PROGRAM BRIEF

Women's Health Highlights

Agency for Healthcare Research and Quality

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AHRQ is the lead Federal agency charged with supporting research designed to improve the quality of health care, reduce its cost, address patient safety and medical errors, and broaden access to essential services. AHRQ sponsors and conducts research that provides evidence-based information on health care outcomes; quality; and cost, use, and access. The information helps health care decisionmakers—patients and clinicians, health system leaders, and policymakers—make more informed decisions and improve the quality of health care services.

U.S. Department of Health and Human Services
Public Health Service

Introduction

The life expectancy of U.S. women has nearly doubled in the past 100 years, from 48 in 1900 to nearly 80 in 2000, compared with a 2000 average of 74 for men. Although women have a longer life expectancy than men, they do not necessarily live those extra years in good physical and mental health. On average, women experience 3.1 years of disability at the end of life.

In 1900, the leading causes of mortality among U.S. women included infectious diseases and complications of pregnancy and childbirth. Today, the chronic conditions of heart disease, cancer, and stroke account for 63 percent of American women's deaths and are the leading causes of mortality for both women and men.

The Agency for Healthcare Research and Quality (AHRQ) supports research on all aspects of health care provided to women, including quality, access, cost, and outcomes. This summary presents highlights from a cross-section of AHRQ's current and recently completed research projects on women's health.

Please see page 28 to find out how to get more detailed information on AHRQ's research programs, including grant announcements and application kits. An asterisk (*) indicates that reprints of an intramural study or copies of other publications are available from AHRQ.

Cardiovascular Disease

Heart disease is the number one killer of women in the United States. More than one-third of all deaths among U.S. women are due to heart disease, which usually occurs about 10 years later in life in women than in men. There are substantial differences in heart disease mortality between white and black women; the heart disease mortality rate is about two-thirds higher for black women than white women. However, heart disease mortality is lower among Hispanic, American Indian, and Asian/Pacific Islander women compared with white women.

Research in Progress

- *Researchers compare clinical characteristics and treatment of men and women over the 10 years preceding heart attack.*

In this 3-year project underway at Olmsted Medical Center in Rochester, MN, researchers are taking a "look-back" approach to compare the assessment and treatment of potentially modifiable risk factors for coronary disease in the 10 years prior to first heart attack. In addition, they are comparing the experiences of men and women in terms of the duration of diagnosed coronary disease prior to heart attack, the presence of specific signs and symptoms associated with coronary disease, the use of specific diagnostic evaluations and referrals, and

the reporting of symptoms immediately prior to first heart attack. Barbara Yawn, Principal Investigator (AHRQ grant HS10239).

Recent Findings

- *Lack of research on women limits usefulness of studies on CHD.*

Although coronary heart disease (CHD) causes more than 250,000 deaths in women each year, much of the research in the last 20 years on CHD has either excluded women entirely or included only limited numbers of women. Two reviews conducted by AHRQ's Evidence-based Practice Center (EPC) at the University of California, San Francisco/Stanford examined the usefulness of beta-blockers, aspirin, and ACE inhibitors in reducing risk among women with known heart disease; the use of exercise EKG and exercise thallium testing for CHD in women; the efficacy of nitrates to reduce risk for CHD events in women with known heart disease; the role of high cholesterol, diabetes, and high homocystine levels as risk factors for CHD in women; and, the extent to which smoking cessation after heart attack, along with treatment of high blood pressure and high cholesterol, can lower risk for CHD events in women. Copies of the two reports, *Results of a Systematic Review of Research on Diagnosis and Treatment of Coronary Heart Disease in Women*, Evidence Report/Technology Assessment No. 80 (AHRQ Publication No. 03-E035 full report; 03-E034 summary) and *Diagnosis and Treatment of Coronary Heart Disease in Women: Systematic Reviews of Evidence on Selected Topics*, Evidence Report/Technology Assessment No. 81 (AHRQ Publication No. 03-E037 full report; 03-E036) are available from AHRQ (contract (290-97- 0013).*

- *Women with symptomatic heart failure benefit when treated with ACE inhibitors and have reduced mortality when treated with beta-blockers.*

Researchers at AHRQ's Southern California EPC examined evidence on pharmacologic management of heart failure and found that treatment with ACE inhibitors was beneficial in women, but it did not reduce mortality in women with asymptomatic left ventricular systolic dysfunction. They also found that both women and men with symptomatic heart failure have reduced mortality when treated with beta-blockers. Copies of Evidence Report/Technology Assessment No. 82, *Pharmacologic Management of Heart Failure and Left Ventricular Systolic Dysfunction: Effect in Female, Black, and Diabetic Patients, and Cost-Effectiveness* (AHRQ Publication No. 03-E044, summary and 03-E045, full report) are available from AHRQ (contract 290-97-0001).

- *Insurance status does not explain differences between men and women in heart attack treatments and outcomes.*

According to this study of more than 327,000 men and women who suffered heart attacks between 1994 and 1997, women clearly received fewer cardiac treatments and procedures and had worse outcomes than men, but insurance status did not appear to explain these disparities. Regardless of insurance status, women generally were less likely than men to receive aspirin, beta-blockers, intravenous heparin, or nitrate therapies within the first 24 hours of hospital admission. Also, women were much less likely than men to undergo coronary angiography, angioplasty, or coronary bypass surgery, and they were significantly more likely than men to die in the hospital. Canto, Rogers, Chandra, et al., *Arch Int Med* 162:587-593, 2002 (AHRQ grant HS08843).

- *Women have a higher prevalence of white-coat hypertension than men.*

Researchers at the Johns Hopkins Evidence-based Practice Center examined the available evidence on the utility of blood pressure (BP) monitoring outside of the clinic setting. Although they found some support for the use of ambulatory BP monitoring,

in general, the evidence was insufficient to compare clinic BP monitoring with BP monitoring elsewhere. Evidence on BP monitoring among population subgroups was rarely stratified by race or sex. The only notable subgroup finding was a higher prevalence of white-coat hypertension in women. However, the evidence was insufficient to determine whether the risks associated with white-coat hypertension are sufficiently low to consider withholding drug therapy in this large subgroup of hypertensive patients. Copies of Evidence Report/Technology Assessment No. 63, *Utility of Blood Pressure Monitoring Outside of the Clinic Setting* (AHRQ Publication No. 03-E003, summary and 03-E004, full report) are available from AHRQ (contract 290-97-0006).*

- *Age and sex are significant predictors of death after heart attack.*

In an editorial accompanying study findings on male and female mortality rates after heart attack, this researcher notes that the interaction of age and sex remains a significant predictor of heart attack-related death, even after adjustment for demographic factors, clinical characteristics, and inpatient cardiac care. The study reported an 11 percent 2-year mortality rate for women before age 60 (vs. 7 percent for men) and a lower mortality rate for women after age 79 (46 vs. 51 percent for men). Ayanian, *Ann Intern Med* 134(3):239-241, 2001 (AHRQ grant HS09718).

- *Women and minorities have atypical symptoms when suffering a heart attack or angina.*

Emergency room (ER) doctors miss diagnosing about 2 percent of patients with heart attack or unstable angina because they do not have chest pain or other symptoms typical of cardiac emergency. When these patients are mistakenly sent home from the ER, they are twice as likely to die from their heart problems as similar patients who are admitted to the hospital. The patients in this study who were misdiagnosed tended to be women under the age of 55 or minorities, to report shortness of breath as their chief symptom—instead of chest pain—and/or to have apparently normal electrocardiograms. The study involved more than 10,500 patients seen in the ERs of 10 U.S. hospitals. Pope, Aufderheide, Ruthazer, et al., *New Engl J Med* 342(16):1163-1170, 2000 (AHRQ grant HS07360).

- *Black women are not as likely as others to receive life-saving therapies for heart attack.*

In a study of nearly 27,000 Medicare beneficiaries who had a heart attack and were eligible for reperfusion therapy—either thrombolytic drugs or primary angiplasty—between February 1994 and July 1995, only 44 percent of eligible black women received the treatment, compared with 59 percent of white men, 50 percent of black men, and 56 percent of white women. Canto, Allison, Kiefe, et al., *New Engl J Med* 342(15):1094-1100, 2000 (AHRQ grants HS08843, HS09446).

- *Men and women differ in their reports of angina and symptoms of heart disease.*

Coronary artery disease risk is elevated in certain women with angina, particularly women who have a poor cardiovascular risk profile and symptoms such as shortness of breath. Researchers used the Rose Questionnaire to examine correlates of angina in men and women aged 35 to 55. Nicholson, White, MacFarlane, et al., *J Clin Epidemiol* 52(4):337-346, 1999 (AHRQ grant HS06516).

- *Risk of stroke due to large-vessel atherosclerosis is lower in women than in men.*

In this study of 454 Rochester, MN, residents who had a first ischemic stroke between 1985 and 1989, the risk of stroke due to atherosclerosis with narrowing of the blood vessel was four times greater in men than in women (47 vs. 12 per 100,000 population). This could help to explain why U.S. rates of carotid endarterectomy (surgical opening of a blocked carotid artery) are 30 to 60 percent higher in men than in women. Petty, Brown, Whisnant, et al., *Stroke* 30:2513-2516, 1999 (Stroke Prevention PORT, contract 290-91-0028).

- *Black women are least likely to be referred for cardiac catheterization.*

This study showed that blacks and women, particularly black women, have statistically significant lower odds of being referred for cardiac catheterization than whites and men. The study involved 720 primary care doctors and 8 patient actors (2 each black men, black women, white men, and white women) who used the same scripts to report the same symptoms, wore identical gowns, used similar hand gestures, and had the same insurance and professions. Schulman, Berlin, Harless, et al., *N Engl J Med* 340:618-626, 1999 (AHRQ grant HS07315).

Cancer Screening and Treatment

Breast cancer continues to be the most commonly diagnosed cancer among women in the United Sates. In 2002, an estimated 203,500 U.S. women were newly diagnosed with breast cancer, and nearly 39,000 women died from the disease.

The good news is that breast cancer deaths have declined recently among white women in this country; the bad news is that over the same period, survival has decreased among black women. Although between 12 and 29 percent more white women than black women are stricken with breast cancer, black women are 28 percent more likely than white women to die from the disease. The 5-year breast cancer survival rate is 69 percent for black women, compared with 85 percent for white women.

In 2002, there were an estimated 13,000 newly diangosed cases of invasive cervical cancer in U.S. women,

and about 4,100 women died from the disease. Cervical cancer occurs most often among minority women, particularly Asian-American (Vietnamese and Korean), Alaska Native, and Hispanic women. Although deaths from cervical cancer have declined substantially over the past 30 years, the cervical cancer death rate for black women continues to be more than twice that of white women. The chance of dying of cervical cancer increases as women get older. Worldwide, cervical cancer is the second or third most common cancer among women, and in some developing countries, it is the most common cancer.

Women who have never had a Pap test or who have not had one for several years have a higher than average risk of developing cervical cancer. Many women still do not have regular Pap tests, particularly older women, uninsured women, minorities, poor women, and women living in rural areas. About half of the women with newly diagnosed invasive cervical cancer have not had a Pap test in the previous 5 years.

Strengthening preventive programs that promote women's health is critical. For example, early diagnosis and treatment through regular checkups, yearly mammograms for women over age 50, and Pap smears every 1 to 3 years for women over age 18 substantially increase the odds of surviving breast or cervical cancer.

Research in Progress

Breast Cancer

- *Determining the impact of false-positive mammograms.*

Using the Medical Expenditure Panel Survey and Surveillance Epidemiology and End Results databases, researchers are conducting a three-step study to identify adverse effects of screening mammography. They will identify a population and categorize participants into false-positive or true-negative mammogram status; compare both groups, according to days off work, perceived health status, physician visits, and medical expenditures; and analyze outcomes and their associations with race, age, socioeconomic status, and comorbidity. Geoffrey C. Lamb, Principal Investigator (AHRQ grant HS11755).

- *Examining race, psychosocial factors, and regular mammography use.*

These Yale University researchers are studying psychosocial influences on regular use of screening mammography by women of different races. Lisa Calvocoressi, Principal Investigator (AHRQ grant HS11603).

Recent Findings

Breast Cancer

- *Lumpectomy followed by radiation and mastectomy are equally effective for treating early-stage breast cancer.*

Two recent studies conducted by researchers at Georgetown University examined the cost-effectiveness of surgical treatments for early-stage breast cancer and patients' quality of life after surgery. In the first study, the researchers concluded that the current practice of giving older women with early stage breast cancer a choice of breast-conserving surgery (lumpectomy) followed by radiation treatment or mastectomy is cost effective. In the second study, they demonstrated that, with the exception of surgical removal of armpit lymph nodes to determine cancer spread, how older women are treated during their care, not the therapy itself, is the most important determinant of long-term quality of life. Polsky, Mandelblatt, Weeks, et al., *J Clin Oncol* 21(5):1139-1146, 2003; Mandelblatt, Edge, Meropol, et al., *J Clin Oncol* 21(5):855-863, 2003 (AHRQ grant HS08395).

- *Reading a large volume of mammograms is only one factor influencing radiologists' accuracy.*

Radiologists who examine more than 5,000 mammograms a year are more likely to accurately interpret them than radiologists who read a low volume of mammograms. Factors other than volume also influence radiologists' accuracy in mammogram interpretation, including fear of medical malpractice, differences in the women screened, having women return to the same facility year after year, and having prior films available for comparison. Elmore, Miglioretti, and Carney, *J Nat Cancer Inst* 95(4):250-252, 2003 (AHRQ grant HS10591).

- *Patients' choice of breast cancer treatment affects health.*

Researchers surveyed 683 older women with localized breast cancer at 5 months, 1 year, and 2 years following breast cancer surgery at 1 of 29 hospitals in Massachusetts, Texas, Washington, DC, and New York. The investigators found that women aged 67 and older who participate with their doctor in choosing which treatment they receive recover faster and have a more positive short-term outlook than women who are not given a choice. Polsky, Keating, Weeks, et al., *Med Care* 40(11):1068-1079, 2002 (AHRQ grant HS08395).

- *Study finds variability in the interpretation of mammograms.*

In this study, investigators examined results from 24 community radiologists' interpretations of 8,734 screening mammograms from 2,169 women over 8 years. They found wide variation in how frequently different radiologists noted masses, calcifications, and other suspicious lesions. The rate of false-positive readings ranged from 2.6 to 15.9 percent. Elmore, Miglioretti, Reisch, et al., *J Natl Cancer Inst* 94(18):1373-1380, 2002 (AHRQ grant HS10591).

- *Older black women do not receive preferred breast cancer treatment.*

Data from 984 black and 849 white Medicare-insured women aged 67 years or older who had local breast cancer were analyzed, and a subset of 732 surviving women were interviewed 3 to 4 years after treatment. Black women were 36 percent more likely than white women to receive mastectomy versus breast-conserving surgery and radiation, say researchers. Further, when black women received BCS, they were 48 percent more likely than white women to not have radiotherapy. Mandelblatt, Kerner, Hadley, et al., *Cancer* 95:1401-1414, 2002 (AHRQ grant HS08395).

- *Patient age and provider specialty affect the use of axillary dissection.*

Using medical records for 464 elderly women with stage 1-2 breast cancer who had breast-conserving surgery and 158 surgeon surveys, investigators examined patient, clinical, and surgeon characteristics associated with the non-use of axillary lymph node biopsy. Older age was strongly associated with decreasing odds of undergoing node biopsy. Women who were cared for by surgeons with training in surgical oncology were 60 percent less likely to undergo node dissection than women cared for by other surgeons. Edge, Gold, Berg, et al., *Cancer* 94:2534-2541, 2002 (AHRQ grant HS08395).

- *Communication of treatment options enhances quality of care.*

Researchers analyzed data from 613 surgeons and their patients who had been diagnosed with localized breast cancer. According to the study results, older women who are told about treatment options by their surgeons are more likely to receive breast-conserving surgery with radiation than other types of treatment. These women also are more likely to be satisfied with the care they receive. Liang, Burnett, Rowland et al., *J Clin Oncol* 20(4):1008-1016, 2002 (AHRQ grant HS08395).

- *Increased use of health care is related to increased screening.*

This study examined mammography use among 2,059 HIV-positive and 569 HIV-negative socioeconomically disadvantaged women involved in the Women's Interagency HIV Study. Mammography use was also compared with U.S. women in the general population using data from the National Health Interview Survey. The HIV-positive women were 60 percent more likely than HIV-negative women to be screened for the first time while in the study. And, more HIV-positive than HIV-negative women reported having health insurance (82 vs. 59 percent); having a primary care provider (93 vs. 67 percent); and visiting a doctor in the past 2 months (84 vs. 54 percent). Preston-Martin, Kirstein, Pogoda, et al., *Prev Med* 34:386-392, 2002 (sponsored by AHRQ, NIH, CDC).

- *Removing axillary lymph nodes has a substantial negative impact on elderly women's quality of life.*

Researchers examined the quality of life of 571 elderly women who were diagnosed with stage I or II breast cancer between 1995 and 1997 from 29 hospitals in five regions. They interviewed the women at 3 months, 12 months, and 24 months after surgery about problems with arm functioning, physical and mental functioning, overall impact of breast cancer on their lives, and worry about cancer recurrence. Sixty percent of the women reported arm problems at some time in the 2 years after surgery (83 percent had axillary lymph nodes removed and 17 percent did not). Women with arm problems used significantly more physical therapy services than other women, and arm problems were the primary determinant of reduced physical and mental functioning. Mandelblatt, Edge, Meropol, et al., *Cancer* 95(12):2445-2454, 2002 (AHRQ grant HS08395).

- *Mammography improves outcomes of elderly cancer patients.*

To determine the impact of mammography screening on elderly breast cancer patients, data were examined on 718 patients newly diagnosed with stage I and II disease at 29 hospitals. Researchers found that 96 percent of women with cancer diagnosed with a mammogram had stage I lesions compared with 81 percent of women diagnosed by other means. Kerner, Mandelblatt, Silliman, et al., *Breast Cancer Res Treat* 69(1):81-91, 2001 (AHRQ grant HS08395).

- *Illness burden and breast cancer therapy are not correlated.*

Investigators assessed the correlations between five measures of illness burden, global health, and physical function and evaluated how each measure correlated with breast cancer treatment patterns in a group of 718 older women with early-stage breast cancer. All of the measures were significantly correlated with each other and with physical function and self-rated health. Mandelblatt, Bierman, Gold, et al., *Health Serv Res* 36(6):1085-1107, 2001 (AHRQ grant HS08395).

- *Hospitals should implement care coordination mechanisms for early-stage breast cancer patients.*

Researchers interviewed 67 physicians, nurses, and support staff practicing at 6 hospitals about hospital-and office-based approaches to coordinating care for breast cancer patients. At high-coordination hospitals, 88 percent of women with breast-conserving surgery received recommended radiotherapy, and 84 percent of those with tumors larger than 1 cm received recommended systemic chemotherapy compared with 76 and 73 percent of women, respectively, at low-coordination hospitals. Bickell and Young, *J Gen Intern Med* 16:737-742, 2001 (AHRQ grant HS09844).

- *Task Force revises recommendations for mammography.*

The U.S. Preventive Services Task Force updated its recommendation by calling for screening mammography, with or without clinical breast exam, every 1 to 2 years for women 40 and over. The recommendation acknowledges some risks associated with mammography, which will lessen as women age. The strongest evidence of benefit and reduced mortality from breast cancer is among women ages 50 to 69. The recommendation and materials for clinicians and patients are available at www.ahrq.gov/clinic/3rdupstf/breastcancer/.

- *Outpatient mastectomies have increased over the last decade.*

These researchers reviewed hospital inpatient and outpatient discharge records for all women who were treated for cancer with a breast procedure (lumpectomy, partial mastectomy, or complete mastectomy) between 1990 and 1996 in Colorado, Maryland, New Jersey, and New York and between 1993 and 1996 in Connecticut. They found that two key factors influence whether a woman gets a complete mastectomy in the hospital or in an outpatient setting: the State where she lives and who is paying for it. For example, women in New York were more than twice as likely, and in Colorado nearly nine times as likely, as women in New Jersey to have an outpatient complete mastectomy. Nearly all Medicaid and Medicare enrollees were kept in the hospital after their surgery, as were 89 percent of women enrolled in HMOs. Case, Johantgen, and Steiner, *Health Serv Res* 36(5):869-884, 2001. Reprints (AHRQ Publication No. 01-R008) are available from AHRQ. (Intramural).*

- *Physicians' preferences help determine treatment for older women with breast cancer.*

Surveyors at the Georgetown University School of Medicine queried a random sample of 1,000 surgeons who were given three scenarios of older women with localized breast cancer. They were

asked whether they would use breast-conserving surgery (BCS) or mastectomy and whether they would use radiation therapy after BCS. Surgeons' preferences were significantly associated with self-reported practice and treatments and explained some of the variations in treatment among older women. Mandelblatt, Berg, Meropol, et al., *Med Care* 39(3):228-242, 2001 (AHRQ grant HS08395).

- *Evidence report focuses on management of breast abnormalities.*

Researchers conducted an extensive review of the evidence on management of breast abnormalities, including excisional biopsy following a stereotactic core needle biopsy, use of tamoxifen therapy, and sentinel lymph node biopsy. The full evidence report, *Management of Specific Breast Abnormalities*, Evidence Report/Technology Assessment No. 33 (AHRQ Publication No. 01-E046)* and summary (AHRQ Publication No. 01-E045),* are available from AHRQ (contract 290-97-0016).

- *Nontraditional programs provide an avenue to reach poor and minority women with mammography services.*

Researchers who studied the Los Angeles Mammography Program (LAMP) found that community-based and other approaches outside of the traditional purview of medicine could be an effective way to deliver mammography information and services to poor and minority women who have limited access to this kind of care. LAMP involved two interventions in 45 churches and generated 3.24 additional screenings among 56 women. Siegel and Clancy, *Health Serv Res* 35(5):905-909, 2000 (Reprints, AHRQ Publication No. 01-R032)* (Intramural).

- *Attitudes of low-income black women about mammography affect appointment-keeping.*

Knowledge of screening recommendations and access to free mammograms were not enough to get some low-income black women to keep their mammography appointments. Most of the women who skipped their appointments said they were embarrassed or believed that a mammogram was unnecessary if they did not have symptoms. Crump, Mayberry, Taylor, et al., *J Nat Med Assoc* 92:237-246, 2000 (AHRQ grant HS07400).

- *Women over 80 are less likely than other women to receive the full range of treatments for breast cancer.*

This study involved more than 700 women aged 67 and older who were diagnosed with localized breast cancer between 1995 and 1997 and treated at 29 hospitals across the country. Women aged 80 and older were less likely than younger women to be referred to a radiation oncologist or to receive radiation therapy after breast-conserving surgery, placing them at significantly increased risk for recurrence. Mandelblatt, Hadley, Kerner, et al., *Cancer* 89:561-573, 2000 (AHRQ grant HS08395).

- *Breast cancer survivors find meaning in their illness as they adjust to their condition.*

This study involved 24 women who had been diagnosed with breast cancer in the previous 2 years. Many of the women found that as they adjusted to the negative consequences of the disease, they also found positive effects, ranging from a reappraisal of life, increased self-knowledge and change, and reordering of priorities. Taylor, *Oncol Nurs Forum* 27(5):781-788, 2000 (NRSA fellowship F32 HS00078).

- *Physician compassion reduces anxiety in women newly diagnosed with breast cancer.*

Researchers recruited 123 healthy breast cancer survivors and 87 women who had not had cancer; they showed half of each group a standard videotape of two treatment options for metastatic cancer. The remaining women saw an "enhanced compassion" videotape in which the doctor was much more supportive. Anxiety scores were significantly lower for women in the enhanced compassion group. Fogarty, Curbow, Wingard, et al., J *Clin Oncol* 17(1):371-379, 1999 (AHRQ grant HS08449).

Cervical Cancer

- *Telecolposcopy can enhance diagnostic accuracy.*

Researchers examined the efficacy of telecolposcopy for women with abnormal Pap smears or other indications for colposcopy who were examined at rural clinics. Images of colposcopic examinations were transmitted to a tertiary care center for interpretation by an expert colposcopist, and another colposcopist (site expert) examined the same patients but did not share findings with the other colposcopists. Agreement ranged from 60, 56, and 53 percent for the local colposcopists, distant experts, and site experts, respectively. Ferris, Macfee, Miller, et al., *Obstet Gynecol* 99(2):248-254, 2002 (AHRQ grant HS08814).

- *Cervical smears of previously screened postmenopausal women are poor predictors of cervical abnormalities.*

Researchers collected cervical smears during the Heart and Estrogen/Progestin Replacement Study of postmenopausal women who still had a uterus and were suffering from coronary artery disease. The researchers identified 2,561 women who had normal cervical smears at study entry and an abnormal smear at the first or second annual visit. Within 2 years of a normal smear, 110 women in the trial had a cytologic abnormality. Of these, all but one were false-positive. Sawaya, Grady, Kerlikowski, et al., *Ann Intern Med* 133(12):942-950, 2000 (AHRQ grant HS07373).

- *Cervical cancer screening every 3 to 5 years with the conventional Pap test is effective.*

A recent review of studies that compared conventional and newer Pap

tests with a current reference standard found that conventional Pap tests were only moderately accurate and did not achieve concurrently high sensitivity and specificity. Nevertheless, the researchers maintain that serial Pap testing continues to be effective, and that a Pap test every 3 to 5 years will detect abnormalities missed in one screening, since cervical cancer is a slow-growing disease, and many lesions regress spontaneously. Nanda, McCrory, Myers, et al., *Ann Int Med* 132:810-819, 2000 (contract 290-97-0014).

- *Newer screening technologies for cervical cancer may enhance diagnostic accuracy.*

Three new cervical cancer screening technologies may contribute to diagnostic accuracy in the detection of cervical cancer and reduce significantly the likelihood that premalignant and malignant cells will be misdiagnosed as normal. Duke University researchers examined the available scientific evidence on screening for cervical cancer and prepared an evidence report and summary on the topic, which are available from AHRQ. *Evaluation of Cervical Cytology*, Summary (AHRQ Publication No. 99-E009);* Evidence Report (AHRQ Publication No. 99-E010).*

Breast and Cervical Cancer

- *Obesity may be an unrecognized barrier to breast and cervical cancer screening.*

These researchers analyzed responses to questionnaires completed by 11,435 women. Among women 18 to 75 years of age who had not had a hysterectomy, 78 percent of overweight and obese women compared with 84 percent of normal-weight women reported having a Pap smear in the previous 3 years. Likewise, fewer overweight and obese women than normal weight women had received a mammogram in the previous 2 years. Wee, McCarthy, Davis, et al., *Ann Int Med* 132(9):697-704, 2000 (NRSA fellowship F32 HS00137).

- *More women would be screened for breast and cervical cancer if their doctors recommended it.*

A major reason women cite for not undergoing breast and cervical cancer screening is that their physicians never recommend it. Older women, in particular, are less likely to be screened. This may be due in part to conflicting professional recommendations for screening older women, the many competing causes of mortality as women age, and possible negative attitudes about screening held by doctors and their older female patients. Mandelblatt and Yabroff, *J Am Med Womens Assoc* 55:210-215, 2000 (AHRQ grant HS08395).

- *Web site benefits breast and cervical health program.*

The authors describe the development, use, and evaluation of a Web-based patient outreach program in a Seattle community screening facility. They conclude that customized Web-based programs can help public health programs with meager resources facilitate patient outreach. Bush, Wooldridge, Foster, et al., *Oncol Nurs Forum* 26(5):857-865, 1999 (AHRQ grant HS09407).

- *Breast and cervical cancer screening varies by age among black and Hispanic women.*

This study found that elderly black and Hispanic women are screened less frequently for breast and cervical cancer than their younger counterparts. Women 65 years of age and older were 21 percent less likely than younger women to have ever had a Pap smear. Mandelblatt, Gold, and O'Malley, *Prev Med* 28:418-429, 1999 (AHRQ grant HS08395).

Hysterectomy and Alternative Treatments

More than 500,000 hysterectomies are performed in the United States each year at an annual cost of more than $5 billion. By age 60, more than one-third of women in the United States have had a hysterectomy.

The most common reason for hysterectomy for women of any age continues to be fibroid tumors, which in the mid-1990s accounted for about one-third of all hysterectomies (nearly two-thirds for black women). Other reasons for hysterectomy include endometriosis (about 18 percent), uterine prolapse (16 percent), excessive bleeding (5 percent), and other causes (10 percent).

Research in Progress

- *Helping women make informed choices regarding hysterectomy.*

This study will build on a previous study of 811 women with noncancerous uterine conditions for whom hysterectomy is a reasonable treatment option. Researchers will determine whether and how 4- to 8-year clinical and quality-of-life outcomes differ by treatment group (hysterectomy, uterus-preserving surgery, or nonsurgical treatments) and develop predictive models of treatment choice and satisfaction. Miriam Kupperman, Principal Investigator (AHRQ grant HS11657).

- *Comparing treatments for dysfunctional uterine bleeding.*

The Surgical Treatments Outcomes Project for Dysfunctional Uterine Bleeding Followup Study is assessing the long-term effectiveness of hysterectomy versus endometrial ablation in women with dysfunctional uterine bleeding in U.S. and Canadian clinical centers. Primary outcomes are bleeding, pain, fatigue, and whether the problem that led each woman to seek care is solved 4 years after surgery. Kay Dickersin,

Principal Investigator (AHRQ grant HS09506).

Recent Findings

- *Endometrial ablation does not substitute for hysterectomy.*

Using the State Inpatient and Ambulatory Surgery Databases of the Healthcare Cost and Utilization Project, investigators accessed data on women with benign uterine conditions who underwent hysterectomy or endometrial ablation. In the six States studied, from 1990 to 1997, increases in endometrial ablation rates did not mirror decreases in hysterectomy rates. Results show endometrial ablation was used as an additive medical technology rather than as a substitute for hysterectomy. Farquhar, Naoom, and Steiner, *Int J Technol Assess Health Care* 18(3):625-634, 2002. (Reprints, AHRQ Publication No. 03-R004).*

- *Study shows life satisfaction improves after hysterectomy.*

In a 1992 survey, women were asked to rate their life satisfaction as better, the same, or worse after menopause or hysterectomy. Women who were 20 or more years posthysterectomy or postmenopause were significantly more likely to reply better than women 5 or fewer years after these events. Among women with a hysterectomy, 53 percent with oophorectomy and 60 percent with ovarian conservation rated life better after the surgery. Only 42 percent of women who had not had a hysterectomy rated life satisfaction as better after menopause. Kritz-Silverstein, Wingard, and Barrett-Connor *J Womens Health and Gender-Based Med* 11(2):181-190, 2002 (AHRQ grant HS06726).

- *U.S. hysterectomy rates stayed constant but the type of surgery changed.*

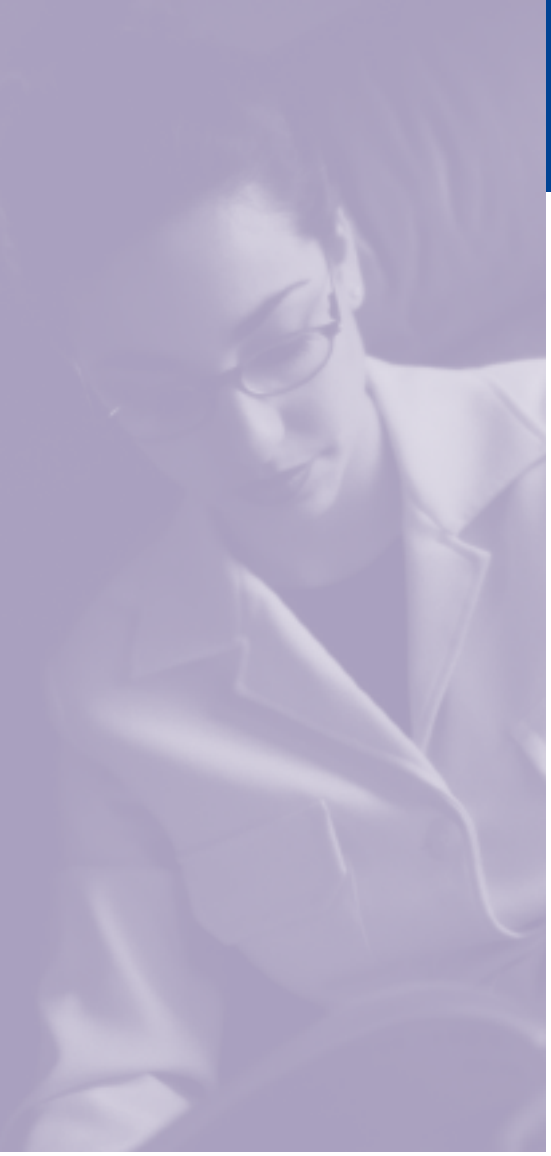
An analysis of 1990-1997 hospital discharge data from the Nationwide Inpatient Sample of the Healthcare Cost and Utilization Project revealed that over the study period, rates of hysterectomy for benign uterine conditions remained about the same, abdominal hysterectomy remained the most common procedure, and laparoscopic hysterectomies increased 30-fold. Farquhar and Steiner, *Obstet Gynecol* 99(2):229-234, 2002. (Reprints, AHRQ Publication No. 02-R049)* (Intramural).

- *Report describes evidence on management of uterine fibroids.*

Researchers at the Duke Evidence-based Practice Center reviewed the available evidence on the benefits, risks, and costs of commonly used medical and invasive therapies for uterine fibroids and found the overall quality of the literature to be poor and inconsistent in reporting the severity of symptoms, uterine and fibroid anatomy, and response to treatments. They did, however, find good evidence that use of gonadotropin-releasing hormone agonists prior to surgery reduces blood loss and may facilitate certain surgical approaches (e.g., use of laparoscopic or vaginal approaches or use of transverse abdominal instead of vertical incisions). They also found that 2-year outcomes are favorable for most women who undergo hysterectomy, but that up to 12 percent of women develop new symptoms after surgery. Copies of Evidence Report/Technology Assessment No. 34, Management of Uterine Fibroids (AHRQ Publication No. 01-E051 summary and 01-E052, full report), are available from AHRQ (contract 290-97-0014).*

- *Most patients are satisfied with the results of hysterectomy.*

University of Maryland researchers interviewed 1,300 women before hysterectomy and 3, 6, 12, and 24 months after surgery. At 1 and 2 years after surgery, 96 percent of the women said the hysterectomy had completely or mostly resolved the problems or symptoms they experienced before the surgery; 93 and 94 percent respectively said the results of the operation were better than or about what they expected; and 82 to 85 percent said their health was better than before the hysterectomy. Kjerulff, Rhodes,



Langenberg, et al., *Am J Obstet Gynecol* 183:1440-1447, 2000 and Kjerulff, Langenberg, Rhodes, et al., *Obstet Gynecol* 95:319-326, 2000 (AHRQ grant HS06865).

- *Hysterectomy is often recommended for indications that do not meet established criteria.*

In this study of enrollees in nine managed care organizations in Southern California, nearly three-fourths of hysterectomies performed from 1993 to 1995 on 497 women did not meet the level of care recommended by an expert panel. Also, 76 percent of women who underwent hysterectomy for endometriosis, chronic pelvic pain, or abnormal bleeding did not meet criteria established by the American College of Obstetricians and Gynecologists. Broder, Kanouse, Mittman, et al., *Obstet Gynecol* 95(2):199-205, 2000 (AHRQ grant HS07095).

- *Patient factors unrelated to gynecological symptoms may affect outcomes of hysterectomy.*

A study of 1,299 women who underwent hysterectomy for benign conditions at 28 Maryland hospitals found that 8 percent of the women had just as many symptoms or more symptoms 2 years afer hysterectomy as they did before the surgery. However, these women were more likely to be in therapy for emotional problems at the time of surgery or to have a low household income (less than $35,000). Gynecologists may not be aware of these factors that can affect treatment effectiveness. Kjerulff, Langenberg, Rhodes, et al., Obstet Gynecol 95(3):319-326, 2000 (AHRQ grant HS06865).

- *Sexual functioning improves for many women who undergo hysterectomies.*

In this 2-year study of more than 1,100 Maryland women 35-49 years of age who had undergone hysterectomy, significant improvements were found in libido and frequency of sexual relations, enjoyment, orgasm frequency, and relief from painful intercourse. Rhodes, Kjerulff, and Langenberg, *JAMA* 282:1934-1941, 1999 (AHRQ grant HS06865).

Urinary Incontinence

Urinary incontinence (UI) affects 10-35 percent of all adults in the United States and about half of all nursing home residents. Women are much more likely than men to be affected, particularly older women who have borne children. However, younger women who have never had children also can be affected, especially during physical activity. UI is generally regarded as one of the major causes of nursing home admission among the elderly.

Despite the significant burden associated with UI, those affected often do not consult a physician about their condition. The reasons for this include embarrassment, the ready availability of absorbent products, low expectations about treatment, and lack of information about UI and treatment options.

Research in Progress

- *Researchers are testing a model for implementing a UI guideline in U.S. nursing homes.*

This study at the University of Rochester in New York is testing the effectiveness of a new model of care to translate AHRQ's UI guideline into practice in 10 nursing homes. Nancy Watson, Principal Investigator (AHRQ grant HS11064).

Recent Findings

- *Study reveals effects of hysterectomy on UI.*

Using the Urinary Symptom Scale for Women, researchers interviewed 1,299 women to assess incontinence before and after hysterectomy. Responses indicate that UI improves for the first 2 years after surgery for most women who have moderate or severe incontinence. According to researchers, women who had mild or no incontinence before

hysterectomy had a 10 percent risk of worse or new-onset incontinence after surgery. Kjerulff, Langenberg, et al., *J Urol* 167:2088-2092, 2002 (AHRQ grant HS06865).

- *Asking the right questions helps physicians identify and treat UI.*

A telephone survey of 384 incontinent women revealed that asking women if they are bothered by incontinence and, if so, about their voiding and leaking patterns enables physicians to identify and treat affected women without using lengthy and time-consuming questionnaires. Robinson, Pearce, Preisser, et al., *Obstet Gynecol* 91(2):224-228, 1998 (AHRQ grant HS08716).

Reproductive Health

One of the many health conditions that can affect women during their reproductive years is pelvic inflammatory disease (PID). PID is an acute infection of the upper reproductive tract, which includes the uterus, ovaries, and fallopian tubes.

PID affects more than 1 million U.S. women each year and frequently results in infertility, ectopic pregnancy, and chronic pelvic pain. Between 10 and 15 percent of U.S. women ages 15 to 44 have had an episode of PID, which usually results from an untreated sexually transmitted disease. Annual estimated costs associated with PID and its consequences exceed $4 billion.

Research in Progress

- *Estimating gynecologic health care use and expenses.*

These researchers are using Medical Expenditure Panel Survey data to estimate health care use and expenditures by U.S. women who have gynecologic disorders and measure the impact of socioeconomic and demographic factors. They also will estimate use of health care for different categories of women and expenditures across a range of common gynecologic disorders. Kristen Kjerulff, Principal Investigator (AHRQ grant HS13057).

Recent Findings

- *Inpatient and outpatient PID treatment outcomes are similar.*

Researchers compared the effectiveness of inpatient and outpatient treatment strategies in preserving fertility and preventing recurrence of PID, chronic pelvic pain, and ectopic pregnancy for women with mild to moderate PID. After 35 months, pregnancy rates were nearly equal between the groups. There were no significant differences between the proportion of women with ectopic pregnancy, chronic pelvic pain, or PID recurrence. Ness, Soper, Holley, et al., *Am J Obstet Gynecol* 186(5):929-937, 2002 (AHRQ grant HS08358).

- *Douching is associated with endometritis.*

Researchers interviewed a group of women with PID and obtained cultures from their upper genital tracts. They compared use of douching among women with endometritis and/or upper genital tract infection (UGTI) with women who had neither condition. Results demonstrate that douching more than once a month and douching within 6 days of study enrollment were associated with an increased risk of endometritis (60 percent) and UGTI (80 percent). Ness, Soper, Holley, et al., *Sex Trans Dis* 28(4):240-245, 2001 (AHRQ grant HS08358).

- *Contraception affects risk of upper genital tract infection.*

Researchers interviewed and obtained endometrial samples from 14- to 37-year-old females with PID to examine the link between hormonal and barrier contraception on the development of UGTI. About 60 percent of the women were age 24 or younger, and nearly 63 percent of the women were black. Although inconsistent use of condoms was associated with a two to three times greater risk of UGTI, no contraceptive method significantly reduced UGTI. Ness, Soper, Holley, et al., *Am J Obstet Gynecol* 185:121-127, 2001 (AHRQ grant HS08358).

- *Researchers evaluate use of clinical predictors of endometritis in women with symptoms of PID.*

Adnexal tenderness (tenderness of the ovaries and/or fallopian tubes) identifies over 95 percent of women with PID, but only 83 percent are identified by the minimum criteria for diagnosing PID suggested by the Centers of Disease Control and Prevention. These and other findings are based on the characteristics of 651 women enrolled in a multicenter randomized treatment trial for PID, clinical and laboratory findings, and endometrial sampling. Peipert, Ness, Blume, et al., *Am J Obstet Gynecol* 184:856-864, 2001 (AHRQ HS08358).

- *Incidence and management of uterine fibroids differ substantially across racial groups.*

Based on a review of the evidence on treatment of uterine fibroids, researchers at the Duke University Evidence-based Practice Center found that black women have a higher incidence of fibroids, larger and more numerous fibroids when first diagnosed, and a higher rate of hysterectomies than other women. The full report, *Management of Uterine Fibroids* (AHRQ Publication No. 01-E052)* and summary (AHRQ Publication No. 01-E051)** are available from AHRQ (contract 290-97-0014).

- *Current tests for diagnosis of PID cannot distinguish it from other causes of pelvic pain.*

Clinicians should suspect causes other than PID in cases where women have pelvic pain and tenderness but not white blood cells or mucopus in the vaginal discharge, according to this study of 157 patients enrolled in the PID Evaluation and Clinical Health (PEACH) study. PEACH is the largest randomized, multicenter study of therapy for PID ever conducted in North America. Peipert, Ness, Soper, et al., *Infect Dis Obstet Gynecol* 8:83-87, 2000 (AHRQ grant HS08358).

Health Care Access, Quality, and Costs

The many changes taking place in health care delivery in the United States have serious implications for women's health. These changes include a consolidation of the health care system, a shift to managed care, and decreased public funding of health care and health-related programs. These changes mean woman need more information than ever before to help them make informed health care choices for themselves and their families.

Research in Progress

- *Examining determinants of out-of-pocket prescription drugs.*

Using nationally representative data, this study will estimate the out-of-pocket prescription drug burden on female Medicare beneficiaries over age 65. The researchers will estimate the proportion of elderly women with high out-of-pocket expenditures for prescription drugs and estimate how health care access problems affect the burden for these drugs for subgroups of elderly women. Usha Sambamoorthi, Principal Investigator (AHRQ grant HS13005).

- *Evaluating the disparity in osteoporosis treatment.*

This study is evaluating the treatment gaps among older women who have had a fracture associated with osteoporosis. Study findings will provide the foundation for designing future secondary prevention programs for re-fracture. Adrianne Feldstein, Principal Investigator (AHRQ grant HS13013).

- *Examining former welfare recipients' ability to access care.*

This study is focusing on the effects of welfare reform on access to health insurance in the State of Oregon. Researchers at Portland State University are also looking at the use of health services among former Temporary Assistance for Needy Families Program recipients and their children. Karen Seccombe, Principal Investigator (AHRQ grant HS11322).

- *Assessing the role of managed care in the use of health services.*

Investigators at Indiana University, Bloomington, are using 1996 Medical Expenditure Panel Survey (MEPS) data to analyze health care use among a subsample of nonelderly adults who have private health insurance. For women, measures will include preventive care services such as Pap smears, breast exams, and mammograms and the number of patient visits to various types of providers. Pravin Trivedi, Principal Investigator (AHRQ grant HS10904).

Recent Findings

- *More assertive outreach programs are needed to link homeless women to case managers and more services.*

Over half (56 percent) of nearly 1,000 homeless women interviewed in Los Angeles County in 1997 had case managers to help them find and obtain care. Women with case managers were nearly twice as likely as those without case managers to use food stamps and more than twice as likely to have found shelter in the month before the interview. Case managers need to step up efforts to help homeless women apply for WIC, refer women to appropriate sources of medical care, and link the women to public health insurance programs, according to these researchers from the University of California, Los Angeles. *J Health Care Poor Underserved* 14(1):34-51, 2003.

- *Racial disparities remain in Medicare managed care plans.*

Data from the 1998 Medicare Health Plan Employer Data and Information Set on 305,574 elderly patients enrolled in Medicare managed care health plans revealed racial differences in clinical services. For example, blacks were less likely than whites to receive breast cancer screening (63 vs. 71 percent). Researchers said more than half of this disparity was explained by socioeconomic factors. Schneider, Zaslavsky, and Epstein, *JAMA* 287(1):1288-1294, 2002 (AHRQ grant HS10803).

- *Community clinics serve as a safety net for homeless women.*

Researchers surveyed administrators and clinicians at 112 clinic sites that provide or could provide primary health care to 95 percent of the homeless women in Los Angeles County. Results from 73 completed surveys revealed that the clinics treat 30 or more homeless, primarily Hispanic women monthly; struggle to provide comprehensive care; and suffer from staff burnout and scarce resources. Despite being unable to offer substance abuse, mental health, and support services, the sites enhance access to care with evening and weekend hours, walk-in visits, proximity to pubic transportation, and by not requiring appointments. Luck, Andersen, Wenzel et al., *J Ambulatory Care Manage* 25(2):53-67, 2002 (AHRQ grant HS08323).

- *Disparities in men's and women's mental health may be sociodemographic.*

Using the 12-item General Health Questionnaire with men and women working in three organizations in the United Kingdom, researchers found that women had more minor mental health problems than men. However, in each organization, women were overrepresented in the lowest grades and underrepresented in the higher grades. Studies of differences between men and women in mental health should take into account their work and life situations. Emslie, Fuhrer, Hunt, et al., *Soc Sci Med* 54:621-624, 2002 (AHRQ HS06516).

- *Homeless women lack sufficient access to medical care.*

Investigators interviewed 974 homeless women about their number of hospitalizations, outpatient visits, and preventive health screens. Homeless

women living on the streets were less likely than women who stayed in shelters and traditional housing to have been hospitalized (21, 28, and 38 percent); had outpatient visits (3.7, 7.2, and 7.4 visits); or had health screens in the past year (2.9, 3.6, and 3.6 out of 4 screens.) Lim, Andersen, and Leake, et al., *Med Care* 40(6):510-520, 2002 (AHRQ grant HS08323).

- *Lack of prenatal coverage decreases chances for timely care.*

This study examined the relationship between timing of insurance coverage and prenatal care among 5,455 low-income women. Rates of untimely prenatal care were highest among women who were uninsured throughout their pregnancy or whose coverage began after the first trimester and were lowest among women who obtained coverage during the first trimester. Egerter, Braveman, and Marchi, *Am J Public Health* 92(3):423-427, 2002 (AHRQ HS07910).

- *Medicare fees influence choice of breast cancer treatment.*

Investigators used data from Medicare files, the American Hospital Association's Annual Survey of Hospitals, and the 1990 census to investigate whether Medicare fees for breast-conserving surgery (BCS) and mastectomy (MST) affected the rate of BCS across 799 ZIP code areas. Results show a that a 10 percent higher BCS Medicare fee was associated with a 7 to 10 percent higher BCS rate. A 10 percent higher MST fee was associated with a 2 to 3 percent lower proportion of women receiving BCS. Hadley, Mitchell, and Mandelblatt, *Med Care Res Rev* 58(3):334-360, 2001 (AHRQ grant HS08395).

- *Race/ethnicity, age, and employment status predict insurance status.*

Medical Expenditure Panel Survey (MEPS) data were used to describe the lack of insurance in terms of three predictors of insurance status: age, race/ethnicity, and employment status. Data show young adults (18-24 years) are the group most likely to be uninsured, Hispanics are most at risk of lacking coverage, and low hourly wage earners are more likely to be uninsured. Rhoades, Vistnes, Cohen, *The Uninsured in America*: *1996-2000*. This report, MEPS Chartbook No. 9 (AHRQ Publication No. 02-0027), is available from AHRQ.*

- *AHRQ fact book answers questions on hospital care for women.*

Using the Healthcare Cost and Utilization Project (HCUP) data, researchers describe the care of women in U.S. hospitals for the year 2000 for the following categories: age, charges, length of stay, in-hospital deaths, insurance coverage, and obstetric care. Jiang, Elixhauser, Nicholas, et al., *Care of Women in U.S. Hospitals, 2000*. This report, HCUP Fact Book No. 3 (AHRQ Publication No. 02-0044), is available from AHRQ.*

- *Researchers describe U.S. women's health status.*

Using 1996 MEPS data, this report describes the health status of U.S. women (perceived health, mental health, and presence of limitations) and their insurance status. Information is presented on women's usual source and type of care as a way to examine access to care. Altman and Taylor, *Women in the Health Care System: Health Status, Insurance, and Access to Care*. This report, MEPS Research Findings 17 (AHRQ Publication No. 02-0004), is available from AHRQ.*

- *A new report illustrates health disparities and gaps between men and women.*

Based on data from the MEPS Household Component and the 1987 National Medical Expenditure Survey, this report presents estimates of health insurance, access to and use of care, and health status among women of different racial and ethnic groups in the United States, as well as differences between men and women. Kass-Bartelmes, Altman, and Taylor, *Disparities and Gender Gaps in Women's Health, 1996*.

This report, MEPS Chartbook No. 8 (AHRQ Publication No. 02-0003), is a available from AHRQ.*

- *Health plan satisfaction survey finds small differences between the sexes.*

Using the Consumer Assessment of Health Plans Study (CAHPS®) adult questionnaire, researchers interviewed nearly 100,000 men and women enrolled in 206 commercial managed care plans nationwide about satisfaction with their health plans. Results show small differences by sex in satisfaction, with no consistent pattern of one sex being more satisfied than the other. Health plan characteristics accounted for the largest variation in satisfaction, and not-for-profit plan status and lower turnover of primary care providers were stronger determinants of women's satisfaction. Weisman, Henderson, Schifrin, et al., *Women's Health Issues* 11(4):401-415, 2001. (Reprints, AHRQ Publication No. 02-R007)*(Intramural).*

- *Race, income, and education influence older women's health.*

A survey of the health and functional status of 91,314 elderly women enrolled in Medicare managed care programs revealed that poorer and less educated women reported poorer health, experienced more chronic illness, and felt depressed or sad more of the time in the past year than their more affluent and educated counterparts. The percentages of women reporting fair or poor health were as follows: black (46), Hispanic/Spanish (42), American Indian/Alaska Native (36), Asian/Pacific Islander (28), and white (27). Bierman, Haffer, and Hwang, *Health Care Financing Rev* 22(4):187-198, 2001 (Reprints, AHRQ Publication No. 02-R006)* (Intramural).

- *Survey data reveal health disparities among older women.*

Survey data were collected from 91,314 elderly women for a new quality measure in the Health Plan Employer Data and Information Set to assess functional outcomes in Medicare+Choice plans. Over half of the women surveyed suffered from three or more chronic conditions. Women with low income, less education, and minority group status were significantly more likely than other women to suffer from chronic diseases and limited ability to function. Bierman and Clancy, *J Amer Med Womens Assoc* 56:155-160, 2001. (Reprints, AHRQ Publication No. 02-R023)* (Intramural).

- *Some disabled women face barriers to screening services.*

Researchers analyzed National Health Interview Survey data with Disability, Family Resources, and Healthy People 2000 supplements to examine the use of screening and preventive services among adult women with disabilities living in the community. Women with major, lower extremity disability were much less likely than other women to receive Pap smears, mammograms, and clinician inquiries about smoking. Iezzoni, McCarthy, Davis, et al., *Am J Med Qual* 16(4):135-144, 2001 (AHRQ grant HS10223).

- *Accessible ob-gyn services are needed for homeless women.*

When nearly 1,000 Los Angeles County homeless women of reproductive age were interviewed, two-thirds reported symptoms during the previous year ranging from abnormal vaginal discharge, severe pelvic pain, and skipped periods to breast lumps and burning during urination. One-fourth of the women were either pregnant at the time of the study or had been pregnant during the preceding year. Wenzel, Andersen, Gifford, et al., *J Health Care Poor Underserved* 12(3):323-343, 2001 (AHRQ grant HS08323).

- *Researchers examine the role of ob-gyns as primary care providers for elderly women.*

Using Medicare claims data, researchers examined the degree to which ob-gyns in the State of Washington offered primary care to elderly women in 1994. About 12 percent of visits by elderly

women to ob-gyns involved nongynecologic diagnoses. Further, patients who saw ob-gyns received over 15 percent of their overall health care from an ob-gyn compared with 43 percent of total health care received by elderly women who saw family physicians. Fink, Baldwin, Lawson, et al., *J Fam Pract* 50(2):153- 158, 2001 (contract 290-93-0136).

- *Nonprofit centers rate better than for-profits in serving disadvantaged women.*

Using data on 108 for-profit and 296 nonprofit women's health centers, investigators examined the association between center ownership and community benefits and concluded that nonprofit centers do a better job of serving disadvantaged women than for-profit centers. Their review showed that nonprofit centers serve larger proportions of uninsured women and rural women, offer reduced rates to more clients based on financial need, offer a broader range of primary care services, and provide clinicians with more frequent training opportunities. Khoury, Weisman, and Jarjoura, *Med Care Res Rev* 58(1):76-99, 2001 (AHRQ grant HS09328).

- *Women prefer to see a female physician when they visit the emergency room.*

Patients seeking care for nonurgent problems during a visit to an emergency department and again 1 week later were surveyed to assess the association between ratings of care and the sex of the attending physician. Women were significantly more satisfied with female than male doctors on four of seven satisfaction indicators. Men's satisfaction with care was not affected by the physicians' sex. Derose, Hays, McCaffrey, et al., *J Gen Intern Med* 16:218-226, 2001 (NRSA training grant T32 HS00046).

- *Study identifies risk factors for late or no prenatal care for low-income women.*

A representative survey of 6,364 low-income California women revealed that women in absolute poverty were nearly nine times as likely to get no care as women with incomes between 101-200 percent of the Federal poverty level. Women who had more than one child, were not married, and whose pregnancies were unplanned were three times more likely than other women to have no prenatal care. Nothnagle, Marchi, Egerter, et al., *Maternal Child Health J* 4(4):251-259, 2000 (AHRQ grant HS07910).

- *Women use more health care services than men, and their costs are higher.*

Women and men have similar hospitalization rates and costs, but women use more primary care services and have higher overall medical charges than men. In this study of 509 adult patients assigned to primary care physicians at a university medical center, women reported significantly lower mental and physical health status than men. The researchers suggest that primary care physicians may be more likely to order laboratory tests, x-rays, and other diagnostic tests for women who make more frequent visits to the doctor and have continuing complaints. Bertakis, Azari, Helms, et al., *J Fam Practice* 49(2):147-152,2000 (AHRQ grant HS06167).

- *Link found between women's subjective assessments of socioeconomic status and health.*

Investigators explored the relationship between how individuals perceive their socioeconomic status (subjective SES) and health, and found subjective SES was significantly related to health in an ethnically diverse group of pregnant women. However, household income continued to predict health after accounting for subjective SES among Hispanic and black women. Objective indicators made no additional contribution to explaining health among white and Chinese-American women. Ostrove, Adler, Kuppermann, et al., *Health Psychol* 19(6):613-618, 2000 (AHRQ grant HS07373).

- *More targeted efforts are needed to improve women's health care.*

According to this report, future efforts to improve women's health care should focus on three areas: coordination of care, interaction with the health care system, and the relationship between socioeconomic status and health. Clancy, *Women and Health*, edited by Goldman and Hatch, New York: Academic Press, 1999, pp. 50-54. (Reprints, AHRQ Publication No. 00-R010).* (Intramural)

- *Women prefer to see an ob gyn for routine gynecological care.*

A survey of 5,164 women enrolled in a health maintenance organization (HMO) revealed that 60 percent of them preferred a gynecologist for basic gynecology care, 13 percent preferred a nurse practitioner, 13 percent preferred their primary care physician, and 14 percent had no preference. Schmittdiel, Selby, Grumbach, et al., *J Womens Health* 8(6):825-833, 1999 (AHRQ grant HS08269).

- *Assessments of hospital maternity care can guide pregnant women.*

Despite differences in demographic and clinical characteristics, women generally agree on which hospitals provide quality maternity care. Their assessments may be a valid indicator of hospital quality of care in this area. Finkelstein, Harper, and Rosenthal, *Health Serv Res* 34(2):623-640, 1999 (AHRQ grant HS00059).

- *U.S. female physicians assess the quality of the health care they receive.*

A nationally representative sample of 4,501 U.S. women physicians rated the health care they received as excellent (39 percent); very good (37 percent); good (19 percent); fair (4 percent); and poor (1 percent). Franks and Clancy, *J Womens Health* 8(1):1-8, 1999

(Reprints, AHRQ Publication No. 99-R048)* (Intramural).

- *Changes in health care delivery and financing are needed for older women.*

Managed care organizations may not be able to meet the needs of the large numbers of chronically ill and elderly women being enrolled. The researchers note that 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. Bierman and Clancy, *Women's Health Issues* 9(1):2-17, 1999 (AHRQ Publication No. 99-R052)* (Intramural).

Medical Expenditure Panel Survey

In 1996, AHRQ launched the Medical Expenditure Panel Survey (MEPS), a nationally representative survey to collect detailed information on health status, health care use and expenses, and health insurance coverage for individuals and families in the United States, including nursing home residents. MEPS is helping the Agency to address many questions important to women, including how health insurance coverage, access to care, use of preventive care, the growth of managed care, changes in private health insurance, and other changes in the health care system are affecting the kinds, amounts, and costs of health care services used by women. For more information related to MEPS, visit the AHRQ Web site at www.ahrq.gov and click on "MEPS" under "Data & Surveys."

Violence Against Women

An estimated 1.3 million women are physically abused by their intimate partners each year, and about one of every four women seeking care in emergency rooms has injuries resulting from domestic violence. There are many consequences of domestic violence, as reflected in the high use of health care services by abused women. In addition to physical injuries, women who are victims of domestic violence experience higher rates of depression, substance abuse, suicidal thoughts, and suicide attempts.

Research in Progress

- *Investigating the effectiveness of domestic violence interventions.*

The objectives of this study are to investigate the effectiveness of domestic violence intervention components, establish a methodology to define outcome measures, explore the feasibility of monitoring these measures with a longitudinal cohort study, and create a methodology for a cost-benefit analysis. Mary J. Zachary, Principal Investigator (AHRQ grant HS11297).

- *Researchers are examining the outcomes of treatment for abused women seen in public clinics.*

This project, underway at the University of Texas Health Science Center in Houston, involves the design, implementation, and testing of nurse case management and group education of abused women attending inner city primary care clinics. Researchers are also assessing the impact of interventions on the health, functional status, and medical care use of children of abused women. Janet Groff, Principal Investigator (AHRQ grant HS11079).

- *Study focuses on needs of Hispanic women who are at high risk for intimate partner violence.*

Researchers at the University of California, San Francisco, are working with 125 low-income Hispanic women at high risk for domestic violence who are receiving prenatal care from public health clinics. The goal is to identify the outcomes these women and their providers are seeking from interventions targeting intimate partner violence. Michael Rodriguez, Principal Investigator (AHRQ grant HS11104).

- *Tool may help ER clinicians identify potential victims of domestic violence.*

This randomized controlled trial, underway at the University of Chicago, is evaluating the effectiveness of a computerized assessment tool to help ER clinicians identify women at risk for domestic violence and recommend specific strategies for management. The study involves the emergency departments of two hospitals, one in the inner city and one in the suburbs. David Howes, Principal Investigator (AHRQ grant HS11096).

- *Researchers are comparing hospital-based interventions for domestic violence.*

Researchers at Harvard School of Public Health are comparing seven existing domestic violence interventions located in different hospital settings to determine their effectiveness and cost-effectiveness and the impact over time of their use on the mental and physical health of battered women. Laura McCloskey, Principal Investigator (AHRQ grant HS11088).

- *Determining the health effects of domestic violence.*

Researchers at the Group Health Cooperative (GHC) in Washington and Idaho will conduct a telephone survey of a random sample of more than 6,500 female GHC enrollees aged 18 to 64 to establish the presence or absence of domestic violence and to measure heath status, social functioning, and health risk outcomes. The survey data will be linked to automated cost and use data, and researchers will compare cohorts of women with and without domestic violence on the measures. Robert Thompson, Principal Investigator (AHRQ grant HS10909).

- *Researchers seek ways to improve screening and management for victims of domestic violence.*

The purpose of this Highland Hospital of Rochester, NY, study is to evaluate the impact of a multifaceted intervention designed to improve

primary care physicians' screening and management of domestic violence. Naomi Pless, Principal Investigator (AHRQ grant HS11490).

Recent Findings

- *Physicians are the key to identifying and referring women who are victims of domestic violence.*

Only 8 percent of women who are abused by their partners ever tell a doctor, and less than 50 percent ever tell anyone. Physicians should make an effort to identify and refer these women to appropriate community services, according to these researchers. They note that simply identifying abuse can influence the evaluation of patient complaints as well as the outcomes of care. Rhodes and Levinson, *JAMA* 289(5):601- 605, 2003 (AHRQ grant HS11096).

- *Online tool helps hospitals evaluate their domestic violence programs.*

AHRQ provided support for development of a 37-item, Web-based instrument for use by hospitals to conduct a formal evaluation of their domestic violence screening and intervention programs. The instrument is available online at www.ahrq.gov or in print (AHRQ Publication No. 03-0004)* (Intramural).

- *Study links stressful life events to abuse during pregnancy.*

Using survey responses from 2,600 postpartum women, researchers examined sociodemographic characteristics, experience of 13 stressful life events during the year before childbirth, and experience of physical abuse. Physical abuse was associated with 5 of the 13 stressors. Additionally, 12 percent of the participants were poor (most were married, white, high school graduates, and aged 20 or older); 14 percent had suffered through five or more stressful events; and almost 9 percent were physically abused during the year before pregnancy and/or during pregnancy (usually by their husbands/partners). Martin, Griffin, Kupper, et al., *Matern Child Health J* 5(3):145-152 (NRSA training grant T32 HS00032).

- *A new tool helps clients define abusive situations.*

Researchers developed the Domestic Violence Survivor Assessment for use with women who disclose intimate partner violence through screening or by seeking counseling or shelter. Family violence counselors can use this tool to help clients define their domestic situations and take the steps to live lives free from abuse. Dienemann, Campbell, Landenburger, et al., *Patient Educ Couns* 46:221-228, 2002 (AHRQ HS10731).

- *Sexual assault is a major problem for homeless women.*

A study of nearly 1,000 homeless women 15 to 44 years of age in Los Angeles County revealed that 13 percent of the women had been raped during the previous year, and half had been raped two or more times during the year. The authors note the striking association of rape with all aspects of women's health and suggest that all homeless women who seek care and have serious mental, physical, or substance abuse problems should be screened for violent experiences. Wenzel, Leake, and Gelberg, *J Gen Int Med* 15:265-268, 2000 (AHRQ grant HS08323).

HIV/AIDS

The number of AIDS cases is growing more rapidly among U.S. women than among men. In 1985, women made up only 7 percent of all reported AIDS cases, compared with 18 percent in 1994 and 23 percent in 1999. AIDS occurs most often among women in their reproductive years (15 to 44 years of age). HIV/AIDS is the sixth leading cause of death among U.S. women 25 to 34 years of age and the leading cause of death for black women in that age group.

Recent Findings

- *One-fifth of deaths of women with HIV are not AIDS related.*

Based on data from death certificates and CD4 cell count, researchers classified the causes of death for 414 women with HIV infection as AIDS or non-AIDS related. Data show that 20 percent of deaths among HIV-infected women are due to causes other than AIDS. Cohen, French, Benning, et al., *Am J Med* 113:91-98, 2002 (sponsored by AHRQ, NIH, and CDC).

- *Case managers reduce drug use in homeless women with HIV.*

Researchers analyzed data from interviews with 974 homeless women aged 15 to 44 to determine if psychiatric symptoms are associated with HIV risk behaviors (injection drug use, unprotected sex, and trading sex) and if homeless women who have contacts with health or substance abuse treatment services are likely to engage in these behaviors. Neither depression nor symptoms of psychosis were associated with HIV risk behaviors. Kilbourne, Herndon, Andersen, et al., *J Health Care Poor Underserved* 13(1):49-65, 2002 (AHRQ HS08323).

- *Nonadherence to HIV treatment is linked to risky behaviors.*

Data were collected on 766 HIV-positive U.S. women to examine adherence to therapy, risk behavior, and disease markers. Two-thirds of the women took all medications as prescribed 95 percent or more of the time; however, the remaining one-third were more than twice as likely to engage in unprotected sexual activity. Women who were less adherent were more likely than those who adhered to treatment to have a detectable virus load, more impaired immune systems, and bothersome symptoms; use condoms inconsistently; and report drug use. Wilson, Barron, Cohen, et al., *Clin Infect Dis* 34:529-534, 2002 (sponsored by AHRQ, NIH, and CDC).

- *HIV-positive women have a high rate of Pap testing.*

Investigators examined sociodemographic, clinical, and provider factors associated with screening for cervical cancer among 624 women being treated for HIV infection. Results show that 81 percent had received a Pap test in the past year. Women who had a gynecologist and primary care physician at the same clinical site were almost twice as likely as other women to report receiving a Pap test. Stein, Cunningham, Nakazono, et al., *J Acquir Immune Defic Syndr* 27:463-466, 2001 (AHRQ HS08578).

- *Special outreach needed for HIV-positive black women and drug abusers.*

Researchers analyzed antiretroviral medication use among 1,690 HIV-positive women, the majority of whom were black or Hispanic. Results show that women who are college-educated, are not black, are privately insured, and have not used illicit drugs are more likely to receive highly active antiretroviral therapy (HAART) to treat their HIV infection. Cook, Cohen, Grey, et al., *Am J Public Health* 92(1):82-87, 2002 (sponsored by NIH, CDC, and AHRQ).

- *Research uncovers important services for HIV-infected women.*

This study focused on the evaluation and management of HIV- infection in women, particularly treatment issues specific to women with HIV. According to the author, women usually are not diagnosed until they seek medical attention for a gynecologic infection. Levine, *Ann Intern Med* 136(3):228-242, 2002 (cosponsored by AHRQ, NIH, and CDC).

- *Highly active antiretroviral therapy alters progression of cervical disease.*

A multicenter longitudinal study involving 2,059 HIV- infected and at-risk women enrolled at six clinical sites sought to determine the effect of HAART on human papillomavirus (HPV) disease. Investigators obtained

Pap smears and cervicovaginal lavage for HPV DNA testing from HIV-infected women at 6-month intervals. Women on HAART were 1.4 times more likely to experience regression, while those not on HAART were more likely to show HPV disease progression. Minkoff, Ahdieh, Massad, et al., *AIDS* 15(16):2157-2164, 2001 (AHRQ grant HS10399).

- *Black women are recruited/retained in HIV clinical trials.*

Researchers describe the recruitment and retention of a diverse group of women infected with HIV and at-risk HIV uninfected women participating in the Women's Interagency HIV Study. Factors found to be associated with retention were older age, black race, stable housing, HIV-infected serostatus, past experience in studies of HIV/AIDS, and site of enrollment. Hessol, Schneider, Greenblatt, et al., *Am J Epidemiol* 154:563- 573, 2001 (cosponsored by AHRQ, NIH, and CDC).

- *Survey shows people with HIV consider parenthood.*

The HIV Cost and Services Utilization Study (HCSUS) surveyed 2,864 adults infected with HIV who were receiving medical care in the United States in early 1996. The study revealed that more than one in four HIV-positive men and women desired children in the future. Of those who wanted children, 6 in 10 men and 7 in 10 women expected to have children. Chen, Phillips, Kanouse, et al., *Fam Plann Perspect* 33(4):144-152,165, 2001 (AHRQ grant HS08578).

- *Modifications suggested for cervical cancer screening guidelines for women with HIV.*

By incorporating data from studies, databases, and the literature, researchers calculated quality-adjusted life expectancy, lifetime costs, and the cost-effectiveness of targeted and universal cervical cytologic screening in HIV-infected women. Results show that adding a human papillomavirus (HPV) test to the first two Pap smears (within the year after HIV diagnosis) and modifying subsequent screening intervals based on HPV test will make the current screening policy more efficient. Goldie, Freedberg, Weinstein, et al., *Am J Med* 111:140-149, 2001 (AHRQ grant HS07317).

- *Women's HIV study identifies prevalence and predictors of skin disease.*

The Women's Interagency HIV Study analyzed baseline data on 2,018 HIV-infected women and 557 uninfected women and found that HIV-infected women were more likely than uninfected women to report skin abnormalities (63 vs. 44 percent) and diagnoses with more than two skin problems (6 vs. 2 percent). Paradi, Mirmirani, Hessol, et al., *J Am Acad Dermatol* 44:785-788, 2001 (cosponsored by AHRQ, NIH, and CDC).

- *All HIV-infected women should be screened for cervical cancer.*

Based on this study, researchers recommend that all HIV-infected women have two Pap smears 6 months apart to screen for cervical cancer and annual Pap smears thereafter when initial Pap results are normal. Goldie, Weinstein, and Freedberg, *Ann Intern Med* 130:97- 107, 1999 (AHRQ grant HS07317 and NRSA training grant T32 HS00020).

Clinical Preventive Services

In addition to supporting research on preventive services, AHRQ convened a panel of independent, private-sector experts in prevention and primary care—the U.S. Preventive Services Task Force (USPSTF)—and conducted a program to increase the appropriate use of preventive services—Put Prevention Into Practice. The USPSTF reviews the scientific evidence and develops recommendations for interventions such as screening tests, counseling, immunizations, and chemoprophylactic regimens. Many of these preventive interventions are of particular importance to women.

Research in Progress

- *Developing a chlamydial screening intervention for teens.*

Researchers at the University of California San Francisco are developing a Clinical Practice Improvement (CPI) intervention to increase *Chlamydia trachomatis* (CT) screening of 14- to 18-year-old females in medical office settings. The intervention involves engaging the office leadership and staff, building teams within clinic staff, redesigning clinical practices, and sustaining gains through continual performance monitoring. Mary- Ann Shafer, Principal Investigator (AHRQ grant HS10537).

- *Updating USPSTF recommendations pertaining to women.*

The USPSTF is updating its recommendations from the 1996 *Guide to Clinical Prevention Services*, 2nd Edition. Current topics and recently issued recommendations that are specifically relevant to women include prevention of unintended pregnancy and postmenopausal hormone replacement therapy, as well as chemoprevention for breast cancer. USPSTF recommendations and related materials are available on the AHRQ Web site at www.ahrq.gov/clinic/prevenix.htm.

- *Evaluating home screening for STDs.*

Researchers at the University of Pittsburgh are evaluating the effectiveness of home screening for two sexually transmitted diseases (STDs)—chlamydia and gonorrhea—compared with office- based screening among women aged 14-29 previously diagnosed with chlamydia during treatment at one of six clinics in Pennsylvania and South Carolina. Roberta Ness, Principal Investigator (AHRQ grant HS10592).

- *Improving screening for STDs in teens.*

Researchers from the University of California, San Francisco, will test ways to improve screening for STDs among asymptomatic, sexually active teens being seen in Kaiser Permanente outpatient clinics. Mary-Ann Shafer, Principal Investigator (AHRQ grant HS10537).

Recent Findings

- *The USPSTF updates osteoporosis screening recommendations.*

The USPSTF recommends that women 65 and older receive routine screening for osteoporosis to reduce the risk of fracture and spinal abnormalities often associated with the disease. The USPSTF also recommends that routine screening begin at 60 for women identified as high risk because of their weight or estrogen use. Nelson, Helfand, Woolf, and Allan, *Ann Intern Med* 137(6):529-541, 2002 (AHRQ contract 290-97-0011).

- *Drugs to prevent breast cancer should not be used routinely.*

The USPSTF reviewed three randomized controlled trials on the use of tamoxifen and raloxifene to reduce the risk of breast cancer. The USPSTF recommends that clinicians discuss with their female patients who are at high risk for the disease the benefits and risks of taking prescription medicines to reduce their risk of breast cancer. The Task Force recommends against the use of these drugs by women at low or average risk for breast cancer. USPSTF, *Ann Intern Med* 137(1):56-58, 2002 (AHRQ contract 290-97- 0011).

- *The USPSTF recommends routine screening for chlamydia.*

The USPSTF recommends the routine screening of all sexually active women, including pregnant women, 25 years of age and younger for chlamydial infection. Other asymptomatic women at increased risk of infection should be screened as well. USPSTF, *Am Fam Physician* 65(4):673-676 (AHRQ contract 290-97-0011). See also *What's New from the Third USPSTF: Screening for Chlamydial Infection* (AHRQ Publication No. APPIP01-0010).*

- *Routine screening for bacterial vaginosis in pregnancy lacks support.*

The USPSTF concludes there is insufficient evidence to recommend for or against routine screening of high-risk pregnant women for bacterial vaginosis. The Task Force recommends against routine screening of average-risk asymptomatic pregnant women for bacterial vaginosis. USPSTF, *Am Fam Physician* 65(6):1147-1150 (AHRQ contract 290-97-0011). See also *What's New from the Third USPSTF: Screening for Bacterial Vaginosis in Pregnancy* (AHRQ Publication No. APPIP 01-0012).*

- *Three of four new prevention recommendations apply to women.*

Recent USPSTF recommendations pertaining to women include the following: Doctors should screen women over 45 years for high blood cholesterol and low high density lipoprotein levels; screen sexually active women 25 years old and younger for chlamydial infection to prevent pelvic inflammatory disease and its complications; and know that screening for and treating bacterial vaginosis during pregnancy is not beneficial in average-risk women but is an option for some women at high risk of preterm delivery. Atkins, *Br Med J USA* 1:187-190, 2001. (Reprints, AHRQ Publication No. 01-R088)* (Intramural).

- *Chlamydia screening rates vary considerably among health plans.*

Investigators at the University of California, Los Angeles studied chlamydia screening rates of 19,214 sexually active females aged 15 to 25. Subjects were enrolled in one of four major U.S. health plans and visited a health care provider during 1997. They found considerable variation among the plans (2 to 42 percent), and performance was generally low. Mangione- Smith, McGlynn, and Hiatt, *Arch Pediatr Adolesc Med*, 154:1108- 1113, 2000 (AHRQ grant HS09473).

- *Chlamydia screening of young women appears to be cost effective.*

Routine chlamydia screening of sexually active women 15 to 25 years of age has health benefits, and it is cost effective, according to this study. Screening these women for chlamydia could be expected to prevent more than 140,000 cases of PID each year and save $45 for every woman screened. Mangione-Smith, O'Leary, and McGlynn, *Sex Transm Dis* 26:309-316, 1999 (AHRQ grant HS09473).

Pregnancy, Birth Outcomes, and Family Planning

The last half of the 20th century saw a decline in maternal deaths among U.S. women—from about 74 deaths in 1950 to about 7 deaths in 1993 for every 100,000 live births. Mortality related to pregnancy and childbirth is low for U.S. women compared with other causes of death, primarily because of health care advances that have occurred over the past 50 years. However, black women and older women continue to be at higher risk of death from complications of pregnancy.

Research in Progress

- *Linking hospital and clinical factors to delivery outcomes.*

The primary goals of this study are to validate and administer a survey to identify organizational factors and labor and delivery policies associated with vaginal birth after cesarean (VBAC)—a quality indicator used to monitor maternal health care and hospital performance—and assess the relationship of the factors and policies with maternal and neonatal outcomes. Kimberly D. Gregory, Principal Investigator (AHRQ grant HS11334).

- *Investigating postnatal and postpartum care programs.*

This study, which is underway at Battelle Memorial Institute in Seattle, WA, is investigating new mothers' use of postdischarge services—including factors that influence decisions about use—and determining the impact of specific postdischarge services on patterns of medical care use, health status, and breastfeeding. Jutta Joesch, Principal Investigator (AHRQ grant HS10138).

- *Aiding shared decisionmaking about childbirth.*

The objective of this study is to develop and pilot test an evidence-based online tool to aid in shared decisionmaking about method of childbirth. The research is underway at Oregon Health & Science University. Jeanne-Marie Guise, Principal Investigator (AHRQ grant HS11338).

- *Evaluating a decision tool for prenatal testing.*

These researchers from the University of California, San Francisco, are evaluating a computerized tool that helps pregnant women and their partners make choices about prenatal diagnostic testing. This is a randomized controlled trial in a racially diverse group of 400 women age 35 and older. Miriam Kuppermann, Principal Investigator (AHRQ grant HS10214).

- *Evaluating the use of acupuncture to treat depression during pregnancy.*

This large-scale, long-term clinical trial is underway at the University of Arizona, Tucson. The goal of this study is to evaluate the efficacy and effectiveness of acupuncture as a treatment for depression during pregnancy. Rachel Manber, Principal Investigator (AHRQ grant HS09988).

Recent Findings

- *Outpatient support for new mothers can foster continuation of breastfeeding after early postpartum discharge.*

According to this study, new mothers who had normal vaginal deliveries and remained in the hospital 24 hours or less were no more likely to discontinue breastfeeding than other mothers if they received outpatient breastfeeding support and one or more home visits from a nurse specialist. The researchers studied medical record data from a large HMO in eastern Massachusetts on more than 20,000 mother-infant pairs with normal vaginal deliveries between October 1990 and March 1998. Madden, Soumerai, Lieu, et al., *Pediatrics* 111(3):519-524, 2003 (AHRQ grant T32 HS00086).

- *First trimester ultrasound is a cost-effective means to identify fetuses with a high risk of Down syndrome.*

According to this study, first trimester ultrasound screening for nuchal translucency (swelling at the back of the neck) either alone or in combination with maternal serum markers, can identify more Down syndrome fetuses and is more cost effective than the currently used second trimester screening. Caughey, Kuppermann, Norton, and Washington, *Am J Obstet Gynecol* 187:1239-1245, 2002.

- *Prenatal iron deficiency leads to mental and psychomotor deficiencies in infants.*

This study correlated the iron status of 278 fetuses, assessed by cord serum ferritin concentrations, with test scores of mental and psychomotor development of the same children at 5 years of age. The children in the lowest cord ferritin quartile had the lowest scores on tests of intelligence, language ability, fine-and gross-motor skills, attention, and tractability. Tamura, Goldenberg, Hou, et al., *J Pediatr* 140:165-170, 2002 (Low Birthweight PORT contract 290-92-0055).

- *Type of delivery affects bleeding problems in neonates.*

Researchers prospectively studied the incidence of neonatal thrombocytopenia (NT) and intraventricular hemorrhage (IVH) and the delivery method of 1,283 low birthweight infants. Vaginal delivery independently increased the risk of IVH and substantially increased the risk of severe NT during an infant's first day in the neonatal intensive care unit. Kahn, Richardson, and Billett, *Am J Obstet Gynecol* 186:109-116, 2002 (AHRQ grant HS07015).

- *Some obstetricians do not follow their preferences for preventing neonatal infection.*

American College of Obstetricians and Gynecologists (ACOG) fellows in New Jersey completed surveys on physician characteristics, group B streptococcus (GBS) guideline preferences, and actual GBS prevention practices. Whereas 75 percent preferred GBS guidelines from the Centers for Disease Control and Prevention, 13 percent preferred ACOG guidelines, and 9 percent preferred American Academy of Pediatrics guidelines; the proportions of obstetricians who adhered to their stated preferences were 58, 64, and 39 percent, respectively. Petrova, Smulian, and Ananth, *Am J Obstet Gynecol* 187:709-714, 2002 (AHRQ grant HS09788).

- *New cost-effective test detects maternal GBS infection during labor.*

Researchers examined the health benefits, costs, and savings associated with three strategies for identifying and treating a hypothetical group of pregnant women at risk of passing group B streptococcus (GBS) infection on to their infants. The cost-benefit analysis showed that using the rapid and accurate polymerase chain reaction (PCR) test to detect maternal GBS infection during labor is more cost effective than two current screening strategies (maternal rectovaginal culture at 35 to 37 weeks of pregnancy and screening for risk factors at the time of labor). Haberland, Benitz, Sanders, et al., *Pediatrics* 110(3):471-480, 2002 (NRSA training grant T32 HS00028).

- *AHRQ releases a report on managing prolonged pregnancy.*

Researchers at Duke University conducted a systematic review of the relevant literature on the management of prolonged pregnancy. This report provides health plans, providers, purchasers, and the health care system with comprehensive, science-based information. The full evidence report, *Management of Prolonged Pregnancy*, Evidence Report/Technology Assessment No. 53 (AHRQ Publication No. 01-E018)* and summary (AHRQ Publication No. 01-E012),* are available from AHRQ (contract 290-97-0014).

- *Study urges discontinuation of low birthweight index.*

This study demonstrates that there is a bias in the Adequacy of Prenatal Care Utilization (APNCU) index. The index was used to study 54 million births and demonstrated increasing trends toward the use of more prenatal resources accompanied by worsening trends in birth outcomes. The authors call for further study of the association between low birthweight and prenatal care use. Koroukian and Rimm, *J Clin Epidemiol* 55:296-305, 2002 (NRSA training grant T32 HS00059).

- *Preeclampsia risk increases with assisted conception.*

This study examined 525 multiple gestations to compare the risk of preeclampsia among women who conceived as a result of assisted conception and women who conceived spontaneously. The former group experienced nearly three times the relative risk of mild preeclampsia and nearly five times the risk of severe preeclampsia compared with women who conceived spontaneously. After adjusting for age and number of pregnancies, women in the former group were twice as likely to develop preeclampsia. Lynch, McDuffie, Murphy, et al., *Obstet Gynecol* 99(3):445-451, 2002 (AHRQ HS10700).

- *Preserving women's health is the best prenatal care target.*

Participants at a 1997 conference on the effects of prenatal care concluded that treating bacterial vaginosis with antibiotics during pregnancy, reducing maternal tobacco use, supplementing deficient maternal iron stores, and reducing maternal stress offer some promise in reducing premature births. However, providing routine prenatal care, enhanced nutrition, drugs to inhibit labor, and home uterine monitoring to identify early labor have not been shown to reduce the incidence of low birthweight infants. McCormick and Siegel, *Ambulatory Pediatr* 1(6):321-325, 2001 (AHRQ grant HS09528).

- *Many with unplanned pregnancies did not use contraception.*

In a study of 279 women (most of whom were unmarried and black) enrolled in a Medicaid managed care health plan, 78 percent said that their most recent or current pregnancy had been unintended. Of these women, more than 57 percent said they had not used any birth control in the month before conception, 5 percent had used birth control of high effectiveness, and 19 percent had used birth control of medium effectiveness. Petersen, Gazmararian, Clark, et al., *Women's Health Issues* 11(5):427-435, 2001 (NRSA training grant T32 HS00032).

- *Black women living in the Northeast have the highest rates of abruptio placentae.*

Researchers derived age-adjusted rates of abruptio placentae (premature separation of the placenta) for combinations of regions of birth and regions of residence of all live singleton births among black women in the United States during 1995-1996. The region and rates among women who had not migrated from the South included the following: Northeast (8.3 per 1,000), Midwest (6.3 per 1,000), South (6.0 per 1,000), and West (4.9 per 1,000). Faiz, Demissie, Ananth, et al., *Ethn Health* 6(3):247-253, 2001 (AHRQ grant HS09788).

- *First-time moms with unassisted deliveries fare best.*

Data from a 7-week postpartum survey of women giving birth for the first time to a single infant were analyzed. Results show that women who were assisted with vaginal deliveries reported substantially worse sexual, bowel, and urinary functioning than women with spontaneous vaginal deliveries. Lydon-Rochelle, Holt, and Martin, *Paediatr Perinat Epidemiol* 15:232-240, 2001 (NRSA training grant T32 HS00034).

- *Chronic hypertension associated with an 11-fold increase in risk of preeclampsia during pregnancy.*

The researchers used hospital discharge records for 1988-1996 involving 38,402 black and 144,285 white pregnant women who gave birth in the hospital. Irrespective of race, the risk of preeclampsia was greater among younger women (aged 15 to 19) than older women (aged 20-39) and among single women compared with married women. Diabetes and urinary tract infection increased the risk of preeclampsia. Both black and white women with chronic hypertension had an 11-fold higher risk of developing preeclampsia during pregnancy. Samadi, Mayberry, and Reed, *Ethnicity Dis* 11:192-200, 2001 (AHRQ grant HS07400).

- *Maternal fever during labor is strongly associated with infection-related neonatal and infant death.*

Maternal fever during labor usually signals inflammation of the fetal membranes due to infection. In this study of birth records for more than 11 million single live births between 1995 and 1997, intrapartum fever tripled the risk of early neonatal death and doubled the risk of infant death for term infants. It was associated with meconium aspiration syndrome, hyaline membrane disease, neonatal seizures, and newborn need for assisted ventilation among both term and preterm infants. Petrova, Demissie, Rhoads, et al., *Obstet Gynecol* 98:20-27, 2001 (AHRQ grant HS07400).

- *AHRQ evidence report presents a systematic review of the evidence on vaginal birth after cesarean.*

In this report, researchers at AHRQ's Evidence-based Practice Center at Oregon Health & Science University discuss the results of their systematic review of the scientific literature on the risks and benefits of vaginal birth after cesarean (VBAC) and repeat cesarean. Examples of covered topics include frequency of VBAC; relative harms, such as maternal death, infection, transfusion, and hysterectomy; uterine rupture; quality of life after delivery; patient satisfaction; determinants of route of delivery; patient decisionmaking; and nonclinical factors affecting delivery options. Copies of *Vaginal Birth After Cesarean*, Evidence Report/Technology Assessment No. 71 (AHRQ Publication No. 03-E018, full report) and summary (AHRQ Publication No. 03-E017) are available from AHRQ* (contract 290-97-0018).

- *Risk of uterine rupture during labor is higher for women with a prior cesarean delivery.*

Researchers analyzed the records of more than 20,000 women who had their first child delivered by c-section and delivered a second child either by cesarean or following labor. Results show that 91 women who underwent a trial of labor followed by vaginal delivery had a uterine rupture during the second birth. When compared with women who had repeat c-sections without labor, uterine rupture was 15 times more likely with prostaglandin induction of labor and 5 times more likely when labor was induced without prostaglandin. Lydon-Rochelle, Holt, Easterling, et al., *N Engl J Med* 345(1):3-8, 2001 (NRSA training grant T32 HS00034).

- *Expanded Medicaid programs decreased the rate of repeat cesareans during the 1990s.*

As more Ohio women became enrolled in Medicaid managed care versus fee-for-service programs from 1992 to 1997, the overall rate of repeat c-sections declined, say researchers at Case Western Reserve University. Based on an analysis of Ohio birth records and Medicaid files, study findings also show that the rate of first-time c-sections remained about the same for both groups. Koroukian, Bush, Rimm, *J Managed Care* 7:134-142, 2001 (NRSA training grant T32 HS00059).

- *Pregnancy-related maternal deaths are more common following cesarean than vaginal birth.*

University of Washington researchers explored the association between method of delivery and maternal death and found that women who had c-sections were four times as likely to die a pregnancy-related death as women who had vaginal deliveries. However, the researchers note that cesarean delivery may be a marker for serious preexisting maternal problems and not necessarily a risk factor for death. Lydon-Rochelle, Holt, Easterling, et al., *Obstet Gynecol* 97(2):169-174, 2001 (NRSA training grant T32 HS00034).

- *Augmented prenatal care does not reduce low birthweight in poor black women.*

Researchers at the University of Alabama at Birmingham assigned 318 Medicaid-eligible pregnant black women to augmented prenatal care and 301 similar women to usual care. Augmented care included education-oriented peer groups, extra appointments, extended time with clinicians, other supports, and risk-reduction programs. Augmented care improved knowledge about pregnancy risk, social support, care satisfaction, and a sense of control; however, it did not reduce the likelihood of low birthweight. Klerman, Ramey, Goldenberg, et al., *Am J Public Health*, 91:105-111, 2001 (Low Birthweight PORT contract 290-92-0055).

- *Poor birth outcomes among homeless women are more likely for women of color.*

Interviews of 237 homeless women aged 15 through 44 years who had given birth within the previous 3 years revealed the following: almost 17 percent had low birthweight (LBW) babies, and 19 percent had preterm births, compared with the national average of 6 percent and 10 percent, respectively. About 22 percent of black and 16 percent of Hispanic women had LBW babies compared with 5.4 percent of white women. Also, 21 percent of black and 14 percent of Hispanic women had preterm births compared with 7.8 percent of white women. Stein, Lu, and Gelberg, *Health Psychol* 19(6):524-534, 2000 (AHRQ grant HS08323).

- *Death of a mother or sister during pregnancy shortens pregnancies among poor black women.*

This researcher interviewed 472 black women from 3 public prenatal clinics (regarding stressful life events, availability of emotional support, and health habits) and collected pregnancy and birth data from a clinical database. Women who lost a mother or sister during pregnancy delivered their babies on average 4.6 weeks earlier than other women in the study. Women who experienced the death of other family members or close friends did not have shorter pregnancies. Barbosa, *J Perinatol* 20:438-442, 2000 (AHRQ grant HS06930).

- *Cesarean or assisted delivery increases the risk for rehospitalization.*

Women who had uncomplicated spontaneous vaginal deliveries were compared with women who underwent c-section or assisted delivery (forceps or vacuum extraction) in a Washington State hospital for the birth of their first child. The latter were more likely than women who had spontaneous vaginal deliveries to be readmitted to the hospital, particularly for infections, within 2 months of delivery. Lydon-Rochelle, Holt, Martin, et al., *JAMA* 283(18):2411-2416, 2000 (NRSA training grant T32 HS00034).

- *Lack of insurance is not the only barrier to timely prenatal care for low-income women.*

In addition to lack of insurance, this study identified other barriers to timely prenatal care for low-income women, including unwanted or unplanned pregnancy, no regular provider before pregnancy, and less than a high school education. The study involved more than 3,000 low-income women in California who were covered either by private insurance or Medi-Cal throughout their pregnancies. Braveman, Marchi, Egerter, et al., *Obstet Gynecol* 95:874-880, 2000 (AHRQ grant HS07910).

- *Waiting longer between pregnancies decreases the risk of premature birth.*

Women who have interpregnancy intervals from 18 to 59 months have the lowest risk of delivering premature infants, according to this analysis of data on nearly 290,000 single infants born in early 1991 to Mexican-American and non-Hispanic white women who lived in the same county. Fuentes-Afflick and Hessol, *Obstet Gynecol* 95(3):383-390, 2000 (AHRQ grant HS07373).

- *Evidence suggests the need for caution in treating hypertension in pregnant women.*

This review of the scientific evidence on management of chronic hypertension during pregnancy focuses on 10 specific questions faced by clinicians who provide care for pregnant women with mild to moderate hypertension. Copies of the report summary (AHRQ Publication No. 00-E010) and full report, *Management of Chronic Hypertension During Pregnancy* (AHRQ Publication No. 00-E011) are available from AHRQ* (contract 290-97-0012).

- *Thousands of c-sections a year are performed too early.*

This study of 733 women who delivered full-term, nonbreech infants by unplanned c-section found that nearly one-fourth of those done for failure to progress were done too early in labor according to recommendations by the American College of Obstetricians and Gynecologists. Gifford, Morton, Fiske, et al., *Obstet Gynecol* 95:589-595, 2000 (Management and Outcomes of Childbirth PORT, contract 290-90-0039).

- *Zinc blood levels during pregnancy do not affect outcomes.*

This large study of the impact of zinc deficiency during pregnancy found no relationship between blood zinc levels and pregnancy outcomes. The researchers measured zinc concentrations in plasma samples at a mean of 16 weeks gestation in nearly 3,500 women attending a public health clinic for prenatal care. Tamura, Goldenberg, Johnston, et al., *Am J Clin Nutr* 71:109-113, 2000 (Low Birthweight PORT contract 290-93-0055).

- *Substantial health and economic benefits accrue when pregnant women stop smoking.*

Excess direct medical costs for each pregnant smoker in 1995 were $511 per live birth, and the total cost was $263 million. According to this study, reducing smoking prevalence among pregnant women by just 1 percentage point would prevent low birthweight in 1,300 live births and save $21 million in direct medical costs in the first year. Lightwood, Phibbs, and Glantz, *Pediatr* 104:1312-1320, 1999 (Low Birthweight PORT contract 290- 92-0055).

- *Vaginal delivery after prior cesarean appears relatively safe.*

The risk of uterine rupture is low enough (.5 percent) that vaginal birth after cesarean is a relatively safe procedure. The researchers used California hospital discharge data for more than 500,000 women delivering babies in the State in 1995 and found that the overall cesarean rate was 21 percent; 12.5 percent of the women had a history of one or more c-sections. The uterine rupture rate was .07 percent for all deliveries and .43 percent for women who attempted vaginal birth after a previous c-section. Gregory, Korst, Cane, et al., *Obstet Gynecol* 94:985-989, 1999 (Childbirth PORT contract 290-90-0039).

- *Two tests reduce the need for coagulation testing of hypertensive pregnant women.*

Doctors often use several blood coagulation tests to diagnose preeclampsia in pregnant women with hypertension. However, a blood platelet count plus a lactate dehydrogenase test can predict coagulation abnormalities in pregnant women with hypertension, according to researchers. Barron, Heckerling, Hibbard, et al., *Obstet Gynecol* 94(3):364-370, 1999 (AHRQ grant HS08131).

- *Cocaine and tobacco use increases the risk of miscarriage.*

Investigators examined the association between cocaine and tobacco use and miscarriage in a group of 970 predominantly poor and black pregnant adolescents and women. Among those who had miscarriages, 29 percent used cocaine and 35 percent smoked. Of those who did not have miscarriages, 21 percent used cocaine and 22 percent smoked. Ness, Grisso, Hirschinger, et al., *N Engl J Med* 340(5):333-339, 1999 (AHRQ grant HS08358).

- *Women's preferences should guide decisions about prenatal testing.*

The original reasons for age- or risk-related cutpoints for prenatal diagnosis are no longer relevant, according to these authors. They discuss the rationale for the traditional thresholds and recommend replacing them with the preferences of well-informed women. Kuppermann, Goldberg, Nease, et al., *Am J Public Health* 89(2):160-163, 1999 (AHRQ grant HS07373).

- *Intervention leads to increase in use of corticosteroids in women at high risk for preterm birth.*

Researchers found a 33 percent increase in use of corticosteroids in women at high risk for delivery of a preterm baby following a five-step intervention with physicians: endorsement by local medical opinion leaders, lectures on the topic, reminders in medical charts, regular discussions with doctors on preterm scenarios, and ongoing feedback on their use of corticosteroids. Leviton, Goldenberg, Baker, et al., *JAMA* 281(1):46-52, 1999 (Low Birthweight PORT contract 290-92-0055).

Hormone Replacement Therapy

Research indicates the median age of menopause in American women is 51 years, with a range of 41 to 59. Studies also document the decline in ovarian production of estrogen and progestin (before the complete cessation of menses) and the associated symptoms and illnesses some women experience. To address the concerns of women during the perimenopausal and postmenopausal period, AHRQ researchers continue to identify risks and benefits of hormone replacement therapy (HRT) and report findings related to its use.

Research in Progress

- *Evaluating the Menopause Interactive Decision Aid System.*

This 3-year, two-phase study is transforming a prototype Web-based decision aid into a comprehensive Menopause Interactive Decision Aid System (MIDAS) that provides personalized feedback about menopausal symptoms, risks for common conditions, and the effects of treatment options. Researchers also will evaluate the impact of MIDAS in a randomized, controlled, multicenter clinical trial. Nananda F. Col, Principal Investigator (AHRQ grant HS13329).

Recent Findings

- *HRT may increase the risk of heart disease.*

Researchers conducted two systematic reviews of the evidence on postmenopausal use of HRT. The reviews were prepared for the U.S. Preventive Services Task Force. They show that harms could exceed benefits for women taking HRT for 5 years or longer to prevent chronic conditions. Harms include an increased risk of blood clots and stroke, an increase in breast cancer with 5 or more years of use, and a probable increase in gallbladder disease. Humphrey, Chan, and Sox, *Ann Intern Med* 137(4):273-284, 2002; Nelson, Humphrey, Nygren, et al., *JAMA* 288(7):872-881, 2002 (contract 290-97-0018).

- *Women using estrogen are at risk for thromboembolism.*

Authors identified three randomized controlled trials, eight case-control studies, and one cohort study to assess the risk of venous thromboembolism in women using estrogen replacement therapy. Postmenopausal estrogen replacement is associated with an increased risk for venous thromboembolism. Miller, Chan, and Nelson, *Ann Intern Med* 136(9):680-690, 2002 (U.S. Preventive Services Task Force).

- *Estrogen therapy does not improve cognitive performance.*

Researchers analyzed data on a community-based sample of 885 postmenopausal women aged 60 to 89 who had undergone a hysterectomy. Among those not using estrogen, there were no significant differences on mean cognitive function scores. Among those using estrogen, women with a hysterectomy and bilateral oophorectomy performed less well on two tests of cognitive function. Kritz-Silverstein and Barrett-Connor, *J Am Geriatr Soc* 50:55-61, 2002 (AHRQ HS06726).

- *HRT does not appear to increase the risk of breast cancer recurrence.*

This systematic review of the published literature found 11 eligible studies conducted through May 1999, of which 4 studies had non-HRT control groups and included 214 breast-cancer survivors who began HRT after an average disease-free interval of 52 months. Over a 30-month followup, 4.2 percent of HRT users per year experienced a recurrence of breast cancer, compared with 5.4 percent of nonusers. Col, Hirota, Orr, et al., *J Clin Oncol* 19:2357-2363, 2001 (AHRQ grant HS09796).

- *HRT may have some effects on cognitive function in symptomatic menopausal women.*

According to this review of 17 studies, HRT may have some positive effects on verbal memory, vigilance, reasoning, and motor speed in women with menopausal symptoms. The evidence also shows, however, that in asymptomatic women HRT has no consistent effects on the results of formal tests of cognitive function. LeBlanc, Janowsky, Chan, et al., *JAMA* 285(11):1489-1499, 2001 (contract 290-97-0018).

- *White women are more likely than minority women to receive HRT.*

This study involved nearly 9,000 women, aged 50 and older, who were outpatients at the University of California, San Francisco Medical Center, and were prescribed HRT. White women were significantly more likely to be given HRT (33 percent) than Asians (21 percent), blacks (25 percent), Hispanics (23 percent), or Soviet immigrants (6.6 percent). Brown, Perez-Stable, Whitaker, et al., *J Gen Int Med* 14:663-669, 1999 (AHRQ grant HS07373).

- *Use of HRT is linked to sociodemographic factors.*

Patterns of HRT use were examined in a national sample of postmenopausal women during 1995. Results show that a woman's educational level, age, and location play a larger role than clinical factors in women's decisions about HRT use. Keating, Cleary, Rossi, et al., *Ann Intern Med* 130:545-553, 1999 (NRSA training grant T32 HS00020).

Other Research

Recent Findings

- *Women are more likely than men to experience long-term posttraumatic stress disorder after major trauma.*

Regardless of the type or severity of traumatic injury, women are more than twice as likely as men to suffer from PTSD, according to a study involving 1,048 adult trauma patients triaged at four trama center hospitals between 1993 and 1996. Patients were evaluated at discharge and at 6, 12, and 18 months postdischarge. Holbrook, Hoyt, Stein, and Sieber, *J Trauma* 53:882-888, 2002 (AHRQ grant HS07611).

- *How posttraumatic stress affects women's health is unclear.*

The literature on PTSD, hostility, and health was examined to determine possible mechanisms underlying the relationship between PTSD and hostility on health outcomes. Results show hostility is a risk factor for hypertension, coronary heart disease, and heart attack; and PTSD is associated with increased health problems including arthritis, bronchitis, migraines, and gynecological complaints. However, the mechanisms responsible are unclear. Beckham, Calhoun, Glenn, et al., *Ann Behav Med* 24(3):219-228, 2002 (NRSA training grant T32 HS00079).

- *Women suffer more than men before and after hip replacement surgery.*

This study examined differences in functional status and pain at the time of total hip arthroplasty (THA) and 1 year later in a group of 432 male and 688 female Medicare beneficiaries. Results show that the women were in worse shape than the men when they elected THA. After 1 year, women walked shorter distances and were more likely than men to report needing help with walking (30 vs. 21 percent); housework (29 vs. 23 percent); and grocery shopping (27 vs 19 percent). Holtzman, Saleh, and Kane, *Med Care* 40(6):461-470, 2002 (AHRQ grant HS09735).

- *A low sense of control causes depression and anxiety.*

Researchers analyzed data on demographics, work characteristics, and physical and mental health of British civil servants. Women with low control at home had more than twice the risk for depression of women with high control. Also, women in the lowest employment grade with low control at home had significantly higher risk for depression than men across all grades and women in higher grades. Women in the lowest grade had a higher risk for anxiety than women in higher grades. Griffin, Fuhrer, Stansfeld, et al., *Soc Sci Med* 52:783-798, 2002 (AHRQ HS06516).

- *Women are more likely than men to be diagnosed as depressed.*

Doctors examined the absence or presence of a depression diagnosis among 508 patients seeking care from a university medical center as well as sociodemographic characteristics, self-reported depressive symptoms, and general health status obtained through interviews. Women expressed more symptoms of depression (6.4 vs. 4.3 percent), had a higher mean number of primary care clinical visits (4.0 vs. 3.1 percent), and were significantly more likely to be diagnosed as depressed (19 vs. 9 percent) than men. Bertakis, Helms, Callahan, et al., *J Womens Health Gender-Based Med* 10(7):689-698, 2001 (AHRQ grants HS06167 and HS08029).

- *Women are less likely than white men to be recommended for kidney transplants.*

A national random survey of 271 U.S. nephrologists was used to gauge their criteria for transplant recommendations

for people with end-stage renal disease. All clinical factors being equal, results show that white men were almost 2.5 times as likely as white women to be recommended for kidney transplants. White women were equally as likely as black women and Asian men were half as likely as white men to be recommended for transplantation. Thamer, Hwang, Fink, et al., *Transplantation* 71(2):281-288, 2001 (AHRQ grant HS08365).

Complementary/Alternative Medicine

Alternative medicine is growing in popularity, but the scientific foundation to support studies of alternative and complementary medicine therapies is inadequate. AHRQ has been supporting research on complementary and alternative medicine for about 10 years. Early studies in this area have focused on the effectiveness and cost-effectiveness of alternative therapies, including chiropractic care, acupuncture, and manual therapy for treatment of low back pain, as well as satisfaction among patients receiving alternative treatments compared with those receiving conventional treatment.

Currently, AHRQ is collecting information through MEPS on use of alternative medicine. In addition, the Agency is providing support for a national alternative medicine ambulatory care survey, which is being conducted by the Group Health Cooperative of Puget Sound. The survey includes acupuncturists, chiropractors, massage therapists, and naturopaths. Through AHRQ's evidence-based practice initiative, garlic and silybum marianum have been evaluated for use in the treatment of certain diseases and conditions. In the future, AHRQ will collaborate with the Center for Complementary and Alternative Medicine at the National Institutes of Health to study additional topics.

More Information

For more information on AHRQ initiatives related to women's health, please contact:

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