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Self-management program helps people with chronic diseases improve their health status and avoid hospitalization

People 60 years of age and older are estimated on average to have two or more chronic health conditions such as arthritis, stroke, lung disease, or heart disease. These conditions typically require the patient to maintain a certain diet, exercise, and adhere to a medication regimen to improve their health, which ideally they self-manage with a doctor's guidance. Traditional patient-education or self-management programs have focused on a specific disease such as diabetes or asthma. However, this study found that a self-management program can educate a group of patients with different chronic diseases; it can improve their health behaviors and health status and reduce hospitalizations and days in the hospital.

The Chronic Disease Self-Management Program (CDSMP) was developed by researchers at Stanford University Kaiser Permanente, Northern California Region, and the University of California, San Francisco. Their work was supported in part by the Agency for Health Care Policy and Research (HS06680). The

researchers trained lay instructors, who themselves had chronic diseases, to educate 952 adults with heart disease, lung disease, stroke, or arthritis in disease self-management. The groups were made up of 10 to 15 people of mixed ages and diagnoses and met at a community site in seven weekly 2.5-hour sessions. At each site, participants were randomized to the CDSMP or usual treatment (controls); participants' physicians were not informed as to their study status.

Rather than prescribing specific behavior changes, the CDSMP leaders helped participants make management choices and reach self-selected dietary, exercise, and medication goals. Participants also helped each other solve disease-related problems and discussed how to manage symptoms such as pain or fatigue. Compared with controls, the CDSMP group significantly increased their number of minutes per week of stretching/strengthening and aerobic exercise; increased practice of cognitive symptom management; improved

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Self-management program

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communication with their physician; significantly improved their overall health status; and had fewer hospitalizations. Overall savings in health care costs were about \$750 per participant, more than 10 times the cost of the program (\$70 per participant).

Of the 391 control subjects who completed the 6-month randomized

study, 283 (72 percent) chose to take the CDSMP. Of these, 237 provided 6-month endpoint data. This group increased their aerobic exercise and use of coping strategies, and they decreased their disability and health distress while increasing social and role activities. Visits to physicians decreased, and they had fewer visits to hospitals and fewer days in the hospital. By taking the CDSMP, the control subjects reversed many of the trends toward worsening health demonstrated during the previous 6-

month randomized trial, note the researchers.

See "Evidence suggesting that a chronic disease self-management program can improve health status while reducing hospitalization: A randomized trial," by Kate R. Lorig, R.N., Dr. P.H., David S. Sobel, M.D., M.P.H., Anita L. Stewart, Ph.D., and others, in *Medical Care* 37(1), pp. 5-14, 1999. ■

Women's Health

Changes in health care delivery and financing are needed to meet the unique needs of older women with chronic conditions

Over 80 percent of women between the ages of 65 and 85 report at least one chronic disease such as diabetes, arthritis, or hypertension; half report more than one; and one-fourth report three or more chronic conditions. Developing successful chronic care systems for the growing number of elderly women requires radical practice redesign and patient education,

according to Agency for Health Care Policy and Research investigators, Arlene S. Bierman, M.D., M.S., and Carolyn M. Clancy, M.D.

In a recent review and synthesis, they point out that managed care organizations are for the first time enrolling large numbers of chronically ill and elderly individuals and may not be adequately prepared to meet the needs of these patients for care that will improve functioning and lead to a better quality of life. Medical practices need to be reorganized and reimbursement mechanisms made sufficient and flexible enough to allow physicians more time for patient education, counseling, and case management to prepare these women to self-manage their illnesses. These objectives cannot be met in a brief office visit; they require a practice and organizational infrastructure and multidisciplinary team that can support the objectives, explain the researchers.

Drs. Bierman and Clancy point out that new models of health care delivery and financing are needed to provide quality care for chronic illness. For example, insurance benefit structure and coverage decisions will affect the availability of pharmaceuticals, durable medical equipment, home care, and other supportive services. Also, physicians need to be trained in functional assessment, must have good communication skills, sensitivity to the needs of diverse populations, the ability to work within a multidisciplinary team, and knowledge of supportive services available in the community, note the researchers. The authors emphasize

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:

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Health care for older women

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that there is a need for rigorous evaluation of interventions and models of care aimed at improving health outcomes for the chronically ill. The article provides a checklist that can be used to guide the evaluation process.

In conclusion, the researchers note that the ultimate challenge for improving women's health requires

developing integrated comprehensive programs to address the continuum of women's health needs: preventive, reproductive, acute, and chronic care. Women suffer from a higher burden of illness and disability than men, and they have unique health needs across the life span. As the Nation's health care system struggles to make the long overdue transition from a primary focus on treating illnesses in individuals to a broader focus on the promotion of health and well-being in the population, the

challenge will be to align organizational and financial structures and incentives with health needs.

See "Women's health, chronic disease, and disease management: New words and old music?" by Drs. Bierman and Clancy, in the January/February 1999 *Women's Health Issues* 9(1), pp. 2-17. Reprints (AHCPR Publication No. 99-R052) are available from AHCPR.** ■

Less than a minute of physician compassion can reduce anxiety in women newly diagnosed with breast cancer

A woman newly diagnosed with breast cancer faces difficult and critical treatment decisions while she is still reeling from the life-threatening diagnosis. She is typically so anxious during the consultation when her doctor is describing treatment options that she barely recalls any information. However, when a doctor simply acknowledges her emotional state, which can take as little as 40 seconds, it lessens a woman's anxiety, and she perceives the doctor as more compassionate. This is good news, says Linda A. Fogarty, Ph.D., of Johns Hopkins University School of Hygiene and Public Health.

In a study supported by the Agency for Health Care Policy and Research (HS08449), the researchers recruited 123 healthy breast cancer survivors and 87 women who had not had cancer. Half of each group of women were shown a standard videotape of two treatment options for metastatic breast cancer—high-dose chemotherapy and low-dose chemotherapy—that discussed risks and benefits, side effects, and probability of survival for each treatment. Women in the other half of each group were shown an "enhanced compassion" videotape, which was similar to the first tape except for the addition of two short

segments. In these segments, the doctor acknowledged the patient's concerns, expressed partnership and support, validated her emotional state and the difficulty of making a decision involving uncertainty, touched her hand, and tried to reassure her.

In a post-videotape questionnaire, women who watched the enhanced compassion videotape gave the physician a higher average total compassion score (mean of 220 vs. 137) and rated the physician as warmer, more pleasant, more sensitive, and more caring than women who watched the standard videotape. While both tapes aroused anxiety, anxiety scores were significantly lower for women in the enhanced compassion group than for women in the standard videotape group (40 vs. 45), after controlling for pre-video anxiety scores.

For details, see "Can 40 seconds of compassion reduce patient anxiety?" by Dr. Fogarty, Barbara A. Curbow, Ph.D., John R. Wingard, M.D., and others, in the January

1999 *Journal of Clinical Oncology* 17(1), pp. 371-379. ■

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Three out of four women physicians give high marks for the quality of health care they receive

Three-fourths of women physicians believe that the quality of health care they receive is at least very good, and very few rate it as only fair or poor. Yet the majority do not believe the quality of care they receive is excellent. Women physicians are highly qualified to assess care and are capable of demanding high-quality care, and most physicians caring for a colleague would make a special effort to provide the best care. Thus, there is clearly room for improvement in women's health care, concludes a study by Erica Frank, M.D., M.P.H., of Emory University School of Medicine, and Carolyn Clancy, M.D., of the Agency for Health Care Policy and Research.

Drs. Frank and Clancy analyzed data from the Women Physician's Health Study, a survey of a nationally representative sample of 4,501 U.S. women physicians who graduated from medical school between 1950 and 1989. Of these, 39 percent thought the health care they personally received was excellent, 37 percent considered it to be very good, 19 percent good, 4 percent fair, and 1 percent judged their health care to be poor quality.

Women physicians with an obstetrician/gynecologist as their regular physician were most likely to judge their health care quality as excellent. Those with more continuing medical education—and thus probably best able to judge current standards of care—were least impressed by the care they received.

Physicians who were most satisfied with their careers and who practiced in suburban areas were more likely to give high ratings to the quality of their personal health care. Women physicians who were less likely to rate their health care quality as excellent practiced in rural or in Government sites, were older, belonged to an ethnic/minority group or were born outside the United States, were more physically or mentally ill, or had no regular personal physician.

See "U.S. women physicians' assessment of the quality of healthcare they receive," by Drs. Frank and Clancy, in the January/February 1999 *Journal of Women's Health* 8(1), pp. 1-8. Reprints (AHCPR Publication No. 99-R048) are available from AHCPR.**

Use of age as a threshold for recommending prenatal diagnosis is questioned

Age increases a woman's risk of having a child with a genetic disorder such as Down syndrome. Thus, physicians currently offer amniocentesis and chorionic villus sampling (CVS) for prenatal diagnosis of chromosomal disorders to women who will be at least 35 years of age at the time of delivery or who otherwise are at risk of giving birth to an infant with a genetic disorder.

The authors of a recent commentary call for eliminating strict age- or risk-based cutpoints for prenatal diagnosis in favor of the preferences of well-informed women. The original reasons for the age cutpoint are no longer relevant, explains lead author Miriam Kuppermann, Ph.D., M.P.H., of the Medical Effectiveness Research Center for Diverse Populations at the University of California, San Francisco. The research was supported in part by the Agency for Health Care Policy and Research (HS07373).

The authors note that a consensus panel recommended this cutpoint in 1979 in part because of limited prenatal screening resources. However, today there are 268 cytogenetic labs that can detect chromosomal abnormalities, and there are 500 board-certified cytogeneticists in the United States. Also, new data based on annual assessment (rather than the earlier 5-year assessment) of a woman's risk of giving birth to a

child with Down syndrome show that the risk increases substantially among women in their early to mid-30s, but it does not spike suddenly at 35 years of age.

In addition, the age 35 cutoff was chosen because that is when the risk that a woman will have a miscarriage after the procedure is about equal to the probability that she is carrying a fetus affected by a chromosomal abnormality, assuming that women weigh these outcomes equally. However, data these authors collected on women's preferences showed that most women (83 percent) would prefer having a procedure-related miscarriage to giving birth to a child with Down syndrome. Finally, age 35 was chosen in 1979 because it was determined that was the age at which the procedure would be cost beneficial; i.e., the cost of providing amniocentesis to women 35 and over would be more than offset by the savings accrued in averting Down syndrome-affected births. This is a much more stringent economic requirement than is currently required of medical interventions, note the researchers.

See "Who should be offered prenatal diagnosis? The 35-year-old question," by Dr. Kuppermann, James D. Goldberg, M.D., Robert F. Nease, Jr., Ph.D., and A. Eugene Washington, M.D., M.Sc., in the February 1999 *American Journal of Public Health* 89(2), pp. 160-163.

Cocaine and tobacco use during early pregnancy substantially increases the risk of miscarriage

Women who smoke early in their pregnancies have nearly twice the risk of having a miscarriage as women who don't smoke.

Pregnant women who use cocaine also substantially increase their risk of miscarriage. In fact, a new study estimates that cocaine use and smoking together accounted for 24 percent of the miscarriages suffered by a group of predominantly poor and black adolescents and women. The study was supported in part by the Agency for Health Care Policy and Research (HS08358) and led by University of Pittsburgh researcher Roberta B. Ness, M.D., M.P.H. Dr. Ness is lead investigator of the AHCPR-supported Pelvic Inflammatory Disease Patient Outcomes Research Team (PORT).

Dr. Ness and her colleagues examined the association between cocaine and tobacco use and miscarriage (spontaneous abortion) among 970 pregnant adolescents and women (14 to 40 years) who sought care at an urban emergency department. They used women's self-reports and urinalysis to detect tobacco and cocaine use and additional hair analysis to detect cocaine use. Both nicotine and cocaine are vasoconstrictors that reduce uterine and placental blood flow, which may be related to miscarriage.

Among those who had miscarriages either at study entry or up to 22 weeks gestation, 29 percent used cocaine (hair analysis) and 35 percent smoked (urinalysis), compared with 21 percent (cocaine use) and 22 percent (tobacco use) of adolescents and women who did not have miscarriages. The presence of a nicotine metabolite, cotinine, in urine was associated with nearly twice the risk (odds ratio [OR] of 1.8; 1 is equal) of miscarriage. The presence of cocaine in hair samples (but not as measured by self-report or urinalysis) was independently associated with an increase in miscarriage (OR of 1.4), after controlling for demographic and drug-use factors. Hair analysis is an extremely sensitive marker of cocaine use over a period of weeks or months, depending on the length of hair analyzed. However, serum and urine tests only detect cocaine use within 72 hours of testing, so that intermittent use may not be detected.

More details are in "Cocaine and tobacco use and the risk of spontaneous abortion," by Dr. Ness, Jeane Ann Grisso, M.D., Nancy Hirschinger, M.A., and others, in the February 2, 1999 *New England Journal of Medicine* 340(5), pp. 333-339. ■

Researchers examine correlation between length of stay following childbirth and women's satisfaction with care

Efforts to reduce hospital stays and lower costs led to the phenomenon known as "drive-through deliveries," that is, the practice of discharging women from the hospital within 24 hours of giving birth. This practice prompted 1996 legislation requiring that insurers cover a postpartum length of stay of up to 48 hours for an uncomplicated delivery.

A recent study shows that a woman's perception of the adequacy of her hospital stay—not the actual length of the stay—affects her satisfaction with care. In this study, women who perceived their hospital stays for birth as "too short" were less satisfied with six aspects of care than those who did not. Yet differences in satisfaction according

to actual length of stay were small and of questionable practical significance, explains Beth S. Finkelstein, Ph.D.

In a study supported in part by the Agency for Health Care Policy and Research (National Research Service Award training grant T32 HS00059), the researchers administered a postdischarge survey to 15,000 women admitted for labor and delivery to 18 hospitals over a 3-year period. The women were asked to evaluate their hospital stays in terms of physician care, nursing care, provision of information, preparation for discharge, overall assessment of care, and willingness to return to the same hospital. Among women with vaginal deliveries, 70 percent felt that their

stay was just right. Women with 1-day stays were less likely to feel it was just right and more apt to feel their stay was too short than women who stayed for 2 or more days (57 percent vs. 76 percent and 39 percent vs. 16 percent, respectively).

Women who stayed in the hospital for 2 or 3 days following cesarean delivery were less apt to feel that their stay was just right and more likely to feel that their stay was too short than women who stayed 4 or more days after a c-section (69 percent vs. 75 percent and 26 percent vs. 11 percent, respectively). Satisfaction scores were higher for patients who felt that their stay was just right and lower among those who perceived it was too short or too

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Satisfaction with care after childbirth

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long. In contrast, mean satisfaction scores according to actual length of stay were much lower.

See "Does length of hospital stay during labor and delivery influence patient satisfaction? Results from a regional study," by Dr. Finkelstein, Dwain L. Harper, D.A., and Gary E. Rosenthal, M.D., in the *American*

Journal of Managed Care 4(12), pp. 1701-1708, 1998. ■

HIV/AIDS Research

Antibiotic treatment of chorioamnionitis may have the potential to reduce transmission of HIV from mother to fetus

Transmission of the human immunodeficiency virus (HIV) from HIV-positive mother to fetus occurs in 15 to 40 percent of cases when the mother has not been treated with preventive zidovudine (ZDV), compared with 5 to 10 percent with ZDV prophylaxis. Antibiotic treatment of inflammation/infection of placental membranes (chorioamnionitis) also may have the potential to reduce maternal-infant HIV transmission, suggests a study by the Low Birthweight Patient Outcomes Research Team (PORT), which was supported by the Agency for Health Care Policy and Research (PORT contract 290-92-0055).

In a recent article, PORT investigators point out that the mechanism(s) by which the fetus becomes infected with HIV are not known. However, preterm birth,

chorioamnionitis, and prolonged rupture of membranes seem to be the strongest and most consistent obstetric risk factors for maternal-fetal HIV transmission. Chronic chorioamnionitis precedes many cases of preterm labor and spontaneous rupture of membranes, whereas acute chorioamnionitis is more common after rupture of the membranes at term.

Bacterial invasion of the uterus engenders a massive cytokine response by the macrophage-like cells of the decidua, placenta, and membranes. Women infected with HIV have high concentrations of cytokines (proteins released as part of an immune response) such as interleukin-6 in the amniotic fluid. These cytokines attract a large number of leucocytes (that may be HIV-infected) into the amniotic fluid. Fetal exposure to the HIV-

infected amniotic fluid may be responsible for the high rates of transmission associated with chorioamnionitis, suggests the PORT's lead investigator, Robert L. Goldenberg, M.D., of the University of Alabama at Birmingham. Dr. Goldenberg and his colleagues theorize that perinatal HIV transmission could perhaps be reduced by antibiotic treatment with metronidazole alone or combined with other antibiotics.

More details are in "Choriodecidual inflammation: A potentially preventable cause of perinatal HIV-1 transmission?" by Dr. Goldenberg, Sten H. Vermund, M.D., Alice R. Goepfert, M.D., and William W. Andrews, Ph.D., in the December 12, 1998 issue of *Lancet* 352, pp. 1927-1930. ■

Note: Only items marked with a single (*) or double (**) asterisk are available from AHCPR. Items marked with a single asterisk (*) are available from AHCPR's clearinghouse. Items with a double asterisk (**) are also available through AHCPR InstantFAX. Three asterisks (***) indicate NTIS availability. See the back cover of *Research Activities* for ordering information. Consult a reference librarian for information on obtaining copies of articles not marked with an asterisk.

Study confirms recommendations for frequency of cervical cancer screening in HIV-infected women

Women infected with HIV have a greater risk than other women of developing cervical cancer and other cervical diseases. The prevalence of cervical dysplasia (abnormal cells) in these women ranges from 11 to 60 percent, depending on how severely suppressed their immune system is. A recent study recommends that all HIV-infected women, regardless of their CD4 cell count (a measure of immune system function), have two Pap smears 6 months apart to screen for cervical cancer and annual Pap smears thereafter, if the initial Pap results are normal. This is in line with the current recommendation of the Centers for Disease Control and Prevention (CDC).

The study was supported by the Agency for Health Care Policy and Research (HS07317 and National Research Service Award training grant T32 HS00020) and conducted by researchers at Harvard University, Boston Medical Center, and Boston University's Schools of Medicine and Public Health. They developed a model to simulate cervical cancer screening, diagnosis, and treatment in hypothetical groups of HIV-infected women in order to estimate the clinical benefits, costs, and cost-effectiveness of six screening strategies for cervical

neoplasia (new cell growth) and cancer in HIV-infected women.

The estimates showed that annual Pap smear screening resulted in a 2.1 month gain in quality-adjusted life expectancy for an incremental cost of \$12,800 per quality-adjusted-life-year (QALY) saved. The strategy recommended by the CDC and the authors of this paper provided an additional 0.04 QALY at a cost of \$14,800 per QALY saved, a benefit that is similar to other clinical interventions. Routine semiannual Pap smears provided a further 0.17 QALY but at a cost of \$27,600 per QALY saved. Annual colposcopy examination cost more but provided no additional benefit compared with semiannual Pap smears. The cost of semiannual colposcopy exceeded \$375,000 per QALY saved.

See "The costs, clinical benefits, and cost-effectiveness of screening for cervical cancer in HIV-infected women," by Sue J. Goldie, M.D., M.P.H., Milton C. Weinstein, Ph.D., Karen M. Kuntz, Sc.D., and Kenneth A. Freedberg, M.D., M.Sc., in the January 19, 1999 *Annals of Internal Medicine* 130, pp. 97-107. ■

Wasting dramatically reduces the quality of life of AIDS patients

Wasting syndrome—or sudden loss of more than 10 percent of body weight—was the cause of death for 14 percent of AIDS patients in 1995, and it affects half of AIDS patients in clinical trials. Wasting and eventual loss of lean body mass lead to weakness, organ failure, secondary immune dysfunction, exhaustion, and ultimately death. It has a profound negative effect on the quality of life of people with AIDS, concludes a study supported by the Agency for Health Care Policy and Research (HS07767). Discussions with 26 men and 8 women with a history of AIDS-associated wasting in four focus groups revealed that nearly all of them were limited in their ability to function, some quite severely, due to the lack of energy and/or muscle weakness that comes with AIDS-related wasting.

Many patients lacked the energy and stamina to perform at work, do household tasks, even dress and bathe themselves, which in turn damaged their self-esteem. Wasting also devastated the psyches of many individuals, who considered wasting the first tangible sign that death was approaching. They reported that wasting evoked feelings of hopelessness, loss of power, grief, depression, preoccupation with morbid thoughts,

anxiety, fear, panic, and even anger. Also, the loss of one's usual appearance, to the point of becoming almost skeletal in many cases, resulted in alienation from one's self, a sense of seeing a stranger in the mirror.

For many, wasting syndrome caused the stigma of AIDS to become visible to others, note study authors Marcia A. Testa, Ph.D., of the Harvard School of Public Health, and William R. Lenderking, Ph.D., of Massachusetts General Hospital. Seemingly small improvements in appearance could potentially lead to large gains in self-esteem, which would likely decrease social isolation and feelings of embarrassment and shame. Similarly, relatively small gains in muscle strength might enable a person to open a jar, lift a bag of groceries, or take a subway. These improvements should be used as standards against which to measure the effectiveness of new therapeutic agents for AIDS-associated wasting, conclude the researchers.

For more details, see "The impact of AIDS-associated wasting on quality of life: Qualitative issues of measurement and evaluation," by Drs. Testa and Lenderking, in the *Journal of Nutrition* 129, pp. 282S-289S, 1999. ■

Many people with AIDS change their minds about end-of-life care as the disease progresses

Health care providers should periodically reassess patient preferences for life-sustaining care, especially for patients with a progressive disease such as AIDS, concludes a study supported by the Agency for Health Care Policy and Research (HS06239). The study showed that about one-fourth of AIDS patients changed their minds about life-sustaining care over a 4-month period. Changes in physical functioning, pain, or thoughts of suicide were more apt to modify a patient's decision about resuscitation. Patients who lacked an advance directive, had not completed high school, or became more severely ill during the 4-month period were more likely to change their preferences about life-sustaining care.

The researchers administered two surveys 4 months apart and then reviewed the medical records of 252 patients with AIDS. The study was conducted during 1990 and 1991 at three health care sites in Boston. Of respondents who initially desired cardiac resuscitation, 23 percent decided to forego it at followup 4 months later; 34 percent of those who initially said they would decline care later said they would accept it. Of those who initially desired any of the several other life-

extending treatment scenarios, 25 percent decided to forego them 4 months later; 24 percent of those who initially said they would decline life-extending care later said they would accept some treatment.

Patients who discussed their preferences with at least one doctor were just as likely as others to change their wish for cardiac resuscitation. Age, sex, race, emotional health, clinical severity of illness, social support, and site of care were not significantly correlated with change in either desire for cardiac resuscitation or acceptance of life-extending treatment. The researchers conclude that health care providers should be cautious in interpreting advance directives that have not been recently evaluated for patients experiencing rapid changes in their health. Advance directives cannot replace ongoing patient-doctor communication, caution the researchers.

See "The stability of preferences for life-sustaining care among persons with AIDS in the Boston Health Study," by Joel S. Weissman, Ph.D., Jennifer S. Haas, M.D., Floyd J. Fowler Jr., Ph.D., and others, in the January 1999 *Medical Decision Making* 19, pp. 16-26. ■

Primary Care Research

Depression can be treated effectively in primary care settings with proper controls and specialty consultation

In today's health care environment, primary care physicians are being called upon to treat most forms of major depression before they can refer patients for specialty care. The depression guideline sponsored by the Agency for Health Care Policy and Research and published in 1993 was based primarily on research done in psychiatric settings. To update these recommendations, several individuals who participated in development of the original guideline recently reviewed studies published between 1992 and 1998 on treatment of depression in primary care settings.

They concluded that both antidepressant medication and depression-specific psychotherapy remain efficacious when transferred from psychiatric to primary care

settings. Most patients can be treated successfully in primary care with regular followup and monitoring to assess treatment response, make necessary adjustments in medication or dosage, and determine whether referral to a specialist is needed. However, this approach requires properly organized treatment programs and a prominent role for the mental health specialist as an educator, consultant, and primary provider for the more severely ill.

Studies show that antidepressant medications prescribed for acute and continuing treatment of depressed primary care patients are associated with a 50 to 60 percent decrease in depressive symptoms, similar to that found for psychiatric patients. Also, recent studies of the use of cognitive, behavioral, or interpersonal psychotherapy for depression

suggest that their efficacy (46 percent, 55 percent, and 52 percent, respectively) does transfer from specialist to generalist settings. Nevertheless, these authors caution that the therapeutic intensity required to monitor depressed patients is difficult to achieve in primary care practice, and it requires provider acceptance of new treatment strategies.

For more information, see "Treating major depression in primary care practice: An update of the Agency for Health Care Policy and Research practice guidelines," by Herbert C. Schulberg, Ph.D., Wayne Katon, M.D., Gregory E. Simon, M.D., and A. John Rush, M.D., in the December 1998 *Archives of General Psychiatry* 55, pp. 1121-1127. ■

Primary care physicians vary widely in how they evaluate and manage osteoarthritis of the knee

Most patients with osteoarthritis (OA) of the knee are treated by primary care physicians (PCPs). These doctors vary widely in how they evaluate and manage severe OA of the knee, concludes the Total Knee Replacement Patient Outcomes Research Team (PORT). The PORT was supported by the Agency for Health Care Policy and Research (HS06432) and led by Deborah A. Freund, Ph.D., of Indiana University. For this study, the researchers mailed a questionnaire to a random sample of 300 family physicians (70 responded) and 300 general internists (72 responded) in Indiana.

The most often used techniques for evaluating severe OA of the knee were examination for crepitation (crackling sound in the knee), assessment of knee range of motion, and a check for pedal pulses. Only

17 percent of PCPs used standing knee x-rays, compared with 60 percent who used non-weight-bearing x-rays. Standing knee x-rays reportedly provide more important diagnostic information. Family physicians were significantly more likely to examine for crepitation, joint stability, and quadriceps muscle strength (a strong quadriceps takes pressure off the knee joint) than were general internists.

The most frequent method of managing severe OA of the knee was drug therapy. Nonsteroidal antiinflammatory drugs (NSAIDs) were the most commonly prescribed medication, despite their higher cost and debatable superiority over pure analgesics such as aspirin or acetaminophen. General internists were significantly more likely than family physicians to prescribe aspirin, acetaminophen, or narcotics.

Family physicians were more likely than general internists to prescribe NSAIDs or oral corticosteroids and to inject corticosteroids intra-articularly. Instruction or referral for weight loss was the second most common management method (reflecting the known relationship between obesity and OA of the knee), followed by referral for physical therapy. Few patients were referred to an orthopedic surgeon for evaluation for possible knee replacement or knee arthroscopy. PCPs did not differ significantly in their referral rates.

See "Management of osteoarthritis of the knee by primary care physicians," by Lorrie A. Mamlin, M.P.H., Catherine A. Melfi, Ph.D, Michael L. Parchman, M.D., and others, in the *Archives of Family Medicine* 7, pp. 563-567, 1998. ■

Case management of patients with chronic renal insufficiency did not improve outcomes over usual care

Case management of certain costly, chronic diseases has come into vogue in recent years. The approach focuses several types of experts and medical resources on the patient in order to cost-effectively manage the patient's condition and improve outcomes. However, a recent study shows that although case management represents state-of-the-art care, it did not improve the outcomes of patients with chronic renal insufficiency compared with usual care. Based on this finding, the researchers recommend that the case management approach, which is expensive, be tested prospectively before being widely introduced into practice. The study was supported in part by the Agency for Health Care Policy and Research (HS07632, HS07719, HS07763, and HS09083).

The researchers enrolled 437 primary care patients with chronic renal insufficiency who were being cared for in an urban academic general internal medicine practice. For 2 years, 231 patients received usual care, and 206 patients received intensive case management at an annual direct cost of \$484 per patient. The goal of the program was to stabilize renal function and control costs. It included repeated consultations in a nephrology case management clinic staffed by two nephrologists, a renal

nurse (who monitored medication compliance and taught self-help behaviors), a renal dietitian (who prescribed a low protein, low potassium diet), and a social worker (who identified and helped overcome barriers to receiving care). The clinic sent letters to the patients' primary care physicians (PCPs) about these interventions.

Although the patients had similar mild-to-moderate renal insufficiency originally, there were no differences in renal functioning, health services use, or deaths 5 years after study enrollment. Lack of improvement in the case management group may have been due in part to its reliance on action by the patient's PCP who had to review letters during typically short patient visits. On the other hand, the targeted level of renal insufficiency may have been too mild to expect a measurable difference in 5 years.

For more details, see "Effects of multidisciplinary case management in patients with chronic renal insufficiency," by Lisa E. Harris, M.D., Friedrich C. Luft, M.D, David W. Rudy, M.D., and others, in the December 1998 *American Journal of Medicine* 105, pp. 464-471. ■

Both general internists and family physicians provide primary care, but their practice styles and resource use differ

For the most part, family physicians and general internists (who usually care for older, sicker patients) coordinate primary care in the United States. However, they have different practice styles, which in turn affect medical charges, conclude two studies by Klea D. Bertakis, M.D., M.P.H., of the University of California, Davis (UCD) School of Medicine. In a study supported by the Agency for Health Care Policy and Research (HS06167), Dr. Bertakis and her colleagues randomized 509 adults requesting an outpatient appointment between 1990 and 1994 at the UCD Medical Center to either a family practice clinic or a general medicine clinic.

Even after controlling for differences in patients' initial health status, a technically oriented style of care by general internists was associated with significantly more

specialty care, emergency department (ED), diagnostic, and total charges over 1 year of care. The technically oriented practices included structuring the doctor-patient interaction, history taking, asking for family information, performing a physical exam, giving evaluation feedback, planning treatment and discussing its effects, and performing in-office procedures. Caring for sicker patients often calls for the more technical style of care shown by general internists. However, training physicians to use such a style for all patients is expensive and possibly unnecessary, note the researchers.

Family practice patients had significantly more primary care clinic visits, perhaps preempting ED visits, and tended to have fewer diagnostic tests than patients seen by general internists. There were no significant differences in charges for

specialty clinic visits, hospitalizations, or diagnostic services. Even for the healthiest patients, those randomized to general internal medicine had significantly higher charges for primary care than those assigned to family practice. General internists might consider using fewer health resources for their healthiest patients, suggest the researchers.

Details are in "Differences between family physicians' and general internists' medical charges," by Dr. Bertakis, L. Jay Helms, Ph.D., Dr. Azari, and others, in *Medical Care* 37(1), pp. 78-82, 1999; and "The impact of physician practice style on medical charges," by Dr. Bertakis, Dr. Azari, Edward J. Callahan, Ph.D., and others, in the January 1999 *Journal of Family Practice* 48(1), pp. 31-36. ■

Health Care Costs and Financing

Researchers examine trends in children's health insurance coverage and the potential impact of CHIP

The proportion of children in the United States without health insurance grew substantially from 1977 to 1996. But this increase was predominantly among children from single-parent families, finds a study by Robin M. Weinick, Ph.D., and Alan C. Monheit, Ph.D., of the Agency for Health Care Policy and Research.

A second study by AHCPR researchers Thomas M. Selden, Ph.D., Jessica S. Banthin, Ph.D., and Joel W. Cohen, Ph.D., shows that 2.6 million uninsured children are eligible for coverage under the Children's Health Insurance Program (CHIP), but enrolling eligible

children depends in large part on States' eligibility rules and outreach efforts. The CHIP program was initially proposed by President Clinton and launched in 1997 to provide coverage to more uninsured children, specifically those in families with incomes too high to qualify for Medicaid.

The two studies are briefly summarized here.

Weinick, R.M., and Monheit, A.C. (1999, March). "Children's health insurance coverage and family structure, 1977-1996." *Medical Care Research and Review* 56(1), pp. 55-73.

The researchers found that one in five children in single-parent families was uninsured in 1996, which is one-third more than in 1977. In contrast, the percentage of children in two-parent families with public coverage doubled between 1987 and 1996, from 6 percent to nearly 13 percent. This increase occurred primarily among poor families and those with only one working parent and was consistent with expansions in the Medicaid program during this period. However, it appears that expansion of Medicaid eligibility after 1987

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Children's health insurance

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had little impact on children in single-parent families, whose rates of public coverage actually declined during the study period.

The study also finds that having two employed parents living in the same household greatly increased the chances of children having private insurance. These children were less likely to be uninsured than those living in two-parent households with only one working parent or those living in single-parent households.

In addition, in 1996, over 20 percent of privately insured children whose single parent previously had been married received their coverage from a policyholder who did not live with them, most likely the child's other parent. This compares with a 1987 rate of only 5 percent.

Information on family structure can provide an additional gauge for evaluating which children are at increased risk of lacking private insurance or being uninsured and, in turn, can help target public policy interventions in appropriate ways,

note Drs. Weinick and Monheit. They analyzed data from three nationally representative medical expenditure household-based surveys conducted by AHCPH in 1977 (National Medical Care Expenditure Survey, NMCES), 1987 (National Medical Expenditure Survey, NMES), and 1996 (Medical Expenditure Panel Survey, MEPS), to examine the relationship between children's family structure and their health insurance coverage. Reprints (AHCPH Publication No. 99-R051) are available from AHCPH.**

Selden, T.M., Banthin, J.S., and Cohen, J.W. (1999, March). "Waiting in the wings: Eligibility and enrollment in the State children's health insurance program," *Health Affairs* 18(2), pp. 126-133.

This study by Drs. Selden, Banthin, and Cohen found that 2.6 million uninsured children are eligible for coverage under CHIP, a program that primarily targets children of the working poor. If these children are added to the 4.7 million uninsured children who were eligible for but not enrolled in Medicaid in 1996, then these public health

insurance programs would cover nearly two-thirds of all uninsured children in the United States.

With \$24 billion set aside over 5 years, CHIP is the largest single expansion of health insurance coverage for U.S. children in more than 30 years. The program offers States an enhanced matching rate (up to a capped amount) for enrolled CHIP children, and gives States the option of expanding traditional Medicaid, creating separate programs, or using combined approaches to implement CHIP. Also, States that create new CHIP programs are permitted to impose modest premiums, copayments, and waiting periods (for example, requiring a 3- to 6-month period of uninsured before eligibility for CHIP).

The challenge is to get children enrolled via aggressive outreach programs, conclude the researchers. They simulated CHIP eligibility and enrollment based on an analysis of data on 6,903 children from the 1996 Medical Expenditure Panel Survey. Reprints (AHCPH Publication No. 99-R050) are available from AHCPH.** ■

Doctors sometimes compensate for Medicare fee cuts by increasing volume

The Omnibus Budget Reconciliation Act of 1987 reduced prevailing Medicare fees for selected medical procedures considered to be overpriced, including coronary artery bypass graft (CABG) surgery. Between 1987 and 1989, thoracic surgeons, whose incomes were markedly reduced by Medicare fee cuts for CABG, performed higher volumes of CABGs and more intense and costly (four- versus three-vessel) CABGs among both Medicare and private-pay patients to recoup about 70 percent of their income loss,

concludes a study supported in part by the Agency for Health Care Policy and Research (HS08000).

The Health Care Financing Administration (HCFA), the agency that administers Medicare, incorporated an asymmetric 50 percent "volume offset" in the calculation of the Medicare Fee Schedule (MFS). In other words, HCFA assumed that physicians experiencing a Medicare fee reduction would increase volume and intensity to recoup half (not 70 percent) of the revenue loss. From a policy point of view, these results

raise concerns about the extent to which price regulation, such as the MFS, can be relied on to control economy-wide health care costs, concludes Winnie C. Yip, Ph.D., of Harvard University.

Dr. Yip analyzed CABG data on 232 thoracic surgeons who performed CABGs in New York and Washington States in 1987 and 1989. A model was constructed to estimate physician response to Medicare fee cuts for CABG, which was based on State inpatient discharge abstracts, the Part B Medicare Annual Data

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Medicare fee cuts

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Prevailing Files, and the Surgical Prevaling Charge System from the

Health Insurance Association of America.

See "Physician response to Medicare fee reductions: Changes in the volume of coronary artery

bypass graft (CABG) surgeries in the Medicare and private sectors," by Dr. Yip, in the *Journal of Health Economics* 17, pp. 675-699, 1998. ■

Tax-preferred medical savings accounts combined with high-deductible catastrophic health plans may be unfair to some

Debate continues about the merits of giving tax preferences to nonelderly individuals and families that establish medical savings accounts (MSAs) in conjunction with high-deductible catastrophic health plans (CHPs). The United States has embarked on a reform path that will enable a limited number of families to take advantage of liberalized tax preferences for MSA/CHPs. Reform proponents argue that individuals and families currently covered by comprehensive employment-related insurance will use fewer medical services and become more price sensitive if they enroll in MSA/CHPs. But the authors of this study agree with critics of reform, who charge that self-selection by people at low risk of poor health into MSA/CHPs may leave only high-risk individuals in comprehensive

plans, possibly leading to premium spirals that could cause the demise of such plans.

Researchers in the Center for Cost and Financing Studies, Agency for Health Care Policy and Research, used microsimulation methods to examine the equilibrium effects of MSA/CHPs on health care and nonhealth care expenditures, tax revenues, insurance premiums, and exposure to risk. Daniel Zabinski, Ph.D., Thomas M. Selden, Ph.D., John F. Moeller, Ph.D., and Jessica S. Banthin, Ph.D., found that simulation of 100 percent MSA/CHP enrollment by families with employment-related coverage suggests that the aggregate effect of reform may be a small positive change in net benefits.

This average gain, however, obscures substantial variation across families in the gains and losses

associated with MSA/CHP reforms. The simulations suggest, for example, that the families losing the most from reform tend to be poorer. Also, reform leaves families at high risk for medical expenses; they will choose between paying higher premiums for their comprehensive plans or being exposed to higher financial risk if they enroll in the MSA/CHP. In both cases, they are worse off compared with their pre-reform status.

See "Medical savings accounts: Microsimulation results from a model with adverse selection," by Drs. Zabinski, Selden, Moeller, and Banthin, in the *Journal of Health Economics* 18, pp. 195-218, 1999. Reprints (AHCPR Publication No. 99-R047) are available from AHCPR.** ■

Medical Effectiveness/Outcomes Research

Teaching hospitals appear to provide better care for two common conditions than nonteaching hospitals

Teaching hospitals are recognized for treating rare or severe diseases. But how well do they treat common illnesses such as congestive heart failure and pneumonia? Apparently quite well, according to a new study supported by the Agency for Health Care Policy and Research (HS06331). The study showed that teaching hospitals provided better care for patients with these two common illnesses than nonteaching hospitals.

Researchers led by John Z. Ayanian, M.D., of Harvard Medical School and Brigham and Women's Hospital in Boston, selected a random sample of Medicare hospital

discharges between September 1991 and August 1992 from four States (Illinois, Massachusetts, New York, and Pennsylvania), including those associated with readmission within 31 days of initial hospitalization, with a principal diagnosis of congestive heart failure or pneumonia. The sample included approximately 900 patients with each principal diagnosis. A nurse abstractor from each State used hospital records of these discharged patients to assess quality of care using four explicit process scales: thoroughness of history taking and physical exams, whether elements of functional

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Teaching hospitals

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status and key symptoms and signs were recorded, use of appropriate tests, and use of standard therapies for both conditions. Two physician reviewers also judged the overall quality of care through structured implicit review of the hospital records.

Physicians were most likely to rate care as good to excellent in major teaching hospitals and less than adequate in nonteaching hospitals for both conditions. Quality of care also was rated better in major and other teaching hospitals than nonteaching hospital by explicit process scales. For instance, physicians at major and other teaching hospitals were more apt than physicians at

nonteaching hospitals to perform a lung exam for patients with these conditions on the second hospital day. They also were more apt to measure potassium and creatinine levels on the third hospital day in congestive heart failure patients when clinically indicated. The researchers conclude that, if teaching hospitals can maintain their quality of care while containing their costs, they will remain valued sites of care for patients with common medical problems.

More details are in "Quality of care for two common illnesses in teaching and nonteaching hospitals," by Dr. Ayanian, Joel S. Weissman, Ph.D., Scott Chasan-Taber, Ph.D., and Arnold M. Epstein, M.D., in November 1998 *Health Affairs* 17(6), pp. 194- 205. ■

Dental Research

Adults are as likely as adolescents to have cavities

Based on clinical examination and full-mouth x-rays, 8 percent of adolescents and adults have medium and large dental caries (cavities). Those between the ages of 13 and 25 are most likely to have clinically evident caries and to have the greatest percentage of teeth involved. Also, nearly 6 percent of apparently clinically sound teeth show radiographic evidence of dental caries, and the prevalence of these clinically undetected caries increases with patient age, according to a study supported by the Agency for Health Care Policy and Research (HS06670).

These findings reinforce the need for dentists to carefully consider x-ray information in all adolescent and

adult patients, note the researchers who are from the University of California at Los Angeles and the University of Sao Paulo, Brazil. They analyzed clinical exams and interpretations of full-mouth radiographs of 460 patients enrolled in a larger study of guidelines for prescribing dental radiographs.

The prevalence of teeth with radiographic caries that were clinically undetected varied from 4.3 percent to 6.7 percent for the four age groups studied (25 years or younger, 26-35 years, 36-45 years, older than 45 years). The chance of a patient having clinically undetected recurrent caries increased with age, both from a per-tooth perspective (ranging from 1 percent to 3.7 percent) and from a per-patient

perspective (ranging from 14.3 percent to 44.4 percent). On a per-patient basis, the rate of gingival caries (cavities along the gums) increased dramatically from 4.8 percent to 22.2 percent for older patients. The researchers conclude that the potential for caries is as high for adults as it is for adolescents.

See "Findings of clinical and radiographic caries among several adult age groups," by Isildinha M. Reis, Dr.P.H., Virginia F. Flack, J.D., Ph.D., Kathryn A. Atchison, D.D.S., M.P.H., and Stuart C. White, D.D.S., Ph.D., in the December 1998 issue of *Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology, Endodontics* 86(6), pp. 760-764. ■

A toll-free TDD number, 888-586-6340, is available at the AHCPR Publications Clearinghouse to support the telecommunication needs of the hearing impaired. TDD callers can communicate with Clearinghouse staff from 9 a.m. to 5 p.m., Monday through Friday (excluding holidays). After 5 p.m., callers may leave a message using the TDD recording device.

Studies explore the impact of medication use on cognitive functioning among community-dwelling elderly

It is estimated that one person in five over 65 years of age is cognitively impaired to some degree. Medications are among the most common causes of reversible confusional states in elderly people. For example, benzodiazepines—used by 6 to 14 percent of community-dwelling elderly people to manage anxiety and insomnia—have been associated with cognitive impairment. A recent study by Joseph T. Hanlon, Pharm.D., M.S., of the University of Minnesota, and colleagues shows that current benzodiazepine use is associated with decreased memory among community-dwelling elderly people. A second study by the same group reveals different patterns of medication use by community-dwelling elderly people that vary by level of cognitive function. Both studies, which were supported in part by the Agency for Health Care Policy and Research (HS07819), are summarized here.

Hanlon, J.T., Horner, R.D., Schmadler, K.E., and others. (1998). "Benzodiazepine use and cognitive function among community-dwelling elderly." *Clinical Pharmacology and Therapeutics* 64(6), pp. 684-692.

Community-dwelling elderly people who use benzodiazepines have worse memory than those who don't use these medications, found this study. After adjusting for the effects of demographic characteristics, health status, and health behaviors, current benzodiazepine users made more errors on memory tests than nonusers. Those who took benzodiazepines long term or in recommended or higher doses made even more memory errors than

short-term or lower dose users. Memory was impaired even though the average current benzodiazepine dose was about 4 mg per day of diazepam equivalence, an initial starting dose recommended for the elderly.

The risk of cognitive impairment should be balanced against the clinical benefit of benzodiazepine use in the elderly. Also, elders should be given prescriptions for smaller total daily doses, conclude the researchers. They prospectively studied 2,765 community-dwelling elderly patients for 3 years. They assessed cognitive function with the Short Portable Mental Status Questionnaire and the Orientation-Memory-Concentration Test.

The researchers found that previous benzodiazepine use was unrelated to memory problems, and current and previous benzodiazepine use was unrelated to other aspects of cognitive functioning as measured with four other tests. Also, those who took benzodiazepines with a short half-life or long half-life had impaired memory. This finding is contrary to a common tenet among geriatricians that benzodiazepines with a short half-life are safer (less likely to result in falls and resulting fractures) and preferred for use among the elderly.

Schmadler, K.E., Hanlon, J.T., Fillenbaum, G.G., and others. (1998). "Medication use patterns among demented, cognitively impaired and cognitively intact community-dwelling elderly people." *Age and Ageing* 27, pp. 493-501.

The more cognitively impaired a community-dwelling elderly person is, the less apt that individual is to use over-the-counter (OTC),

cardiovascular, and analgesic medications, as well as prescription medications overall, finds this study. For instance, demented people were significantly less likely than cognitively impaired (but not demented) elders to use any OTC medications (odds ratio [OR] of 0.65; 1 is equal odds), cardiovascular medications (OR of .70), and analgesics (OR of 0.54).

It is possible that demented patients may underreport pain or express pain in atypical ways, or that clinicians may undertreat pain in demented patients. Alternatively, demented patients in this study were less apt to have arthritis, a leading indication for analgesic medications. The higher use of analgesics by those who were not demented may represent a protective effect of certain diseases or the medications used to treat them. This explanation is consistent with growing evidence on the protective effects of antiinflammatory medications on the development of Alzheimer's disease and also with a lower than expected prevalence of Alzheimer's disease in patients with rheumatoid arthritis.

In this racially mixed sample of community-dwelling elderly people in North Carolina, the proportion of demented people using medications (87 percent) and the average number of medications per person (3.4) were substantial. As a combined group, those who were demented and cognitively impaired were less likely than the cognitively intact group to use any OTC medications (OR of 0.78), but they took similar numbers of prescription medications. These results were based on medication use in the previous 2 weeks as ascertained during an interview in the patient's home. ■

Cardiac arrests do not occur randomly but follow certain temporal patterns

Out-of-hospital cardiac arrests occur most often on Monday (similar to heart attacks), happen more often in the winter months of December through March, and are least common in the summer (July, August, and September), says a new study supported in part by the Agency for Health Care Policy and Research (HS08197). It found that there were 31 percent more cardiac arrests in January (the highest month) than in August (the lowest month).

Previous studies have reported diurnal (time of day) variation in the onset of cardiac arrests, with high incidence in the morning and in the evening, lack of daily variation during the week, and some seasonal variation. This is the first study to report variation in rate of sudden cardiac deaths by day of the week, a pattern that may be explained by activity levels, note the researchers. For instance, people who are retired may be more active early in the week because that is when facilities are in least demand in communities where retirees live.

However, the seasonal variation is almost certainly from environmental influences. For instance, outdoor activity levels generally increase in the summer in the Seattle area (the study site) because the rains diminish, and the

daylight hours are longer. It might be argued that the dreary and rainy winter months take a toll on a person's psyche, thus enabling emotional triggers of cardiac arrest.

Patterns of temporal variation in cardiac arrests may be important for understanding mechanisms leading to the onset of acute cardiovascular disorders, explain the University of Washington researchers. They explored weekly and seasonal temporal variation in 6,603 out-of-hospital cardiac arrests attended by the Seattle Fire Department between March 1985 and February 1993.

See "Weekly and seasonal variation in the incidence of cardiac arrests," by Monika Peckova, M.S., Ph.D., Carol E. Fahrenbruch, M.S.P.H., Leonard A. Cobb, M.D., and Alfred P. Hallstrom, Ph.D., in the February 1999 *American Heart Journal* 137, pp. 512-515. ■

Attention AHCPR-funded researchers: Don't forget to contact your project officer as soon as you have an article accepted for publication. A recent analysis shows that we received advance notification of only 12 percent of articles appearing in the professional literature that stemmed from AHCPR-funded projects. We would like to help publicize your findings. Please be sure to let us know about your articles before they are published.

AHCPR News and Notes

AHCPR issues request for planning ideas

The Agency for Health Care Policy and Research is seeking your input in the form of recommendations for future research initiatives in areas identified as priorities in the Agency's current strategic plan. AHCPR's strategic plan describes the framework that the Agency will use to guide the development of budget proposals for fiscal years 2000, 2001, and 2002 as well as decisions on resource allocations for research, translation (including tool development), dissemination, and evaluation

activities that will facilitate the implementation of research findings at all levels of the health care system. To access the strategic plan, visit our Web site at <http://www.ahcpr.gov/> and click on "About AHCPR."

We encourage written suggestions from our customers and stakeholders for future Agency activities. Submissions should include the following information:

- A description of the focus of the activity and its alignment with Agency priorities.

- The gap addressed by the suggested research.
- The population addressed by the activity.
- An indication of the health care issues that are of most concern for the individual or organization nominating the activity.
- Background information to help us assess the urgency of the need for the results of the proposed project. Given that projects undertaken by the Agency will take a year

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Request for ideas

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(minimally) to begin, what is the magnitude of the problem addressed, how soon could the results be implemented, and what change would be anticipated?

- An estimate of the budget required to adequately address the proposed activity.
- Potential partners for the Agency.
- A description of the desired end product(s) (research knowledge; information; tools such as instruments for measurements,

databases, informatics, and other applications that can be used to assess and improve care; or systems intervention) and how the product will be used in the health care system.

Responses to this request will be accepted on an ongoing basis. Submissions should be no more than three pages in length and may be in the form of a letter (preferably with an electronic file in a standard word processing format on a 3-1/2" floppy disk) or an e-mail message. Send your submission to Lisa Simpson, M.B., B.Ch., M.P.H., Deputy Administrator, Agency for Health Care Policy and Research, 2101 E. Jefferson Street, Suite 600,

Rockville, MD 20852; or via e-mail to lsimpson@ahcpr.gov.

We will not respond to individual suggestions, but all nominations will be considered in selecting topics. For more information about topic nomination, please contact Jane Osborne, Planning Officer, Immediate Office of the Administrator, 2101 E. Jefferson St., Suite 600, Rockville, MD 20852; phone 301-594-0152; e-mail josborne@ahcpr.gov. ■

Nominations invited for AHCPH Child Health Scholar

The Agency for Health Care Policy and Research is seeking applicants for our Scholar-in-Residence in Child and Adolescent Health. The selected scholar will have the opportunity to work closely with AHCPH's senior management and staff and will undertake at least one research project that will result in one or more papers for publication and/or presentation. In addition, the scholar will benefit from the opportunity to be in the midst of Federal policymaking related to health services research on health care for children and adolescents.

After completing the program at AHCPH, the scholar is expected to return to his or her home institution and provide enhanced leadership in child health services research. AHCPH's partners in this announcement are the Ambulatory Pediatrics Association, the American Academy of Pediatrics, the American Society of Pediatric Department Chairs, and the Society for Adolescent Medicine.

AHCPH's current scholar in residence is Joseph Thompson, M.D., FAAP. Dr. Thompson's home institution is the University of Arkansas. Applications for the next appointment are due June 30, 1999, with a decision to be made in August 1999 for a preferred January 2000 start date. For more information, request a copy of *Scholar-in-Residence in Child and Adolescent Health* (AHCPH Publication No. 99-P019). **

AHCPH is co-sponsoring the first of its kind meeting on Children's Health Services Research on June 26,

1999, in Chicago, IL. This is a premeeting being held in conjunction with the Association for Health Services Research annual conference, which begins the next day. The meeting will enable participants to learn about new research methodologies and tools; discuss the latest research findings that affect clinical, management, and policy decisions; investigate and respond to funding priorities; and network with colleagues in the children's health services research field. In addition to plenary sessions focusing on the field, the state of the science in children's health services research, and congressional interest in the field, stimulating breakout sessions will focus on building research capacity via training and research networks; uses of research findings in policymaking; and funding opportunities, including grantsmanship and a mock study section. A reception follows the meeting.

Other co-sponsors of the meeting are the National Association of Children's Hospitals and Related Institutions, the American Academy of Pediatrics, and the Association for Health Services Research. Major funding for the meeting comes from the David and Lucile Packard Foundation.

Visit AHCPH's Web site at <http://www.ahcpr.gov/> to review the preliminary program, including confirmed speakers, and access a meeting registration form. ■

Position available: The Agency for Health Care Policy and Research is accepting applications for the Senior Biomedical Research Service position of Director, Technology Assessment Program, Center for Practice and Technology Assessment (CPTA). The Director plans, organizes, directs, and evaluates AHCPR technology assessment activities and serves as a technical authority and principal advisor to AHCPR's Administrator, other senior management, and colleagues in the field on a variety of issues related to technology assessment. The salary range for this position is \$80,658 to \$136,700 per year, and the application deadline is June 30, 1999. To obtain a copy of the full announcement, which specifies mandatory professional/technical requirements, desirable qualifications that must be addressed individually through a personal narrative, and other administrative requirements, please call 301-594-2408 or visit our Web site at <http://www.ahcpr.gov/>. ■

Announcements

Research on swallowing problems in the elderly highlights potential for preventing pneumonia in stroke patients

Current research on swallowing problems (dysphagia) suggests that hospital stroke management plans that include programs to diagnose and treat dysphagia may yield dramatic reductions in pneumonia rates, according to a new evidence report produced by ECRI, an Evidence-based Practice Center (EPC), under contract to the Agency for Health Care Policy and Research. The EPC also found that use of comprehensive examinations conducted at the patient's bedside can detect most serious swallowing problems, could improve quality of care, and may help reduce costs.

About 6.2 million Americans over age 60 have dysphagia, a condition that can result in "aspiration"—when food or fluids enter a person's lungs—and lead to pneumonia. The topic for this report was nominated by the Health Care Financing Administration, which sought an evidence-based assessment of methods for diagnosing and treating dysphagia in elderly individuals with neurologic diseases, specifically those methods associated with services provided by speech-language pathologists. Most of the approximately 300,000 to 600,000 new cases of dysphagia each year occur in stroke patients.

In addition to showing that patients benefit from acute stroke management programs that include specific efforts to diagnose and treat swallowing problems, an analysis of the available literature demonstrates the value of full bedside examinations in providing a solid core of information that health professionals and others can use in deciding on a course of treatment. A full bedside examination includes taking a detailed history, performing a physical examination of the mouth and throat, and observing the patient attempting to swallow various consistencies and sizes of foods and liquids. Other findings discussed in the report include:

- Use of full bedside examinations in dysphagia management programs are capable of identifying up

to 80 percent of all cases of aspiration. Aspiration often is difficult to detect because about half of patients with dysphagia who aspirate do so silently (without a cough).

- The limitations of available evidence do not allow one to determine the extent to which invasive procedures like videofluoroscopy or fiberoptic endoscopy reduce pneumonia rates more than full bedside examinations.
- The evidence is inconclusive about how the frequency of swallowing therapy sessions affects patient outcomes.
- The only controlled trial that compared a soft diet (some solids) to a traditional pureed diet (liquids only) found that a soft diet resulted in lower pneumonia rates among stroke patients with a history of aspiration pneumonia.

As noted by the developers of the report, there is a great need for more extensive and better designed research in the area of dysphagia, particularly a well-designed trial comparing dysphagia management programs using different diagnostic modalities. ECRI's report provides a detailed description of the design and analysis of a trial that would address several major unanswered questions and would also overcome some of the limitations of current research, such as sample sizes that are too small and the pooling of outcomes data on patients with dysphagia resulting from different causes.

To access the summary online, visit AHCPR's Web site at <http://www.ahcpr.gov/> and click on "Clinical Findings."

Print copies of the summary, *Diagnosis and Treatment of Swallowing Disorders (Dysphagia) in Acute-Care Stroke Patients* (AHCPR Publication No. 99-E023) are available from AHCPR.** The full report is expected to be available in summer 1999. ■

New MEPS reports are now available

The following journal article and two in-house reports present findings from the Medical Expenditure Panel Survey (MEPS). MEPS is the third in a series of nationally representative surveys of medical care use and expenditures sponsored by the Agency for Health Care Policy and Research. MEPS is co-sponsored by the National Center for Health Statistics (NCHS). The first of these surveys, the National Medical Care Expenditure Survey (NMCES), was conducted in 1977, and the second, the National Medical Expenditure Survey (NMES), in 1987.

MEPS collects detailed information on health care use and expenses, sources of payment, and insurance coverage of individuals and families in the United States. The journal article and reports described below are available from AHCPR.* Please see the back cover of *Research Activities* for ordering information.

For more information about MEPS, visit AHCPR's Web site at <http://www.ahcpr.gov/> and click on "Data and Surveys."

Changes in access to care, 1977-1996: The role of health insurance." (1999, April). Zuvekas, S.H., and Weinick, R.M. *Health Services Research* 34(1), supplement, pp. 271-279.

Declines in health insurance coverage were responsible for only one-fifth of the declines in access to health care services experienced by Hispanic Americans and young adults aged 18 to 24 between 1977 and 1996, according to this study. The authors conclude that simply increasing health insurance coverage will not be enough to eliminate these disparities.

Using data from NMCES, NMES, and MEPS, the authors looked at

three groups (Hispanic Americans, young adults aged 18-24, and the uninsured) and their access to care, measured by whether they had a usual source of health care. In conducting this study, the authors specifically isolated the role of health insurance, which is widely believed to be the primary determinant of access to care, from other factors.

Hispanic Americans were affected both by declining rates of insurance and, for those who were uninsured, declining rates of access to care, as measured by usual source of care. The proportion of Hispanic Americans with a usual source of health care declined from 80.3 percent in 1977 to 70.4 percent in 1996. During this same period, in addition to declining rates of insurance and declining rates of access among the uninsured, young adults with insurance experienced declines in access. The percentage of young adults with a usual source of care declined from 78.6 percent to 66 percent. Overall, during this period, the percentage of all uninsured Americans with a usual source of care declined from 74.4 percent to 62 percent.

These declines resulted in growing gaps in access to care between these groups and other Americans over the last 20 years. The authors found that even if rates of health insurance had remained constant, these groups still would have experienced declines in access to care.

Reprints (AHCPR Publication No. 99-R054) are available from AHCPR.**

Special Care Units in Nursing Homes—Selected Characteristics, 1996. Research Findings No. 6. Freiman, M., and Brown, E.

This report summarizes information on special care units in nursing homes, with emphasis on Alzheimer's units. This information is drawn from the 1996 Nursing Home Component of MEPS. In 1996, almost a fifth (19.2 percent) of all nursing homes had at least one formal and distinct special care unit. These special care units contained 120,400 beds, or 6.9 percent of all nursing home beds. By far the largest category of special care units was for Alzheimer's and related dementias, which constituted 65.7 percent of all the special care units in nursing homes.

More than a tenth of nursing homes had an Alzheimer's unit. Hospital-based nursing homes were less likely to have special care units than other facility types. Special care units were more likely to be found in nursing homes that were part of a group or chain than in independent facilities. Nursing homes with special care units were more likely to be certified by both Medicare and Medicaid than facilities without a special care unit. Further, over half of nursing homes with special care units had 125 or more total nursing beds, whereas less than a fifth of homes without any special care units fell into this size range. Copies of this report (AHCPR Publication No. 99-0017) are available from AHCPR.*

Use of Health Care Services, 1996. MEPS Research Findings No. 7. Krauss, N.A., Machlin, S.S., and Kass, B.L.

This report presents estimates of health care use for the civilian noninstitutionalized population of the United States during calendar year 1996. Data are derived from the Household Component of MEPS. Aspects of health care use described in this report include the proportion

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of people receiving ambulatory medical care in office-based and hospital-based settings, dental care, inpatient hospital care, home health services, and prescription medicines. Specific comparisons are made by selected demographic characteristics—such as age, sex, and race/ethnicity—as well as by

health insurance coverage, perceived health status, and whether or not a respondent had a usual source of care. Separate estimates also are reported for children's use of ambulatory medical and dental services.

About three-quarters (74.9 percent) of the population received ambulatory care from a medical provider, and 7.3 percent of the population (19.6 million people) had

at least one hospital stay during 1996. In general, health care use estimates were highest for elderly people, people in poor health, and those who died during calendar year 1996. The uninsured, both elderly and nonelderly, were less likely to use both ambulatory and inpatient services.

Copies of this report (AHCPR Publication No. 99-0018) are available from AHCPR.* ■

Research Briefs

Allison, J., Kiefe, C.I., and Weissman, N.W. (1999, January). "Can data-driven benchmarks be used to set the goals of Healthy People 2010?" (AHCPR grant HS09446). *American Journal of Public Health* 89, pp. 61-65.

These researchers discuss a process for determining quantitative targets for health objectives that can be used in setting goals for Healthy People 2010. They developed a "pared-mean" method to define from data the best achievable health care practices. They calculated the pared-mean benchmark for screening mammography from the 1994 National Health Interview Survey by using metropolitan statistical areas as the "provider" unit. The researchers then established the minimum provider subset that included at least 10 percent of all women surveyed about receipt of mammography. The pared-mean benchmark becomes the proportion of women in this subset who received mammography, which was 71 percent compared with the Healthy People 2000 goal of 60 percent. The researchers conclude that benchmarks derived from data reflecting the best available care

provide viable alternatives to consensus-derived targets.

Bazzoli, G.J., Shortell, S.M., Dubbs, N., and others. (1999, February). "A taxonomy of health networks and systems: Bringing order out of chaos." (AHCPR grant HS09524). *Health Services Research* 33(6), pp. 1683-1717.

These authors disagree with the widespread perception that organizational change in healthcare has been chaotic. They conclude that some important and meaningful similarities can be found across many newly evolving hospital-led organizations. Using a conceptual framework focused on differentiation, integration, and centralization, they were able to classify about 70 percent of health networks and about 90 percent of health systems into well-defined organizational clusters. Their analysis suggested that some organizational clusters had high degrees of differentiation of hospital, physician, and insurance activities (for example, decentralized health networks and systems), whereas other clusters had low differentiation (for example, independent health networks and systems). Some clusters had extensive centralization

in all three service/product dimensions (for example, centralized health networks and systems). Health networks and systems typically engaged in both ownership-based and contract-based integration or they had no integration at all.

Clark, D.O., Kroenke, K., Callahan, C.M., and McDonald, C.J. (1999). "Validity and utility of patient-reported health measures on hospital admission." (AHCPR grant HS07719). *Journal of Clinical Epidemiology* 52(1), pp. 65-71.

These investigators developed a 15-question interview to assess several domains of health status relevant to hospitalized patients—including symptoms, functional status, mood, and perceived health—to determine the validity of patient-reported health status upon hospital admission. They delivered the structured interview to 88 percent of 2,672 eligible patients shortly after hospital admission from July 1996 through June 1997 and calculated the patients' acute physiology score (APS, indicator of illness severity). The correlation of the patient-reported measures with the APS was 0.01 to 0.13. Overall perceived

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health was correlated 0.20 to 0.45 with symptoms and functional status and 0.07 with the APS. The patient-reported measures also performed comparably to the APS in predicting length of hospital stay. The researchers conclude that patient-reported health measures upon hospital admission are valid.

Crystal, S., Sasso, A.T., and Sambamoorthi, U. (1999, February). "Incidence and duration of hospitalizations among persons with AIDS: An event history approach." (AHCPR grant HS06339). *Health Services Research* 33(6), pp. 1611-1638.

Considerable socioeconomic and geographic variability exists both in the incidence and duration of hospitalization among people with AIDS in New Jersey, based on event history analysis. These authors modeled both the incidence and duration of hospitalizations among 1,401 Medicaid beneficiaries with AIDS in New Jersey by using a multi-State/multi-episode continuous time duration model that frames hospital use as a series of transitions among States. They used simulations to translate race, geographic location, and other parameters into estimates of length of stay, the probability that a hospitalization would end in death, and the probability that a nonhospitalized person would be hospitalized within 90 days. The authors found, for example, that black race and Hispanic ethnicity were associated with hospital stays 1.2 days and 1 day longer, respectively, than stays for non-Hispanic whites; blacks also experienced more frequent hospital admissions. Residents of the high-HIV-prevalence areas of the State had more frequent admissions and stays that were 2 days longer than people residing elsewhere in the State.

Heckerling, P.S., Verp, M.S., and Albert, N. (1999). "Patient or physician preferences for decision analysis." (AHCPR grant HS06945). *Medical Decision Making* 19, pp. 66-77.

A woman choosing chorionic villus sampling (CVS) over amniocentesis is trading off a small increased risk associated with CVS to her pregnancy for the psychologic benefits of decreased anxiety, increased maternal-fetal bonding, and the option for a first-trimester instead of second-trimester therapeutic abortion in the event of a genetic abnormality. Another woman may find the increased risk of miscarriage associated with CVS unacceptable and opt for later amniocentesis. The authors of this study found that patient but not physician preferences when incorporated into decision models corresponded with the prenatal test choice made by the patient. They examined the relationship between prenatal test choices made by women and the choices prescribed by decision-analytic models based on their preferences and separate models based on the preferences of their physicians. Preferences were assessed using written scenarios describing testing outcomes and were recorded on linear rating scales.

Kell, S.H., Allison, J.J., Brown, K.C., and others. (1999). "Measurement of mammography rates for quality improvement." (AHCPR grant HS09446). *Quality Management in Health Care* 7(2), pp. 11-19.

Health insurance claims data capture a higher percentage of mammograms than chart audit data, finds this study. Thus quality improvement projects should consider using claims data only to ascertain mammography rates, conclude the researchers. They compared mammography rates from

abstracted chart data and claims data for 1,096 female Medicare beneficiaries with diabetes and their 74 physicians participating in the Ambulatory Care Quality Improvement Project. Chart audit showed that 26 percent of women had received a mammogram, and claims data showed that 35 percent had done so during the 18-month period studied. The mammography rate from claims data over the 2-year period as opposed to 18 months was 42 percent.

Rosenberg, M.A., Fryback, D.G., and Lawrence, W.F. (1999). "Computing population-based estimates of health-adjusted life expectancy." (AHCPR grant HS06491). *Medical Decision Making* 19, pp. 90-97.

There are many different data sources and many different methods to compute health-adjusted life expectancy (HALE), an index used to measure the current health of a population and to track it over time. These authors present a Bayesian approach—a method of calculating mortality rates using a blend of regional and local data—to computing HALE for a local population, in this case, older adults in the community of Beaver Dam, WI. They used quality of well-being measures from 1,430 participants in the Beaver Dam Health Outcomes Study as weights. The authors conclude that the Bayesian method of computing population-based estimates of HALE creates a smooth set of rates, retains the local flavor of the community, and gives a measure of variability of the estimated HALE.

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Schwartz, C.E., Vollmer, T., Lee, H., and others. (1999, January). "Reliability and validity of two self-report measures of impairment and disability for MS." (AHCPR grant HS08582). *Neurology* 52, pp. 63-70.

Two new patient self-report measures, the Symptom Inventory (which measures symptoms of neurologic impairment) and the Performance Scales (which measure eight areas of disability), were better

able to distinguish multiple sclerosis (MS) patients with moderate and severe levels of disability than were generic measures such as the Health Status Questionnaire and the Quality of Well-Being Index, finds this study. Thus, if the total score on the new measures increases more than 1 SD for a given patient's subgroup (that is, minimally, moderately, or severely disabled), it might indicate that the patient's condition is worsening and would merit an imminent evaluation and intervention by a neurologist, conclude the authors. They describe

results of a multicenter study that validated these patient-reported measures, which they developed for use in MS clinical research. Participants included 274 MS patients and 296 healthy controls who were matched to patients on age, sex, and education. ■

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AHCPR Pub. No 99-0028

April 1999