The prevalence of clinically proven and biopsy-proven hemochromatosis combined was 4.5 per 1,000 people in the total sample and 5.4 per 1,000 in white patients. Twice as many men were diagnosed with hemochromatosis as women.

Diagnosis of hemochromatosis is routinely followed by the screening of first-degree relatives, but routine screening for hemochromatosis in primary care is not recommended at this time. However, given the high prevalence of undiagnosed hemochromatosis among whites, these researchers recommend routine primary care screening with serum transferrin saturation testing in this population. They point out that the degree of iron overload in many of these patients suggested that irreversible damage would have occurred if the disease had gone unrecognized and tissue iron stores had continued to accumulate.

McDonnell, S.M., Phatak, P.D., Felitti, V., and others. (1998, December). "Screening for hemochromatosis in primary care settings." ***Annals of Internal Medicine*** **129(11), pp. 962-970.**

In this paper, the researchers assert that because of its availability, low cost, high sensitivity, and acceptable specificity, the transferrin saturation test is currently the most appropriate initial screening test for hemochromatosis. They address practical issues encountered by four hemochromatosis screening programs that need to be addressed when implementing iron status screening. These include changes in case definitions of hemochromatosis from the classic description, selection of screening threshold values and identification of false-positive cases, variability and lack of standardization of screening test measurements, physician education, informed consent and concerns about medical and genetic discrimination, patient compliance with screening and therapy, and incidental detection of iron deficiency.

For instance, the genetic tests and even biochemical criteria for early diagnosis of hemochromatosis are new and not yet fully correlated with clinical outcomes. A lower threshold of iron saturation should probably be used for women and blacks–two groups that have less incidence of

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hemochromatosis than white men—thus capturing more of the disease. However, lower cut-points have not been directly tested for their association with the newly described genetic mutations or clinical outcomes. Many physicians are unconvinced that hemochromatosis exists in their patient population and are unfamiliar with the transferrin saturation test. The health consequences of hemochromatosis can largely be prevented with early detection. But ethical, patient consent, and confidentiality issues regarding testing remain. ■

Routine thyroid screening is not recommended for patients suspected of having obstructive sleep apnea

Obstructive sleep apnea (OSA) and hypothyroidism (underactive thyroid) are relatively common disorders that have similar symptoms, such as breathing problems during sleep and daytime lethargy. It has been suggested that hypothyroidism might cause OSA, leading many clinicians to wonder if they should perform thyroid screening for patients with OSA. However, a recent study shows that only 1.41 percent of patients without a prior history of hypothyroidism who underwent polysomnography and thyroid function testing were found to have subclinical hypothyroidism. The study was supported in part by the Agency for Health Care Policy and Research (National Research Service Award fellowship F32 HS00109) and led by Vishesh K. Kapur, M.D., of the University of Washington, Seattle.

A more practical approach may be to limit thyroid testing to individuals who fail to show sleep-disordered breathing of sufficient severity to explain their symptoms, who do not show satisfactory improvement after effective therapy of sleep-disordered breathing, or in whom hypothyroidism is suspected based on physical exam, notes Dr. Kapur. The researchers reviewed the medical charts of 336 adult patients at a health maintenance organization who underwent polysomnography for suspected OSA. They determined patients' thyroid function status, polysomnography results, use of levothyroxine to reduce sleep-disordered breathing, and clinical signs and symptoms. Most of the patients had a history of snoring, episodes of sleep apnea (temporary cessation of breathing) witnessed by others, or daytime sleepiness.

Based on testing performed during or after the initial visit for a sleep complaint, only four patients (1.41 percent) were found to have previously undiagnosed subclinical hypothyroidism, and their only symptoms were fatigue and snoring. It is not known whether subclinical hypothyroidism causes OSA or that treating hypothyroidism would cure coexisting OSA. Even in patients with overt hypothyroidism and OSA, the effect of thyroid hormone replacement on sleep-disordered breathing has been variable, concludes Dr. Kapur.

See "Association of hypothyroidism and obstructive sleep apnea," by Dr. Kapur, Thomas K. Koepsell, M.D., M.P.H., James deMaine, M.D., and others, in the *American Journal of Respiratory and Critical Care Medicine* 158, pp. 1379-1383, 1998. ■

Outcomes/Effectiveness Research

Greater blood loss during surgery is associated with postoperative delirium

Delirium, one of the most common complications after surgery in older patients, often leads to other complications, poor recovery, longer hospital stays, and higher costs. Greater blood loss during surgery, more postoperative blood transfusions, and postoperative anemia are associated with postoperative delirium in older adults. The route of anesthesia and intraoperative hemodynamic complications—including hypotension and irregular heart rhythms (tachycardia and bradycardia)—are not associated with subsequent development of delirium, according to a study supported in part by the Agency for Health Care Policy and Research (HS06573).

Lee Goldman, M.D., M.P.H., of the University of California, San

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Francisco, Thomas Lee, M.D., M.Sc., of Partners Community Healthcare in Boston, and their colleagues studied 1,341 patients 50 years of age and older who were admitted for major elective noncardiac surgery at an academic medical center. The researchers used patients' medical charts to determine route of anesthesia; intraoperative hypotension, bradycardia, and tachycardia; blood loss; number of blood transfusions; and lowest postoperative hematocrit (proportion of red blood cells to total blood volume). They diagnosed delirium using daily patient interviews with the Confusion Assessment Method, medical records, and index of nursing intensity.

Delirium developed on or after postoperative day 2 in 9 percent of patients. The route of anesthesia was not relevant, with 7 percent of patients who received either general or spinal anesthesia developing postoperative delirium. Intraoperative hemodynamic complications did not differ in patients who did and did not develop delirium. However, despite blood transfusions, patients with a postoperative hematocrit of less than 30 percent had nearly twice the risk (odds ratio of 1.7) of delirium as those with higher hematocrits. The researchers conclude that a low postoperative hematocrit is likely to cause a central nervous system insult that predisposes the patient to delirium. They suggest that a transfusion strategy to keep hematocrit greater than 30 percent could be one component of a multifactorial intervention to reduce delirium in high-risk patients.

More details are in "The association of intraoperative factors with the development of postoperative delirium," by Edward R. Marcantonio, M.D., S.M., Dr. Goldman, E. John Orav, Ph.D., and others in the November 1998 *American Journal of Medicine* 105, pp. 380-384. ■

IV heparin is associated with more complications than some other therapies for preventing secondary stroke

Stroke affects about 450,000 people in the United States each year, and recurrent stroke is a major cause of disability and death. Aspirin, warfarin, and intravenous heparin are anticoagulants used as therapy to prevent further strokes in stroke patients. The incidence of complications due to heparin are greater than those for aspirin or warfarin, concludes a study supported in part by the Agency for Health Care Policy and Research (Stroke PORT contract 290-91-0028). Based on an extensive analysis of clinical records, the study found that complication rates were 3.5 for aspirin and 7.9 for warfarin per 100 person-years and 0.30 for heparin for 100 person-days of treatment (the equivalent of 108 per 100 person-years of heparin treatment).

These complications occurred in a group of Rochester, MN, patients who, between 1985 and 1989, received aspirin (339 patients) or warfarin (145 patients) within 2 years after first ischemic stroke, transient ischemic attack, or amaurosis fugax (an episode of partial blindness lasting 10 minutes or less), or received intravenous heparin (201 patients) within 2 weeks after one of these three events.

The percentage of patients who developed complications while receiving heparin was small, but obviously, it should be used selectively and carefully to avoid over-anticoagulation, according to these researchers. The risk of gastrointestinal hemorrhage during short-term heparin administration for acute stroke patients appears to be considerably greater than for similar patients receiving long-term treatment with warfarin and aspirin. This could be due to a number of factors, including the ease with which patients may be accidentally over-treated with intravenously administered heparin and a possible propensity for stress-related hemorrhagic gastroduodenal ulceration or gastritis in the setting of acute stroke, particularly stroke causing severe neurologic deficits.

For both aspirin and warfarin, most complications occurred within the first year of treatment. Patients who had complications from warfarin therapy were generally older at the time of their initial stroke-related event than patients who did not have complications.

See "Frequency of major complications of aspirin, warfarin, and intravenous heparin for secondary stroke prevention," by George W. Petty, M.D., Robert D. Brown, Jr., M.D., Jack P. Whisnant, M.D., and others, in the January 5, 1999 *Annals of Internal Medicine* 130(1), pp. 14-22. ■

Elderly knee replacement patients fare better when treated in more experienced hospitals

Elderly patients undergoing total knee replacement (TKR) surgery at hospitals that perform at least 50 of these operations each year are less apt to suffer complications than those who undergo the procedure at hospitals that perform fewer TKRs. These are the findings of a recent study by the Total Knee Replacement Patient Outcomes Research Team (PORT). The study involved Medicare patients who underwent knee replacement surgery between 1985 and 1990. The TKR PORT was supported by the Agency for Health Care Policy and Research (HS06432).

These findings suggest that knee surgery should not be expanded to small hospitals; instead it should be centralized at regional centers where at least 50—and preferably 100—operations each year are assured. This is one way to reduce in-hospital complications, according to the PORT researchers. They analyzed 6 years of Medicare claims data and other data files for patients who underwent primary knee replacement from 1985 to 1990. Models were used to estimate the probability that a patient would have an in-hospital complication. The models controlled for hospital volume, other hospital characteristics, patient demographics, and patient health status. A panel of two orthopedic surgeons and two internists reviewed diagnosis codes to determine whether a complication was likely, possible, or due to anemia.

The researchers calculated that increasing the number of annual hospital knee replacement operations from 40 to 80 would decrease the probability of a likely complication for Medicare patients by about 3 percent. Including younger patients would increase the thresholds for total volume to 53 and 107. The most likely complications were disorders of fluid, electrolyte, and acid-base balance; cardiac dysrhythmias; complications affecting specified body systems; and rupture of a tendon.

For more details, see "The effect of hospital volume on the in-hospital complication rate in knee replacement patients," by Edward C. Norton, Ph.D., Steven A. Garfinkel, Ph.D., Lisa J. McQuay, and others, in the December 1998 *Health Services Research* 33(5), pp. 1191-1210. ■

Low Birthweight PORT publishes recent findings

The Low Birthweight in Minority and High-Risk Women Patient Outcomes Research Team (PORT) was supported by the Agency for Health Care Policy and Research (PORT contract 290-92-0055) to examine the factors contributing to low birthweight, particularly among low-income black women who are at increased risk for delivering low birthweight babies. In addition, PORT researchers studied practices aimed at preventing low birthweight and its major sequelae. Led by Robert L. Goldenberg, M.D., of the University of Alabama at Birmingham, the researchers recently published three studies, as well as the PORT final report. All are summarized here.

The first study demonstrates success with a five-step approach to increase doctors' use of corticosteroids, which are known to improve outcomes in preterm babies. The second study recommends that the routine screening of pregnant women for thrombocytopenia be discontinued. The third study concludes that maternal serum levels of metalloproteinase-9 do not appear to predict spontaneous preterm birth.

Leviton, L.C., Goldenberg, R.L., Baker, C.S., and others. (January 1999). "Methods to encourage the use of antenatal corticosteroid therapy for fetal maturation. A randomized controlled trial." ***Journal of the American Medical Association*** **281(1), 46-52.**

A multipart intervention to improve the quality of care that physicians give to pregnant women has been successful and shows promise of decreasing infant mortality and disability in preterm infants. The goal of the intervention was to increase the appropriate use of corticosteroids, which when given prior to a preterm birth can reduce the risk of complications. According to Dr. Goldenberg and colleagues, this intervention resulted in a 33 percent increase in the use of corticosteroids.

The study focused on minority and other high-risk women who tend to deliver preterm babies because of poor pregnancy weight gain, low prepregnancy weight, and other related lifestyle issues. Corticosteroid use is known to be one of the most effective ways to improve the outcomes of babies born preterm and reduce infant mortality and disability in preterm babies.

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The AHCPR Low Birthweight PORT researchers used a five-step intervention to increase doctors' use of corticosteroids. The quality improvement program included enlisting local medical opinion leaders to encourage doctors to administer corticosteroids, lectures for doctors on corticosteroids, reminders in medical charts to use them, regular discussions with doctors on the various preterm scenarios, and ongoing feedback on their use of corticosteroids.

Although a National Institutes of Health Consensus Conference and several medical societies have endorsed the use of corticosteroids to reduce the complications of preterm delivery, this treatment continues to be underused by the medical community. According to the researchers, the reasons for this low use include the fact that many obstetricians underestimate the benefits of corticosteroids, and hospital obstetrical practices for preterm labor do not always allow for the most optimal timing of corticosteroid administration.

Rouse, D.J., Owen, J., and Goldenberg, R.L. (1998). "Routine maternal platelet count: An assessment of a technologically driven screening practice." ***American Journal of Obstetrics and Gynecology*** **179, pp. 573-576.**

Routine screening of pregnant women for thrombocytopenia–or a low blood platelet count—a cause of bleeding disorders, should be discontinued. This practice fails to meet established pregnancy screening criteria. Also, it may actually be harmful because it may place unaffected fetuses of thrombocytopenic women and the women themselves at risk from invasive procedures. The researchers reviewed the literature to determine the potential for maternal thrombocytopenia screening to detect fetal thrombocytopenia and prevent fetal or neonatal mortality.

Autoimmune thrombocytopenia occurs in about 2 in 1,000 pregnancies and is estimated to result in neonatal intracranial hemorrhage in about 2 in 100,000 births. Gestational thrombocytopenia, which occurs in 4 percent to 7 percent of pregnancies, is 40 to 70 times as prevalent in pregnancy as the autoimmune form, but it poses negligible risk to the fetus. What's more, maternal thrombocytopenia has been shown to be a relatively insensitive indicator of severe fetal thrombocytopenia. The positive predictive value of such a screening test, that is, its ability to predict an infant who will sustain an intracranial hemorrhage based on identifying mothers with the condition, is 0.1 percent, calculate the researchers.

A maternal history of nongestational thrombocytopenia should identify nearly all of the about 2 in 1,000 women at presumed risk of delivering a severely thrombocytopenic infant. Also, women with gestational thrombocytopenia, which carries no risk to the fetus, may be diagnosed with autoimmune thrombocytopenia, and subjected needlessly to invasive diagnostic and therapeutic interventions such as cordocentesis and cesarean delivery. This screening test has an unacceptably high false-positive rate and is insensitive, that is, it fails to identify many at-risk fetuses, conclude the researchers.

Tu, F.F., Goldenberg, R.L., Tamura, T., and others. (1998). "Prenatal plasma matrix metalloproteinase-9 levels to predict spontaneous preterm birth." ***Obstetrics and Gynecology*** **92, pp. 446- 449.**

The ability to identify biomarkers that can predict the onset of preterm labor or premature rupture of membranes would be invaluable in designing a therapy to prevent these problems. The Low Birthweight PORT was hopeful that a zinc-dependent proteinase, plasma matrix metalloproteinase-9, might be such a marker. However, this study shows that although levels of this substance remain unchanged throughout pregnancy and then rise three-fold at the onset of spontaneous labor, levels obtained just prior to delivery do not appear to predict spontaneous preterm birth.

The research team used an enzyme-linked immunosorbent assay to measure matrix metalloproteinase-9 levels in plasma samples from 35 nonpregnant women and in stored plasma samples obtained during a randomized trial of zinc supplementation in pregnant women. They then periodically sampled plasma levels of women who eventually delivered following spontaneous labor or premature rupture of membranes at 24 to 32 weeks, 33 to 36 weeks, and greater than 37 weeks.

They found that plasma matrix metalloproteinase-9 levels averaged about 19 ng/mL from 19 weeks until 36 weeks and did not change significantly as the gestational age increased. This remained true regardless of whether women ultimately delivered at 24 to 32, 33 to 36, or after 37 weeks. Levels obtained prior to, but within 1 week of, presentation for delivery were not significantly different from those obtained earlier in pregnancy. Finally, levels for women in spontaneous labor were similar regardless of gestational age and were increased three-fold compared with those drawn at each prenatal visit.

Low Birthweight in Minority and High-Risk Women Patient Outcomes Research Team. Final Report. **(AHCPR Publication No. 98-N005).**

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In this final report, the researchers provide detailed findings on topics such as bacterial vaginosis, preeclampsia and low-dose aspirin therapy, biochemical predictors of preterm birth, prevention-based findings, and neonatal intensive care. The report also includes an extensive cumulative bibliography. Key findings from the 5-1/2-year PORT project are summarized for clinicians in a two-page clinical highlight (AHCPR Publication No. 98-N005).**

A limited supply of free copies of the complete report (AHCPR Publication No. 99-N005) are available from AHCPR.* Visit AHCPR's Web site at http://www.ahcpr.gov/clinic/ to access online copies of the abstract, cumulative bibliography, and the clinical highlight. ■

Foreign-born Hispanic women have fewer low birthweight babies than their American-born counterparts

One in five women of childbearing age in the United States is foreign-born. Compared with women born in the United States, foreign-born women are more likely to be socioeconomically disadvantaged and uninsured—factors usually associated with poor birth outcomes. Yet Hispanic women born in the United States are more likely than those born in other countries to have moderately low birthweight (LBW) infants. However, there is no difference by country of birth in the incidence of LBW infants among Asian, black, and white women, according to a recent study supported in part by the Agency for Health Care Policy and Research (HS07373). The study was conducted by researchers at the Medical Treatment Effectiveness Minority Research Center at the University of California, San Francisco.

The perinatal advantage of foreign-born Hispanic women—attributed by some to better diet, cultural support, and other factors—compared with other immigrant women in the United States remains a mystery. Unfortunately, the birth certificate data used in this study did not permit an assessment of the relationship between these factors and low birthweight, according to the study's lead author, Elena Fuentes-Afflick, M.D., M.P.H.

The researchers used 1992 California birth certificate data on 497,868 infants born to Asian, black, Hispanic, and white women to measure the relationship between maternal birthplace, ethnicity, and LBW infants, after adjusting for maternal and care factors. Results showed no difference in LBW infants among foreign-born Asian women and those born in the United States, but the small sample of LBW Asian infants may have made it difficult to detect a difference. Also, there was some indication that incidence of LBW infants varied by Asian subgroup. There was no difference in very LBW or moderately LBW infants between foreign-born and American-born black women and white women, after adjustments were made for maternal and infant factors affecting birthweight.

See "Maternal birthplace, ethnicity, and low birth weight in California," by Dr. Fuentes-Afflick, Nancy A. Hessol, M.S.P.H., and Eliseo J. Perez-Stable, M.D., in the *Archives of Pediatric and Adolescent Medicine* 152, pp. 1105-1112, 1998. ■

Prostate studies focus on barriers to early diagnosis, candidates for conservative treatment, and urinary tract symptoms

Physicians diagnosed prostate cancer in about 200,000 American men in 1998. Uncertainty exists about whether routine prostate-specific antigen (PSA) testing should be recommended to improve early diagnosis of prostate cancer. Also, it remains unclear whether patients benefit more from aggressive treatments such as surgery and radiation treatment or a more conservative approach of watchful waiting followed by androgen suppression for symptomatic metastatic disease. Finally, many men remain confused about the relationship between genitourinary symptoms and prostate cancer.

Researchers supported by the Agency for Health Care Policy and Research recently published three studies on these issues. The first study (National Research Service Award fellowship F32 HS00125) suggests that illiteracy is a major barrier to PSA screening and early prostate cancer diagnosis among black men. The second study, by the Prostate Patient Outcomes Research Team (HS08397), shows that men with high-grade prostate tumors are

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less likely to benefit from conservative treatment than those with low-grade tumors. The third study, also by the Prostate PORT, shows a high prevalence of bothersome genitourinary symptoms in men 18 to 50 years of age and a high proportion of men who worry that these symptoms may be related to prostate cancer.

Bennett, C.L., Ferreira, M.R., Davis, T.C., and others. (1998). "Relation between literacy, race, and stage of presentation among low-income patients with prostate cancer." *Journal of Clinical Oncology* 16(9), pp. 3101-3104.

Black men are almost twice as likely as white men to be initially diagnosed with advanced-stage prostate cancer. But it is their higher level of illiteracy, not black race, that seems to be a barrier to early cancer diagnosis, according to the authors of this study. Low-income black men are probably not aware of the need to undergo prostate cancer screening nor of the availability of screening at churches, schools, clinics, and hospitals, explain the researchers. They evaluated literacy and prostate cancer stage at diagnosis in 212 low-income men who received medical care at equal-access sites in two different cities. The researchers developed a model to evaluate predictors of metastatic prostate cancer at presentation as a function of patient age, race, literacy, and city.

Half of black men were diagnosed with advanced-stage disease compared with 36 percent of white men. Also, black men were nearly six times more likely to have literacy levels less than sixth grade (52 percent vs. 9 percent). Men with metastatic cancer at diagnosis were 1.5 times more likely to have lower literacy levels (less than sixth grade for 40 percent with stage D vs. 25 percent for stages A to C). After adjustment for differences in literacy, age, and city, race was not a significant predictor of advanced-stage prostate cancer.

Illiterate blacks may lack adequate knowledge of prostate cancer screening and early detection efforts, many of which are highlighted in written media or presented in materials that are often written at a literacy level above that of a significant portion of the American population. The researchers conclude that culturally sensitive, low-literacy educational materials developed in collaboration with the target population may improve patient awareness of prostate cancer and decrease racial variations in stage of prostate cancer at diagnosis.

Albertsen, P.C., Hanley, J.A., Gleason, D.F., and Barry, M.J. (1998). "Competing risk analysis of men aged 55 to 74 years at diagnosis managed conservatively for clinically localized prostate cancer." *Journal of the American Medical Association* 280(11), pp. 975-980.

This study demonstrates that men whose prostate biopsy specimens show Gleason score 2 to 4 disease (low-grade or highly differentiated tumor) face a minimal risk of death from prostate cancer within 15 years of diagnosis. Conversely, men whose biopsy specimens show Gleason score 7 to 10 disease (high-grade or poorly differentiated tumor) face a high risk of death from prostate cancer when treated conservatively, even when cancer is diagnosed as late as age 74. Men with Gleason score 5 or 6 disease face a modest risk of death from prostate cancer that increases slowly over at least 15 years of followup.

These findings are based on risk analysis of 767 men (aged 55 to 74 years at diagnosis) with localized prostate cancer diagnosed between 1971 and 1984, either not treated or treated with immediate or delayed hormonal therapy. They were followed for 10 to 20 years after diagnosis. Based on data gathered from patients' medical charts, the researchers estimated the probability of dying from prostate cancer or other causes given the patients' tumor histology and age at diagnosis.

The risk of dying from prostate cancer within 15 years (depending on their age at diagnosis) was 4 to 7 percent for men whose tumors had Gleason scores of 2 to 4, 6 to 11 percent for a score of 5, 18 to 30 percent for a score of 6, 42 to 70 percent for a score of 7, and 60 to 87 percent for a score of 8 to 10. A majority of the younger men in this study with Gleason 2 to 4 tumors are still alive but face a possibility of death from prostate cancer in the future. In contrast, most older men with Gleason 2 to 4 tumors have died from other medical causes rather than prostate cancer. Men with tumors with Gleason scores 7 to 10 experienced a very high rate of death from prostate cancer regardless of their age at diagnosis. Very few of these men of any age were alive 15 years later, with most dying from prostate cancer.

Collins, M.M., O'Leary, M.P., and Barry, M.J. (1998). "Prevalence of bothersome genitourinary symptoms and diagnoses in younger men on routine primary care visits." *Urology* 52, pp. 422-427.

Half of younger men visiting primary care physicians (PCPs) experience bothersome genitourinary (GU) symptoms. One-fourth of these men worry that their GU symptoms may be related to prostate cancer, according to this study. This finding alone supports the need for PCPs to address the issue of GU symptoms with their younger male patients to educate them about prostate cancer, recommend the researchers.

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They gave a self-administered survey to 101 men (mean age of 36 years) visiting a primary care group practice. The survey included the American Urological Association Symptom Index, a benign prostatic hyperplasia (BPH) impact index, as well as additional questions about GU pain, sexual dysfunction, and history of GU diseases. The researchers then reviewed the medical records of men with GU symptoms.

Half of these men reported GU symptoms, 27 percent of all men reported a history of at least one GU disease, and 17 percent had more than one; 16 percent of men had been to a urologist. Ninety percent of all men thought that PCPs should routinely ask younger men GU questions as part of their general health care. ■

Home Health Care

Nearly half of home health care clients have unmet needs such as household and nutritional support

In order for people using home health services to remain alone in their homes without family or other informal support, they often need nutritional support, help with household chores, and/or other formal services to supplement medical and nursing care. These services may be the key that enables a person to use home care rather than institutional care. Yet nearly half of home health care clients receive only some or none of the support services they need, according to a study supported in part by the Agency for Health Care Policy and Research (HS06843).

Typically, support services are not provided because they are not reimbursable, the demand for some services outweighs supply, physicians writing home care orders are not aware of all their patients' needs, and/or hospital discharge planners have not arranged for the correct mix of support services. Certain patient factors decrease the likelihood that adequate care will be provided. These include being black or a member of another minority group, having Medicaid insurance, being in a health maintenance organization, having AIDS, and receiving maternal/child health services.

Cindy Parks Thomas, P.A., M.S., of Brandeis University, and Susan M. Payne, Ph.D., of Case Western Reserve University, collected data from 2,013 home health clients of 12 nonprofit agencies in Massachusetts in 1993 to examine client-related factors associated with the need for formal support services and factors associated with whether those needs were adequately met. They asked the visiting nurse to identify unmet need for support services. Overall, 85 percent of clients needed one or more support services. Nearly half of the home health clients were not receiving enough support to meet all of their needs. Of those with any unmet need, over 80 percent needed three or more services that were not being provided. If the home health visit was a hospital admission visit or the patient had an acute condition, the need for support services was less likely to be met than if the patient was an ongoing client.The services with the highest level of unmet need were mental health, with 56 percent not receiving needed services, social work (45 percent), and speech therapy (51 percent).

Details are in "Home alone: Unmet need for formal support services among home health clients," by Ms. Thomas and Dr. Payne, in the *Home Health Care Services Quarterly* 17(2), pp. 1-20, 1998. ■

Improving communication with patients needs to be major focus for hospitalist systems

There is a trend for hospitals to use hospitalists–a dedicated group of specialists in inpatient medicine—in place of a patient's outpatient or primary care doctor to manage care while the patient is hospitalized. Removing primary care doctors from direct involvement in inpatient care may be more efficient, but its impact on patients' experiences in the hospital remains unknown. A recent study, supported in part by the Agency for Health Care Policy and Research (HS06452), cautions that this approach requires increased attention to patient education and physician-patient communication.

The study was conducted at Brigham and Women's Hospital, which, at the time of the study, did not have a designated hospitalist system. The researchers found that patients hospitalized with chest pain whose regular physicians remained involved in their hospital care were less likely than patients managed by a physician other than their regular doctor to report communication problems regarding tests (20 percent vs. 31 percent), activity after discharge (42 percent vs. 51 percent), and health habits (31 percent vs. 38 percent). Communication about test results and their meaning, what activities to do or not to do after discharge, and how to change health habits such as smoking or diet plays an important role in improved patient care and health outcomes.

Regular physicians may communicate better with their patients in the hospital because they already know their patients well, and because they are personally responsible for coordinating postdischarge care, explain the study's lead author, Steven R. Simon, M.D., M.P.H., and principal investigator, Thomas H. Lee, M.D., M.Sc., of Harvard Medical School. Nevertheless, the authors point out that communication problems are common even among patients cared for by their own doctors. Formal hospitalist systems may offer opportunities to improve communication for all patients.

The researchers surveyed 1,059 consecutive patients hospitalized with chest pain from July 1990 to February 1992. They asked about demographic, clinical, and illness data and interviewed the patients by telephone 1 month after discharge.

For more details, see "Communication problems for patients hospitalized with chest pain," by Drs. Simon and Lee, Lee Goldman, M.D., M.P.H., and others, in the December 1998 *Journal of General Internal Medicine* 13, pp. 836-838. ■

Medications comprise the third largest health care expenditure for children with HIV

In 1992, annual medication costs averaged $12,315 for a child with AIDs and $4,504 for an HIV-positive child; most of these costs were paid by Medicaid. In fact, medications are the third largest health care expenditure for children infected with HIV, according to David C. Hsia, M.D., M.P.H., J.D., of the Agency for Health Care Policy and Research. The other two-thirds of expenses are for hospital stays and outpatient services.

Dr. Hsia analyzed a representative sample of 100 children with AIDS and 41 children with HIV who participated in the 1991-1992 AIDS Cost and Services Utilization Survey (ACSUS), which was sponsored by AHCPR. He found that in 1992, average annual prescription charges for children with AIDS were nearly three times as much as for children with HIV ($2,821 vs. $1,109 for outpatient medications and $9,494 vs. $3,395 for inpatient medications). Antiretrovirals accounted for 28 percent of charges, *Pneumocystis carinii* pneumonia (PCP) prophylaxis for 3 percent, and other antimicrobials for 32 percent of medication charges. Multiplying by the reported prevalence of HIV disease in U.S. children in 1992 would produce total U.S. pharmacy charges of $48.2 million, most of which (67 to 77 percent) is paid by Medicaid.

On the basis of CD4 counts and age, about 15 percent of HIV-positive children and 14 percent of children with AIDS had indications for antiretroviral drugs but did not receive them; and 17 percent and 18

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Pediatric HIV

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percent, respectively, warranted prophylaxis for PCP but did not receive it. Consensus groups now recommend simultaneous prophylaxis of HIV-infected children with both nucleoside analogs and protease inhibitors, which will further increase prescription costs. While not burdensome to the U.S. health care system as a whole (prescription costs for these children were less than one-tenth of 1 percent of the $71 billion spent on medications in 1992), for selected payers such as Medicaid, these additional costs could compound the effects of medical inflation and HIV's increasing prevalence.

More details are in "Medications used for paediatric HIV infection in the USA, 1991-1992," by Dr. Hsia, in *AIDS Care* 10(6), pp. 761-770, 1998. Reprints (AHCPR Publication No. 99-R031) are available from AHCPR.** ■

AHCPR News and Notes

AHCPR releases evidence reports on depression and sinusitis

The Agency for Health Care Policy and Research recently released two new reports—new pharmacotherapies for treating depression and diagnosis and treatment of community-acquired acute sinusitis—from a series of evidence reports/technology assessments sponsored by AHCPR to provide public- and private-sector organizations with comprehensive, science-based information on common, costly medical conditions and health care technologies. AHCPR awarded contracts to 12 Evidence-based Practice Centers (EPCs) in the United States and Canada to review all the relevant literature on designated topics related to prevention, diagnosis, treatment, and management of common diseases and clinical conditions and technology assessments of specific medical procedures or health care technologies.

Forthcoming AHCPR evidence reports/technology assessments examine treatment of attention deficit/hyperactivity disorder, atrial fibrillation, swallowing disorders, and other topics. Recently assigned topics include management of acute chronic obstructive pulmonary disease, management of cancer pain, criteria for weaning from mechanical ventilation, and management of chronic hypertension during pregnancy.

Summaries of these two reports, as well as six earlier reports on sleep apnea, traumatic brain injury, alcohol dependence, prostate cancer, cervical cytology, and urinary tract infection (see *Research Activities*, December 1998 and January/February 1999), were released recently via the World Wide Web. To access the summaries online, visit AHCPR's Web site at **http://www.ahcpr.gov/** and click on "clinical information." Printed summaries of the reports are available from AHCPR,** and printed copies of the full reports* are expected to be available in the near future. See the back cover of *Research Activities* for ordering information.

Treatment of Depression: New Pharmacotherapies. Summary (AHCPR Publication No. 99-E013). Newer categories of antidepressant drugs are equally as effective as older generation antidepressants, and roughly equal numbers of patients drop out of clinical trials because of side effects, according to this evidence report which compares drug treatments for depression. The evidence report was prepared for AHCPR by the San Antonio Evidence-based Practice Center. The EPC found that selective serotonin reuptake inhibitors (SSRIs) are equally as effective in treating depression as older generation antidepressants, such as tricyclics.

According to Cynthia D. Mulrow, M.D., M.Sc., the study's lead investigator and a professor of medicine and geriatrics at the University of Texas Health Science Center at San Antonio, SSRIs are therapies of choice for many practitioners, but there are a lot of treatment options, and no particular class of drugs is routinely more effective than others. The EPC found that both newer and older generation antidepressants have side effects. Patients taking the newer antidepressants were more likely to have higher rates of diarrhea, nausea, insomnia, and headache. The older drugs were likely to cause adverse effects on the heart and blood pressure and result in dry mouth, constipation, dizziness, blurred vision, and/or tremors. Although anecdotal reports suggest high rates of difficulty in sexual functioning, this study found few data that directly address this problem.

The study did not compare drug costs for the nine categories of

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Evidence reports

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antidepressants, the dosing schedules, or the risk of various drug-to-drug interactions. The report was designed to provide a comprehensive evaluation of the efficacy of newer pharmacotherapies and herbal medications—such as St. John's wort, kava kava, and valeriana–for depressive disorders.

The researchers found no evidence of effectiveness of kava kava and valeriana and concluded that existing evidence about the effectiveness of St. John's wort is unclear. However, compared with placebo, the literature suggests that St. John's wort shows promise for mild to moderate depression, and it may have fewer adverse effects than older generation antidepressants. The National Institutes of Health, through the National Institute of Mental Health, the National Center on Complementary and Alternative Medicine, and the Office of Dietary Supplements, is now sponsoring a placebo-controlled, blinded clinical trial comparing St. John's wort to a selective serotonin reuptake inhibitor.

Diagnosis and Treatment of Acute Bacterial Rhinosinusitis. Summary (AHCPR Publication No. 99-E015). In treating uncomplicated acute bacterial sinusitis, inexpensive antibiotics like amoxicillin and folate inhibitors are just as effective as newer and more expensive antibiotics such as third generation cephalosporins. However, for many patients with acute sinusitis, symptoms will resolve without any antibiotics. These are the major findings of a study by the New England Medical Center Evidence-based Practice Center.

Acute sinusitis is one of the most common primary care problems in the United States. Millions of cases occur each year, affecting all age groups and all segments of the general population. Although not all people who contract the condition seek treatment from a physician, most still incur costs in buying over-the-counter medications and time lost from work. In 1992, Americans spent $200 million on prescription cold medications and more than $2 billion for over-the-counter medications.

Even though sinusitis is so common, its management is challenging. In most cases, the condition involves inflammation of both the sinuses (sinusitis) and nasal passages (rhinitis), but the causes vary. If the sinusitis is not caused by bacteria, treatment with antibiotics will have limited or no effect and may have adverse side effects. However, because patients with bacterial sinusitis may develop a more serious sinus infection, it is important to properly diagnose and treat these patients. The Center's report focuses on the diagnosis and treatment of uncomplicated, community-acquired, acute bacterial sinusitis in children and adults.

As noted by Joseph Lau, M.D., Director of the New England Medical Center EPC, the research shows that using x-rays or other diagnostic procedures is not a cost-effective initial strategy for uncomplicated patients. He calls for additional research to determine the best ways to screen patients for infections.

In addition, the study concluded that:

- More patients were cured, and cured earlier, when treated with antibiotics rather than placebo; however, about two-thirds of patients receiving placebos recovered without antibiotics.
- More research is needed to identify simple, inexpensive, diagnostic methods to help distinguish patients requiring treatment with antibiotics from those not requiring antibiotics or further evaluation.
- Research focused specifically on children is needed to determine the proper methods to diagnose and treat their sinusitis.
- Future studies should examine the connection between treatment and relapse rates or the development of recurrent sinusitis. Such results will help clarify the relationship between treatment and the amount of time it takes for symptoms to resolve. Studies also should address the optimal length of antibiotic treatment, the role of patient preferences in clinical decisionmaking, and the issue of emerging antibiotic resistance.

The conclusions about the diagnosis and treatment of acute bacterial sinusitis were based on 48 analyzable studies published within the last 30 years and involving approximately 5,036 patients, including adults and children.

The evidence report was developed by the New England Medical Center EPC in partnership with the American Academy of Otolaryngology-Head and Neck Surgery (AAOHN), the American Academy of Pediatrics (AAP), the American College of Physicians (ACP), and the American Academy of Family Physicians. The AAOHN, AAP, and ACP each have plans to develop or update clinical guidelines on acute sinusitis. ■

AHCPR announces new topics for the U.S. Preventive Services Task Force

The Agency for Health Care Policy and Research has announced the initial list of topics that will be evaluated over the coming year by the U.S. Preventive Services Task Force (USPSTF). It includes four new screening tests and/or preventive measures that have not been reviewed previously by the USPSTF in the two earlier editions of the *Guide to Clinical Preventive Services*. It also includes eight topics that the Task Force is revisiting because of newly available information on their effectiveness, new technologies, or continuing controversy.

The USPSTF, an independent panel of preventive health experts, was first convened in 1984 by the U.S. Public Health Service. It is charged with evaluating the scientific evidence for the effectiveness of a range of clinical preventive services, including common screening tests, immunizations, and counseling for health behavior change and to produce age- and risk-factor-specific recommendations for these services. The Task Force published its first set of recommendations in the 1989 *Guide to Clinical Preventive Services;* the *Guide* was revised in 1995. The third USPSTF was convened in November 1998.

These initial 12 topics were selected by the Task Force members based on preliminary work by AHCPR's two clinical prevention centers: the Research Triangle Institute and University of North Carolina at Chapel Hill (UNC) and Oregon Health Sciences University (OHSU). The selection process included a preliminary literature search of new information on prevention and screening published since 1995; consultation with professional societies, health care organizations, and outside prevention experts; a review of current levels of controversy and variation in practice; and consideration of the potential for a change from current USPSTF recommendations. Additional topics for new assessments and updates will be selected and announced periodically over the next 2 years. The new topics are:

- Chemoprophylaxis (for example, tamoxifen and related drugs) to prevent breast cancer.
- Vitamin supplementation to prevent cancer or coronary heart disease (vitamin E, folate, beta carotene, and vitamin C).
- Screening for bacterial vaginosis in pregnancy.
- Developmental screening in children.

The topics to be updated are:

- Screening for diabetes mellitus.
- Newborn hearing screening.
- Screening for skin cancer.
- Counseling to prevent unintended pregnancy.
- Screening for high cholesterol.
- Postmenopausal hormone therapy.
- Screening for chlamydial infection.
- Screening for depression.

Nominations of new topics for consideration by the USPSTF may be sent to David Atkins, M.D., M.P.H., Coordinator for Clinical Preventive Services, Center for Practice and Technology Assessment, Agency for Health Care Policy and Research, 6010 Executive Boulevard, Room 300, Rockville, MD 20852. Priority will be given to preventive interventions that can be delivered in the primary care setting, are widely available, and for which scientific evidence exists to assess efficacy and effectiveness.

All the topics selected for evaluation by the USPSTF will be subject to rigorous analysis and research with a goal of translating the best available science into the best medical practice. To speed implementation of new and updated USPSTF recommendations, individual reports will be released as they are completed.

For more information on the USPSTF, contact Barbara Gordon at 301-594-4024. The full report of the *Guide to Clinical Preventive Services, Second Edition*, and highlights of the *Guide* are available on AHCPR's Web site at **http://www.ahcpr.gov** (click on "Clinical Information"). Copies of the *Guide* are available for purchase ($20) from AHCPR's Clearinghouse. See the back cover of *Research Activities* for ordering information.* ■

Research grant applicants may "self-assign" to review groups

Did you know that you can "self-assign" your investigator-initiated research grant application to the initial review group or study section that you believe is best suited to review your application? To do this, you need to include a cover letter detailing your request with your application. Such a request generally determines where the application will be assigned for review. Self-assignment is possible for new, amended, and competing continuation applications submitted on the PHS 398 form to the Center for Scientific Review at the National Institutes of Health, where AHCPR research grant applications are received.

In your cover letter, you also may request funding consideration at either the Agency for Health Care Policy and Research or at a particular NIH component. Even if you are requesting assignment to an NIH Institute, you still may ask that your application be reviewed by an AHCPR study section if you believe that is where the most appropriate review expertise is to be found.

When you self-assign your application to AHCPR, you may choose one of the following four AHCPR study sections: Health Care Quality and Effectiveness Research (HQER), Health Research Dissemination and Implementation (HRDI), Health Systems Research (HSR), or Health Care Technology and Decision Sciences (HTDS).

AHCPR recently added a fifth study section to evaluate research training applications. However, you cannot self-assign to this study section since assignments are made only in response to specific research training program initiatives.

For more information about these study sections, see the peer review update below. For more complete information, visit AHCPR's Web site at **http://www.ahcpr.gov** and click on "funding opportunities" for current study section descriptions and rosters. Please direct any questions or comments about the self-assignment process to Pat Thompson, Ph.D., AHCPR's referral officer, at 301-594-1404. ■

Peer review update

The Agency for Health Care Policy and Research's Health Services Research Initial Review Group (IRG) reviews applications for grants and cooperative agreements. The IRG comprises five subcommittees: Health Systems Research, Health Research Dissemination and Implementation, Health Care Technology and Decision Sciences, Health Care Quality and Effectiveness Research, and Health Care Research Training. Newly appointed subcommittee members are listed here. To see complete rosters for the subcommittees, as well as a roster of reserve reviewers—who may be asked to serve on any subcommittee or special emphasis panel as their expertise is needed—please visit AHCPR's Web site and click on "funding opportunities."

Health Care Research Training (HCRT). HCRT was established recently to review applications for research training and career development, including applications for the National Research Service Awards (NRSA) program (institutional training grants and individual fellowships), dissertation grants, and other types of training support. The newly appointed members of the HCRT subcommittee are: Chair, Edmund M. Ricci, Ph.D., University of Pittsburgh; William A. Anderson, Ph.D., Michigan State University; Elena Andresen, Ph.D., St. Louis University; William S. Custer, Ph.D., Georgia State University; Glenn Flores, M.D., F.A.A.P., Boston Medical Center; Deanna Grimes, Dr.P.H., R.N., University of Texas-Houston Health Science Center; Margaret J. Gunter, Ph.D., Lovelace Clinic Foundation of Albuquerque; Nancy Harada, Ph.D., P.T., University of California, Los Angeles; Jay S. Himmelstein, M.D., M.P.H., University of Massachusetts; John E. Kralewski, Ph.D., University of Minnesota; Laurel K. Leslie, M.D., Children's Hospital, San Diego; Terri Menke, Ph.D., Department of Veterans Affairs, Houston; Ciaran Phibbs, Ph.D., Veterans Affairs Medical Center, Menlo Park, CA; Lynne Richardson, M.D., Mt. Sinai Medical Center; Dale Tussing, Ph.D., Syracuse University; and Barbara Yawn, M.D., M.S., Olmstead Medical Center, Rochester, MN.

HCRT held its first review meeting on January 28-29, 1999; the second meeting will be July 29-30, 1999. The scientific review administrator for HCRT is Carl Ohata, Ph.D. (phone 301-594-6040).

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Peer review update

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Health Systems Research (HSR). Six new members have been appointed to the HSR subcommittee: Gloria Bazzoli, Ph.D., Northwestern University; Douglas Conrad, Ph.D., University of Washington; Stephen Mick, Ph.D., University of Michigan; Jean Mitchell, Ph.D., Georgetown University; Joan Teno, M.D., M.S., Brown University; and Doug Wholey, Ph.D., University of Minnesota.

The HSR subcommittee reviews applications concerned with the organization and functioning of the health care system. The HSR subcommittee's first meeting in 1999 was held February 18-19; they will meet again June 24-25 and October 28-29. The scientific review administrator for HSR is Martha Bryan, Ed.D. (phone 301-594-6061).

Health Care Quality and Effectiveness Research (HCQER). Seven new members have been appointed to the HCQER subcommittee: Chair Alvin Mushlin, M.D., Sc.M., University of Rochester Medical Center; David Bergman, M.D., Lucile Packard Children's Hospital, Stanford, CA; John Flack, M.D., M.P.H., Wayne State University; Paula Johnson, M.D., M.P.H., Brigham and Women's Hospital, Boston; Elizabeth McGlynn, Ph.D., RAND, Santa Monica, CA; Pamela Mitchell, Ph.D., University of Washington; and Christopher Schmid, Ph.D., Tufts University.

HCQER met on February 9-10, 1999; the subcommittee will meet again in 1999 on June 10-11 and October 25-26. Stephen Wickizer, Pharm.D., is scientific review administrator for HCQER (phone 301-594-6057).

Health Research Dissemination and Implementation (HRDI). No new members have been appointed to the HRDI subcommittee. HRDI reviews applications for dissemination research projects. The subcommittee met on March 12; a second meeting is scheduled for July 8-9, 1999. Joan Hurley, M.H.S., J.D., is scientific review administrator (phone 301-594-6075).

Health Care Technology and Decision Sciences (HCTDS). The HCTDS subcommittee reviews applications relating to health care technologies. The subcommittee met on March 5 and will meet again June 7-8, 1999. There are no newly appointed members of the HCTDS subcommittee. The acting scientific review administrator for HCTDS is Joan Hurley, J.D., M.H.S. (phone 301-594-6075). ■

Announcements

New national data set provides in-depth picture of hospital care in the United States

Researchers now have access to a powerful new data set that provides an in-depth picture of the use, quality, and costs of hospital inpatient care in the United States. This data set, which is available from the Agency for Health Care Policy and Research, includes detailed information on topics such as diagnoses, patient demographics, medical and surgical procedures, diagnostic tests, hospital charges, payment sources, and hospital characteristics.

The 1996 data set—the Nationwide Inpatient Sample (NIS)—is a one-of-a-kind database of hospital discharge information from approximately 6.5 million inpatient stays at over 900 hospitals in 19 States across the country. The NIS is the only publicly available database to include payer information, permitting analyses of care covered by private insurance, Medicare, Medicaid, and other sources.

The database is a product of the Healthcare Cost and Utilization Project, a Federal-State-industry partnership sponsored by AHCPR to produce standardized, high-quality data for use in measuring and evaluating the impact of changes in the health care system on access to services, quality, outcomes, and costs. For researchers and others who want to analyze trends, NIS data sets are available for 1988 through 1996.

The data set contains more than 100 clinical and nonclinical variables, including primary and secondary diagnoses and procedures; patient demographic characteristics such as sex, race, median income, and zip code; payment source; length of stay; total charges; and admission and discharge status. The large amount of data contained in the NIS permits analysis of rare conditions, such as congenital anomalies, and studies of infrequent procedures, such as organ transplantation. The database fills a special niche in that it also includes information on care provided to the uninsured.

The NIS can be linked with databases containing county-level information, such the Bureau of Health Professions Area Resource File, a database of the

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NIS data set

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U.S. Health Resources and Services Administration. The NIS also can be linked with descriptive hospital data from the American Hospital Association's (AHA) Annual Survey of Hospitals.

The data set can be run on desktop computers and comes in ASCII format for ease of use with numerous off-the-shelf software products, including SAS and SPSS. NIS also includes weights for producing national and regional estimates and comes with full documentation in Adobe Acrobat. SAS and SPSS users are provided with programs for converting ASCII files.

The NIS Release 5 for 1996 is available on CD-ROM with accompanying documentation for $160 from the National Technical Information Service. The NTIS accession number is PB99-500480. The cost may be higher for customers outside the United States, Canada, and Mexico. Data from earlier NIS releases (1988 through 1995) also are available from NTIS. See the back cover of *Research Activities* for ordering information.*** ■

New MEPS chartbook presents data on minority health

The Agency for Health Care Policy and Research has published a new chartbook that presents estimates of health insurance coverage, access to health care, and health status for blacks, Hispanics, and whites in America. The chartbook, *Racial and Ethnic Differences in Health, 1996*, features findings from AHCPR's 1996 Medical Expenditure Panel Survey (MEPS). This is the second chartbook released from MEPS data; the first chartbook, *Children's Health, 1996* (AHCPR Publication No. 98-0008), was released in March 1998.

Using a question-and-answer style along with charts and graphs, the chartbook compares differences in health that each racial/ethnic group experienced during 1996. Significant findings include:

- More than one-third of Hispanics had no health insurance coverage. Although Hispanics represent only 11.6 percent of the U.S. population under age 65, they make up over 21 percent of the uninsured population.
- Hispanic and black Americans were more likely than white Americans to lack private, job-related health insurance coverage.
- Blacks were the group most likely to have only public insurance: more than one-fourth of blacks, compared with one-fifth of Hispanics and one-tenth of whites were covered by public insurance.
- Families headed by Hispanics were the most likely to report barriers to obtaining the health care they needed, and they were the least likely to have a usual source of health care.
- Blacks and Hispanics were more likely than whites to be in fair or poor health.

Copies of the chartbook, *Racial and Ethnic Differences in Health, 1996* (AHCPR Publication Number 99-0001), are available from AHCPR.* ■

AHCPR offers a new information service

Would you like to receive AHCPR press releases and other announcements electronically? If so, we invite you to subscribe to our new general listserv. All you need is a computer and an e-mail address. Signing up is easy—here's how:

1. Send an e-mail message to listserv@list.ahcpr.gov
2. Leave the subject line blank.
3. In the body of the message type: sub public_list-L John Doe (insert your full name).
4. You will receive a return message confirming that you are now an AHCPR listserv subscriber.

If you encounter any problems in subscribing, please contact Howard Holland in AHCPR's public affairs office at hholland@ahcpr.gov for assistance. ■

New electronic inventory added to AHCPR's Web site

As part of our enhancement of the Agency for Health Care Policy and Research's Web site, an electronic inventory has been developed of our information products that are available from the National Technical Information Service (NTIS). Please check out this new resource at **http://ahcpr.fedworld.gov**

For the most part, the inventory is made up of final reports from AHCPR-sponsored grants and contracts, as well as some data products. It includes more than 3,000 products produced over a 30-year span by AHCPR and its predecessor agency, the National Center for Health Services Research and Health Care Technology Assessment (NCHSR). As such, it represents an archives of the health services research funded by AHCPR and NCHSR, and it can be used as a tool for mining the research findings that have been generated by the agency.

Basic information is included in each record, such as title, authors/principal investigators, and abstract. There are currently four options for searching the database: full-text, keyword, author, and product number. The keyword phrases provided are those that were assigned to the project by the project officer at the time the report or other product was submitted to NTIS.

Each item contained in the inventory is available for purchase from NTIS. You may order items directly from the system's online "shopping cart," and your order will be processed electronically.

We are always interested in your feedback. Please direct your comments, questions, concerns, or suggestions to Gerri Michael Dyer via e-mail at gdyer@ahcpr.gov. ■

AHCPR funds new projects

The following research projects, small project grants, and conference grant were funded recently by the Agency for Health Care Policy and Research. Readers are reminded that findings usually are not available until a project ends or is nearing completion.

Research Projects

Determining and understanding barriers to adult immunization

Project director:	Richard K. Zimmerman, M.D.
Organization:	University of Pittsburgh Pittsburgh, PA
Project number:	AHCPR grant HS09874
Project period:	4/1/99 to 9/30/01
First year funding:	$388,815

Disease management for asthmatics in Medicaid HMOs

Project director:	Alan L. Hillman, M.D.
Organization:	University of Pennsylvania Philadelphia, PA
Project number:	AHCPR grant HS10044
Project period:	4/1/99 to 3/31/02
First year funding:	$626,075

Employee response to health plan performance ratings

Project director:	Michael E. Chernew, Ph.D.
Organization:	University of Michigan Ann Arbor, MI
Project number:	AHCPR grant HS10050
Project period:	3/1/99 to 8/31/00
First year funding:	$215,030

SES differences in HMO utilization by older Americans

Project director:	Jose J. Escarce, M.D., Ph.D.
Organization:	RAND Santa Monica, CA
Project number:	AHCPR grant HS09630
Project period:	4/1/99 to 3/31/02
First year funding:	$713,332

Small Project Grants

Analysis of x-inefficiency in U.S. hospitals

Project director:	Michael D. Rosko, Ph.D.
Organization:	Widener University Chester, PA
Project number:	AHCPR grant HS09845
Project period:	4/1/99 to 3/31/00
Funding:	$25,054

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New projects

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Ethics consultation in U.S. hospitals: A national survey

Project director:	Ellen E. Fox, M.D.
Organization:	George Washington University Washington, DC
Project number:	AHCPR grant HS09808
Project period:	4/1/99 to 3/31/00
Funding:	$60,926

Physician/patient preferences in hysterectomy

Project director:	Jeffrey Peipert, M.D.
Organization:	Women and Infants Hospital Providence, RI
Project number:	AHCPR grant HS09846
Project period:	4/1/99 to 3/31/00
Funding:	$77,694

School mental health: Quality care and positive outcome

Project director:	Laura A. Nabors, Ph.D.
Organization:	University of Maryland Baltimore, MD
Project number:	AHCPR grant HS09847
Project period:	9/1/99 to 3/31/00
Funding:	$30,825

Socioeconomic deprivation and outpatient health care use

Project director:	Sally Zierler, M.D.
Organization:	Brown University Providence, RI
Project number:	AHCPR grant HS09848
Project period:	3/01/99 2/29/00
Funding:	$78,910

Conference Grant

Making coverage decisions about emerging technologies

Project director:	Nancy V. Chockley, M.B.A.
Organization:	NIHCM Research and Education Foundation Washington, DC
Project number:	AHCPR grant HS09849
Project period:	2/1/99 to 1/31/00
Funding:	$48,470 ■

Seven new grant final reports now available from NTIS

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

Center for Medical Treatment Effectiveness Programs. Barbara Tilley, Ph.D., Case Western Reserve University, Henry Ford Health Science Center, Detroit, MI. AHCPR grant no. HS07386, project period 2/1/93 to 7/31/98.

The objectives of this project were to (1) facilitate research on improving health and quality of life outcomes for minority populations; (2) assist and encourage minority investigators to conduct medical treatment effectiveness research relevant to minority populations; (3) provide technical assistance to others conducting treatment effectiveness research relevant to minority populations; and (4) involve the community in the center's activities. Patients studied were drawn from either the Henry Ford Health System (HFHS) or the surrounding community. Studies conducted by the center helped to separate treatment effects related to socioeconomic status and race. In 1993, over 390,000 patients of diverse socioeconomic status visited HFHS; 26.7 percent were black, and 42.1 percent of the black patients were members of a health maintenance organization (HMO). The center analyzed existing HFHS data and conducted pilot studies for effectiveness trials. The tertiary care component of HFHS provided in-depth data on rare conditions (e.g., diabetes-related amputations, hospitalization for asthma). Within an HMO/community setting, differences were found in the outcomes of white and black patients being treated for asthma or diabetes;

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the differences remained after accounting for socioeconomic status. Interventions shown to be successful in white patients were not always directly transferable to black patients. (Abstract, executive summary, and final report, NTIS accession no. PB99-128357; 50 pp, $25.50 paper, $12.00 microfiche)***

Complements and Substitutes in the Production of Health. Michael Lee Ganz, Ph.D., Columbia University, New York, NY. AHCPR grant HS09610, project period 7/1/97 to 12/31/98.

Despite advances in medicine and public health people still behave in unhealthy ways that result in preventable morbidity and mortality. This project tried to explain this phenomenon by testing the theory of incentives to act in healthy ways. An economic model based on the competing risk model of epidemiology is presented. The effect of family health history is also explored. The findings suggest that policies directed at improving the physical and social environment may improve health via both their direct effects and their indirect effects on behaviors unrelated to the policy. (Abstract and executive summary of dissertation, NTIS accession no. PB99-119828; 20 pp, $23.00 paper, $12.00 microfiche)***

Health Care Access for Deaf Persons. Steven Barnett, M.D., Highland Hospital, Rochester, NY. AHCPR grant HS09639, project period 7/1/97 to 6/30/98.

The goal of this project was to evaluate the health care utilization and other health-related characteristics of a nationally representative sample of deaf adults while accounting for the age at onset of hearing loss, a predictor of linguistic and sociocultural group affiliation. Cross-sectional analyses of data from the 1990-1991 National Health Interview Surveys were linked to the National Death Index. Health-related measures of adults 19 years of age and older deafened before (prelingually) and after (postlingually) 3 years of age and those of a representative sample of the general population were compared after adjusting for sociodemographics and health status. Compared with the control population, prelingually deafened adults had fewer physician visits and were less likely to have visited a physician in the preceding 2 years; postlingually deafened adults had more physician visits and were more likely to have visited a physician in the preceding 2 years. Postlingually deafened women were less likely to have had mammography within the previous 2 years. Prelingually deafened adults were less likely to smoke. Prelingually and postlingually deafened adults appear to have different problems accessing health care services. (Abstract, executive summary, and final report, NTIS accession no. PB99-128365; 56 pp, $27.00 paper, $12.00 microfiche)***

Oral Health 2000 National Consortium: Grassroots Synergy. Denise S. Lebloch, Oral Health America, Chicago, IL. AHCPR grant HS09546, project period 9/1/97 to 2/28/98.

This grant supported the 1997 conference, "Synergy at the Grassroots Level," held in Atlanta, GA. The meeting was dedicated to promoting community-based and integrated strategies that evaluate project and program effectiveness. The focus was on providing participants with a strategic approach for the planning and implementation of effective community-based oral disease prevention and health promotion strategies. A framework was presented for supporting and facilitating State and local actions aimed at improving oral health. (Abstract, executive summary, and final report of conference, NTIS accession no. PB99-119844; 46 pp, $25.50 paper, $12.00 microfiche)***

Outcomes of Dedicated AIDS Units. Linda M. Aiken, Ph.D., R.N., University of Pennsylvania, Philadelphia, PA. AHCPR grant HS08603, project period 9/30/95 to 9/29/98.

This study extended earlier research that employed comparative, multisite data and a quasiexperimental design to compare inpatient outcomes in 20 hospitals in 11 major cities throughout the United States. The data included detailed information on a consecutive sample of AIDS patients admitted to 40 units including interviews, nurses' clinical assessments, extensive medical records data, discharge summaries, and billing information. The earlier study found that dedicated AIDS units achieved increased patient satisfaction, as well as higher job satisfaction and lower burnout for nurses. This study extended the patient followup period beyond hospital discharge and found positive effects on 30-day mortality of dedicated AIDS units and, more generally, of hospitals with dedicated AIDS units. It also demonstrated that organizational characteristics which distinguish dedicated AIDS units from conventional scattered-bed units and magnet hospitals from conventionally organized hospitals are partly responsible for favorable patient outcomes, including decreased mortality. Moreover, it has more firmly established that a simple four-category scale reflecting nurses' assessments of patients' needs for assistance in basic activities of daily living is a better

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predicator of mortality than the two more established AIDS severity of illness measures and CD4 counts. (Abstract, executive summary, and final report, NTIS accession no. PB99-130007; 48 pp, $25.50 paper, $12.00 microfiche)***

Ownership Type and the Behavior of Women's Health Centers. Amal J. Khoury, M.P.H., Johns Hopkins University, Baltimore, MD. AHCPR grant HS09328, project period 9/1/96 to 8/31/98.

Using data from the 1994 National Survey of Women's Health Centers, this research examined the association between ownership type and the behavior of centers in terms of community benefits and management practices. The researchers compared 296 nonprofit and 108 for-profit centers. Overall, nonprofit centers provided more community benefits than for-profit centers. The nonprofit centers served more uninsured women, provided more clients with reduced rates, located more often in rural areas, and were more likely to train health professionals and to provide education services at no cost to clients. Community participation in center governance was more evident at nonprofit centers. Nonprofit primary care and reproductive health centers provided a broader range of primary care services than their for-profit counterparts. Nonprofit and for-profit centers appeared equally likely to serve women on Medicaid and minority women and to provide transportation and translator services. The analysis of management practices showed that nonprofit and for-profit centers performed similarly in terms of the utilization of clinician resources and marketing and planning. The for-profit centers, however, were more involved in managed care contracting. (Abstract and executive summary of dissertation, NTIS accession no. PB99-128340; 14 pp, $23.00 paper, $12.00 microfiche)***

Patterns of Referral for Patients with Newly Diagnosed Diabetes in Alberta. Robert A. Reid, M.D., M.P.H., Johns Hopkins University, Baltimore, MD. AHCPR grant HS09587, project period 6/1/97 to 5/31/98.

The goals of this study were to (1) describe the patterns of referral from primary to specialty care for people with newly diagnosed diabetes, including the likelihood of referral, the pathways to specialty care, the duration of referral, and the types of specialists seen; and (2) evaluate the influence of patient and provider factors and the medical care system on the likelihood of referral and referral duration. A cohort of 4,577 patients with new-onset diabetes diagnosed in 1994 was identified using the physician claims database of the Alberta Health Care Insurance Plan; all claims were examined for 18 months following diagnosis. The results show that referral is relatively common, with 43 percent of diabetics receiving specialist care following their initial diagnosis. Although referral from a primary care provider was the most common route to specialty care (66 percent), referral from other specialists (20 percent), and patient self-referral (14 percent) were also important routes. Patients made an average of three visits to specialists; half had multiple referral episodes extending beyond a 2-week interval. Case-mix (diabetes-related morbidity and other comorbidities) was the strongest predictor of referral. Younger insulin-dependent diabetics (less than age 60) were much more likely than older patients to be referred. Other significant factors included poverty, geographic access to specialist care, and the sex and experience of the generalist. (Abstract and executive summary of dissertation, NTIS accession no. PB99-119810; 16 pp, $23.00 paper, $12.00 microfiche)*** ■

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Deyo, R.A. (1998). "Using outcomes to improve quality of research and quality of care." (AHCPR grant HS08194). *Journal of the American Board of Family Practice* 11(6), pp. 465-473.

This article by the leader of the Back Pain Patient Outcomes Research Team points out that outcomes research focuses on the end results of patient care in terms of symptoms, disability, and survival rather than physiology, laboratory results, or imaging. Effectiveness in routine care is a function of efficacy but also of diagnostic accuracy, physician skill in applying a treatment, patient compliance, and perhaps other factors that are artificially optimized in the clinical trial setting. Dr. Deyo uses the case of treating low back pain to discuss how a physician might evaluate whether following guidelines on a particular condition actually improved patient outcomes such as quality of life and mortality. He points out that in the case of back pain symptoms, function and quality of life can be quantified in a

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meaningful way, and that a great variety of well-validated instruments are available for use. However, their adoption and widespread use in routine care settings for outcomes management will require far better data systems and more resources than are currently available.

Paradise, J.L. (1998). "Otitis media and child development: Should we worry?" (Joint NICHD-AHCPR grant HD26026). *Pediatric Infectious Disease Journal* 17(11), pp. 1076-1083.

Whether chronic early childhood middle ear infections (otitis media) cause impaired speech, language, cognition, and psychosocial development later in life remains unresolved. At issue in particular is the common practice of subjecting infants and young children with persistent otitis media with effusion (OME) to tympanostomy tube placement specifically to reduce the risk of developmental impairment. Currently, children younger than age 3 years undergo an estimated 313,000 such placement operations per year. This article describes a prospective study designed to address questions about the adverse effects of OME, whether they are permanent or transient, and whether they are preventable by timely tube placement. The study will enroll a large sample of normal infants before 2 months of age and identify those in whom OME persists during the first 3 years of life. The researchers will randomly assign those children with persistent OME to either prompt tube placement or to delayed tube placement and administer a battery of standardized developmental tests to those children and to a sample of others at ages 3, 4, and 6 years.

Porell, F., and Caro, F.G. (1998). "Facility-level outcome performance measures for nursing homes." (AHCPR grant HS07587). *The Gerontologist* 38(6), pp. 665-683.

Nursing home facility performance measures are not highly associated with various structural facility attributes, concludes this study. The researchers measured facility performance by comparing actual resident outcomes with expected outcomes (for instance, survival rate, functional status, pressure ulcers, and restraint use) derived from quarterly predictions or resident-level econometric models over a 3-year period (1991-1994). The intercorrelations among the nine outcome performance measures were relatively low and not uniformly positive. Performance measures were not highly associated with various structural facility attributes. Relatively few facilities exhibited consistent superior or inferior performance over time. Overall, the correlations suggest that there are few nursing homes with uniformly much better or much worse than expected performance on the patient outcomes measured.

Randolph, A.G., Guyatt, G.H., and Calvin, J.E. (1998). "Understanding articles describing clinical prediction tools." (NRSA fellowship F32 HS00106). *Critical Care Medicine* 26(9), pp. 1603-1612.

The authors of this paper want to teach clinicians how to evaluate the validity, results, and applicability of articles describing clinical prediction tools. They use as an example an article describing a rule to predict the need for intensive care unit admission in patients arriving at the emergency room with chest pain. To properly evaluate results of the article, clinicians need to know what the prediction tool is, how well it categorizes patients into different levels of risk, and what the confidence intervals are around the risk estimates. Also, valid prediction tools are not applicable in every patient population. Before using the tool in patient care, clinicians should ensure that the tool maintains its prediction power in a new sample of patients, that the patients are similar to patients used to test the tool, and that the tool has been shown to improve clinical decisionmaking.

Raube, K., Handler, A., and Rosenberg, D. (1998). "Measuring satisfaction among low-income women: A prenatal questionnaire." (AHCPR grant HS08115). *Maternal and Child Health Journal* 2(1), pp. 25-33.

One measure of quality of care is how satisfied patients are with the care they receive. These researchers evaluated the reliability and construct validity of a prenatal care satisfaction scale. They tested the 22-item questionnaire, which included six dimensions of care, during telephone interviews with 101 Medicaid-insured, black and Hispanic first-time mothers 18 years of age and older. The dimensions of care satisfaction included the art of care, technical quality, access, physical environment, availability, and efficacy. The scale showed high reliability, as well as good construct validity.

Ren, X.S., and Amick III, B.C. (1998). "Cross-cultural use of measurements." (AHCPR grant HS09352). In *Handbook of Immigrant Health*, Loue, S., editor. New York: Plenum Publishing, pp. 81-99.

Most health status measures have been developed in English. Few studies have gathered systematic information on functioning and well-being among immigrant populations in the United States. In this book chapter, the authors address conceptual and methodological issues related to cross-cultural development and validation of health

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status instruments—that is, how best to design socially and culturally appropriate health status measurement instruments for different groups. To illustrate these issues, they discuss the development of a Chinese version of the Medical Outcome Study, 36-item Short-Form Health Survey.

Safran, D.G., Taira, D.A., Rogers, W.H., and others. (1998). "Linking primary care performance to outcomes of care." (AHCPR grant HS08841). ***Journal of Family Practice*** **47(3), pp. 213-220.**

The authors of this study examined the relationship between seven elements of primary care (accessibility, continuity, comprehensiveness, integration, clinical interaction, interpersonal treatment, and trust) and three outcomes (adherence to physician's advice, patient satisfaction, and improved health status). They used data derived from an observational study of 7,204 Massachusetts State employees who completed a questionnaire on doctor-patient relationships and care satisfaction. With other factors equal, patients who greatly trusted their primary care doctors and whose doctors knew them well were nearly three times more apt to follow their doctor's advice than those with very low levels of knowledge and trust (44 percent vs. 17 percent adherence). The likelihood of complete care satisfaction was five times greater among patients with high versus median levels of trust in their doctors (88 percent vs. 18 percent). The leading correlates of self-reported health improvements were integration of care, thoroughness of physical examination, communication, the doctor's knowledge of the patient, and trust.

Sterling, T.R., Moore, R.D., Graham, N.M., and others. (1998). "*Mycobacterium tuberculosis* infection and disease are not associated with protection against subsequent disseminated *M. avium* complex disease." (AHCPR grant HS07809). ***AIDS*** **12, pp. 1451-1457.**

A history of tuberculosis (TB) infection or disease is not associated with protection against subsequent disseminated *M. avium* complex (MAC) disease in HIV-infected people. However, individuals with extrapulmonary TB are at increased risk for disseminated MAC, particularly at low CD4 cell levels, concludes this study. The researchers followed HIV-infected adults with CD4 lymphocyte counts below 100 between 1989 and 1996. They determined the relative risk of disseminated MAC based on history of prior opportunistic infection, MAC prophylaxis, and other factors. Among the 30 patients with active TB, eight developed disseminated MAC, compared with 208 cases of disseminated MAC among 1,148 patients without prior TB infection or disease. Among the 10 patients with extrapulmonary TB, 5 developed disseminated MAC.

Wells, K.B. (1999, January). "The design of partners in care: Evaluating the cost-effectiveness of improving care for depression in primary care." (AHCPR grant HS08349). ***Social Psychiatry and Psychiatric Epidemiology*** **34(1), pp. 20-29.**

This paper describes the design and implementation of Partners in Care, a study designed to examine cost-effectiveness of treatments for a range of depressive disorders in primary care settings for Mexican Americans and non-Hispanic whites. The researchers selected seven diverse managed care organizations and randomized their clinics to one of three interventions: basic quality improvement plus enhanced medication management (QI-MEDS), QI plus enhanced psychotherapy (QI-THERAPY), and usual care (UC). The goal was to increase the percentage of depressed patients who begin and adhere to appropriate treatment within a feasible practice budget. QI teams received 2 days of training in assessing and treating depression, educating primary care clinicians, and conducting quality assurance meetings. They enrolled 1,356 patients and then educated patients and physicians. ■

Attention researchers: The Department of Veterans Affairs has established a new centralized referral center where you can find out how to access the VA's various databases, including the National Patient Care Database (NPCD) and the Decision Support System (DSS). Staff of the VA Information Resource Center (VIREC) will lead you to the data bases you need and to consultants knowledgeable about those sources. In addition, VIREC staff will serve as a liaison between health services researchers and VA's information system operations. Patient confidentiality will be safeguarded by VIREC; no patient identifiers or patient-specific information will be released.

The VIREC is located on the Edward Hines, Jr., Hospital Campus in Hines, IL, and has an academic affiliation with the Institute for Health Services Research and Policy Studies at Northwestern University. For more information, contact VIREC at 708-216-2413 (phone); 708-216-2415 (fax); or via e-mail to **virec@research.hines.med.va.gov**. Visit VIREC's Web site at **www.virec.research.med.va.gov** or write to VIREC (578/151V), Hines VA Hospital, P.O. Box 5000, Hines, IL 60141-5000. ■

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