AHCPR

# Research Activities

*No. 230, October 1999*

## Highlights

### Departments



### Regular Features



## Care for elderly heart attack patients is at least as good in HMOs as in fee-for-service plans

Elderly heart attack patients in Minnesota who were covered by health maintenance organizations (HMOs) received life-saving thrombolytic treatments at least as often as those covered by traditional fee-for-service (FFS) plans. In addition, they were slightly more likely to have received emergency transportation and aspirin therapy, according to a recent study funded by the Agency for Health Care Policy and Research (HS07357).

The research team, headed by Stephen B. Soumerai, Sc.D., of Harvard Medical School and Harvard Pilgrim Health Care, reviewed the medical records of 2,304 elderly Medicare patients who were admitted with acute myocardial infarction (AMI) to 20 hospitals in Minnesota from October 1992 through July 1993, and from July 1995 through April 1996. They found that the speed with which patients received care and the quality of that care were of equal or slightly higher quality under HMO coverage versus FFS coverage.

The researchers also looked at other dimensions of care for patients with AMI, including their use of emergency transportation and whether they received aspirin therapy in addition to thrombolytic medication. Patients with HMO coverage were slightly more likely to have used an ambulance to get to the hospital. The researchers attributed this to HMOs' around-the-clock telephone triage systems that encourage patients with acute symptoms to use emergency transportation. Patients with HMO coverage also were slightly more likely to have received aspirin therapy, which researchers believe is because HMOs employ a larger percentage of younger physicians who may be more aware of newer drug treatments.

Dr. Soumerai and his colleagues show that objective quality standards need to be developed in all settings and for all insurers, not only for HMOs. This paper provides evidence that substantial opportunities exist to decrease preventable deaths, for example, by increasing use of beta blockers and aspirin and reducing delays to the hospital.

*continued on page 2*

## Care for elderly heart attack patients

*continued from page 1*

The researchers note that all of Minnesota's HMOs are nonprofit; they do not know if HMO performance would be as high in a for-profit setting.

For more details, see "Timeliness and quality of care for elderly patients with acute myocardial infarction under health maintenance organization vs. fee-for-service insurance," by Dr. Soumerai, Thomas J. McLaughlin, Sc.D., Jerry H. Gurwitz, M.D., and others, in the September 27, 1999 issue of *Archives of Internal Medicine* 159, pp. 2013-2020. ■

## *Evidence-Based Medicine*

# Beta blockers may be the most effective first-line treatment for stable angina

Stable angina (suffocating chest pain) affects more than 7 million people in the United States. Long-term drug therapy to prevent anginal symptoms has consisted of beta blockers, calcium antagonists (also called calcium channel blockers), long-acting nitrates, or their combinations. Current treatment of stable angina in the United States frequently does not include beta blockers, even though several treatment guidelines recommend beta blockers as the first-line agent for these patients. A recent study supported by the Agency for Health Care Policy and Research (Contract No. 290-97-0013) supports these recommendations and adds evidence that beta blockers are tolerated as well as or better than calcium antagonists and provide equivalent relief.

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

AHCPR
Office of Health Care Information
2101 East Jefferson Street, Suite 501
Rockville, MD 20852
(301) 594-1364

Mary L. Grady, Managing Editor
Gail Makulowich, Contributing Editor
Joel Boches, Design and Production
Karen Migdail, Media Inquiries

A team of researchers from the University of California, San Francisco-Stanford Evidence-based Practice Center performed a meta-analysis of 90 studies conducted between 1966 and 1997 that directly compared beta blockers, calcium antagonists, and long-acting nitrates in patients who had stable angina. The analysis revealed that beta blockers were as well tolerated as calcium antagonists. The calcium antagonists were associated with a greater number of adverse events, but they did not provide greater angina relief (measured by number of angina episodes, nitroglycerine use, and exercise time) than beta blockers. For example, there were 0.31 fewer episodes of angina per week with beta blockers, and they were discontinued 28 percent less often because of adverse events than calcium antagonists (odds ratio, OR 0.72). There was no significant difference in rates of cardiac death and heart attack for both treatments, but more long-term comparative trials are required to determine whether the different therapies are responsible for a significant mortality difference in these patients. Too few studies compared long-acting nitrates with calcium antagonists or beta blockers to determine differences in survival, symptoms, or adverse events.

See "Meta-analysis of trials comparing β-blockers, calcium antagonists, and nitrates for stable angina," by Paul A. Heidenreich, M.D., M.S., Kathryn M. McDonald, M.M., Trevor Hastie, Ph.D., and others, in the May 26, 1999 *Journal of the American Medical Association* 281(20), pp. 1927-1936.

**Editor's note:** This paper is based on an evidence report prepared for AHCPR by the UCSF-Stanford Evidence-based Practice Center. A summary (AHCPR Publication No. 99-E021) of the report is available from AHCPR.** Copies of the full report, *An Evaluation of Beta-Blockers, Calcium Antagonists, Nitrates, and Alternative Therapies for Stable Angina* (AHCPR Publication No. 99-E022), will be available from AHCPR in late 1999. ■

## Many factors affect physicians' acceptance and use of new clinical guidelines

For a long time, medical societies and public health officials took it for granted that physicians would agree with and adopt new immunization recommendations. However, when adoption of new recommendations for *Haemophilus influenzae*, type B, and hepatitis B vaccines were far from uniform, it became clear that adoption of new vaccine guidelines could no longer be assumed. Sociocultural factors, physician practice factors, characteristics of the guideline itself, and how it is disseminated all influence adoption of the guideline by physicians, according to a study supported by the Agency for Health Care Policy and Research (HS07286).

Thomas R. Konrad, Ph.D., of the University of North Carolina at Chapel Hill, and his colleagues developed a model to determine the factors that influence physician guideline adoption, using immunization guidelines as a model. The model traces sequential steps, from awareness to adoption and adherence to the guideline, and identifies factors that can either slow or speed movement through these stages. Using the model, the researchers identified such sociocultural factors influencing immunization practices as previous history of epidemics (for example, the recent resurgence in cases of measles), community or school vaccination policies, and parent demand. State or local vaccine requirements for public school attendance are felt to exert strong influences on physicians' vaccine practices.

Individual physician characteristics (age and training), practice characteristics (time spent with other physicians, quality assurance efforts, and information management systems), and practice management policies (other physician practices, requirements of public and private insurers, and limitations in drug prescribing options), also influence guideline adoption. Specifics of the guideline itself—for example, advantage over prior recommendations, complexity for providers and parents, and compatibility with existing recommendations—also influence physicians' guideline acceptance and use. Finally, how a guideline is disseminated, that is, choice of information sources (for example, medical or lay, official or unofficial), the credibility of those sources, other methods of dissemination, and the initial acceptance by local medical opinion leaders, also influence guideline adoption.

More details are in "Adopting immunization recommendations: A new dissemination model," by Gary L. Freed, M.D., M.P.H., Donald E. Pathman, M.D., M.P.H., Dr. Konrad, and others in the *Maternal and Child Health Journal* 2(4), pp. 231-239, 1998. ■

## New report focuses on rehabilitation for children and adolescents with traumatic brain injury

The Oregon Health Sciences University, in its capacity as an Agency for Health Care Policy and Research Evidence-based Practice Center (EPC), has completed an exhaustive review of the literature regarding the effectiveness of interventions to rehabilitate children and adolescents with traumatic brain injury (TBI). A summary of that report is now available from AHCPR.

At AHCPR's request, the EPC conducted this study as a supplement to the evidence report it prepared on TBI rehabilitation for adults, which was released in 1998.

The five-page summary of Evidence Report Number 2, Supplement, *Rehabilitation for Traumatic Brain Injury in Children and Adolescents* (AHCPR Publication No. 99-E025), is available from AHCPR.** Copies of the full supplementary report (AHCPR Publication No. 00-E001) will be available in late 1999.* ■

**Also in this issue:**

## Private nonteaching hospitals have higher cesarean delivery rates than other hospitals for Medicaid-insured women

Women undergoing cesarean delivery have higher rates of infection and take longer to heal after delivery than women who have vaginal deliveries. They also are more likely to have complications in later pregnancies from repeat cesarean delivery and have an increased risk of abnormal placentation and ectopic pregnancy. Private nonteaching hospitals, which now care for the largest proportion of Medicaid-insured women, have higher cesarean delivery rates for these women compared with other types of hospitals, concludes a study by the Patient Outcomes Research Team (PORT) on Variations in Management of Childbirth and Patient Outcomes. This is important, since large numbers of obstetric Medicaid patients are being systematically transferred from public hospitals to private nonteaching hospitals, notes PORT researcher, Katherine L. Kahn, M.D., of RAND and the University of California, Los Angeles.

With support from the Agency for Health Care Policy and Research (PORT contract 290-92-0039) and the Robert Wood Johnson Foundation, the researchers retrospectively studied California discharge data for 92,800 women who delivered babies at 78 hospitals in Los Angeles County during 1991. According to Kimberly D. Gregory, M.D., M.P.H., a team member supported by the Robert Wood Johnson Foundation Minority Faculty Development Award, Medicaid-insured women who gave birth in private nonteaching hospitals had a lower prevalence of clinical conditions that are typically associated with cesarean deliveries when compared with women who delivered their babies at public, private teaching, and HMO hospitals.

After adjusting for the women's clinical and sociodemographic characteristics, the researchers found that the Medicaid-insured women who delivered their babies in private nonteaching hospitals had an overall cesarean delivery rate that was 2 to 2.5 times as great as that of similar women who delivered at public hospitals (24.5 percent vs. 9 percent). The adjusted cesarean delivery rate was 8 percent in private teaching hospitals and 12 percent in HMO hospitals. These data cannot distinguish if cesarean deliveries are being overused in private nonteaching hospitals or underused in other types of hospitals. Based on the 1995 mean per diem hospital reimbursement rate for Medicaid patients ($821) and the mean 3-day hospital stay for cesarean delivery versus the 1-day stay for vaginal deliveries, the difference in the calculated cesarean rates by hospital type translated into about $13.6 million in additional health care expenses for obstetric services in Los Angeles County.

For more details, see "Cesarean deliveries for Medicaid patients: A comparison in public and private hospitals in Los Angeles County," by Dr. Gregory, Emily Ramicone, M.S., Linda Chan, Ph.D., and Dr. Kahn, in the May 1999 *American Journal of Obstetrics and Gynecology* 180, pp. 1177-1184. ■

## Researchers examine hospital length-of-stay and costs for pneumonia

About 1 million patients are hospitalized for pneumonia each year at a cost exceeding $6 billion. Most of this cost is for hospital room charges and is directly related to length of hospital stay. The Pneumonia Patient Outcomes Research Team (PORT), led by Wishwa N. Kapoor, M.D., M.P.H., of the University of Pittsburgh, and supported by the Agency for Health Care Policy and Research (HS06468), recently published two studies examining length of hospital stay and costs for community-acquired pneumonia (CAP).

The first study found that hospitals varied substantially in their mean lengths of stay for CAP patients, and that outcomes were no worse for patients with shorter stays than they were for patients who were hospitalized longer. The second study calculated that in 1994, the estimated cost of outpatient treatment for a patient with CAP was $264, and inpatient treatment cost $7,500 per patient, with total CAP treatment costs totaling $10 billion that year. These studies are summarized here.

**McCormick, D., Fine, M.J., Coley, C.M., and others. (1999, July). "Variation in length of hospital stay in patients with community-acquired pneumonia: Are shorter stays associated with worse medical outcomes?" *American Journal of Medicine* 107, pp. 5-12.**

*continued on page 5*

## Hospital care for pneumonia

*continued from page 4*

Hospitals vary dramatically in how long they keep patients with CAP. Apparently, patients who stay shorter times have no worse medical outcomes than those who stay longer in the hospital, according to this study, which involved a group of 1,188 adults with CAP who had been admitted to one community and three university teaching hospitals. They compared patients' mean length of stay, deaths, hospital readmissions, return to usual activities and work, and pneumonia-related symptoms.

Patients' mean length of hospital stay ranged from 7.8 to 9.8 days. Patients with the shortest stays were at no higher risk for poor medical outcomes than those admitted for longer stays in mortality (relative risk, RR, 0.7; 1 is equal risk), hospital readmission (RR, 0.8), return to usual activities (RR, 1.1), return to work (RR, 1.2) during the first 14 days after discharge, or in the mean number of pneumonia-related symptoms 30 days after admission. The 95 percent confidence limits for each of these estimates included the null value of 1.0, indicating a nonsignificant association between length of stay and these medical outcomes.

These findings suggest that hospitals that keep CAP patients for longer times may be able to shorten their stays without adversely affecting patient outcomes. Of course, aggressive programs to shorten hospital stays for CAP may eventually introduce unnecessary risk. Future studies are needed to identify the most efficient processes of care for CAP and to determine when patients are sufficiently stable for hospital discharge, conclude the authors.

**Lave, J.R., Lin, C.J., Fine, M.J., and Hughes-Cromwick, P. (1999). "The cost of treating patients with community-acquired pneumonia."** ***Seminars in Respiratory and Critical Care Medicine*** **20(3), pp. 189-197.**

This study estimates that in 1994, the cost of treating an outpatient with CAP was $264; inpatient care cost $7,500 (including hospital and physician care and followup care). The total costs associated with treating CAP that year were about $10 billion. The estimated average national cost of an inpatient pneumonia case was $5,711, with a range from $4,259 in Washington to $7,545 in Connecticut. Similar patients were treated differently. The range in average length of stay, a major cost contributor, across States was 4.6 days. Washington had the shortest average length of stay (5.3 days), and New Jersey had the longest (9.9 days). The median cost of antibiotic therapy for an inpatient episode was $228.70, ranging across four hospitals studied from $183.67 to $315.60 for similarly ill patients with similar outcomes.

Across sites, the mean cost per outpatient episode ranged from $264 to $421. Much of this variation was due to the site of the patient's initial visit, with emergency department (ED) visits costing much more than visits to a doctor's office.

The researchers recommend various strategies for decreasing the cost of treating CAP. These include identifying low-risk patients who can safely be treated as outpatients, decreasing length of hospital stays, reducing the use of EDs for initial CAP evaluation, and promoting the use of lower cost antibiotic therapy. The team's findings are based on analysis of six databases: the National Health Interview Survey, the National Hospital Discharge Survey, AHCPR's Healthcare Cost and Utilization Project-3 (HCUP-3), the Pennsylvania MediQal Pneumonia Database of adult patients with CAP discharged from Pennsylvania Hospitals in 1991, the Pennsylvania Medicare Pneumonia Sample, and the Pneumonia PORT Cohort Study (to obtain treatment estimates), which was a multicenter prospective cohort study of outpatient and hospitalized patients with CAP. ■

## *Clinical Decisionmaking*

# Early postoperative enteral feeding for bowel resection patients is cost effective

Starting patients on early postoperative enteral feeding following surgical resection of the small or large intestine is cost effective, finds a study supported in part by the Agency for Health Care Policy and Research (HS08440). Sixty-six patients were fed by a jejunal feeding tube (tube inserted into the small intestine during surgery) within 12 hours after surgery compared with 159 control patients who were fed within the first 5 days after surgery (usual care). A dietitian monitored the nutritional status of the treatment patients on a daily basis. Anne-Marie Hedberg, Dr.P.H., M.S., R.D., of the University of Texas School of Public Health and the Houston Health Science Center, and her colleagues compared the outcomes and cost of care for

***continued on page 6***

## Early postoperative tube feeding

*continued from page 5*

both groups, who were treated at the Texas Medical Center for similar diagnoses and subsequent bowel resections during an 18-month period.

An average of $1,531 was saved per successful treatment patient, which more than offset the additional cost of $108.30 for the dietitian's time. Overall, early tube feeding resulted in $4,450 total cost savings per success in the treatment group. Also, 91 percent of treatment patients had no infection compared with 83 percent of control patients, probably due to the shorter average time (1.8 vs. 5.8 days) that treatment patients spent on total parenteral nutrition (TPN).

Early jejunal feeding was considered a replacement for TPN, which requires placement of a central line into one of the large veins returning blood to the heart for intravenous feeding. The associated risk of bloodstream infections in patients with central venous catheters (CVC) is substantial. Thus, reducing the number of days patients must have these CVCs for TPN is desirable. In addition, 100 percent of treatment patients versus only 1.7 percent of control patients were receiving nasogastric tube feedings by postoperative day 3. The researchers recommend creating a jejunal feeding access for surgical patients if it is likely that diet may not be initiated in the first few days after surgery.

More details are in "Economic implications of an early postoperative enteral feeding protocol," by Dr. Hedberg, David R. Lairson, Ph.D., Lu Ann Aday Ph.D., and others, in the July 1999 *Journal of the American Dietetic Association* 99(7), pp. 802-807. ■

## Dialysis patients' quality-of-life concerns deserve greater attention from providers

Patients with end-stage renal disease (ESRD), that is, chronic kidney failure, apparently have concerns about the impact of dialysis treatment on the quality of their lives that are not fully appreciated by health care providers, concludes a study supported by the Agency for Health Care Policy and Research (HS08365). These patients usually receive hemodialysis (HD) for 3 to 4 hours three times a week at a dialysis center or peritoneal dialysis (PD) four times per day.

Dialysis functions like a kidney to remove waste products from the body and regulate chemical and water balance. In HD a machine filters impurities out of the blood from an arm or leg artery. The filtered blood is then returned to the body via an adjacent vein. PD involves inserting a catheter in the patient's abdomen to run dialysis fluid into the abdomen. The fluid is then drawn out along with excess water and waste products.

CHOICE (Choices for Healthy Outcomes in Caring for ESRD) researchers at the Johns Hopkins University, New England Medical Center, Tufts University, and the Independent Dialysis Foundation, in Baltimore, MD, conducted focus groups with adult patients receiving either HD or PD at four Baltimore dialysis centers. They conducted separate focus groups with nephrologists, nurses, dietitians, social workers, and/or medical technicians from the centers. The researchers audiotaped the focus groups, which concentrated on the impact of dialysis on patients' quality of life, and analyzed and compared group comments.

According to dialysis patients, ESRD and dialysis affected ten different areas of quality of life, yet health care professionals tended to focus on only five of these areas. Providers generally had a good understanding of patients' concerns about the effects of ESRD and dialysis, such as the loss of freedom and control patients feel. However, they made no comments about the effects of ESRD and dialysis on mental attitude and very few comments about their effects on anxiety levels, body image, sleep, and cognitive function. In contrast, some patients mentioned they became depressed, were anxious about getting an infection (from PD), had problems with body image, were weak and tired, didn't always sleep well or needed cat naps, and felt they forgot things or didn't think clearly. These findings may suggest ways to improve care delivered to dialysis patients, conclude the authors.

See "Use of focus groups to identify concerns about dialysis," by Eric B. Bass, M.D., M.P.H., Mollie W. Jenckes, M.H.Sc., Nancy E. Fink, M.P.H., and others, in the July 1999 *Medical Decision Making* 19, pp. 287-295. ■

## Elderly patients with serious depression may not accurately describe their physical health

Elderly people who have minor depression or are not depressed generally rate their physical health better as their level of illness declines. On the other hand, elderly patients who are suffering from serious depression often provide assessments of their health that are inconsistent with clinical evidence, finds a multidisciplinary study supported by the Agency for Health Care Policy and Research (HS07772). Thus, very depressed elderly patients probably provide doctors with a less accurate picture of their health than others, concludes Cynthia L. Leibson, Ph.D., a member of the research team based at the Mayo Foundation.

Dr. Leibson and principal investigator Judith M. Garrard, Ph.D., of the University of Minnesota, and their colleagues analyzed depression scales and health status scales of 549 elderly patients as part of a larger study of outcomes associated with antidepressant treatment among members of a large health maintenance organization. The sample was stratified by depressive status based on the Geriatric Depression Scale. The researchers confirmed depression with the telephone version of the Diagnostic Interview Schedule (DIS) and asked respondents to rate themselves as unhealthy, somewhat healthy, in average health, or very healthy. The researchers used the chronic disease score (CDS)—which identifies patterns of medication use across 17 chronic disease categories—to measure clinically defined illness and a health status questionnaire to measure physical functioning and pain.

Of those studied, 47 percent had no depressive symptoms, 41 percent had minor depression, and 12 percent had serious depression. For patients with no depression or minor depression, self-rated health improved significantly as clinically defined illness decreased, leading the researchers to conclude that when a patient's report is inconsistent with clinical condition, evidence of minor depression should not preclude further investigation of inconsistencies between a patient's report and clinical evidence. However, there was no such inverse association for those with serious depression; these individuals rated their health worse or better than clinical evidence suggested.

More details are in "The role of depression in the association between self-rated physical health and clinically defined illness," by Drs. Leibson and Garrard, Nicole Nitz, M.S., and others, in *The Gerontologist* 39(3), pp. 291-298, 1999. ■

## *Primary Care*

## Largest U.S. study ever examines pediatric referrals to specialists

In the United States, primary care physicians (PCPs) refer patients to specialists at rates that vary from two-fold to five-fold. Many managed care organizations use PCPs, including pediatricians, as gatekeepers to reduce costs by curtailing referrals for presumably inappropriate specialty care. A concern among many doctors and their patients is that gatekeeping pits the PCPs' traditional role as clinical advocates for patients against their managerial role as cost controllers.

But two recently published articles derived from the largest U.S. study ever conducted on pediatricians' referral patterns contain some surprises. The study examined office visits to 142 pediatricians in 94 practices across 36 States. It was supported by the Agency for Health Care Policy and Research (HS08430) and led by Christopher B. Forrest, M.D., Ph.D., and Barbara Starfield, M.D., M.P.H., of Johns Hopkins School of Public Health. Study findings in the first paper reveal that referrals to specialists are uncommon among all pediatricians. The second paper's findings suggest that doctors who have many patients enrolled in gatekeeping plans are more, not less, apt to refer their patients to specialists than others.

**Forrest, C.B., Glade, G.B., Baker, A.E., and others. (1999, July). "The pediatric primary-specialty care interface."** ***Archives of Pediatric and Adolescent Medicine*** **153, pp. 705-714.**

Referrals to specialists are uncommon among pediatricians, concludes this study. It found that pediatricians refer children and adolescents to specialists during only 2.3 percent (or 1 out of 40) of office visits. Referrals made during telephone conversations with parents accounted for 27.5 percent of all referrals. After adjustment for

*continued on page 8*

## Pediatric referrals

*continued form page 7*

patient characteristics, there was a 4.4-fold variation in referral rates.

Getting advice on diagnosis or treatment from a specialist was the most common reason for referral (74.3 percent of referrals). Referral for medicolegal reasons or because the PCP had insufficient time to manage the patients' health problem was uncommon. Most (53 percent) referrals were made for new health problems and for 50 clinical conditions (especially chronic ear infections). Referrals were made to surgical subspecialists (52.3 percent), followed by medical subspecialists (27.9 percent), nonphysicians (11.4 percent), and mental health practitioners (8.4 percent). Also, in most cases (75 percent), physicians wanted to share medical management of the patient with the specialists.

These results suggest that the boundaries of the primary-specialty care interface are fluid, shifting in response to physicians' demands for advice or specialized skills and parents' or patients' expectations for specialty care. The researchers suggest that evidence-based guidelines on when to refer patients would be most useful for the 50 most commonly referred conditions reported in this study. Their findings are based on analysis of 58,771 visits made to 142 pediatricians during 20 consecutive practice days.

**Forrest, C.B., Glade, G.B., Starfield, B., and others. (1999, July). "Gatekeeping and referral of children and adolescents to specialty care."** ***Pediatrics*** **104(1), pp. 28-34.**

This study found unexpectedly that gatekeeping arrangements nearly doubled the odds of patient referrals from pediatricians' offices to specialty care, even though they compromised some aspects of care coordination. During the study period (October 1996 to September 1997), patients made 27,104 visits to 142 pediatricians during 1,228 practice days. Most visits (55.6 percent) were for patients in plans with gatekeeping arrangements. Patients in these plans were more apt to be referred than patients not enrolled in gatekeeping plans (3.16 vs. 1.85 percent of office visits for privately insured patients, and 5.39 percent vs. 3.73 percent of office visits for Medicaid-insured patients).

Physicians who saw 75 percent or more of their patients in gatekeeping plans saw 4 more patients per day (26 vs. 22) than those with 25 percent or fewer patients in gatekeeping plans. Increased practice intensity could be associated with less time to manage patients in the primary care setting, thereby leading to more referrals, suggest the researchers. Their study also found that coordination of referrals made during office visits was more problematic at the time of referral for patients in gatekeeping plans. Physicians were less likely to schedule an appointment or communicate with the specialist for referred patients in gatekeeping plans.

Primary care physicians unfamiliar with the panel of specialists in a patient's health plan may be less likely to contact that consultant to schedule a referral visit or to provide information about the patient. This breakdown in coordination limits a PCP's ability to clarify referral questions for the consultant and to provide background information on the history, previous evaluation, and management of the patient's health problem, explain the researchers. They suggest that as market penetration of gatekeeping insurance plans increases, doctors may need to hire additional administrative staff to help them coordinate an increasing volume of referrals. ■

## Feedback and financial incentives may not improve pediatric preventive care in Medicaid HMOs

Immunizations and other cost-effective preventive health services are underused by many poor children. Yet providing physicians in Medicaid managed care organizations (MCOs) with feedback on compliance with preventive health services, even with financial bonuses for compliance, does not increase their provision of these services, concludes a study supported by the Agency for Health Care Policy and Research (HS07634). These findings should not be interpreted to mean that financial incentives cannot capture physicians' attention regarding preventive care. Other factors may have contributed to the lack of effect, suggests Alan L. Hillman, M.D., M.B.A., of the University of Pennsylvania.

Dr. Hillman and his colleagues randomly assigned primary care sites serving children in a Medicaid HMO to one of three groups: a feedback group (physicians received written feedback about compliance scores), a feedback and financial incentive group (financial bonus when compliance criteria were met), and a control group. The researchers evaluated compliance with pediatric preventive care guidelines through semiannual chart audits conducted from 1993 to 1995.

***continued on page 9***

## Pediatric preventive care

*continued from page 8*

All three study groups improved total compliance scores from 56 percent to 73 percent, as well as scores for immunizations (from 62 percent to 79 percent) and other preventive care (from 54 percent to 71 percent). However, there were no significant differences between either intervention group and the control group. Bonuses paid out over the course of the study amounted to an average of $2,000 per site, but they had little effect on an individual physician's overall income. This financial incentive may not have been sufficient to influence behavior, suggest the researchers. Also, only 56 percent of the 27 responding sites were aware of the feedback and incentive program, despite repeated mailings. Finally, during the course of the study, much public attention was focused on improving pediatric preventive care, and many HMOs conducted quality improvement activities. These system-wide events could have overshadowed the impact of the incentive during the short time it was offered.

Perhaps most important are the lessons from this research regarding the need to mimic reality as closely as possible when deciding on the magnitude of financial incentives, the need for physician "buy in" (perhaps related to the size of incentives), and the length of the intervention. However, these considerations must be balanced by the fact that actual clinical practice cannot be as highly controlled as it is in randomized controlled trials. Balancing control in health services research with the exigencies of actual practice will remain a challenge, concludes Dr. Hillman.

See "Pediatric preventive care incentives in a Medicaid HMO," by Dr. Hillman, Kimberly Ripley, M.A.S., Neil Goldfarb, B.S., and others, in *Pediatrics* 104, pp. 931-935, 1999. ■

# Costs pose a barrier to early childhood immunization

A national priority for the year 2000 is full immunization of at least 90 percent of U.S. children by age 2. Yet the vaccination rate for children ages 19 to 35 months was only 78 percent in 1996. A recent study places part of the blame on economic barriers to timely immunization. It shows that children are vaccinated later in the practices of providers who do not receive free vaccine supplies, those that tend to refer uninsured children to a public vaccine clinic rather than do the vaccinations themselves, and providers who over-interpret contraindications to vaccination. These findings provide support for the 1994 Federal Vaccines for Children Program, which provides free vaccines to providers and public clinics that immunize disadvantaged children.

Clearly, furnishing free vaccines to health care providers who care for disadvantaged children can increase immunization rates, assert Richard K. Zimmerman, M.D., M.P.H., of the University of Pittsburgh, and his colleagues. With support from the Agency for Health Care Policy and Research (HS08068), they interviewed 29 primary care physicians at HealthEast multispecialty group practices in Minnesota about their likelihood of immunizing a child in a particular clinical situation. They then correlated physicians' stated practices with actual immunization practices.

Significantly more children seen by providers who received free vaccines were vaccinated on time compared with children seen by providers who did not receive free vaccines (measles-mumps-rubella, MMR#1, 77 percent versus 48 percent; diphtheria-tetanus-pertussis, DTP#3, 84 percent vs. 71 percent; and DTP#4, 82 percent vs. 66 percent). Children seen by providers who were knowledgeable about the proper contraindications to vaccination were more apt to be vaccinated on time. For example, children seeing providers who were unlikely to give an MMR vaccine to a child with mild diarrhea (which is not a contraindication to vaccination) had vaccination rates for MMR#1 of 62 percent vs. 76 percent for providers willing to vaccinate such children. Fewer children seen by providers likely to refer an uninsured child to a health department for vaccination received MMR#1 on time than children seen by providers who were more likely to immunize uninsured children themselves (69 percent vs. 81 percent).

See "Are vaccination rates higher if providers receive free vaccines and follow contraindication guidelines?" by Dr. Zimmerman, Tammy A. Mieczkowski, Ph.D., and Matthew Michel, in the May 1999 *Family Medicine* 31(5), pp. 317-323. ■

## Patients with disabilities are less likely than nondisabled patients to receive preventive care services

More than one out of five people older than 65 has some sort of disability. As the U.S. population continues to age, more Medicare patients will be disabled. Unfortunately, severely disabled Medicare patients are less apt to receive needed preventive services than their nondisabled counterparts, according to a study supported in part by the Agency for Health Care Policy and Research (contract 290-93-0036).

The study found that the most severely disabled Medicare-insured women (limited in their ability to carry out five or six activities of daily living) who were 70 years of age or younger reported fewer Pap smears (23 percent vs. 41 percent) and those age 50 and older reported fewer mammograms (13 percent vs. 44 percent) compared with similar nondisabled women. These rates decreased even further to 9.3 percent for Pap smears and 5.3 percent for mammograms for severely disabled women living in long-term care facilities.

Efforts should be made to identify patients who are severely disabled—especially those in long-term care facilities—because they seem to be particularly vulnerable, suggest the Seattle, WA, researchers who conducted the study. They analyzed data from the 1995 Medicare Current Beneficiary Survey to calculate self-reported Pap smears, mammograms, and influenza and pneumococcal vaccinations among groups with different levels of disability (number of limitations in daily living activities).

In a controlled analysis, severely disabled women were about 56 percent less likely to report receiving Pap smears and mammograms, compared with nondisabled women, regardless of age, health maintenance organization (HMO) enrollment status, or long-term care arrangements. However, functional limitations were not a deterrent to receiving the vaccinations studied. It may be more difficult to perform a mammogram or Pap smear on a woman who has functional limitations, especially if she has impaired mobility. Also, disabled individuals are apt to have multiple medical problems, and physicians may concentrate on these issues and neglect health maintenance items. On the other hand, providers may believe that preventive services are less important or cost effective for seriously disabled individuals, whose quality of life may already be low.

More details are in "Do Medicare patients with disabilities receive preventive services? A population-based study," by Leighton Chan, M.D., Jason N. Doctor, Ph.D., Richard F. MacLehose, M.S., and others, in the June 1999 *Archives of Physical Medicine and Rehabilitation* 80, pp. 642-646. ■

## Programs to improve timely prenatal care should not focus solely on uninsured and Medicaid-insured women

Recent efforts to improve prenatal care in the United States have focused on expanding Medicaid maternity care programs for poor "special needs" mothers. Health care planners have often assumed that programs to improve prenatal care use are needed only by the public sector and by providers serving large numbers of uninsured or Medicaid-insured women. Yet a new study shows that low income, even among privately insured women, is strongly associated with untimely prenatal care (first visit after the first trimester or no prenatal care), and that a substantial proportion of privately insured childbearing women are poor.

In one of the largest and most comprehensive population-based studies of childbearing women to date, Paula Braveman, M.D., M.P.H., of the University of California, San Francisco, and her colleagues conducted a State-wide survey of women giving birth in California during 1994 and 1995. Their work was supported in part by the Agency for Health Care Policy and Research (HS07910). They compared prenatal care use among women in different income groups and income-insurance subgroups and explored barriers to prenatal care.

The researchers found that nearly two-thirds (65 percent) of the women delivering babies in California during this time had low incomes. As expected, nearly all women (96 percent) with Medi-Cal (California's Medicaid program) had low incomes, but one-third (35 percent) of privately insured women also had low incomes. Most of the women in both groups received their prenatal care at private-sector sites.

Overall, 32 percent of low-income women had untimely prenatal care. Among poor women (0 to 100 percent of the Federal poverty level), 38 percent insured by Medi-Cal and

*continued on page 11*

## Timely prenatal care

*continued from page 10*

25 percent with private coverage had untimely prenatal care. Among the near poor (101 to 200 percent of the Federal poverty level), 24 percent of women with Medi-Cal and 14 percent with private insurance had untimely care. Among privately insured, moderate-income women, only 8 to 12 percent had untimely care.

These findings clearly indicate that low-income women are the mainstream maternity population, notes Dr. Braveman. Thus, programs and policies aimed at improving the timely use of prenatal care should include all low-income women, not only those who are uninsured or Medicaid-insured women.

See "The prevalence of low income among childbearing women in California: Implications for the private and public sectors," by Dr. Braveman, Susan Egerter, Ph.D., and Kristen Marchi, M.P.H., in the June 1999 *American Journal of Public Health* 89(6), pp. 868-874. ■

# Primary care physicians interact differently with patients during initial and return visits

Patients appear to benefit from the continuity of seeing the same primary care physician over time, suggest two studies supported by the Agency for Health Care Policy and Research (HS06167) and led by Klea D. Bertakis, M.D., M.P.H., of the University of California, Davis. The first study demonstrates that return visits to the same doctor are shorter but more productive than the initial visit. The second study shows that physician practice style during the initial encounter along with other physician and patient factors influence the nature of return visits.

**Bertakis, K.D., Azari, R., Callahan, E.J., and others. (1999, August). "Comparison of primary care resident physicians' practice styles during initial and return patient visits." Journal of General Internal Medicine 14, pp. 495-498.**

This study found that return visits to the same primary care physician lasted only half as long (20 vs. 38 minutes) but were more work-intensive than the initial visit. Return visits were significantly less technically oriented, that is, the physician spent less time on history taking, physical examination, and treatment planning. Instead, there was more emphasis on health behaviors and the active involvement of patients in their own care. This difference between return and initial clinical visits suggests that physician-patient familiarity influences what happens during the medical visit, note the researchers.

They randomly assigned 212 nonpregnant adults to 58 senior resident physicians in either a family practice or general medicine clinic at a university medical center. Study patients returned for a median of four additional visits after their initial appointment from 1990 to 1993. All initial visits and 41 percent of return visits were videotaped to document physician practices during the visits.

Despite the shorter length of return visits, they included an average of 1.84 clinically significant behaviors per 15-second interval versus only 1.71 per interval for initial visits, a significant difference. Also, in return visits, discussions concerning therapy centered less on evaluation feedback and planning treatment and more on treatment compliance. The interpersonal dynamics also changed, with the patient taking a more active role.

**Bertakis, K.D., Robbins, J.A., Callahan, E.J., and others. (1999, March). "Physician practice style patterns with established patients: Determinants and differences between family practice and general internal medicine residents." Family Medicine 31(3), pp. 187-194.**

Physician practice style during the initial patient visit is not the only factor affecting subsequent visits. Other physician and patient factors also play a role, finds this study. The researchers randomly assigned 509 new adult patients to family practice or internal medicine clinics at a university medical center and followed them for 1 year of care by resident physicians. They videotaped initial and return visits, and correlated factors associated with physician practice styles with established patients during return visits.

Both family physicians and internists spent more time on technical aspects of medical care (for example, medical exam and treatment) for patients in poorer health and for those patients whose initial visits had been characterized by more technical physician behaviors. Also, discussions of nutrition, exercise, and other health behaviors and discussions of treatment compliance during return visits were predicted by these issues being addressed during the first visit. Being male or having an addiction problem such as smoking

***continued on page 12***

## Physician/patient interaction

*continued from page 11*

was also predictive of these discussions in return visits. Physicians tended to encourage more active involvement with patients who were older, had higher incomes, and when they had used this approach the first time.

Women's return visits emphasized preventive services more than men's return visits. Also, higher initial health status, greater number of return visits, and more self-reported depressive symptoms all significantly influenced the amount of counseling services during return visits. The authors note that many factors influence the established practice style patterns of physicians, and that visits tend to consistently reflect a physician's personal style.

In addition, this study also found support for the hypothesis that there are measurable differences between the practice styles of family physicians and internists. For example, family practice residents gave greater attention to preventive services during return visits, while internal medicine residents spent more time using technical behavior during followup visits. These differences may have implications for patient outcomes, conclude the researchers. ■

## *Rural Health*

# Rural communities motivated to develop managed care networks benefit most from technical assistance programs

More than one in four people (27 percent) in the United States is enrolled in a managed care program, but the growth of risk-based managed care has lagged in rural areas. In 1995, less than 10 percent of the rural population in eight States was enrolled in a commercial HMO compared with 26 percent of the urban population in the same States.

The rural communities most motivated to integrate into managed care systems are those who perceive the threat of managed care from outside their community. This may be due to increased market activity by regional or national managed care organizations (MCOs) or efforts by large regional hospitals in nearby urban areas to draw rural providers into their networks. Rural providers in these communities have strong incentives to band together, but to operate effectively, they need a great deal of resource-intensive technical assistance. In 1994, the Agency for Health Care Policy and Research funded five university-based technical assistance projects to help rural providers in six States—Arizona, Maine, Oklahoma, West Virginia, Nebraska, and Iowa—prepare to participate more effectively in managed care through the development of rural health networks.

The project offered technical assistance to help rural communities develop rural health networks to participate in managed care. Technical assistance efforts varied according to the extent of each site's network and managed care activity. Three projects (Maine, Nebraska and Iowa, and West Virginia) provided organizing support needed by fledgling provider networks to contract with MCOs. Other projects assisted in community development as a first step toward network development and managed care in Arizona, West Virginia, Nebraska, and Iowa. Finally, the project provided support for loose provider coalitions in Maine. A recent evaluation of the program (supported by AHCPR contract no. 290-93-0038) was conducted to assess its effects and provide guidance to other organizations considering similar technical assistance efforts.

Some sites made substantial progress toward system integration during the first 3 years of the program. Yet in other sites, provider groups were less cohesive and their goals less clear, and they were least prepared for managed care. They were arguably most in need of technical assistance, but because members were not strongly motivated to cooperate, the technical assistance had little immediate impact on the health care delivery system. Thomas C. Ricketts, Ph.D., of the University of North Carolina, and colleagues conclude that technical assistance projects are insufficient on their own to spur network development. Instead, real movement toward system integration usually requires pressure from larger forces external to the community.

For more details, see "Preparing rural communities for managed care: Lessons learned," by Nancy J. Fasciano, M.P.A., Suzanne Felt-Lisk, M.P.A., Dr. Ricketts, and Benjamin Popkin, J.D., M.P.H., in the Winter 1999 *Journal of Rural Health* 15(1), pp. 78-86. ■

## Managed care apparently does not constrain use of intensive care services

A full day in a hospital intensive care unit (ICU) costs about three to five times as much as a day in a regular inpatient unit. Thus, it makes sense that insurers would want to give physicians and hospitals incentives to limit the use of the ICU. However, managed care patients are no less likely to receive ICU services than other patients, finds a new study by researchers at the Agency for Health Care Policy and Research. Bernard Friedman, Ph.D., and Claudia Steiner, M.D., M.P.H., used 1992 hospital discharge summaries to analyze use of ICUs in Florida and Massachusetts by adult patients under age 65 and not covered by Medicaid.

When a hospital's ICU supply ratio (actual ICU use divided by expected demand based on patient case mix) was tight, that is, below the median for the State, all patients had a shorter length of stay (LOS) in the ICU, and there was no difference by payer class. It was only when hospitals were above the median in the supply ratio that HMO and self-pay patients received less ICU care relative to other insured patients. This occurred because other privately insured patients had a longer LOS than predicted by patient clinical factors, not because HMO and self-pay patients had much shorter stays.

In Florida, there was no significant difference in ICU charges (adjusted to estimate resource use) for HMO patients. In Massachusetts, for both HMO and self-pay patients, the length of ICU stay was about 4 days less than would be expected for their condition. However, this result reflected partly the distribution of patients across hospitals with different constraints on total ICU supply. In both States, at hospitals in the lowest quartile of supply ratio, patients received fewer ICU resources than predicted: a 28 percent shorter LOS in Massachusetts and 56 percent lower charges in Florida. The lack of a relationship between ICU admission rates and managed care should be reassuring to observers concerned about undue restriction of these services by managed care physicians, conclude the researchers.

More details are in "Does managed care affect the supply and use of ICU services?" by Drs. Friedman and Steiner, in the Spring 1999 *Inquiry* 36, pp. 68-77. Reprints (AHCPR Publication No. 99-R071) are available from AHCPR.** ■



## Multiple drug therapy for HIV clinic patients is only half as successful as it is for clinical trial patients

Highly active antiretroviral therapy (HAART), an intense combination drug therapy for patients who have HIV infection, is only half as successful in reducing HIV viral load in patients treated at a typical urban HIV clinic compared with those in clinical trials. Failure to keep clinic appointments is the principal reason for this failure to suppress HIV levels, according to a study supported in part by the Agency for Health Care Policy and Research (HS07809). Missed appointments may simply be a marker for poor compliance with drug therapy, which is more easily controlled in clinical trials, suggests Richard D. Moore, M.D., M.H.Sc., of Johns Hopkins University School of Medicine.

HAART has been able to reduce HIV blood levels to less than 500 copies/mL in 60 to 90 percent of clinical trial patients. It is usually a combination of drugs: protease inhibitors, nucleoside analogs, and non-nucleoside reverse transcriptase inhibitors. In this study, Dr. Moore and colleagues analyzed the success of a broad range of HAART regimens in 273 patients receiving care at an urban HIV clinic. The patients took a protease inhibitor regimen containing at least one other antiretroviral drug that they had not taken before; 87 percent took at least three drugs. The patients were similar in sex, age, injection drug use, baseline CD4

***continued on page 14***

## Clinic care for patients with HIV

*continued from page 13*

lymphocyte count (indicator of immune system function), and HIV levels.

Of these clinic patients, 37 percent receiving HAART had undetectable HIV levels 1 year after starting therapy, and only 23 percent experienced viral suppression in all three time periods: 1 to 90 days, 3 to 7 months, and 7 to 14 months. This was half the rate of viral suppression seen in patients participating in clinical trials involving similarly potent therapy. Adverse drug reactions were more common among women and twice as common in patients receiving regimens including the protease inhibitor ritonavir than in those taking the protease inhibitors indinavir or nelfinavir. Higher rates of missed clinic appointments was the factor most strongly associated with failure to suppress HIV viral load at 1 year. Minority patients, injection drug users, and those younger than 41 years were more likely to miss clinic appointments.

See "Highly active antiretroviral therapy in a large urban clinic: Risk factors for virologic failure and adverse drug reactions," by Gregory M. Lucas, M.D., Richard E. Chaisson, M.D., and Dr. Moore, in the July 20, 1999 *Annals of Internal Medicine* 131(2), pp. 81-87. ■

## A substantial number of HIV-infected individuals also suffer from serious mental illness

The first State-wide report on community-dwelling patients with serious mental illness and HIV/AIDS reveals that the co-existence of these two conditions may pose a significant clinical and public health problem. Among 8,294 Medicaid-insured patients with HIV disease in New Jersey, 6 percent suffered from schizophrenia and 7 percent from a major affective disorder, such as major depressive disorder or bipolar disorder. In comparison, schizophrenia affects only 1 percent of the general population. Preparation of the report was supported in part by the Agency for Health Care Policy and Research (HS06339).

Ironically, HIV has spread to psychiatrically disabled patients just as treatments have become both increasingly effective and more complex. Clinicians must determine when and how to provide antiviral combination therapies to these patients, who may find it more difficult to adhere to the complex drug treatments, explains the study's principal investigator Stephen Crystal, Ph.D. Dr. Crystal and his Rutgers University colleagues merged the New Jersey HIV/AIDS Registry with Medicaid eligibility files to identify and characterize seriously mentally ill patients with HIV infection.

The researchers found that those with schizophrenia were more apt than other patients to be injection drug users and to have Medicaid claims indicative of substance abuse. Also, they were more likely to be diagnosed with HIV rather than AIDS, suggesting more recent infection than other patients. Seventy-seven percent of this group had indications of a substance abuse problem. Individuals with a major affective disorder were more apt to be white, female, and residents of rural areas. Although HIV disease may sometimes trigger psychiatric dysfunction, it is likely that many seriously mentally ill individuals with HIV infection are among the group with long-term chronic mental illness, conclude the researchers. They call for further research to examine the risks faced by seriously mentally ill individuals in the community and to shed light on their experiences when treated with combination antiviral regimens.

For more details, see "Schizophrenia and major affective disorder among Medicaid recipients with HIV/AIDS in New Jersey," by James Walkup, Ph.D., Dr. Crystal, and Usha Sambamoorthi, Ph.D., in the July 1999 *American Journal of Public Health* 89(7), pp. 1101-1103. ■

# AHCPR launches research program to improve the safe and effective use of medical products

The Agency for Health Care Policy and Research recently launched a new research program to boost the positive impact on patient care of medical products—drugs, biologics, and medical devices—by establishing four Centers for Education and Research on Therapeutics (CERTs). AHCPR has awarded $7.7 million over a 3-year period in cooperative agreements to the Duke University Medical Center in Durham, NC, the University of North Carolina, Chapel Hill, Vanderbilt University, Nashville, TN, and Georgetown University Medical Center in Washington, DC, to operate the centers. Duke University also will include a coordinating center for the program. The centers will conduct pilot studies using state-of-the-art clinical, laboratory, and health services research methodologies.

The CERT demonstration program is intended to improve the quality of health care and reduce costs by increasing awareness of the benefits and risks of new uses or combinations of medical products and by improving the effectiveness of existing uses. AHCPR administers the program in consultation with the Food and Drug Administration.

The CERTs and their principal investigators are:

**Duke University Clinical Research Institute Cardiovascular CERT. Principal investigator: Robert M. Califf, M.D. Total projected funding $2,802,813; funding period 9/30/99 - 9/29/02.**

This center will focus on currently approved therapies in cardiovascular medicine, including special surveillance programs for cardiovascular devices, revascularization, new prosthetic valves, and coronary stents. In addition, the center will conduct demonstration projects involving the treatment of congestive heart failure, chest pain, and abnormal heart rhythms.

**University of North Carolina CERT on Rational Therapeutics for the Pediatric Population. Principal investigator: William Campbell, Ph.D. Total projected funding $1,984,255; funding period 9/30/99 - 9/29/02.**

Improvement in child health is the focus of this center. Activities may include innovative education and research on new drugs and devices used in pediatric care and new uses of existing drugs and devices. Potential study topics include therapeutic drug monitoring in HIV-infected children, drug metabolism, vitamin D-deficient rickets, asthma care, attention deficit/hyperactivity disorder, and adverse drug reactions.

**Vanderbilt University CERT. Principal investigator: Wayne Ray, Ph.D. Total projected funding $1,353,507; funding period 9/30/99 - 9/29/02.**

The goal of this center is to improve use of prescription medicines in Medicaid managed care by combating three specific threats to rational pharmacotherapy: inadequate knowledge of medications and their benefits and risks, inadequate provider and patient behavior, and policies that lead to poor patient outcomes. A major focus of this project will be the treatment of arthritis.

**Georgetown University Medical Center CERT. Principal investigator: Raymond L. Woosley, M.D., Ph.D. Total projected funding $1,549,628; funding period 9/30/99 - 9/29/02**.

The center will focus on reducing drug interactions, particularly in women, by improving prescribing. Objectives include identifying potential candidates for investigations of drug interactions and designing and implementing a comprehensive educational program aimed at physicians, pharmacists, and patients on specific drug interactions. ■

# HHS Secretary appoints new members to AHCPR National Advisory Council

Health and Human Services Secretary Donna E. Shalala has appointed four new members to the National Advisory Council (NAC) for Health Care Policy, Research, and Evaluation. The Council provides advice to the Secretary and to the Administrator of the Agency for Health Care Policy and Research. The 24-member Council comprises private-sector experts representing health care plans, providers, purchasers, consumers, and health services researchers, as well as top Federal health officials. The new Council members are:

**Karen Davis, Ph.D.,** President, The Commonwealth Fund, New York, NY.

**Marsha Lillie-Blanton, Ph.D.,** Vice President, Henry J. Kaiser Foundation, Washington, DC.

**Uwe E. Reinhardt, Ph.D.,** James Madison Professor of Political Economy and Professor of Economics and Public Affairs, Princeton University, Princeton, NJ.

**John Clark Nelson, M.D.,** Partner, Mountain West Obstetrics and Gynecology, Salt Lake City, UT.

The continuing Council members are:

**Donald Berwick, M.D., M.P.P.,** President and CEO, Institute for Healthcare Improvement, Boston, MA. (Committee Chairman)

**Colleen Conway-Welch, Ph.D.,** Professor and Dean, Vanderbilt University School of Nursing, Nashville, TN.

**Jose Julio Escarce, M.D., Ph.D.,** Senior Natural Scientist, RAND, Santa Monica, CA.

**Elliott S. Fisher, M.D., M.P.H.,** Associate Professor of Medicine, Dartmouth Medical School, Hanover, NH.

**Dennis G. Fryback, Ph.D.,** Professor, Department of Preventive Medicine, University of Wisconsin, Madison, WI.

**Vanessa N. Gamble, M.D., Ph.D.,** Director, Center for the Study of Race and Ethnicity in Medicine and Associate Professor, History of Medicine and Family Medicine, University of Wisconsin School of Medicine, Madison, WI.

**Larry A. Green, M.D.,** American Academy of Family Practice, Washington, DC.

**Brent C. James, M.D.,** Vice President for Medical Research and Executive Director, Institute for Health Care Delivery Research, Intermountain Health Care, Salt Lake City, UT.

**Sheila Leatherman,** Executive Vice President, United HealthCare Corporation, Minnetonka, MN.

**James M. Perrin, M.D.,** Associate Professor and Director of General Pediatrics, Massachusetts General Hospital, Boston, MA.

**Ruby Takanishi, Ph.D.,** President, Foundation for Child Development, New York, NY.

**Peter W. Thomas, J.D.,** Principal Attorney, Powers, Pyles, Sutter, and Verville, P.C., Washington, DC.

**Nelda P. Wray, M.D.,** Director, Houston Center for Quality of Care and Utilization Studies, Veterans Affairs Medical Center, Houston, TX.

In addition to the private-sector members, representatives from seven Federal agencies serve as ex-officio members of the Council: the National Institutes of Health, the Department of Defense, the Centers for Disease Control and Prevention, the Department of Veterans Affairs, the Substance Abuse and Mental Health Services Administration, the Food and Drug Administration, and the Health Care Financing Administration. ■

# AHCPR, Packard Foundation, and HRSA award $9.1 million for studies on improving health care for low-income children

The Agency for Health Care Policy and Research, the David and Lucile Packard Foundation, and the Health Resources and Services Administration (HRSA) are supporting a group of research studies to help public health insurance programs and health care delivery systems improve health care quality and access to care for low-income children. The new projects were announced October 12 by President Clinton. Overall funding will total $9.1 million over 3 years for nine research projects.

According to AHCPR Deputy Administrator Lisa Simpson, M.B., B.Ch., and Eugene Lewit, Ph.D., Senior Program Manager in the Children, Families and Communities Program of the Packard Foundation, the studies are especially timely in light of the growth of managed care and other recent changes in the financing and delivery of health care, including the State Children's Health Insurance Program (CHIP). CHIP, enacted as part of the Balanced Budget Act of 1997. CHIP helps States offer affordable health insurance to low-income, uninsured children in working families that earn too much for Medicaid but too little to afford private coverage.

These studies will seek to uncover which health insurance and delivery features work best for low-income children—particularly minority children and those with special health care needs. The studies should benefit CHIP as well as other public insurance programs and delivery systems, including Medicaid and other publicly subsidized health insurance. Seven of the projects focus exclusively on or have separate analyses of children with special health care needs, and five explore disparities between minority and white children.

A key feature of this set of projects is that the principal investigators will participate in a national coordinating committee that will undertake activities to strengthen individual studies and make it possible for the results to be applied across locations, populations, and delivery systems with various insurance and organizational features. The coordinating committee will receive guidance from a users' group made up of Federal, State, and local government representatives.

The following awards were made:

**Provider Participation and Access in Alabama and Georgia. Principal investigator: Janet Bronstein, Ph.D., University of Alabama at Birmingham; $1,188,628; 9/30/99 - 9/29/02.**

This study will examine the effect of CHIP and Medicaid changes and expansions in Alabama and Georgia on provider availability and on low-income children's subsequent access to, use of, and satisfaction with health services. Two substudies, one of black children and one of children with special health care needs, will be undertaken.

**Impact of Publicly Funded Programs on Child Safety Nets. Principal investigator: Peter Budetti, M.D., J.D., Northwestern University, Evanston, IL; $985,469; 9/30/99 - 9/29/02.**

The purpose of this national study is to look at the impact of Medicaid managed care and CHIP on the survival and financial viability of pediatric safety net providers.

**Medicaid vs. Premium Subsidy: Oregon's CHIP Alternatives. Principal investigator: Janet Mitchell, Ph.D., Center for Heath Economics Research, Waltham, MA; $872,321; 9/30/99 - 9/29/02.**

This study will compare access to, satisfaction with, and the quality of health care of Oregon children who choose to enroll in the CHIP Medicaid-look-alike program, those who choose to enroll in the premium subsidy program, and those who remain uninsured. There will be a focus on Hispanics, who are disproportionately represented among the uninsured. Researchers will also investigate continuity of enrollment and the reasons why some fail to re-enroll in the CHIP program.

**Special Health Care Need Children: CHIP Responsiveness. Principal investigator: Sara Rosenbaum, J.D., George Washington University, Washington, DC; $951,687; 9/30/99 - 9/29/02.**

This study will explore how States exercise their flexibility in CHIP program design by describing eligibility criteria in freestanding CHIP programs and all managed care design features in CHIP programs nationwide. Researchers also will analyze the data from the National Health Interview Survey, AHCPR's Medical Expenditure Panel Survey (MEPS), and the Area Resource File to model the impact of key benefit features on low-income

*continued on page 18*

## New research projects

*continued from page 19*

children's access to and use of health care.

**Evaluation of Kansas Healthwave. Principal investigator: Robert St. Peter, M.D., Kansas Health Institute, Topeka, KS; $614,290; 9/30/99 - 9/29/02.**

The purpose of this study is to evaluate the impact of the Kansas CHIP program on low-income children's health care access, quality, use, and insurance status, including children who remain uninsured. This study will include a special focus on the vulnerable populations of rural, urban black, and Hispanic children.

**Access and Quality of Care for Low-Income Adolescents. Principal investigator: Elizabeth Shenkman, Ph.D., University of Florida, Gainesville, FL; $920,191; 9/30/99 - 9/29/02.**

This study will focus on the impact of the organizational features of Florida's CHIP plans and providers on adolescents' access to and quality of care, health and functioning, and expenditures, including a comparative analysis of minority and white youths.

**Health Care Access, Quality, and Insurance for CSHCN. Principal investigator: Nancy Swigonski, Ph.D., Indiana University, Indianapolis, IN; $1,118,744; 9/30/99 - 9/29/02.**

This study will analyze the impact of Indiana's various CHIP arrangements on children with special health care needs regarding health care access, utilization, quality, satisfaction, expenditures, health outcomes, and family impact.

**New York's SCHIP: What Works for Vulnerable Children? Principal investigator: Peter Szilagyi, M.D., M.P.H., University of Rochester, NY; $1,751,260; 9/30/99 - 9/29/02.**

The purpose of this study is to assess the impact of New York's CHIP health plan features on enrollees' access, use, and quality of care, including substudies of children with asthma and minority children. In addition, investigators will examine continuity of enrollment, the magnitude and reasons for loss of commercial insurance, the impact of CHIP on uncompensated inpatient care, and the factors that cause some eligible families not to enroll.

**Analysis of Fee-for-Service vs. Managed Care CSHCN. Principal investigator: Janet Zimmerman, Ph.D., Michigan Public Health Institute, Okemos, MI; $667,369; 9/30/99 - 9/29/02.**

This study will investigate the impact of a voluntary managed care program for children with special health care needs on Medicaid-eligible children.

**Editor's Note:** The David and Lucile Packard Foundation is a private family foundation founded in 1964. The Foundation provides grants in a number of program areas, including science, children, and families, communities, conservation, and the arts.

HRSA, AHCPR's sister agency, is a component of the U.S. Public Health Service. HRSA directs health programs to improve the health of the nation by assuring quality health care to underserved, vulnerable, and special-need populations and by promoting appropriate practices and capacity in the health professions workforce, particularly in primary care and public health. ■

**Correction.** The July/August 1999 issue of *Research Activities*, page 14, announced the availability of the grant final report for project HS09534, "Can Hospital Policies Be Developed to Serve as Standards of Practice when Conflicts Occur over Life-Sustaining Treatment?" Lawrence Schneiderman, M.D., University of California, San Diego, principal investigator. Information needed to order this publication from the National Technical Information Service (NTIS) was inadvertently omitted from the summary. To purchase a copy of this report, specify NTIS accession number PB99-154411. The cost for the 34 page report–including abstract, executive summary, and final report–is $25.50 for paper or $12.00 for microfiche.***

See the back cover of this issue for information on contacting NTIS. ■

## AHCPR congratulates recent recipients of dissertation grants

The Agency for Health Care Policy and Research congratulates the recipients of recently awarded dissertation grants. We wish you well as you join the community of health services researchers and contribute knowledge that will help to enhance the quality of health care in years to come. We also acknowledge and thank all the mentors/advisors of these newly funded grantees. We appreciate the leadership and guidance you are providing to these students and trainees.

| PI | Grant | Institution | Mentor/Advisor |
|---|---|---|---|
| Jean Marie Abraham | HS10572 | Carnegie Mellon | Martin Gaynor, Ph.D. |
| Catherine DesRoches | HS10576 | Columbia University | John A. Capitman, Ph.D. |
| Iris A. Garcia-Caban | HS10567 | Brandeis University | |
| Denise F. Giles | HS10569 | University of Alabama, Birmingham | Greg Alexander, Sc.D. |
| Holly E. Jacobson | HS10562 | University of Arizona | Muriel Saville-Troike, Ph.D. |
| Ahmed W. Khwaja | HS10574 | University of Minnesota | Roger Feldman, Ph.D. |
| Ruvanee M. Pietersz | HS10565 | University of Chicago | Martha McClintock, Ph.D. |
| Peggy A. Schuber | HS10583 | University of Texas, Houston | Janet Meininger, Ph.D. |
| Janet K. Shim | HS10582 | University of California, San Francisco | Howard Pinderhughes, Ph.D. |
| Tanya Jean Stivers | HS10577 | University of California, Los Angeles | John Heritage, Ph.D. |
| Michael G. Trisolini | HS10580 | Brandeis University | Stanley S. Wallack, Ph.D. |
| Doris C. Vahey | HS10581 | University of Wisconsin | Vivian Littlefield, Ph.D. ■ |

## New book recounts tragedy to hemophiliacs from HIV-tainted blood in the early 1980s and their eventual empowerment

For thousands of years, boys known as "bleeders" faced an early, painful death from hemophilia. The 20th century has seen many advances in hemophilia treatment. Scientific breakthroughs in coagulation research in the 1950s led to the development of freeze-dried pooled plasma products. Major treatment improvements occurred beginning in the 1970s, following passage of legislation that created a nationwide network of federally funded hemophilia treatment centers. By the early 1980s, the "miracle treatment" of freeze-dried pooled plasma blood products, which helped blood clotting and abated uncontrolled bleeding, enabled men with hemophilia to have full, normal lives. However, infiltration of the virus into the blood donor supply during that time resulted in over half of the hemophilia community becoming infected with the virus that causes AIDS.

But rather than collapsing, this community refocused its priorities, extended its reach, and helped shape blood safety policies to prevent further tragedy, according to a new book by Susan Resnik, Dr.P.H., of the University of California, San Diego, Medical School. In the book, *Blood Saga: The Emergence and Empowerment of the U.S. Hemophilia Community, 1948-1998*, Dr. Resnik includes the stories of many players: men with hemophilia and their families, medical personnel, clinical researchers, and the author herself, who was

*continued on page 20*

## New book on hemophilia

*continued from page 19*

Educational Director of the National Hemophilia Foundation in the early 1980s.

Through narratives and use of oral histories, Dr. Resnik tells the story of hemophiliacs' hopes and dashed dreams from the perspectives of parents, wives, nurses, doctors, government agency directors, health care providers, and many others. Gene insertion therapy now holds the promise of a cure for hemophilia in the near future. Yet scientific breakthroughs inevitably become intertwined with the industry and academic medical centers that govern the national health care system. And in that system, costs and safety are sometimes contending issues, notes Dr. Resnik, whose work was supported by the Agency for Health Care Policy and Research (HS06596).

See *Blood Saga: The Emergence and Empowerment of the U.S. Hemophilia Community, 1948-1998*, by Dr. Resnik; Ewing, NJ: University of California Press, 294 pp., fall 1999. Available for purchase from California-Princeton Fulfillment Services, 1445 Lower Ferry Road, Ewing, NJ 08618; 609-883-1759, phone; 800-999-1958, fax; $29.95 clothbound, plus $3.75 shipping. ■

**Attention researchers:**

**Contact the AHCPR Clearinghouse at 800-358-9295 to obtain grant application kits. Kits are no longer available from Equals Three Communications.**

## *Research Briefs*

**Bush, N.E., Wooldridge, J., Foster, V., and others. (1999). "Web site design and development issues: The Washington State breast and cervical health program Web site demonstration project." (AHCPR grant HS09407). *Oncology Nursing Forum* 26(5), pp. 857-865.**

The authors describe the development of a customized Web site to assist Breast and Cervical Health Program (BCHP) outreach staff in a Seattle community screening program. They discuss the outreach staff's Internet knowledge and describe access and barriers during a 2-year period using the Web site. The site was based on continuous input from a sample of BCHP outreach workers, screening coordinators, and public health nurses from regional health districts and program-contracted clinics. The researchers evaluated the BCHP Web site in 1996 and again in 1998 using mailed and online Web questionnaires to these groups. They also monitored "hits" to the Web site monthly. They found that its use rose steadily over the 2 years to reach a stable plateau. The authors conclude that public health programs with meager resources can benefit from the relatively inexpensive use of customized and versatile Web sites.

**Chapman, G.B., and Coups, E.J. (1999). "Time preferences and preventive health behavior: Acceptance of the influenza vaccine." (AHCPR grant HS09519). *Medical Decision Making* 19, pp. 307-314.**

Why do people often fail to follow preventive health measures such as diet and exercise regimens that would reduce their risk of heart disease or choose not to have vaccinations to prevent disease? Probably because these measures typically involve immediate costs and only future benefits. Consequently, people with future-oriented time preferences should be more likely to adopt preventive measures. This study examined the relationship between time preferences and acceptance of free influenza vaccination among 412 corporate employees. The researchers measured time preferences in two domains, money and health, and asked participants about vaccine attitudes and beliefs. There was a small relationship between vaccination acceptance and monetary time preferences but not with the health time-preference measures. Other variables, such as perceived effectiveness of the vaccine, were more predictive.

***continued on page 21***

## Research briefs

*continued from page 20*

**Eisen, S.V., Shaul, J.A., Clarridge, B., and others. (1999, June). "Development of a consumer survey of behavioral health services." (AHCPR grant HS09250).** ***Psychiatric Services*** **50(6), pp. 793-798.**

Consumers' evaluations are considered important indicators of the quality of behavioral health services. This paper describes development of a consumer survey designed to assess the quality of mental health and substance abuse services and to evaluate insurance plans that provide such services. The Consumer Assessment of Behavioral Health Services survey began with a review of existing consumer satisfaction surveys and input from several groups working toward development of nationally standardized satisfaction surveys. The researchers used consumer focus groups to ensure all important quality domains were included. Results of a pilot test conducted with 160 consumers—82 enrolled in Medicaid plans and 78 in commercial plans—suggested that the survey was able to distinguish between the two groups in evaluations of care and insurance plans. More testing will follow.

**Hartley, D., Jackson, J., Mueller, K.J., and others. (1999, Winter). "AHCPR-funded rural managed care centers: Report from the field." (AHCPR cooperative agreement HS08612).** ***Journal of Rural Health*** **15(1), pp. 87-93.**

In 1994, the Agency for Health Care Policy and Research awarded cooperative agreements to five university-based groups to promote the establishment of managed care institutions and development of rural health networks. This paper summarizes the experiences of these rural managed care centers during the first 3 years of this initiative. Project directors faced occasional hostility at the mention of managed care in some rural communities and, to a large extent, worked on infrastructure development activities focused on information systems. Directors cited hospital and physician leadership as key ingredients for progress toward their goals of managed care contracting or infrastructure development. Communities in which a majority of physicians were in solo practice seemed to have the most difficulty taking the developmental steps toward managed care. The authors conclude that development of information systems and efforts to foster leadership in the medical community are areas in which grant funding of this type can be most effective.

**Schwartz, J.A., and Chapman, G.B. (1999, July). "Are more options always better? The attraction effect in physicians' decisions about medications." (AHCPR grant HS09519).** ***Medical Decision Making*** **19, pp. 315-323.**

Increased numbers of medication and treatment options have affected consumer choice and physician behaviors. The purpose of this study was to determine whether the attraction effect—a bias commonly found in consumer-choice studies—would also occur in physicians' decisionmaking. In the attraction effect, the addition of a third alternative to a choice set influences preferences for the two original options. In this study, 40 internal medicine residents reviewed three patient cases (depression, sinusitis, and vaginitis) and then chose the most appropriate medication for each patient. In some versions of the cases, two medication options were available. Other versions included a third medication (the decoy) that was inferior in every way to one of the original options (target) but not to the others (competitors). The addition of the "decoy" medication increased the likelihood of choosing the target medication. Thus, the attraction effect does occur in physicians' decisions about medications. Physicians should be aware of this bias when evaluating or suggesting several similarly attractive medications or treatment options for the same medical condition.

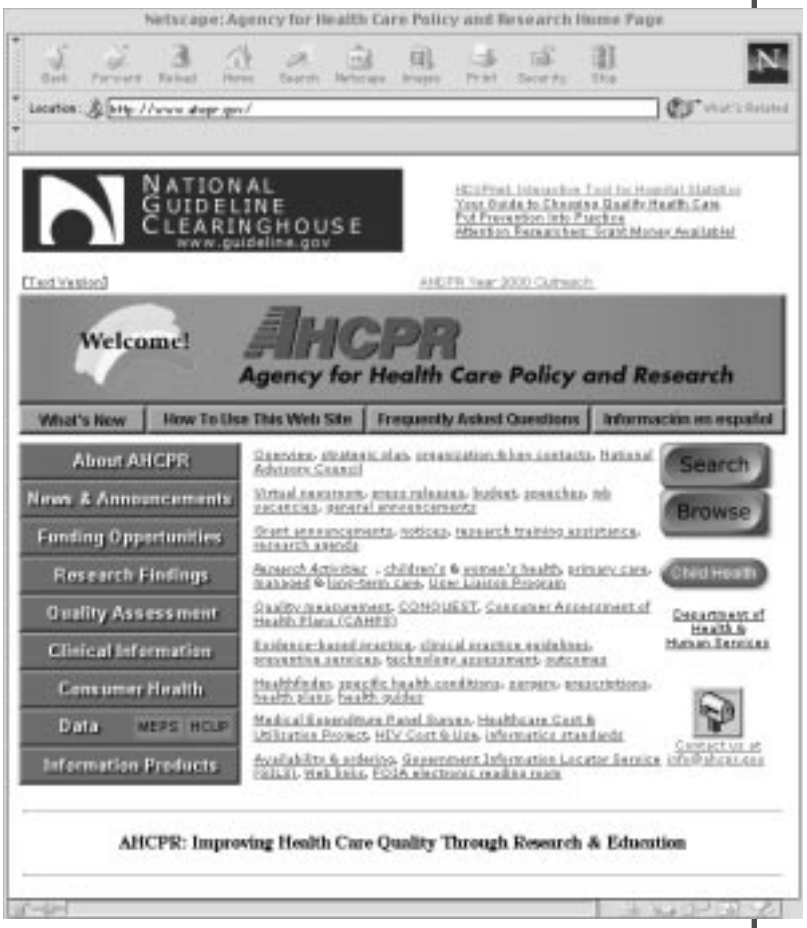
**Treadwell, J.R., and Lenert, L.A. (1999, July). "Health values and prospect theory." (AHCPR National Research Service Award fellowship F32 HS00122).** ***Medical Decision Making*** **19, pp. 344-352.**

This paper describes prospect theory (PT) and how it can be applied to health values. Prospect theory is a descriptive theory of choice that was originally developed to explain monetary choices. PT has the potential to accurately characterize how people assign values to health states. In other words, people evaluate health states not according to some absolute criterion but rather according to their relative perceptions of good and poor health. A person in poor health can psychologically adapt to that state and eventually view it as "not so bad." By contrast, a person in good health may rate that poor health state quite negatively, because it is so much worse than their current health. In a review of relevant health research, the authors found mixed support for prospect theory but encourage more research into the application of PT to health values. ■

# Don't Forget—
# Visit AHCPR's Web Site

## AHCPR's Web site

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




**http://www.ahcpr.gov/**

## Ordering Information

AHCPR makes documents available free of charge through its publications clearinghouse and AHCPR InstantFAX. Other AHCPR documents are available from the National Technical Information Service (NTIS) or the Government Printing Office (GPO). To order AHCPR documents:

**(*) Available from the AHCPR Clearinghouse:**
Call or write:

AHCPR Publications Clearinghouse
Attn: (publication number)
P.O. Box 8547
Silver Spring, MD 20907
800-358-9295
410-381-3150 (callers outside the United States only)
888-586-6340 (toll-free TDD service; hearing impaired only)

**(**) Available from the AHCPR Clearinghouse and from AHCPR InstantFAX:**
For instructions on using InstantFAX, call 301-594-2800. You must call from a fax machine with a telephone handset. Use the key pad on the receiver when responding to prompts. AHCPR InstantFAX operates 24 hours a day, 7 days a week.

**(***) Available from NTIS:**
To purchase documents from NTIS, call or write:

National Technical Information Service (NTIS)
Springfield, VA 22161
703-605-6000, local calls
800-553-6847

**Available from GPO:**
Call the GPO order desk for prices and ordering information 202-512-1800.

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

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

Public Health Service
Agency for Health Care Policy and Research
P.O. Box 8547
Silver Spring, MD 20907-8547

AHCPR Pub. No 00-0003
October 1999