

AHRQ
*P*rogram *N*ote **6**

Agency for
Healthcare Research
and Quality

January 2003

**Compendium of
AHRQ Research
Related to Mental
Health**



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Agency for Healthcare Research and Quality

AHRQ *Program Note* 6

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Compendium of AHRQ Research Related to Mental Health

U.S. Department of Health and Human Services
Public Health Service
Agency for Healthcare Research and Quality
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Introduction

During the course of a year, about one in five American adults (or 20 percent) has a mental disorder, according to current epidemiological estimates.¹ The direct costs of mental health services in 1996 were \$69.0 billion, with an additional \$17.7 billion spent on Alzheimer's disease and \$12.6 billion on substance abuse treatment.² The indirect costs of mental disorders in the United States in 1990 were estimated at \$78.6 billion.³ The World Health Organization, in the landmark Global Burden of Disease Study, found that mental illness is the second leading cause of disability and premature mortality and that mental disorders collectively account for more than 15 percent of the overall burden of disease from all causes.⁴ Because of these startling statistics, there has been a greater focus on mental health issues, starting with the White House Conference on Mental Health in 1999 and the first U.S. Department of Health and Human Services Secretarial Initiative on Mental Health. In late 1999, the first ever Mental Health: A Report of the Surgeon General was published.²

Besides a renewed focus, the last decade has witnessed a great deal of change in the field of mental health. Managed care and other changes in the health delivery system have led to a shift away from specialty care for mental health and toward treatment by primary care providers. Pharmaceuticals have provided a whole new range of treatments that can work very effectively, especially when combined with psychosocial interventions. Last but not least, consumers and families have emerged as powerful and knowledgeable participants in the process of care.

The Agency for Healthcare Research and Quality (AHRQ) conducts an array of health services research that provides evidence-based information on health care outcomes; quality; and cost, utilization, and access. AHRQ's research provides this information to help clinicians, policymakers, and patients make more informed decisions and improve the quality and outcome of health care services.

AHRQ has a broad portfolio of mental health research and other related activities, ranging from intramural studies to grants, contracts, and

workshops. Some of the research has focused expressly on mental health, while other endeavors, such as conferences and training symposia, are more general in scope but have a strong mental health component. For example, a symposium on making health services research more accessible to people and groups outside the research community focused on substance abuse and other aspects of mental health. Additionally, many of AHRQ's studies on other diseases use a mental disorder as a measure for determining the effectiveness of a specific treatment or intervention. For example, a study on arthritis might include depression as a measure of a patient's health status. Because so many of these studies exist, they are not included here, even though they may reveal depression-related findings.

This compendium provides an overview of the research and activities that AHRQ has conducted and funded. It was organized so it can be useful to people approaching AHRQ research from different perspectives.

- The research is first divided into broad sections such as extramural research grants/contracts, intramural research, and meetings sponsored by AHRQ's User Liaison Program.
- The broader sections are categorized into subject-matter areas. Extramural research is categorized by type of disorder or problem (such as depression or violence) or by a cross-cutting topic (such as pharmaceuticals or quality). Intramural research is categorized by such health services research topics as access, cost, and utilization.
- Many of the entries give the information you need in order to access the research, such as the AHRQ publication number or information you can use to locate journal articles.
- Brief descriptions of findings are included if available. It was not feasible to include all the findings from some studies, such as the Depression Patient Outcomes Research Team (PORT), which has generated many publications to date. In addition, many of the projects will continue to release new

findings after the publication of this compendium.

- An index at the end of this report gives additional topics by which the research could be classified. For instance, you can search by type of disorder (e.g., Alzheimer's disease); by population group (e.g., minorities, the elderly); by health services research topic (e.g., utilization); or by other topics such as "pharmaceuticals" or "institutional care." This type of cross-reference should enable you to find the research you want no matter what perspective you are coming from.
- Another index categorizes the research in terms of principal investigators.

AHRQ has a history of name changes. It began as the National Center for Health Services Research. In 1989, it became the Agency for Health Care Policy and Research; in 1999, it was reauthorized as the Agency for Healthcare Research and Quality. With each name change, research foci have changed somewhat but the tradition of health services research has remained the same. In general, this compendium covers research conducted from 1989, when the Agency was created, to the present.

The research results may be available in print as articles, conference proceedings, or AHRQ reports. They may be available on the Web or be available as audio tapes. They may be released as the result of projects undertaken in cooperation with other organizations, such as the U.S. Preventive Services Task Force. AHRQ publications and other products (anything with an AHRQ or AHCPR number given) are available through the AHRQ Publications Clearinghouse, usually for free. You can e-mail the AHRQ Clearinghouse at

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Recent AHRQ publications, as well as information on AHRQ and its programs, are available on the Web site—

www.ahrq.gov

References

¹Regier DA, Narrow WE, Rae DS, et al. The de facto US mental and addictive disorders service system. Epidemiologic Catchment Area prospective 1-year prevalence rates of disorders and services. *Arch Gen Psychiatry* 1993 Feb;50(2):85-94.

²U.S. Department of Health and Human Services. *Mental health: a report of the Surgeon General*. Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health; 1999.

³Rice DP, Miller LS. The economic burden of schizophrenia: conceptual and methodological issues and cost estimates. In: Moscarelli M, Rupp A, Sartorius N, editors. *Handbook of mental health economics and health policy*. Vol. 1: Schizophrenia. New York: John Wiley and Sons; 1996. p. 321-24.

⁴Murray CJL, Lopez AD, editors. *The global burden of disease. A comprehensive assessment of mortality and disability from diseases, injuries, and risk factors in 1990 and projected to 2020*. Cambridge, MA: Harvard School of Public Health; 1996.

Extramural Research

The AHRQ-sponsored research in this section is generally organized by type of disorder. If you would prefer to approach it from the perspective of areas of health services research, consult the index. The index serves as a cross-classification of all of the mental health research in this compendium. You can also consult the index of principal investigators.

Some of the projects included in this section, such as symposia or training grants, do not have an apparent mental health focus but yielded significant findings in the area of mental health.

Each grant entry shows the principal investigator (PI), an overview of the grant, and any findings that are available. If a printed report or other product of the grant is available, it is listed along with the information you need to locate it.

Addiction/Substance Abuse

PI: Peter P. Budetti, MD, JD, Northwestern University

Grant No.: T32 HS00078

Grant Period: 7/1/98-6/30/03

Title: Predoctoral and Postdoctoral Training Program

This is an interdisciplinary predoctoral and postdoctoral health services research training program under the auspices of the Institute for Health Services Research and Policy Studies at Northwestern University, Evanston and Chicago, Illinois. The predoctoral training program provides interdisciplinary training, although students are matriculated in discipline-specific departments (e.g., clinical psychology, economics, sociology, organizational behavior, management). Generally, students receive AHRQ support for 2 years. The postdoctoral training program focuses on the research development of both clinical and research doctorates. Participants are required to take six courses in research methods and health policy, plus two electives. This AHRQ/National Research Service Award fellowship program is

integrated with parallel fellowship programs, one of which is supported by the National Institute on Disability and Rehabilitation Research and another of which focuses on mental health services and policy.

Findings: Young people who are in residential treatment for serious emotional or behavioral problems are among the most needy in the child welfare system. Those who also abuse drugs or alcohol are more likely than the others to escape from the residence, commit suicide, or be placed in an institution such as a hospital or detention center. Young people entering residential treatment programs should be screened for type and severity of substance use problems, and services should be individualized to ensure close supervision and monitoring of their high-risk behaviors. This specialized approach could facilitate their discharge into foster homes or as adopted children rather than moving them to another institution. These researchers retrospectively analyzed medical chart data on 564 children and adolescents in residential treatment and State custody in Florida and Illinois who had serious emotional or behavioral disturbances. They evaluated differences in clinical characteristics and compared placement outcomes between young people with and without coexisting substance use disorders. Overall, 26 percent of boys and 37 percent of girls had substance use problems in addition to serious emotional or behavioral disturbances. Youngsters with dual diagnoses were significantly more likely than those with only one diagnosis to be at risk for suicide (57 vs. 35 percent of girls, 45 vs. 32 percent of boys), elopement (77 vs. 41 percent of girls, 67 vs. 35 percent of boys), and crime or delinquency (63 vs. 31 percent of girls, 82 vs. 42 percent of boys). Among girls, those with substance use problems were more likely than those without these problems to be discharged to institutions (56 vs. 15 percent), and fewer girls with substance use problems were placed in the community (44 vs. 85 percent). There were no differences in placement between boys with and without substance use problems.

PI: Margaret A. Compton, MS, New York University (Dissertation Grant)

Grant No.: R03 HS06964

Grant Period: 8/1/91-12/31/92

Title: Perception, Drug Preference, and Pain in Drug Users

The objective of this study was to develop a better understanding of substance abusers' experience of pain so that nurses can better assess and manage these patients' discomfort. The specific aim of the study was to learn if patients' pain experience is related to their perceptual style, which is also expected to be manifest in their preferred drug of use. The survey sampled 60 substance abusers in treatment and 60 recovering substance abusers.

Findings: Decreased pain tolerance was found in current drug users. Drug type makes a significant difference in level of tolerance, with opioid abusers having less tolerance than cocaine abusers.

PI: Lillian Gelberg, MD, MSPH, University of California, Los Angeles

Grant No.: R01 HS06696

Grant Period: 7/1/91-6/30/95

Title: Physical Health and Medical Care in a Homeless Cohort

The goal of this study was to assess the influences on the normal course of status of physical health, health care utilization, and compliance with recommendations for treatment in a population of homeless adults. Factors influencing utilization of medical treatment, and therefore of particular emphasis in the research, included mental illness and substance abuse.

Findings: Most of the homeless adults living in Los Angeles suffer from mental illness, alcoholism, or drug addiction. These homeless individuals can be motivated to seek medical care for conditions they consider serious, despite mental illness or substance abuse problems. The researchers pointed out that residential history, mental health, substance abuse, history of victimization, and competing needs affect the use of health services and clinical outcomes. The researchers believe that social isolation may be a more important barrier to access to care than chronic psychiatric problems or substance use among the homeless. The study also suggests that multiservice health-related programs, including drug and alcohol treatment, be made available to the homeless for greater convenience in access to care.

PI: Julia Hidalgo, ScD, Maryland State Department of Health and Mental Hygiene

Grant No.: R03 HS06185

Grant Period: 1/1/89-12/31/89

Title: Cost of Treatment of Intravenous Drug Users with AIDS

In this study, the investigator profiled social-demographic and clinical characteristics of intravenous drug users (IVDUs) with AIDS, focusing on variations in the use of health, addiction, and mental health services and the fiscal impact on hospitals, Medicaid, and other public programs of treatment for IVDUs with AIDS. The researchers utilized the Maryland Human Immunodeficiency Virus Information System (HIVIS), a database that includes statewide pharmacy records, clinical trials information, health insurance claims data, AIDS Registry information, and data from death certificates and health care records. They also analyzed payment records from the Michigan Medicaid program, generated from 1985 to 1989 by 783 persons, to determine Medicaid payments for services related to HIV.

Findings: The survival time of patients with AIDS who were treated with the drug zidovudine (AZT) has more than doubled. The median survival climbed to 450 days, compared with 310 days among those diagnosed between 1987 and 1989. AIDS patients diagnosed between 1987 and 1989 who received AZT had a mean survival rate of 770 days, while those diagnosed within the same time period who did not receive the drug had a mean survival rate of 190 days. Of the AIDS patients diagnosed during or after April 1987, a 2-year survival time was more frequent among homosexual men, persons younger than 45 years of age, non-Hispanic whites, and AIDS patients presenting with Kaposi's sarcoma or *Pneumocystis carinii* pneumonia as opposed to other opportunistic infections. According to Michigan Medicaid program data, the average monthly Medicaid payment in 1989 dollars for HIV services was \$1,302.57. Services unrelated to HIV infection accounted for 12.5 percent of the total amount, and 2.5 percent was undetermined. The average monthly expenditure for men was roughly twice that for women. Payments for HIV-related treatments rose with age to about 40 years and declined slightly among older adults, with the highest payments for those 19-35 years of age.

PI: Alison M. Hughes, University of Arizona (Small Conference Grant)

Grant No.: R13 HS06991

Grant Period: 6/1/91-5/31/93

Title: Southwest Border Rural Health Research Conference

The purpose of this conference was to bring researchers and policymakers together to review research results and their policy implications, to recommend steps for action, and to identify additional research directions regarding the status of health care research along the United States-Mexico border. Substance abuse was a topic of interest at the time in border development and therefore was included in the conference.

Findings: No products or findings are available at this time.

PI: Ellen M. Hutchins, ScD, Johns Hopkins University (Dissertation Grant)

Grant No.: R03 HS08040

Grant Period: 9/30/93-9/29/94

Title: Risk Factors for Prenatal Drug Use and Treatment Success

The purpose of this research was to determine the association between seven psychosocial risk factors and the propensity for drug use during pregnancy and completion of a drug treatment program. The psychosocial risk factors are family history of alcohol and/or drug problems, history of childhood sexual abuse, presence of a male partner who introduced subject to drug use, depression, transiency, lack of social support, and frequency of alcohol/drug use by male partner. For the study on drug use during pregnancy, 237 women were recruited from a large, inner-city prenatal clinic in Detroit and were categorized as users or nonusers. The research on treatment success studied pregnant addicted women in Baltimore and categorized them as completers or noncompleters of a drug treatment program.

Findings: All variables, with the exception of a history of childhood sexual abuse, were found to be significant with regard to drug use during pregnancy. The dissertation thesis includes information on prevalence rates of psychosocial risk factors for both drug-using and non-drug-using populations, allowing comparisons to be drawn between the two groups.

PI: Jonathan Klein, MD, MPH, University of Rochester

Grant No.: R01 HS08192

Grant Period: 9/30/96-9/29/99

Title: Effective Organization of Adolescent Health Services

The goal of this project was to understand how the organization of adolescent health services affects adolescents' access to care. The research was based on the Environment-Systems-Services-Outcomes model for adolescent health service evaluation. The project set out to identify barriers and facilitators to the delivery of services to adolescents, and how factors such as confidentiality, cost, and comprehensiveness influence adolescents' access to and potential use of preventive health care and other services.

Findings: Many physicians ask their adolescent patients about their use of tobacco products, but far fewer physicians pursue the subject with these youngsters, despite guidelines that recommend specific steps that are effective in helping many adults to quit smoking. Among these are smoking prevention guidelines sponsored by the U.S. Public Health Service (PHS). Physicians reported asking 91 percent of adolescents about their smoking habits, and they discussed the health risks of tobacco with 77 percent. However, the physicians asked only 41 percent of adolescents about smoking among their friends (which increases the likelihood they will smoke), and only 32 percent were asked if they used smokeless tobacco. Doctors assessed the motivation to quit of 81 percent of smokers, but they set quit dates for only 34 percent and scheduled followup visits for only 28 percent of smokers.

Pediatricians asked more patients about peer influences than did family physicians. However, family physicians more often asked about smokeless tobacco use, assessed motivation to quit, provided smoking cessation handouts, helped set quit dates, and scheduled followup visits for smokers, perhaps because of their experience with adult smokers. Overall, doctors used more tobacco interventions when they were familiar with the PHS guidelines (family doctors were more familiar than pediatricians, at 48 percent vs. 27 percent), spent more time with adolescent patients (female doctors spent more time, at 26 vs. 21 minutes), and spent more time alone with patients (enhancing rapport and confidentiality).

PI: Barbara D. Lardy, MPH, American Association of Health Plans (Small Conference Grant)

Grant No.: R13 HS09807

Grant Period: 2/1/98-7/31/98

Title: Addressing Tobacco in Managed Care

This conference provided an opportunity for various managed care plans to meet and learn about tobacco control guidelines from AHRQ (then the Agency for Health Care Policy and Research), including the guidelines for identification and treatment of tobacco use and addiction. The conference also provided an opportunity for the managed care plans to develop implementation strategies for the guidelines and to identify significant challenges and gaps in research.

Findings: Full proceedings of the conference were published in *Tobacco Control*, Volume 7 Supplement, Winter 1998. This report is available for a fee from the National Technical Information Service, 800-553-NTIS. The NTIS accession no. is PB99-144156. The proceedings include presentations, question and answer sessions, and descriptions of various studies conducted regarding tobacco control in the managed care setting, including a few that examine the impacts of implementations of the AHRQ smoking cessation guidelines. Additional information is available at <www.aahp.org/atmc.htm>.

PI: Edward F. Lawlor, PhD, University of Chicago (Small Conference Grant)

Grant No.: R13 HS09361

Grant Period: 12/1/96-3/31/97

Title: Chicago Health Services Research Symposium

The objective of this conference was to bring together the research and policy communities to define selected issues, problems, and phenomena in the delivery of health services and to present a research agenda/strategy for study, in an effort to make health services research more accessible to health professional organizations, researchers, public officials, community groups, and others. The symposium involved 350 participants representing local, State, and regional governments; academic institutions; advocacy agencies; health institutions; and trade associations from seven States in the Midwest. Topical sessions focused on, among other issues, substance abuse and mental health.

Findings: Conference proceedings are available for a fee from the National Technical Information Service, 800-553-NTIS. The NTIS accession no. is PB98-126360.

PI: Stephen Mick, PhD, University of Michigan

Grant No.: R01 HS05998

Grant Period: 9/30/88-9/30/91

Title: Rural Hospital Management Strategies and Viability

The project examined the determinants, characteristics, and impacts of strategic management responses by rural hospitals to changes in their environment during the 1980s. Management responses over the 1983-88 period were studied, including (1) horizontal integration, particularly linkages with urban hospitals and with other rural hospitals in the service area; (2) vertical integration; (3) diversification; (4) divestment/downsizing; (5) staff recruitment; (6) marketing; and (7) efforts to increase efficiency. Environmental changes studied as possible determinants of these responses included implementation of the Medicare Prospective Payment System (PPS), changes in local demographics (e.g., population decline and/or aging), and changes in local economies (e.g., declines in employment). Impacts of the first four categories of management responses on hospitals' economic performance during 1984-87 also were examined, including impacts on costs, service volumes, and financial status.

Findings: This retrospective panel study of 797 rural U.S. hospitals shows that less than one in five (18.7 percent) had any alcohol and chemical abuse (ACA) service. These findings support other studies which show that the availability of such services may not meet population need or demand. Hospitals located in more densely populated counties with higher per capita income and more physicians per 1,000 population were positively associated with ACA services. Other hospitals positively associated with ACA services were those in the New England, Mid-Atlantic, and East North Central areas, and those with a large number of beds, psychiatric services, other nonphysician personnel, and psychiatrists. The presence of psychiatric services was a key correlate of ACA services, and the scarcity of psychiatric personnel in rural areas appears to be a major reason for the infrequency of rural hospital-sponsored ACA services.

PI: Eugene Oddone, MD, Duke University

Grant No.: T32 HS00079

Grant Period: 7/1/98-6/30/03

Title: Health Services Research Fellowship

This postdoctoral fellowship program provides opportunities for clinical and research doctorates to develop health services research skills in primary care. The objectives of the program are to provide fellows with: clinical research training, exposure to efficient ambulatory care practice settings, and the administrative skills necessary to become productive academicians in health services research. Seventy-five percent of the fellowship involves didactic training in research methodology and participating in research. Fellows take seven formal courses that cover research methodology, statistics, and clinical research. Electives are available in the areas of clinical trials, health services research, analysis of genetic data, and psychometrics and reliability. The program incorporates the philosophy that clinical research skills are learned best by carrying an independent idea through to its completion rather than assisting in the completion of an ongoing project.

Findings: Being able to accurately evaluate substance abuse in veterans suffering from post-traumatic stress disorder (PTSD) is important for assessment and treatment planning. Some suspect that veterans seeking treatment for PTSD may not be truthful about substance abuse because they fear losing entitlement to PTSD-related financial compensation, yet few veterans seeking help for PTSD lie about substance abuse. These researchers compared drug urine screening results with self-reports of drug use by 341 male veterans referred to a Veterans Affairs Medical Center PTSD specialty clinic. Through urine tests, patients were screened for use of amphetamines, barbiturates, benzodiazepines, cannabinoids, cocaine, opiates, and phencyclidine. Veterans also completed a questionnaire asking about their use of these and other drugs during the previous 6 months. Only 8 percent of veterans with drug screens denied using substances that were detected by urine screen. Self-reports and urine results were consistent in 71 percent of cases. Veterans diagnosed with PTSD who reported substance abuse were more likely to use only marijuana or depressants (79 percent) than stimulants (21 percent). Those who underreported substance use had lower socioeconomic status than accurate reporters or

overreporters (those reporting use of drugs not detected by urine testing). However, underreporters did not differ from the others by race, age, level of combat exposure, PTSD diagnosis, or other factors. If all those who refused drug testing, denied using drugs, or underreported substance use (as detected by urine drug screens) were grouped together, only 11 percent of veterans studied would have underreported substance use. Given the validity of self-reports and their many advantages (low cost, ease of administration, and noninvasiveness), they are desirable for this population, conclude the researchers.

PI: Thomas Ricketts, PhD, University of North Carolina, Chapel Hill

Contract No.: 290-03-0038

Contract Period: 9/30/94-3/29/96

Title: Drug Abuse Among Nonmetropolitan and Rural Adolescents: The Need and Availability of Services

The purpose of this task order was to provide the Federal Government with the information necessary for decisionmaking concerning substance abuse and treatment services for adolescents in nonmetropolitan and rural areas. A literature review of prior research on substance use was conducted to answer relevant questions regarding the issue. A secondary data analysis of treatment services, as well as analysis of the National Drug and Alcoholism Treatment Unit Survey, was also conducted. The researchers attempted to answer several questions regarding prevalence of substance use, patterns of substance use, factors influencing substance users, consequences of substance use, substance abuse treatment services available, barriers to access and utilization of treatment services, financing of treatment services, public/private integration of treatment services, and effectiveness of treatment services for youths.

Findings: Rates of substance abuse in urban adolescents converged with rates of substance abuse in rural adolescents, due more to a sharp decline in substance abuse by urban adolescents than to a sharp increase in substance abuse by rural adolescents. Across rural communities, there is significant variation in rates of substance abuse. No studies were found that addressed the progression from infrequent substance abuse to dependence in nonmetropolitan and rural adolescents, and none were found to indicate that the nonmetropolitan

and rural adolescent populations progress differently or face different risks than metropolitan adolescents. Very little research was found regarding nonmetropolitan and rural area treatment services for adolescents. Nonmetropolitan areas had fewer substance abuse treatment providers and less specialized treatment services than metropolitan areas. Nonmetropolitan area adolescents were more likely to receive outpatient treatment services. Nonmetropolitan area treatment providers had fewer barriers to access and use and relied more on State and Federal Government funding than metropolitan area providers.

PI: Liza Solomon, MHS, PhD, Johns Hopkins University

Grant No.: R03 HS06441

Grant Period: 2/1/90-1/31/92

Title: **Utilization and Insurance Among HIV-Positive Drug Users**

This study sought to determine the health services utilization of 1,881 HIV-positive intravenous drug users (IVDUs) in Baltimore. The researchers examined the impact of HIV serostatus, clinical symptoms, CD4 cell counts, and health insurance on utilization of health services over a 6-month period by administering self-report questionnaires about use of health services, insurance coverage, and HIV-related symptoms.

Findings: In this population, 67 percent of the participants had health insurance (including Medicaid), 48 percent had at least one outpatient visit, and 12 percent had at least one inpatient visit within the past 6 months. The presence of two or more HIV-related symptoms contributed the most to utilization of both inpatient and outpatient health care services. HIV-positive individuals presenting no symptoms were just as likely as HIV-seronegative individuals to not use services. The presence of health insurance was marginally associated with inpatient admissions. Only 42 percent of individuals meeting the criteria for zidovudine use reported actually taking the medication. Heavy injection drug use was significantly associated with delayed initiation of zidovudine use among those individuals who reported taking the medication. Despite the initial presence and continuation of high levels of health insurance in this population, HIV-positive serostatus and symptoms were linked to more months of health insurance coverage. The researchers suggest

that HIV-positive IVDUs are not getting the preventive care that they need, due to the lack of a routine health care provider, barriers associated with a lack of health insurance, and complications associated with heavy injection drug use.

PI: Sarah W. Tracy, University of Pennsylvania (Dissertation Grant)

Grant No.: R03 HS06985

Grant Period: 9/1/91-12/31/92

Title: **The Medicalization of Alcoholism in America, 1870-1919**

The purpose of this study was to examine the factors—political, social, economic, and medical—that have influenced current beliefs and policies toward alcohol abuse and problem drinkers. The researcher utilized the methods of social history, starting with the establishment of the American Association for the Cure of Inebriety in 1870 and ending with Prohibition in 1919, to document the ways in which alcoholism became established in the medical arena, how that understanding generated new health care and social policy, and the degree to which new institutions and organizations dealing with alcoholism were effective.

Findings: No findings are available at this time.

PI: A. Eugene Washington, MD, MSc, University of California, San Francisco (Cooperative Agreement)

Grant No.: U01 HS07373

Grant Period: 1/1/93-12/31/98

Title: **Medical Effectiveness Treatment Program (MEDTEP) Research Center on Minority Populations**

The purpose of this project was to establish a Medical Effectiveness Research Center on Diverse Populations at the University of California, San Francisco. The Center focused on the effectiveness and outcomes of medical treatments aimed at blacks, Hispanics/Latinos, and Asian Americans. Areas of research included cancer, cardiovascular disease, diabetes, glaucoma, prenatal care, and reproductive health. Studies specific to mental health included a random survey of current smokers aged 18-65 years, including Latinos and non-Latino whites, derived from the 1990 San Francisco census, as well as a community survey of behavioral risk factors for poor health among Latinos and non-Latino whites living in San Francisco.

Findings: Latinos' smoking behavior and attitudes differ from those of non-Latino white smokers, and they need more effective smoking cessation programs. For instance, Latinos most often quit smoking because of criticism by family, concern about damaging their children's health, and a desire to set a good example for their children, whereas whites more often cited concerns about their own health and the desire to achieve a difficult goal (not smoking). Latinos were more likely than whites to believe that tobacco is not addictive, and whites were more inclined than Latinos to continue smoking to avoid weight gain. Differences in attitudes and beliefs about cigarette smoking were independent of the number of cigarettes smoked and level of education. Researchers suggested that physicians who want to boost Latino patients' motivation to quit smoking should focus on maintenance of the family's health and personal appearance, as opposed to maintenance of personal health or getting rid of an addiction. Latino men and women smoked fewer than half as many cigarettes per day as non-Latino white men and women; were less likely to have consumed an alcoholic beverage in the previous month; and consumed fewer drinks per week. Researchers suggested that health promotion programs designed for Latinos should emphasize the importance of regular physical activity, increased use of cancer screening tests, and limited consumption of alcohol and cigarettes.

PI: Ruth E. Zambrana, PhD, University of California, Los Angeles

Grant No.: R01 HS05518

Grant Period: 8/1/87-7/31/90

Title: Mediators of Birth Outcome Among Three Low-Income Ethnic Groups

The objective of this study was to examine the effect of sociodemographic, health behavior, medical risk, and psychosocial risk factors on the timing of prenatal care among low-income black-American, Mexican-American, and recent Mexican immigrant women in Los Angeles. Researchers compared various factors and birth outcomes for the three groups using interview data and medical records data from a sample of 1,800 women visiting 22 prenatal care clinics in Los Angeles. Comparisons were made between Mexican-Americans and Mexican immigrants to measure the role of acculturation in birth outcomes. Substance use/abuse was given

particular attention as a risk factor for birth outcomes.

Findings: About 7 percent of poor black and Hispanic women who received prenatal care at community clinics continued to use drugs during pregnancy, a rate comparable to national estimates. Black women are much more apt to use substances during pregnancy than Hispanic women, but stress and anxiety, not ethnicity, are highly associated with substance use during pregnancy. Black women reported more stressful life events, such as death or injury of someone close, problems with alcohol and drugs, problems at work, an arrest, or problems with government agencies; more distress from these events; and higher anxiety than Hispanic women. Black women were also the least likely to be employed full time or to live with the baby's father, and they were the most likely to receive public health insurance. Researchers interviewed women about their use of substances in the 3 months before they became pregnant and during pregnancy. They found that black women were more likely than Mexican-American or Mexican-immigrant women to be heavy users of alcohol, to have used drugs, and to have smoked cigarettes. Women who continued to use substances during pregnancy, regardless of ethnicity, experienced twice as many stressful life events as women who did not use substances. Mexican-immigrant women are more likely than Mexican-American women, who have been in the United States many years, to abstain from alcohol, drug, and cigarette use during pregnancy. A higher degree of integration into the United States is associated with increased prenatal stress, which in turn is associated with fewer social supports and more substance use. However, these behavioral risk factors do not appear to directly affect preterm births or birth weight.

Alzheimer's Disease/Cognitive Impairment

PI: Katharine C. Cook, University of Virginia, Charlottesville (Dissertation Grant)

Grant No.: R03 HS10762

Grant Period: 7/1/00-8/31/01

Title: Making Care Decisions for Cognitively Impaired Parents

This study described the decisionmaking processes experienced by adult offspring seeking and choosing care for their cognitively

impaired parents. The study drew information from the experiences of adult offspring who decided to utilize respite care, supportive living, assisted care, and long-term care services over the course of 1 year. The research strategy used sensitized the researchers to the preferences of the decisionmakers in their attempt to improve family outcomes.

Findings: No findings are available at this time.

Anxiety Disorders

PI: Christopher Frueh, PhD, Medical University of South Carolina

Grant No.: R01 HS11642

Grant Period: 7/5/02-6/30/05

Title: **Telepsychiatry Service Delivery to Trauma Victims**

To test the hypothesis that a novel mode of mental health service delivery using telepsychiatry is as effective as traditional modes of treatment, this study will compare videoconferencing technology (telepsychiatry) to “same-room” (traditional) treatment. Veterans who are trauma victims with post-traumatic stress disorder (PTSD) at a Veterans Affairs outpatient PTSD clinic will be randomized to either intervention and followed for 6 months. Two categories of outcome variables will be assessed: (1) clinical outcomes, such as symptom severity and social functioning; and (2) process outcomes, such as patient satisfaction/acceptance, treatment credibility, session attendance, treatment adherence, and treatment dropout.

Findings: No findings are available at this time.

PI: Douglas F. Zatzick, MD, University of Washington

Grant No.: R03 HS11372, Previous No. R01 HS11372

Grant Period: 5/1/01-10/31/02

Title: **Collaborative Intervention for Post-Traumatic Stress Disorder Trauma Survivors**

This investigation examined the effectiveness of a collaborative mental health intervention pilot for physically injured trauma survivors suffering from post-traumatic stress disorder (PTSD), developed methods for assessment of the cost-effectiveness of the intervention, and documented the processes of collaborative care delivery. The study followed 160 trauma

survivors for 12 months, from hospital admission through outpatient care and community rehabilitation.

Findings: No findings are available at this time.

Depression

PI: Joan R. Asarnow, PhD, University of California, Los Angeles

Grant No.: R01 HS09908

Grant Period: 8/1/98-7/31/03

Title: **Youth Partners in Care: Depression and Quality Improvement**

This project is evaluating the impact of a quality-improvement intervention designed to enhance the outcomes of mental health care for children in managed care practices and reduce their families’ stress by educating them and their primary care physicians about depression treatment. The intervention will also assist in providing the primary care practices with the clinical resources to implement the necessary medication management and/or cognitive-behavior therapy. The study will measure outcomes such as satisfaction with care, clinical symptoms, daily functioning, service use and costs, indirect costs, and parental psychological distress.

Findings: Thus far, brief screening surveys for depression have been created. They can be completed in primary care waiting rooms and are feasible for use within primary care settings.

PI: Jonathan B. Brown, MPP, PhD, Kaiser Foundation Research Institute (Cooperative Agreement)

Grant No.: U01 HS07649

Grant Period: 9/30/92-9/30/96

Title: **Implementations of Guidelines in a Large Group-Model Health Maintenance Organization**

The objective of this study was to evaluate strategies used by a large group-model health maintenance organization (HMO) to implement national clinical guidelines for the detection and treatment of hypertension and depression. The implementation of the Guideline for the Detection and Treatment of Depression in Primary Care from the Agency for Health Care Policy and Research (now AHRQ) was studied.

Findings: Quality improvement teams alone were insufficient to improve depressive symptoms among primary care patients with

chronic depression in managed care organizations. Tailoring clinical guidelines to suit local conditions may greatly increase the likelihood that physicians will implement them. The continuous quality improvement implementation strategy did not effect adherence to guideline care for depression, while the academic detailing (AD) strategy induced increased antidepressant drug use by clinicians. In the AD group, worse depressive symptoms and functional status among patients with chronic recurring depressive illness seemed to be responsible for causing increased treatment of depression. The Kaiser Permanente Northwest Region *Guideline for the Management of Depression in Primary Care*, 1993, contains more specific material on depression screening, offers practical details about referral to the HMO's mental health department, and describes self-help options and local community resources not mentioned in the AHRQ document because of its national orientation. Although the Kaiser Permanente guideline is now out of print, it is described in detail in "The Paradox of Guideline Implementation: How AHCPR's Depression Guideline Was Adapted at Kaiser Permanente Northwest Region," by Jonathan Brown, Diana Shye, and Bentson McFarland, in the January 1995 *Journal of Quality Improvement* 21(1), pp. 5-20.

PI: Edward J. Callahan, PhD, University of California, Davis
Grant No.: R03 HS08029
Grant Period: 12/1/93-5/31/95
Title: **Impact of Depressive Symptoms on Process of Primary Care**

This study was designed to examine and evaluate data based on three hypotheses surrounding physicians and their depressed patients. First, concerning the physician-patient interaction, the study examined whether or not the physician recognizes the patient's depressive symptoms. Second, concerning the differences in process and cost of care, the study examined whether or not the physician appropriately recognizes the patient's depressive symptoms. Finally, concerning the outcome of care, the study examined when the patient's depressive symptoms are appropriately recognized.

Findings: When physicians did recognize depression, they treated patients differently. Missed depression diagnoses can lead to unnecessary and costly tests to uncover the cause of vague physical complaints such as

headache and fatigue, which frequently mask depression. Improving physicians' recognition of depression could improve quality of care for these patients and save health care costs. Primary care physicians often fail to recognize depression when it is present in their patients, yet they are less likely to miss it in women and more educated patients than in men and less educated patients.

PI: Gregory N. Clarke, PhD, Kaiser Foundation Research Institute
Grant No.: R01 HS10535
Grant Period: 6/1/99-5/31/03
Title: **Health Maintenance Organization Collaborative Care Treatment for Depressed Youth**

This study examines the effectiveness, in terms of both patient outcomes and overall costs, of a cognitive behavioral therapy used as an adjunct to antidepressant medication therapy to treat adolescents ages 12-18 who are experiencing depression for the first time. The randomized clinical trial will be conducted in four large managed care practices in the Northwest that provide primary care, and it will involve the teaming of pediatricians and trained mental health therapists.

Findings: No findings are available at this time.

PI: Harold I. Goldberg, MD, University of Washington (Cooperative Agreement)
Grant No.: U01 HS07652
Grant Period: 12/1/92-11/30/96
Title: **Evaluation of Guidelines in Large Group Practices**

In this study the researchers conducted a randomized controlled trial to determine the effectiveness of academic detailing (AD) techniques and continuous quality improvement (CQI) teams in increasing compliance with a national guideline for the primary care of hypertension and depression.

Findings: Both the AD techniques and CQI teams failed to improve guideline compliance or clinical outcomes for depression. No intervention effects were found in depression recognition, improved prescribing, or reduced symptomatology, with the exception of a small decrease (4.7 percent) in first-generation tricyclic use associated with the AD technique compared to usual care. This change was consistent with the guideline recommendation

to avoid antidepressants that frequently cause side effects.

PI: David E. Grembowski, PhD, University of Washington
Grant No.: R01 HS06833
Grant Period: 5/1/95-11/30/99
Title: Managed Care, Physician Referral and Medical Outcomes

The purpose of this study was to assess the role played by managed care in physician referral behavior among pain or depression patients in primary care and to determine the health outcomes of referred and nonreferred patients as a result of managed care.

Findings: Plans that are “more managed” were less likely to refer patients to a psychiatrist. Low-income patients were less likely to be referred to a mental health specialist if there was physician financial withhold for referral. A physician productivity bonus was associated with greater access to specialists, and patients in more managed plans had lower ratings of care from their primary physicians.

Patients in managed care organizations with the primary care physician as gatekeeper are less likely to see specialists than other patients because patients typically face higher out-of-pocket costs when they self-refer. Evidence suggests that minimal benefits with high out-of-pocket costs for a category of health services, such as mental health, decrease the probability that a patient will be referred for those services.

PI: Ronald D. Hays, PhD, RAND
Grant No.: R01 HS06171
Grant Period: 6/1/90-5/31/92
Title: Patient Adherence Among Chronic Disease Patients

This study investigated the factors that predict patient adherence to prescribed medical therapy and the resulting patient health outcomes. The researchers analyzed data collected from the Medical Outcomes Study (MOS), a 6-year study of patients with specific chronic diseases, including depression. The MOS includes data from both solo and group practices and from both prepaid and fee-for-service arrangements in Boston, Chicago, and Los Angeles.

Findings: Patients are more likely to follow their doctors’ advice if their doctors have busy practices, are happy in their work, and take time to answer questions and conduct patient followup via phone or office visits. A physician’s personal characteristics such as age,

sex, and ethnic group had no significant effect on patient adherence.

PI: Rachel Manber, PhD, Stanford University
Grant No.: R01 HS09988
Grant Period: 9/30/98-9/29/01
Title: Acupuncture Treatment of Depression During Pregnancy

This study tested the efficacy of acupuncture therapy used to treat pregnant women who have been diagnosed with major depression. The study specifically tested the effectiveness of acupuncture therapy in treating depression in comparison to (1) other forms of acupuncture treatment used to address valid symptoms separate from the depressive symptoms and (2) prenatal massage. The study analyzed the effects of the acupuncture treatment, as compared with the controls, on depression during pregnancy, depression post partum, and infant outcomes.

Findings: No findings are available at this time.

PI: Geoffrey W. McEnany, PhD, University of California, San Francisco (Fellowship Grant)
Grant No.: F32 HS00093
Grant Period: 3/1/95-2/28/97
Title: Nursing Strategies for Major Depression in Women

This clinical trial study utilized an experimental design, collecting data over a 1-month period regarding fatigue, mood, and sleep pattern rhythms before and after nonpharmacologic treatment for a major nonseasonal, non-bipolar depressive episode. The study focused on pre- and post-menopausal women, examining the potential gender-bound effects of treatment. This study aimed to assess the impacts of intervention in order to demonstrate treatment efficacy, specifically the use of phototherapy as a treatment for nonseasonal, non-bipolar depression.

Findings: No findings are available at this time.

PI: Gregory A. Nichols, MBA, Kaiser Foundation Research Institute (Dissertation Grant)
Grant No.: R03 HS07991
Grant Period: 8/1/93-7/31/95
Title: The Detection and Treatment of Depression in a Large Health Maintenance Organization

The goal of this study was to compare the skill of family practice and internal medicine

primary care physicians in communicating the detection of depression to their patients, the subsequent treatment of depressive disorders, and the patients' use of health care resources. First, a depression screening questionnaire scale was distributed to randomly selected members of the Kaiser Permanente Northwest health maintenance organization. Members with ongoing or recurring depression or dysthymia who identified either a family practice or internal medicine physician as their primary care provider were identified and studied further to assess any differences between family practice and internal medicine physicians. The study also compared the utilization of health care resources between members being treated and members not being treated for depression.

Findings: Family practice physicians may be more attentive to depressive disorders than internal medicine physicians. Chronically or recurrently depressed patients of family practice physicians were more likely to report that their physician asked them about depressive symptoms than were patients of internal medicine physicians (34.0 percent vs. 27.3 percent). Family practice patients had more visits and were more likely to use antidepressant medications.

PI: Jacqueline A. Pugh, MD, University of Texas (Cooperative Agreement)

Grant No.: U01 HS07397

Grant Period: 9/9/92-2/28/98

Title: Mexican American Effectiveness Research Center

The objective of this study was to establish a Mexican American Effectiveness Research Center (MERECE) to examine the effectiveness of treatments for chronic disabling conditions in Mexican Americans, including type II diabetes, mental health issues such as depression, and problems with functional status. Through the establishment of a research core, a training core, a technical assistance core, and a dissemination core, this study intended to assess outcomes of measures and treatments regarding the conditions in Mexican Americans, to train investigators for outcomes research within the Mexican-American population, to provide technical assistance to MERECE-related projects, and to disseminate research information.

Findings: Subsyndromal depression is more prevalent than major depression in primary care settings with a majority of Mexican-American

patients. Both subsyndromal and minor depression are associated with significant functional impairment. Symptom relief and potential recovery from depression rely on the availability of informal social supports and the development of religious faith. Of nursing home residents, 26 percent have major depression. Depressed nursing home residents are more functionally impaired, use more health care resources, and may be at increased risk of death compared to their nondepressed counterparts. The Geriatric Depression Scale (GDS) and Brief Carrol Depression Rating Scale (BCDRS) met criteria for moderate to substantial agreement with the standard for depression, whereas the Short Geriatric Depression Scale (SGDS) and Center for Epidemiologic Studies Depression Scale (CES-D) achieved only fair agreement. Researchers suggest that the GDS is a preferred measure and that brief interviewer-administered tools may improve detection of depression in the nursing home. The GDS also was culturally adapted for use with Spanish-speaking individuals, with performance equivalent to that of the English version. Mexican-American nursing home residents are more impaired, both cognitively and functionally, than non-Hispanic white residents as measured by the Mini-Mental State Examination. It is not clear whether patients' medical conditions, nursing home selection and referral patterns, or cultural factors play a role in functional differences between ethnicities.

PI: Rebecca L. Schein, PhD, Duke University Medical Center (Fellowship Grant)

Grant No.: F32 HS00108

Grant Period: 9/1/95-6/30/96

Title: Depression Treatment in Elderly Medical Outpatients

The purpose of this research was to investigate the effectiveness of short-term problem-solving therapy (PST) in treating depression in elderly medical outpatients. The study examined 24 elderly outpatients fulfilling the criteria for major depression and having at least one chronic medical illness. Participants were then referred for PST by physicians treating geriatric outpatients at the Duke Medical Center. Patients were evaluated in measures of depression, multidimensional functional status, self-rated health, and social problem-solving abilities to determine if the

PST had a significant impact in these areas, as compared with a wait-list control group.

Findings: Application of the Center for Epidemiological Studies-Depression Scale (CES-D) to elderly medical patients may compromise the validity of the scale in terms of sensitivity and specificity for the elderly medical population, as the study found that some of the CES-D items failed to differentiate between major, minor, and nondepressed patients.

PI: Karen Swanson, BA, SCM, University of California, Los Angeles

Grant No.: R03 HS11407

Grant Period: 7/1/01-6/30/02

Title: Patient Satisfaction for Depressed Patients in Primary Care

Patient satisfaction is usually conceptualized by assessing either technical competency (appropriate care) or interpersonal aspects of care (patient-provider relationship). The main objective of this study is to test whether patient satisfaction is determined by both types of quality of care for people who are diagnosed with major depression and if there are any gender differences in this relationship. Another objective is to determine if provider switching is a consequence of patient dissatisfaction with care. It is hoped that findings from this study will assist health plans in understanding what predicts satisfaction with care so they can target and restructure care.

Findings: No findings are available at this time.

PI: Kenneth B. Wells, MD, MPH, RAND

Grant No.: R01 HS06802

Grant Period: 4/1/91-3/31/94

Title: Variations in the Process/Outcomes of Care—Depression

This study used data from two large quasi-experimental studies, the Medical Outcomes Study and the Prospective Payment Quality of Care Study, to examine variations in quality and outcomes of care for depression for different groups of depressed patients (age groups, men vs. women, poor vs. nonpoor, ethnic minority vs. white) and for different types of treatment locations (rural vs. urban, for-profit vs. nonprofit organizations, public vs. private). Further, it determined how variations in outcomes correspond to variations in the process of care for depressed patients.

Findings: Patients with dysthymia may have poorer outcomes than patients with a severe episode of depression and no chronic depression. Patients with subthreshold depressive symptoms but no current disorder had the best outcomes, although 25 percent of this group had a major depressive episode within 2 years. Patients who were not white were more likely than whites to have a remission during the 2-year followup but other demographic factors were not related to remission. Classifying patients according to depression severity and functional status rather than a specific depressive disorder may be particularly useful in primary care practice for two reasons: (1) many clinicians resist existing psychiatric diagnostic classifications; (2) depressed primary care patients may be more likely to present with complaints about their functioning rather than their mood.

It was also found that 60 percent of depressed outpatients had at least one chronic medical condition. Depression was worse in patients with a history of heart attacks than those with hypertension and insulin-dependent diabetes. In a related analysis, it was found that medically healthy depressed patients can be more limited physically and socially than individuals with chronic conditions such as diabetes and arthritis. Depressed persons were found to be less able to perform their social roles as parents or workers, experience more physical pain, and generally perceive their health as worse than persons with chronic medical conditions.

Differences were found in outcomes for depressed patients depending on their payment type. Prepaid patients who received outpatient treatment for depression from psychiatrists became more limited in role and physical functioning over time than patients who received traditional fee-for-service care. These same prepaid patients also sharply reduced their use of antidepressants after 2 years even though evidence strongly supports the value of maintenance therapy in patients with chronic and recurrent depression.

Depressed patients being treated by a specialist usually receive psychotherapy and/or antidepressants. General medical providers are more apt to use less intensive and more advice-oriented depression counseling as treatment. A depressed patient is less likely to receive counseling in a prepaid plan than under fee-for-service (FFS) care. Additionally, the most severely depressed patients are treated by

psychiatrists, less depressed patients by psychologists or nonphysician therapists, and the least depressed by primary care providers in both prepaid and FFS systems.

Approximately 11 percent of depressed outpatients switch from FFS to prepaid plans and vice versa, a rate that is higher than that for patients with other disorders. Patient satisfaction and outcomes are not significantly affected by a switch in either direction. However, patients switching from prepaid to FFS plans may be at risk for poorer functional outcomes, although not necessarily poorer mental health, probably due to a break in continuity of care. Patients tended to decrease the number of their visits while switching.

The trend away from mental health specialty care and toward general medical provider care for depression reduces costs, but it also worsens outcomes and does not increase the value of health care in terms of functional improvement per dollar spent. Depressed patients treated for any reason in the general medical care sector had fewer functional limitations than individuals receiving no care. Patients treated by psychiatrists fared the best. Additional improvements in care for depressed patients were indicated for all treatment types. Patients who were sicker and those with more education were less likely to use a subtherapeutic dose. Minority patients used antidepressants at one-third the rate of white patients and were more than twice as likely to use a dose below the minimum therapeutic level.

In evaluating the impact of Medicare's Prospective Payment System, it was found that after implementation of the system, a higher percentage of hospitalized depressed elderly patients had clinically appropriate acute-care admissions; the initial assessment of psychological status by the treating provider was more complete; the quality of psychotropic medication management improved; and the rates of inpatient medical or psychiatric complications, discharge to another hospital or nursing home, and inpatient readmission declined.

PI: Kenneth B. Wells, MD, MPH, RAND

Grant No.: R01 HS08349

Grant Period: 4/1/95-3/31/01

Title: Improving the Cost-Effectiveness of Care for Depression—Patient Outcomes Research Team (PORT-II)

Using a quasi-experimental design, this project evaluated the cost-effectiveness of alternative approaches to improving care for depression in prepaid group practices and obtained information on the linkages between processes of care and patient outcomes in primary care settings. Patients in general medical clinics were randomly assigned to their usual care or to one of two interventions (improving medication management or improving counseling for depression). Treatment decisions were up to the usual care providers and their patients, but clinical protocols, changes in practice structure, and patient and provider education were used to enable more appropriate care. The interventions were tested in 46 primary care clinics in 6 U.S. managed care organizations, which adapted the interventions to their own policies.

Findings: A quality improvement (QI) program of evidence-based materials was developed and tested and is available as a resource toolkit designed for clinicians, nurse specialists, psychotherapists, and patients in most types of managed care organizations. This QI program was found to improve care for depressed patients without requiring any services beyond those already covered by the patients' health plans. Study findings also indicated that overall employment rates can be positively affected with improved treatment. Full or partial toolkits are available at <www.rand.org>.

When the outcomes of the two study interventions were compared to the outcomes of usual care, patients who were enrolled in the QI-therapy group had better results over the 2-year observation period. The QI-therapy group had fewer role limitations than the QI-medications group, but both groups had fewer role limitations than those in usual care.

PORT researchers examined the relationship between patient ratings of interpersonal patient-provider relationship (PPR) and both satisfaction with health care and technical quality of care among a sample of depressed primary care patients and found that interpersonal PPR is a critical element of health care quality. Patients are more likely to disclose concerns and details about their illness when the doctor asks them about specific problems such as depression, shows empathy, discusses treatment choice, and listens well, which are all elements of quality PPR.

PORT findings have also shown that despite effective psychotherapy and antidepressant

medication, about three-fourths of primary care patients with depression do not receive appropriate care. Yet most (83 percent) of these patients, regardless of the severity of their symptoms, wanted to be treated for their depression, and most preferred counseling over medication. Specific treatment preferences vary by race, sex, income, and knowledge about treatments.

The PORT quality improvement approach can help the primary care physician with depression patient assessment, treatment, and followup. This study found that when clinical leaders of local managed care practices were trained in multimodal quality improvement programs, practices achieved above 70 percent adherence rates for most intervention components. For example, they were near 100 percent for hiring depression nurse specialists and reducing copayments for psychotherapy. Adherence rates were lower in some areas, however, with only 55 percent of patients on antidepressants followed by nurses to monitor symptoms, side effects, and medication compliance for the full expected duration (6-12 months).

When compared to patients with chronic medical conditions such as back problems, arthritis, and hypertension, depressed patients had worse mental health-related quality of life (HRQOL) and poorer physical functioning than those with a chronic condition. Because rates of detection and treatment of depression are moderate at best, primary care physicians should place more emphasis on helping patients recover from depression.

PORT researchers also found that patient preferences for mental, physical, and social health may strongly shape their treatment decisions. Patients may prefer to maintain a certain tolerable quality of life rather than risk additional suffering that could result from high-technology treatments. While concerns about physical health explained 35-55 percent of variation in patient treatment preferences, patients also placed a high value on their mental health (20-42 percent of preference variation). Mental health was strongly related to health preferences, even among patients with chronic medical conditions, such as arthritis or diabetes.

High copays or strict limits on visits and other types of health care services may dissuade

patients from seeking care, while low copays or unlimited visits may have the opposite effect. Apparently, patients suffering from depression often perceive their mental health coverage to be more generous than it actually is, which could lead to unexpected out-of-pocket costs. In contrast, patients usually have a fairly accurate idea of their coverage for medical visits and prescription copays. Overall, depressed patients reported better mental health benefits than they actually had. Depressed patients who had used health care services in the past 6 months had a more accurate picture of medical benefits but not of mental health benefits. Patients with depressive disorder and patients who were less satisfied with their health care reported mental health copays more accurately than those who had depression symptoms only and more satisfied patients, respectively. Also, white patients and patients who had fewer chronic health problems were more accurate in reporting mental health visit limits than patients from ethnic minorities and sicker patients. More effective dissemination of information about mental health benefits by health maintenance organizations, health care plans, and employers could correct misperceptions, enhance trust, and improve access to and quality of mental health care.

PI: Whitney P. Witt, MPH, Johns Hopkins University (Dissertation Grant)

Grant No.: R03 HS11254

Grant Period: 9/1/00-6/30/01

Title: Family Influences on Children's Health and Health Care

This study examined the impact of two major family stressors, childhood disability and maternal depression, on the health status of children and on health care and mental health care services utilization among children. The study also investigated the impact of maternal mental health care, respite care, and child care services on the health status of children. The researchers used data from the 1994 National Health Interview Survey Supplement on Disability (NHSSD), a questionnaire of biological mothers concerning about 20,000 children under age 18, including about 3,200 disabled children.

Findings: No findings are available at this time.

Pharmaceuticals

PI: Deborah L. Ackerman, PhD, University of California, Los Angeles (UCLA)

Grant No.: R03 HS09551

Grant Period: 9/30/97-7/31/98

Title: Outcomes and Costs of Inpatient Antidepressant Drugs

This inpatient study retrospectively reviewed billing data and clinical outcomes data from the UCLA Neuropsychiatric Hospital to evaluate the relative costs and benefits of different treatment regimens and to provide descriptive information about antidepressant drug use. Other outcomes were evaluated, including length of stay, discharge to the medical center, and readmission.

Findings: The higher initial cost of the selective serotonin-reuptake inhibitors (SSRIs) for treating depression may be offset by higher expenses associated with monitoring and managing side effects of tricyclic antidepressants (TCADs). SSRIs were the most commonly prescribed antidepressants. The atypicals (trazodone, bupropion, and nefazodone) and SSRIs were associated with the highest charges: \$2,000-\$3,000 higher than for the TCADs. The atypicals were associated with \$500-\$1,000 higher charges for services and procedures, specifically for electroconvulsive therapy, which was billed more often and for more procedures per patient. Readmission rates were similar across drug classes.

PI: Frank M. Ahern, PhD, Pennsylvania State University

Grant No.: R01 HS09075

Grant Period: 8/1/96-7/31/00

Title: Impact of Prospective Drug Use Review on Health

The purpose of this study was (1) to conduct a descriptive epidemiological analysis of psychotropic drug use, prescribing patterns, and yield of Prospective Drug Utilization Review (ProDUR) screening and (2) to evaluate the independent effects of two different procedures on health outcomes, including both outcomes from changes in prescribing practices and differential mortality, morbidity, and health services utilization. The study examined two 24-month periods, before and after the ProDUR interventions, and two outpatient populations in which ProDUR has been implemented: the

Pennsylvania Medicaid program and the Pennsylvania PACE program, a State-level outpatient pharmaceutical assistance program for the elderly.

Findings: No findings are available at this time.

PI: Rajender R. Aparasu, PhD, South Dakota State University

Grant No.: R03 HS10813

Grant Period: 9/1/00-2/28/02

Title: Evaluation of Inappropriate Psychotropic Use in Elderly

The objective of this research was to determine the factors leading to and the effects of inappropriate psychotropic use in the elderly. The researchers utilized data from the Medical Expenditure Panel Survey (MEPS) on the community-dwelling elderly in the United States aged 65 years and older who used psychotropic medications. The researchers specifically assessed the characteristics of the psychotropic-using elderly, the quality and degree of inappropriate psychotropic use, and the impact of inappropriate psychotropic use on health care costs and utilization.

Findings: No findings are available at this time.

PI: Viktor E. Bovbjerg, MPH, University of Washington (Dissertation Grant)

Grant No.: R03 HS08469

Grant Period: 9/1/94-8/31/95

Title: Lipid-Lowering Medications and Risk of Injury

The purpose of this study was to examine the association between the use of lipid-lowering medications and injury, including motor vehicle accidents, suicide or attempted suicide, and homicide or assaults.

Findings: No association between lipid-lowering medications and elevated risk of injury was suggested. The researchers found no increased injury risk among current users of lipid-lowering medications or past users, after adjustment for behavioral disorders, medical conditions, and health status. Current use of these medications was associated with lower risk of injury among patients who did not have behavioral disorders, while current use was not associated with injury risk among patients with behavioral disorders.

PI: Jeffrey Brown, Heller School, Brandeis University (Dissertation Grant)

Grant No.: R03 HS10016

Grant Period: 9/30/98-9/29/00

Title: Clozapine's Impact on Schizophrenic Medicaid Enrollees

The objective of this study was to compare the use of clozapine as treatment for schizophrenia patients in the Medicaid populations of New York and New Jersey and to compare the prescribing of the drug by various providers. The study compared New York, which excluded clozapine from its Medicaid drug formulary, and New Jersey, which included it, to estimate the effects of clozapine on access, utilization, and expenditures.

Findings: This dissertation is not available to date.

PI: William Campbell, MD, University of North Carolina, Chapel Hill

Grant No.: U18 HS10397-01

Grant Period: 9/30/99-9/29/02

Title: Rational Therapeutics for the Pediatric Population

The University of North Carolina Center for Education and Research on Therapeutics (CERTs) builds on the recent work of the Program on Health Outcomes and brings together a diverse clinical, research, and education community around the needs of children in achieving optimum outcomes of drug and device therapy. The CERTs is organized into four core teams that are pursuing a coordinated education and research agenda focusing on Rational Therapeutics for the Pediatric Population. For their initial and phased studies, the core teams have selected 16 projects based on the skills of the team and the CERTs' partners. The methods range from a literature search and review to pharmacokinetic studies. The partnerships include representation from the pharmaceutical industry, a nonprofit arm of a managed care organization, several contract research organizations, an integrated health care delivery system, and other academic medical centers.

Two of the projects selected for study are related to mental health. They are: (1) prescribing patterns of psychotropic drugs for adolescents and (2) the attention deficit-hyperactivity disorder (ADHD) project. The first project is a retroactive analysis administrative database that is addressing use of psychotropic drugs to treat depression and

ADHD. The second project is designing and testing toolkits and process improvement strategies for practitioners to use in the diagnosis and management of ADHD.

Findings: Researchers reviewed and analyzed 1995-99 claims data of the UnitedHealth Group in Minnesota for children under age 20 in six independent practice association health plans from four different geographic regions. They calculated the prevalence of use of four psychotropic drug classes: central nervous system stimulants (CNSSs) such as Ritalin, selective serotonin-reuptake inhibitors (SSRIs), tricyclic antidepressants (TCAs), and other antidepressants (OADs). Over the 5-year period, use of OADs increased 195 percent and use of TCAs decreased 21 percent. Pediatricians made up half and family doctors 20 percent of the first prescribers of CNSSs in 1995, compared with 13 percent of psychiatrists (which increased to 18 percent by 1999). Psychiatrists were most likely to prescribe SSRIs (56 percent in 1995, declining to 44 percent by 1999). However, the proportion of pediatricians and family doctors prescribing this class of drugs increased from 7 percent in 1995 to 23 percent in 1999 for pediatricians and from 13 percent in 1995 to 28 percent in 1999 for family doctors. These findings underscore the importance of training and expertise among primary care physicians in the use of psychotropic medications in youths.

PI: Alan M. Garber, MD, PhD, Stanford University

Grant No.: R01 HS07818

Grant Period: 3/1/93-9/30/96

Title: Preference Assessment for Pharmaceutical Evaluation

The purpose of this research was to develop a health-state classification system, present descriptions of possible health states to patients for rating, and assess patient preferences toward alternative states of health for use in cost-effectiveness analysis of pharmaceutical therapies. Subjects were randomized to exposure to either multimedia or text descriptions of the health state and tested for recall and recognition of its features with regard to two important pharmaceutical therapies: alglucerase, for Gaucher disease, and clozapine, an antipsychotic medication.

Findings: Multimedia subjects had better recall and better recognition of health state

features than did text-only subjects. The research suggests that multimedia presentations result in a more accurate and complete understanding of the described health states than do text-only presentations.

PI: Judith M. Garrard, PhD, University of Minnesota

Grant No.: R01 HS07772

Grant Period: 3/1/93-2/28/99

Title: Patient Outcomes Associated with Antidepressant Drugs

The purpose of this study was to examine the association between patient outcomes and antidepressant treatment of people with depressive symptoms. The subjects of the study were elderly people (65 years of age or older) living in the community who were enrolled in a social health maintenance organization (SHMO). The patient outcomes studied were health services utilization; health and functional status, including mortality; and quality of life.

Findings: Primary care physicians miss identifying depressive feelings in half of the elderly community-dwelling patients they see, especially men. Elderly people who have minor depression or are not depressed generally rate their physical health better as their level of illness declines, while elderly patients who are suffering from serious depression often provide assessments of their health that are inconsistent with clinical evidence. The researchers concluded that one way to improve clinical detection of depression, and hence the quality of life of community-dwelling elderly people, might be periodic screening for depression using an instrument such as the Geriatric Depression Scale. Secondly, when a patient's report is inconsistent with the clinical condition, evidence of minor depression should not preclude further investigation of inconsistencies between a patient's report and clinical evidence, while there was no such inverse association for those with serious depression. The report is available for a fee from the National Technical Information Service, 800-553-NTIS. The NTIS accession no. is PB2001-106533.

PI: Joseph T. Hanlon, PhD, PharmD, Duke University Medical Center

Grant No.: R01 HS07819

Grant Period: 3/1/93-5/31/95

Title: Cognitive Impairment and Medication Appropriateness

The objective of this study was to determine if the use of psychotropics, nonsteroidal anti-inflammatory drugs (NSAIDs), or anticonvulsants is associated with cognitive impairment in the community-dwelling elderly. The study examined patterns of medication use among three groups of community-dwelling elderly: the demented cognitively impaired, the cognitively impaired without dementia, and the cognitively intact.

Findings: Among the community-dwelling elderly, cognitively impaired subjects (including demented individuals) are less likely to use over-the-counter (OTC) medications and analgesics than cognitively intact individuals. The more cognitively impaired a community-dwelling elder is, the less apt that individual is to use OTC, cardiovascular, and analgesic, as well as prescription medications. The higher use of analgesics by those who were not demented may represent a protective effect of certain diseases, such as rheumatoid arthritis, or the medications used to treat them, such as anti-inflammatories. There was no compelling evidence to suggest that NSAID use is associated with either deterioration or improvement in the level of cognitive function among community-dwelling elderly. However, current use of benzodiazepines, either with a short half-life or a long half-life, was associated with memory impairment, and use of higher doses of benzodiazepines was associated with increasingly worsened memory function. The researchers concluded that the risk of cognitive impairment should be balanced against the clinical benefit of benzodiazepine use in the elderly and that elders should be given prescriptions for smaller total daily doses. Previous benzodiazepine use was unrelated to memory problems, and current and previous benzodiazepine use was unrelated to other aspects of cognitive functioning. Researchers observed a relationship between digoxin and decreased cognitive function but suggested that additional research is needed to assess the role of digoxin as opposed to underlying disease.

PI: David A. Katz, MD, University of Wisconsin

Grant No.: R01 HS10466

Grant Period: 9/1/00-8/31/02

Title: Improving the Evidence for Unstable Angina Guidelines

The purpose of this research is to develop a statistical technique by which to measure costs

and patient health outcomes jointly, incorporating the influential factors that were often neglected in previous analyses. To test its performance and sensitivity, the technique will be applied to real data, including an investigation of the determinants of health care costs and cost and use of pharmacologic treatments in 9,000 Medicaid recipients with diagnosed attention deficit hyperactivity disorder.

Findings: No findings are available at this time.

PI: Barbara M. Maloney, University of Massachusetts (Dissertation Grant)

Grant No.: R03 HS07954

Grant Period: 9/1/93-8/31/95

Title: **Psychoactive Drug Use Post Omnibus Budget Reconciliation Act (OBRA): Massachusetts**

The objective of this study was to evaluate the effectiveness of OBRA's Federal legislation regulating psychoactive drug use in nursing homes. The researchers reviewed data from the Massachusetts Medicaid Claims File and nursing home resident records to determine the effects of the regulations on the use of psychoactive drugs (including antipsychotics, hypnotics/sleepers, long-acting benzodiazepines, and anxiolytic drugs), on prescriber compliance with the guidelines, and on any changes in survival, hospitalization rates, activities of daily living functioning, and behavioral stability of nursing home residents.

Findings: No findings are available at this time.

PI: Vincent Mor, PhD, Brown University

Grant No.: T32 HS00011

Grant Period: 9/30/86-6/30/03

Title: **Institutional National Research Service Award**

The Brown University Center for Gerontology and Health Care Research received an AHRQ-funded postdoctoral training grant that has become an integral part of this highly productive research group. Since its inception in 1986, seven physicians and seven PhDs have been trained in the interdisciplinary environment. Several of these individuals have already begun to influence health services research in the areas of health status assessment, geriatrics, and long-term care, and others launched promising careers in the field. The goals of the training program are: (1) to teach

health services research methods as well as content material relevant to gerontology and long-term care; (2) to train both physicians and nonphysician researchers; and (3) to give trainees didactic as well as "hands on" supervised experience in health services research.

Findings: This project has shown that psychoactive drugs are used more frequently with the elderly in nursing homes than with the elderly living in the community, and residents under 65 years of age were more likely to be given psychoactive drugs than were older residents. These drugs include anxiolytics (agents that relieve anxiety), antidepressants, hypnotics, and neuroleptics and can cause complications in the frail elderly and increase the risk of falling when inappropriately used. Nearly 62 percent of the residents under age 65 received psychoactive drugs, compared with 56 percent of the residents aged 75-84 and 50 percent of those 85 and older. Residents admitted from other nursing homes and from psychiatric facilities were more likely to be given psychoactive drugs than were persons transferred from hospitals or private homes. Disruptive and more cognitively impaired residents also had a higher risk of being given psychoactive drugs. Moreover, many residents take psychotropic medication with drugs for diabetes, hypertension, Parkinson's disease, and other conditions. This potentially harmful polypharmacy sparked regulation of medications dispensed in nursing homes in 1987 and probably warrants similar regulation in board-and-care facilities.

The 1987 Nursing Home Reform Act (NHRA) directed nursing homes to reduce their use of physical restraints; it also detailed nursing home residents' rights to be free of physical and chemical restraints used simply for discipline or convenience. As a result, the number of restraint-free homes increased nationwide from 1 percent in 1989 to 8 percent by 1995. Restraint-free homes differ in several ways from homes that use restraints. Restraint-free homes are 30 percent more likely to have a high ratio of full-time equivalent Registered Nurses per resident than homes that use restraints. Restraint-free homes have a lower average occupancy rate—68 percent compared with an overall rate of 87 percent in other facilities. Restraint-free homes also are more likely to have residents less in need of restraint; that is, their residents have fewer problems in

performing activities of daily living, and the homes have a lower average number of residents who are bowel or bladder incontinent.

Restraint-free homes also differ in organizational characteristics, as they are more likely than other homes to be not-for-profit facilities located in urban and more competitive areas, to be smaller, and not to be members of chains (perhaps suggesting that change may be delayed in bureaucratic organizations such as nursing home chains). Restraint-free homes are less likely to have special care units for Alzheimer's patients but are more likely to have other special care units.

With the passage of the 1987 NHRA, nursing homes are no longer allowed to use psychoactive medications except for justifiable clinical reasons. The Federal law seems to have had some impact, as this study found that although the use of antipsychotic drugs increased a bit from 1990 to 1993 (14 percent to 17 percent), clinical factors were slightly more significant in 1993 in the use of both antipsychotics and antianxiety/hypnotic drugs. This suggests that the use of psychotropic drugs is more clinically motivated than in the past. In 1990, nursing home residents who were more physically impaired, older, or had a prior stroke were significantly less likely to receive antipsychotic drugs. Those who were more cognitively impaired or suffered from dementia, depression, or a history of psychiatric problems were significantly more apt to receive antipsychotic drugs. In 1993, a largely similar pattern of effects was observed, with the addition of anxiety disorders as a factor increasing the likelihood of receiving antipsychotic drugs. In 1993, nursing home residents with a history of psychiatric problems were three times more apt to be given antipsychotics than other residents. Those with an anxiety disorder were four times more apt to receive antianxiety/hypnotic drugs than other residents in 1993. Nursing home facility factors also were less important in influencing psychotropic drug use in 1993 than in 1990. However, the changes in psychotropic drug use may not have been specifically related to the NHRA but may instead have been due to increased knowledge about the appropriate indications for psychotropic drug use.

PI: Wayne A. Ray, PhD, MS, Vanderbilt University

Grant No.: R01 HS03222

Grant Period: 9/1/78-8/31/80

Title: Claims-File Research: Pediatric Health Care Quality

This objective of this study was to review a data set in order to describe psychotropic drug use and prescribing in children. The researchers reviewed the records of 341,422 children under age 18 enrolled in the Tennessee Medicaid Aid to Families with Dependent Children program from 1977 through 1981. The study specifically reviewed incidence and utilization rates of prescribing, frequent use of psychotropic drugs, exposure to multiple agents, doctor shopping, and 5-year trends for children, as well as relationships between physicians' training and practice and their prescribing of psychotropic drugs. The researchers also studied differences in prescribing based on age and gender of the children. Prescribing of psychotropic drugs—including minor tranquilizers, sedatives/hypnotics, antidepressants, and antipsychotics—as well as of controlled-analgesic drugs and of opioid-containing drugs was studied.

Findings: For the 341,422 children, an average of 3.9 office visits per child were made and an average of 4.8 prescriptions per child were received. A total of 18,023 children received 54,123 psychotropic drug prescriptions: 55 percent were for sedatives/hypnotics, 17 percent were for tranquilizers, 16 percent were for antidepressants, and 8 percent were for antipsychotics. Along gender-specific lines, proportions of male and female children receiving psychotropic drug prescriptions were comparable through age 11. From age 11, the proportions of male and female children receiving psychotropic drug prescriptions diverged. By ages 16 and 17, almost twice as many females (6.3 percent) as males (3.3 percent) received prescriptions for psychotropic drugs. From age 11, prescribing of psychotropic drugs was significantly higher for females than males for comparable diagnoses, including mental illness. The pattern of psychotropic drug prescriptions per office visit for mental illness was similar: by age 17, females received 95.8 prescriptions per 1,000 office visits, while males received 47.0 prescriptions per 1,000 office visits. Total number of prescriptions received per child in

any drug class was independent of gender. The researchers suggest that the sex-specific difference in frequency of psychotropic drug prescriptions is a result of factors that begin at puberty, but no earlier. However, they also suggest that the phenomenon of greater prescribing for females goes beyond strictly female diagnoses, such as gynecologic and genitourinary disorders.

PI: Betsy L. Sleath, MS, University of Wisconsin (Dissertation Grant)

Grant No.: R03 HS07499

Grant Period: 9/1/92-9/30/93

Title: Patient Gender and Psychotropic Prescribing

The objective of this research was to test an interactional model of psychotropic drug prescribing believed to be capable of explaining the variability that exists in psychotropic prescribing to male and female patients. The researchers reviewed about 550 existing audiotapes of physician-patient interactions from 11 different ambulatory care settings in the United States and Canada to examine the influence of differences in patient-physician interaction on psychotropic prescribing.

Findings: Forty-two percent of psychotropic prescriptions were initiated by patients rather than their primary care physicians. These patients had one or more chronic conditions, had seen their physicians at least twice before, and in many cases, had received the psychotropic medication before. Seventeen percent of the patients received prescriptions for one or more psychotropic medications; 47 percent of repeat psychotropic prescriptions and 20 percent of new ones were initiated by patients. Sixty-nine percent of prescriptions for low-income patients were physician-initiated, while nearly 90 percent of psychotropic prescriptions for high-income patients were patient-initiated. Fifty percent of patients who had been to see their physician seven or more times initiated psychotropic prescribing, compared with 29 percent of patients who had seen their physician two to six times previously. The patients' sex, race, age, and rating of physical and emotional health were not significantly related to whether physicians or patients initiated psychotropic prescribing. However, 20 percent of white patients received prescriptions for one or more psychotropic medications, while only 13.5 percent of black

patients received prescriptions. For white patients, both patient expression of emotional symptoms and physician perceptions of patient emotional health significantly influenced psychotropic prescribing, while for patients who were not white, only patient expression of emotional symptoms significantly influenced psychotropic prescribing. For both white and other patients, neither patient expression of physical and social symptoms nor physician perceptions of patient physical health and social problems influenced psychotropic prescribing.

PI: Stephen B. Soumerai, ScD, Harvard University

Grant No.: R01 HS05947

Grant Period: 7/1/88-6/30/90

Title: Unintended Outcomes of Health Care Cost Containment

The objective of this study was to determine the effects of outpatient drug cap policies on physician visit rates, hospital admissions, institutionalization, and deaths. This study compared 42 months of Medicaid claims data and clinical records from two community mental health centers (CMHCs) and the State psychiatric hospital in New Hampshire, a State with outpatient drug cap policies, to 42 months of Medicaid claims data in New Jersey, a State with no such caps. The goal was to determine the effects of a three-prescription monthly limit on the use of psychotropic drugs and acute mental health services by noninstitutionalized schizophrenia patients.

Findings: The cap resulted both in immediate reductions of 15 to 49 percent in the use of psychotropic drugs such as antidepressants, lithium, and antipsychotic drugs and in coincident increases of one to two visits per month to CMHCs (with administration of antipsychotic drugs) and a sharp increase in the use of emergency mental health services and partial hospitalizations. After the cap was discontinued, the use of medications and most mental health services reverted to pre-cap levels. The researchers concluded that limiting Medicaid reimbursement to three drug prescriptions per patient per month markedly increased emergency and acute care services for noninstitutionalized schizophrenic patients who were unable to pay for the additional psychotropic drugs they needed. This cost-cutting initiative cost Medicaid 17 times more than it saved in prescription drug costs.

Quality

PI: Richard C. Hermann, MD, Harvard University

Grant No.: R01 HS10303

Grant Period: 9/30/99-9/29/01

Title: **Quality Measures for Severe/Persistent Mental Illness**

The aim of this research was to: (1) identify, inventory, and describe existing measures of the quality of mental health care for individuals with severe and persistent mental illness; (2) develop selected measures and test their meaningfulness and feasibility; and (3) implement selected measures as part of ongoing efforts to improve the quality of treatment provided to patients with severe and persistent mental illness. The study focused specifically on Medicaid and Department of Mental Health patients in Massachusetts.

Findings: These researchers used a case study of one organization's experience to demonstrate the implementation of a quality management program in a behavioral health care delivery system. The case study emphasized how theoretical frameworks were operationalized and how organizational structure and process were shaped to address challenges well known in quality management, such as authority, accountability, and follow-through. The study revealed that continuous quality improvement (CQI) activities had some impact in some areas. For example, by changing off-unit privileges for patients undergoing detoxification, CQI reduced high readmission rates for patients who were admitted for both a mental disorder and active substance abuse and who had previously left the program. Adolescent inpatient services used interventions such as staff training in de-escalation techniques to reduce the high rates of physical restraint of adolescents.

Quality of care measures are particularly underdeveloped in the area of mental health. This research project analyzed 86 process measures that were developed to assess the quality of mental health care. Most measures evaluate treatment of major mental disorders, such as schizophrenia and major depression, with a few focusing on children or the elderly. Domains of quality include treatment appropriateness, care continuity, access, coordination of care, disease detection, and disease prevention.

PI: Laura A. Nabors, PhD, University of Maryland, Baltimore

Grant No.: R03 HS09542

Grant Period: 9/30/97-9/29/99

Title: **School Mental Health—Quality Assessment and Improvement**

The objective of this pilot program study was to assess the impact of quality assurance activities and evaluation outcomes related to therapy services. School-based mental health therapy services were provided by therapists working through the Center for School Mental Health Assistance to 150 students aged 13-19 years at three high schools in Baltimore City, with 80 percent of the students from minority populations. Stakeholder focus groups (consisting of students, parents, therapists, health center staff, health department personnel, teachers, and school administrators) and student and parent interviews were conducted to inform the quality assurance and program evaluation components of the study.

Findings: This study successfully developed a systematic approach to evaluating school mental health programs. This step-by-step process was published in the August 2000 *Community Mental Health Journal* 36(4):395-411. Another aspect of this study found that the costs of the evaluated program were relatively low when compared to other programs, such as those in the community or the private sector. These findings are described in the May 2000 *Journal of School Health* 70(5):206-9.

PI: Laura A. Nabors, PhD, University of Maryland, Baltimore

Grant No.: R03 HS09847

Grant Period: 9/1/99-8/31/01

Title: **School Mental Health: Quality Care and Positive Outcome**

The purpose of this study was to examine the relationship between treatment process and youth outcomes in school mental health programs by (1) testing and refining current measures for assessing youth outcomes (including satisfaction and resilience); (2) conducting focus groups with clinicians to refine clinician and youth-report instruments; and (3) tracking youth outcomes and quality over time. The researchers studied 320 youths from low-income families aged 11-18 years and attending one of four Baltimore City middle and high schools.

Findings: Successfully conducting evaluations of school mental health programs depends on the evaluators overcoming several challenges that relate to the internal and external validity of their results.

Schizophrenia

PI: Patricia P. Dickersin, PhD, University of Maryland (Small Conference Grant)

Grant No.: R13 HS09818

Grant Period: 5/1/98-2/28/99

Title: Cochrane VI-Systematic Reviews:

Evidence for Action

This grant funded an annual meeting of the Cochrane Collaboration, an international nonprofit organization that prepares, maintains, and promotes the accessibility of evidence-based health care information. Members of the Collaborative Review Groups performed reviews addressing health care interventions concerning numerous diseases, including schizophrenia, and the conference proposed to build on such information. Dissemination of the reviews was done primarily through the Cochrane Database of Systematic Reviews.

Findings: Conference proceedings are available for a fee from the National Technical Information Service, 800-553-NTIS. The NTIS accession no. is PB2000-101193. The Cochrane Collaboration posts its reviews on its Web site: <www.cochrane.org>.

PI.: Anthony F. Lehman, MD, University of Maryland

Contract Number: 290-92-0054

Contract Period: 9/30/92-7/31/00

Title: Schizophrenia Patient Outcomes

Research Team (PORT)

The purpose of this study was to assess practice variations in the treatment and management of schizophrenia and analyze them for relative patient outcomes, resource use, and remaining scientific uncertainties. Recommendations for treatment and management were developed and disseminated to practitioners and the public. This project also evaluated the effectiveness of the dissemination effort in terms of measurable patient outcomes, practice patterns, public awareness and attitudes, and resource use.

Findings: This project completed a major literature review that summarized the key findings in all areas of treatment for

schizophrenia (pharmacotherapies, psychological and family interventions, vocational rehabilitation, and assertive community treatment).

The most important product developed through the PORT is evidence-based treatment recommendations that also focus on the therapies identified above. These recommendations are a synthesis of the best scientific evidence from well-controlled research. The level of evidence for each recommendation is also included, and both the strengths and limitations in our current knowledge base are identified.

Patterns of care were also studied through the PORT. Findings show that less than half of schizophrenic patients are receiving proper doses of antipsychotic medications or appropriate psychosocial interventions. Other findings include: younger patients were more likely to be offered psychotherapy and vocational rehabilitation; minority patients were more likely to be on higher doses of antipsychotic medications and less often prescribed an antidepressant when depressed; psychosocial treatments are often prescribed at the point of hospital discharge but follow-through in the community is low and failure to offer these treatments for outpatients may be a serious problem in ongoing community-based care; and psychosocial treatment varied in conformance rates based on location, with patients in some States more likely than those in another to be prescribed a vocational intervention and less likely to be prescribed a family intervention or psychotherapy.

The researchers also found that only one-fourth of schizophrenics with Medicare coverage received any outpatient care in 1991. Being black, male, 65 or older, or having a substance abuse diagnosis was associated with a lower likelihood of receiving any outpatient services. Among people under 65 years of age, whites were about 1.5 times as likely as blacks to have received outpatient care and 1.3 times as likely to have received individual therapy.

Researchers also analyzed the association of race with past and current diagnoses and with current treatment for depression, mania, and anxiety disorders. White patients with schizophrenia were significantly more likely than black patients to report lifetime diagnosis (56 vs. 41 percent), current diagnosis (37 vs. 32 percent), and current treatment (34 vs. 30 percent) for depression. White patients also

were more likely than black patients to report lifetime diagnosis, current diagnosis, and current treatment of manic-depressive disorder or anxiety disorder, despite similar self-reported symptoms of these mood disorders. Since blacks in this study reported more psychotic symptoms (for example, hallucinations and delusions) than whites, differences in symptom presentation may have caused doctors to more frequently confuse manic-depression with schizophrenia among blacks. This confusion also may be related to the use of white patients' presentation of symptoms as the basis for most research and diagnostic tools on mood disorders. Nevertheless, standard care includes assertive treatment of both affective and psychotic symptoms, whether they are coexisting problems or components of the same disorder. Black patients were less likely than white patients in this study to receive such assertive care.

Veterans with schizophrenia who received treatment through the Department of Veterans Affairs (VA) were less likely to have access to state-of-the-art community-based services than non-VA patients. During the time frame being evaluated (1994-96), the VA relied mostly on hospital-based rather than community-based services, but since then, the VA has expanded outpatient care services to include more recovery-oriented care.

PI: Bradley C. Martin, PhD, University of Georgia Research Foundation, Inc.

Grant No.: R03 HS10815

Grant Period: 7/1/00-1/31/02

Title: Advancing Risk Adjustment for Schizophrenia

The purpose of this study was to develop and validate a prospective risk-adjustment index with predictive capability for schizophrenia. The index used administrative data and was based on selected previous approaches to construct such an index. The index was expected to provide greater predictive ability than constituent indices.

Findings: No findings are available at this time.

PI: Linda E. Rose, PhD, Johns Hopkins University

Grant No.: R03 HS10378

Grant Period: 9/30/99-9/29/01

Title: Implementing Family Programs in Psychiatric Settings

This research aimed to investigate the factors influencing the availability of access to interventions and services for families when a family member either is hospitalized with an acute episode of schizophrenia or bipolar disorder or is receiving long-term care in a community-based treatment setting. The study conducted various focus groups, consisting of health care providers, families, patients, and mental health advocates, in the Baltimore area. Barriers to family interventions were identified and suggestions for improvement to family programs were proposed.

Findings: This study provides evidence that implementation of guidelines for family care is a complex undertaking that needs to take into account the constraints of the current health system as well as the wishes of the families. Many of the problems and concerns raised by families have been documented in previous studies, and the evidence on which the recommendations for family care are based is substantial and convincing. It was also noted that fewer than 50 percent of families are receiving such care. Health professionals identified two major barriers to the provision of care: (1) lack of system-based resources and support, and (2) lack of clear and explicit practice guidelines that incorporate responsibility and accountability for such care. The following conclusions and recommendations are offered from the findings of this study:

1. Health professionals do not see extensive (e.g., 9-month) interventions with families as feasible in the current health care system. Alternative approaches to family care need to be investigated.
2. Families want support from health professionals that consists of thoughtful, respectful interactions that are not rushed.
3. African-American families have specific concerns related to their own community's response to mental illness that need to be addressed.
4. There is a lack of coordination of services for both patients and families from inpatient care to community-based care. As a result, patients and families do not always get the care they need.
5. Adolescents have specific needs that were suggested in this study and warrant further study

6. Health professionals are dealing with a wide variety of family situations and do not always know how to proceed. Ongoing education for staff is essential if families are to be engaged in care.
7. Standardized interventions are helpful for delivering basic education to families about mental illness, but often the educational materials available to staff are outdated or not comprehensive. Such standardized approaches need to be supplemented with individualized instruction and support based on a family's need and the patient's stage of illness.
8. Community-based support groups such as the National Alliance for the Mentally Ill (NAMI) provide vital services to families. Their contributions need to be recognized and supported by the health care system. Family participants who were not a part of the NAMI group had not been told about NAMI and were not aware of it.
9. Patients were aware of the importance of their relationships with family members. They also wanted the family to be better educated about their illness.
10. A major point of intervention for families is helping them understand the health care system and how to make it work for them. Getting a patient into the hospital, and dealing with police and emergency rooms are major sources of stress. Future studies need to investigate the experiences of families in crisis and the roles of emergency personnel in that experience.
11. The issue of patient confidentiality is of great concern to families, who see it as a major barrier to working with health professionals. This issue and its ramifications need to be explored in future studies.

Stress

PI: Timothy Carey, MD, University of North Carolina

Grant No.: T32 HS00032

Grant Period: 9/1/89-6/30/03

Title: University of North Carolina, Chapel Hill, Training Program in Health Services Research

The predoctoral program invites applications from advanced doctoral candidates in any of 10 academic departments of the School of Public

Health (Health Policy and Administration; Epidemiology; Biostatistics; Health Behavior and Health Education; and Maternal and Child Health) or the Division of Academic Affairs (Economics; Sociology; Political Science; Geography; and Anthropology). On completion of the training program, both predoctoral and postdoctoral trainees will have gained a generalized background in contemporary health policy issues and the historical significance of these issues, a solid understanding of the most common statistical and study design methods applicable to health services research and policy analysis, and experience in the design and conduct of health services research under the supervision of at least one mentor with expertise in the subject and methods being used. They will also receive a set of materials to use as supporting references in their own work and a set of publishable data.

Findings: Traditionally, doctors have had almost complete control over their practices. However, as third parties (managed care plans, traditional insurers, and employers) exert more influence on the practice of medicine, physician job control dissipates, exposing doctors to ever-increasing stress. This project tests a model relating job stress to four intentions to withdraw from practice mediated by job satisfaction and perceptions of physical and mental health. The model suggests that higher perceived stress is associated with lower physician satisfaction levels, which in turn are related to greater intention to quit, decrease work hours, change specialty, or leave direct patient care. Doctors experiencing burnout, anxiety, and depression seem to deal with these problems by leaving patient care in some way other than quitting their jobs, decreasing work hours, or changing specialty. Higher levels of perceived stress result in poorer perceptions of physical health, which link with greater intentions to change specialty.

Also analyzed as part of this post-doctoral program was the prevalence of stressful life events and physical abuse among women prior to delivery. Women who are abused before and during pregnancy also show a high level of stressful life events, identified as residential moves, increased arguments with husbands/partners, family member hospitalizations, financial hardship, and deaths of loved ones. Because of the high frequency of these events and the abuse, a woman's care provider should ask patients about their lives and make referrals where appropriate.

PI: Allison C. Jeffrey, Virginia Polytechnic Institute and State University (Dissertation Grant)

Grant No.: R03 HS10036

Grant Period: 9/30/98-5/31/99

Title: Secondary Trauma Feedback to Domestic Violence Workers

The purpose of this dissertation was to study the incidence of secondary traumatic stress (STS) among domestic violence workers, specifically assessing the base rate for STS, the success of protection with coping skills, and the effectiveness of advice to alleviate STS.

Findings: This dissertation is not available at this time.

PI: Lisa S. Meredith, PhD, RAND (Dissertation Grant)

Grant No.: R03 HS06622

Grant Period: 9/1/90-8/31/91

Title: Effects of Stressful Life Events on Health Outcomes

The objective of this study was to investigate how stressful life events affect health outcomes of chronically ill elderly men and women over time and to develop a model for scoring life events across age groups. This research used data from the Medical Outcomes Study regarding 2,400 patients with one of four chronic illnesses (hypertension, diabetes, advanced coronary artery disease, and depression).

Findings: On the whole, except for resignation, retirement, and bereavement, the frequency of stressful events and of negative stressful events decrease with increasing age. Overall stress (health events excluded) seems to be associated with a few measures of health, such as increased symptomatology. Chronic as compared with acute events of a negative nature were associated with lowered levels of social functioning and increased fatigue; acute events were associated with increased pain. On the whole, older chronically ill people appear to adapt relatively well to stress as compared with younger ones.

Tools

PI: Paul D. Cleary, PhD, Harvard University (Cooperative Agreement)

Grant No.: U18 HS09205

Grant Period: 9/30/95-9/29/01

Title: Consumer Assessment of Health Plans Study

The goals of the project were to: (1) produce survey protocols for collecting reliable and valid information from consumers regarding their assessments of health plans and services, (2) develop and test the effectiveness of different report formats for conveying results to consumers and benefits managers, (3) demonstrate the resulting survey protocols, and (4) evaluate the usefulness of the survey information for consumers and purchasers selecting health plans and services. The study team selected the survey developed by the Research Triangle Institute under contract to AHRQ as the foundation for the proposed project. Special attention was devoted to refining the modules for, among others, persons with mental health problems.

Findings: The consumer survey, Consumer Assessment of Behavioral Health care Services (CABHS), can identify which aspects of the health insurance plan and treatment are priorities for improvement. Adult patients from both commercial health plans and public assistance plans were surveyed. Both commercial and public assistance respondents were least satisfied with the promptness of treatment from clinicians and aspects of care most influenced by health plan policies and operations, such as access to treatment and plan administrative services. The Experience of Care and Health Outcomes survey (ECHO™) was developed specifically to assess consumers' ratings of their behavioral health treatment, including mental health, alcohol and drug, and other substance abuse services. Managed behavioral health care organization and health plan versions of ECHO™ are currently available. ECHO™ will soon be incorporated into the Consumer Assessment of Health Plans (CAHPS®). Copies of the ECHO™ survey and additional information regarding ECHO™ are available at www.hcp.med.harvard.edu/echo/home.html.

PI: Donald Goldman, MD, Children's Hospital, Boston

Grant No.: T32 HS00063

Grant Period: 9/30/94-6/30/03

Title: Health Services Research for Children and Families

This grant to the Division of General Pediatrics and the Department of Hospital Epidemiology and Quality Improvement funds a

training program that is preparing two fellows each year with the skills necessary for carrying out health services research focusing on services affecting children and families. Trainees obtain core methodologic training in the disciplines of clinical epidemiology, biostatistics, health policy and services research, and quality improvement through an established program for physicians at the Harvard School of Public Health.

Supplementary pediatric health services methods are taught in seminars at Children's Hospital.

Findings: A growing number of troubled children and adolescents are showing up at hospital emergency departments (EDs), primarily for self-destructive behavior. By asking them just four questions, non-mental-health professionals in the ED can quickly identify children and adolescents who are suicidal, a critical first step to getting them into treatment. Responses to the four questions asked by the triage nurse identified 98 percent of children at risk for suicide, based on a standard 30-item Suicide Ideation Questionnaire (SIQ) later administered to them by a mental health clinician. The four questions assessed major factors in suicide risk: present and past thoughts of suicide, prior self-destructive behavior, and current stressors. Adding 10 questions to these 4 on the Risk of Suicide Questionnaire (RSQ) did not significantly improve the accuracy of identifying suicidal patients. The RSQ took less than 2 minutes to complete, and ED nurses reported in a post-study focus group that it reduced the stress of handling such patients. In addition, patients felt it was acceptable to discuss suicidal thoughts they had kept to themselves. For the most part, parents were relieved that a clinician was delving into a topic that they feared discussing with their children.

PI: David H. Gustafson, PhD, University of Wisconsin

Grant No.: R18 HS06177

Grant Period: 7/1/90-6/30/93

Title: Impact of Computer Support on HIV Infected

This study aimed to assess the impact of the Comprehensive Health Enhancement Support System (CHESS) on the health services utilization, health status, and risk behaviors of HIV-positive patients as compared to those patients without access to CHESS. The study made CHESS available to males presenting to

HIV testing sites in Milwaukee and Madison for a 3-week period in their homes and then in community sites. The study also analyzed cost and use patterns.

Findings: CHESS was formally tested and validated as a useful tool for influencing health services utilization, health status, and risk behaviors of HIV-positive patients. CHESS was later adapted, under funding by the National Cancer Institute, to aid smokers in trying to quit. A CHESS adaptation for cognitive behavior therapy was initially developed as part of the smoking cessation module. CHESS has also been, and will continue to be, generalized to adapt to other areas.

PI: David H. Gustafson, PhD, University of Wisconsin (Small Conference Grant)

Grant No.: R03 HS09567

Grant Period: 9/30/97-9/29/98

Title: Computer System to Support Alzheimer's Decisionmaking

The objective of this pilot project was to develop a new decisionmaking component for the Alzheimer's module of the Comprehensive Health Enhancement Support System (CHESS) and adapt a new behavior change program so that CHESS would support the implementation of decisions related to Alzheimer's disease by family caregivers. The project funded enhancements to the existing Alzheimer's CHESS program to best accommodate the individual needs of the different populations accessing CHESS. The decision support components were pilot tested to obtain a preliminary sense of its acceptance, use, and potential effects on the quality of life of family caregivers and their relationship with providers.

Findings: The outcomes of this research are currently being built upon by a research project funded by the California Foundation in which the researchers are developing and testing the Alzheimer's module in California. The Alzheimer's module is also being tested in the CHESS Research Consortium, a group of nine health care providers, including health plans, hospitals, and major medical centers.

PI: David A. Katerndahl, MD, University of Texas Health Science Center, San Antonio

Grant No.: R03 HS10676

Grant Period: 4/1/00-3/31/01

Title: Stability of Psychiatric Symptoms in Primary Care

The purpose of this pilot study was to determine the best methods to test the Dynamic Model of Mental Health Problems, a model used to represent the ever-changing levels of anxiety, depression, and physical symptoms that occur in patients, as opposed to the rather static criteria of the diagnostic system for mental disorders (DSM) currently used in health care settings. Mostly female, mostly Hispanic, primary care patients were randomly assigned to one of three groups—self-report interview, face-to-face interview, and telephone interview—and were surveyed at baseline and monthly for up to 6 months to assess their levels of anxiety, depression, and somatization.

Findings: The results of the study offer support for the Dynamic Model, with 47 percent of the subjects crossing the nondistressed-distressed threshold at least one time. The structured versus self-answer interview methods yielded similar results. The telephone and face-to-face followup methods yielded similar followup rates. However, the face-to-face interviews produced data that were more sensitive to social desirability.

PI: John V. Lavigne, PhD, Children's Memorial Hospital, Chicago

Grant No.: R01 MH59462 (co-funded with National Institute of Mental Health)

Grant Period: 9/1/98-5/31/02

Title: Treating Oppositional Defiant Disorder in Primary Care

This study examined the effectiveness of using a psychological intervention in primary care pediatric settings to help identify and treat preschool children with oppositional defiant disorder (ODD). It also evaluated how well a 10-week training program on parenting skills reduced the incidence of ODD and how well the intervention reduced the use of ambulatory and emergency room care. Two primary care treatment models for children aged 4-6 years with ODD, including a parent-training intervention with manually driven treatment and videotapes, were administered by either a pediatric nurse or mental health care professional and compared to a control group of families provided with usual care.

Findings: No findings are available at this time.

PI: Roderick K. Mahurin, PhD, Battelle Memorial Institute, Seattle (Small Meeting Grant)

Grant No.: R03 HS09828

Grant Period: 9/30/98-9/29/99

Title: Expert System Diagnosis of Depression and Dementia

The purpose of this study was to design and validate an expert decision system and a neural network classification system. The systems would be able to diagnose and differentiate between depression and dementia in the elderly. The systems were to be developed through four phases: knowledge acquisition, prototype development, usability testing, and system validation.

Findings: No findings are available at this time.

PI: Ian W. McDowell, MD, MSc, University of Ottawa

Grant No.: R01 HS06206

Grant Period: 9/1/89-12/31/91

Title: *Measuring Health, Revised Edition*

The purpose of this grant was to fund the preparation of a second, expanded edition of a reference book entitled *Measuring Health: A Guide to Rating Scales and Questionnaires*. Chapter topics already included physical disability, psychological well being, social health, pain measurement, quality of life, and general health measurements. This reference book provides a critical overview of the field of health measurement by giving full descriptions and copies of over 80 health measurement methods, summarizing the reliability and validity of each, and providing the information readers need to select the most appropriate measurement for their purposes and then apply and score the method chosen. The second edition includes a chapter on anxiety and depression, among other topics, as well as updates on the previous edition.

Findings: *Measuring Health: A Guide to Rating Scales and Questionnaires*, Second Edition, was published July 18, 1996, by Oxford University Press and contains chapters covering health status measurement scales for both depression and mental status testing. Ordering information is available at <www.oup.co.uk/isbn/0-19-510371-8>.

Contractor: The MEDSTAT Group

Contract No: 290-96-0005

Contract Period 9/30/96-3/13/98

Title: Quality Measurement Network

The purpose of this contract was to develop the Quality Measurement Network (QMNet), a project to create a quality measurement information resource through a collaboration between the public and private sectors. QMNet maximizes the capabilities of the Computerized Needs-Oriented Quality Measurement Evaluation SysTem (CONQUEST). It provides more detailed and comprehensive information on a wider range of clinical performance measures and a greater number of medical conditions, including age groups affected, prevalence, utilization and costs, potentially preventable adverse outcomes, comorbidities, risk factors, and clinical services recommended or not recommended on the basis of scientifically based guidelines. The goals were for QMNet to become a comprehensive, publicly accessible quality measurement resource that helps both the public and private sectors to improve health care quality and for QMNet to help create a free-standing quality network.

Findings: QMNet, CONQUEST's technical assistance program, successfully modified the quality improvement tool in order to maximize its capabilities. CONQUEST users can obtain free technical assistance through AHRQ's QMNet contractor by calling 800-865-5380.

P.I.: Heather Palmer, MB, BCh, SM, Harvard University

Contract No: 290-91-0070

Contract Period: 9/25/91-2/29/96

Title: Development of Medical Treatment Guidelines

The purpose of this contract was to facilitate the development of guidelines, standards, performance measures, and review criteria by panels of appropriately qualified experts and consumers of health services. This contract was to provide for the preparation of appropriate substantive premeeting information and background materials and for all the logistical, administrative, and other support required to prepare for, conduct, and report on panel meetings and other activities associated with the development, review, and updating of guidelines for AHRQ.

Findings: CONQUEST (COmputerized Needs-Oriented QUality Measurement Evaluation SysTem) 1.0 was developed under

this contract. CONQUEST is a quality improvement software tool that uses a common structure and language to help users identify, understand, compare, evaluate, and select measures to assess and improve clinical performance. CONQUEST is comprised of two databases—one for clinical performance measures and one for conditions. Among other areas of concentration, CONQUEST includes measures linked to conditions such as anxiety disorder, depression, behavioral problems, and panic disorder; measures linked to procedures such as electroconvulsive therapy; measures adaptable for use with Alzheimer's disease, bipolar disorder, bulimia nervosa, schizophrenia, and substance abuse; and condition reports for Alzheimer's disease, depression, substance abuse, and schizophrenia. The development of CONQUEST was funded by AHRQ. CONQUEST 2.0 is the most current version and supersedes versions 1.0 and 1.1. The CONQUEST 2.0 database and its User's Guide and Quick Start Summary can be downloaded directly from AHRQ's Web site at <<http://www.ahrq.gov/qual/conquest.htm>>. For free technical assistance and more information about CONQUEST 2.0, contact Marge Keyes at 301-594-1824 or via e-mail at mkeyes@ahrq.gov.

PI: Bruce L. Rollman, MD, MPH, University of Pittsburgh

Grant No.: R01 HS09421

Grant Period: 9/30/96-3/31/00

Title: Depression Care Using Computerized Decision Support

The objective of this research was to develop and implement a computerized decision-support system that prompts primary care physicians (PCPs) to implement treatment recommendations based on the AHRQ-sponsored practice guideline on depression in primary care and, subsequently, to conduct a randomized clinical trial of the clinical outcomes and costs of providing care this way. The researchers studied 240 patients with a current episode of major depression, as evaluated by the Primary Care Evaluation of Mental Disorders (PRIME-MD), and presenting to an urban academic medical center. Researchers also hoped to evaluate the effects of disseminating the depression guideline by computer on physicians' knowledge, attitudes, and practices.

Findings: The electronic medical record (EMR) is an efficient method by which to

disseminate clinical practice guidelines and to direct utilization by PCPs. The PRIME-MD is an efficient method by which to screen and identify patients with major depression in a busy primary care practice. Once patients have been screened for major depression using the PRIME-MD, disseminating a treatment guideline via an EMR system to those PCPs who agree with the diagnosis is helpful but may be insufficient for improving treatment outcomes for psychiatric illness, especially when compared to more labor-intensive interventions. However, electronic notification of the diagnosis of major depression can increase the likelihood that a PCP will initiate a clinical response. Busy PCPs will respond to electronic notification messages concerning the psychiatric morbidity of their patients and recommend a mental health intervention. PCPs agreeing with the diagnosis were found to initiate pharmacotherapy treatment more quickly when given electronic reminders, although rates of referral to mental health specialists were not affected.

PI: Barbara Starfield, MD, MPH, Johns Hopkins University

Grant No.: R01 HS07045

Grant Period: 2/1/92-1/31/96

Title: Development of an Adolescent Health Status Measure

This study refined a previously developed health status measure, the Child Health and Illness Profile (CHIP), for adolescents. The CHIP-Adolescent Edition (CHIP-AE™) was intended as a self-administered comprehensive health status measure, examining health, well-being, and functional status. The researchers assessed the reliability and validity of the instrument by testing it on samples of adolescents aged 11-17 years from eight urban middle and high schools in Appalachia and the rural South and from three hospital clinics for children with chronic illness and two acute illness clinics of two hospitals.

Findings: The study was successful in developing, validating, and making available a feasible and practical tool (the CHIP-AE™) for assessing the health status of 11- to 17-year-olds across a comprehensive range of domains. The six domains address health-related characteristics, including functional status and quality of life. They are discomfort, disorders, satisfaction with health, achievement of social expectations (development appropriate to age), resilience, and risks. The discomfort domain

includes a number of internalizing mental health components, and the disorders domain includes psychosocial components. Many of the other domains incorporate both mental and physical health together to assess health status. The CHIP-AE™ is designed for self-administration in both community and clinical settings, is person focused rather than disease focused, and can be used to assess changes occurring over time or in response to health services interventions targeted at groups of adolescents. The executive summary and final report are available for a fee from the National Technical Information Service, 800-553-NTIS. The NTIS accession no. is PB96-182563.

PI: Pamela G. Williams-Russo, MD, Hospital for Special Surgery, New York

Grant No.: R01 HS06530

Grant Period: 1/1/92-12/31/95

Title: Assessment-Validation of Cognitive Function Scale

The purpose of this study was to develop a multi-item scale of cognitive functional status that can be used in practice and research to evaluate change in cognitive function in the elderly and that can be integrated with other patient-centered measurements of functional status and well-being. The researchers tested the reproducibility, validity, and responsiveness of the scale and integrated the results with those obtained using the Medical Outcomes Study instrument (SF-36) and results from formal neuropsychologic testing. The researchers compared interviews of patients with a low comorbidity index, patients with a high comorbidity index, and patients pre- and post-coronary artery bypass surgery. All patients were over the age of 65.

Findings: No findings are available at this time.

Trauma

PI: Edward E. Cornwell III, MD, Howard University (Small Conference Grant)

Grant No.: R13 HS07854

Grant Period: 6/1/93-5/31/94

Title: Urban Trauma: Prevention, Acute Care, Economic Impact

The purpose of this conference was to examine issues in traumatic injuries, especially intentional injuries and those secondary to interpersonal violence. These issues were

discussed at length by experts and were the subject of questions for further research and of strategies for addressing the problem. The results of the conference were to be distributed to a specific target audience including health care providers and others with interest in intentional injury.

Findings: No findings are available at this time.

PI: Sureyya S. Dikmen, PhD, University of Washington

Grant No.: R01 HS06497

Grant Period: 8/1/91-7/31/95

Title: **Head Injury Outcome**

This study examined the determinants of head injury outcome and the factors that predict outcomes. The factors considered include severity of the injury, source of payment, basic demographics, pre-existing conditions, and use of rehabilitation services. The study analyzed results of three longitudinal studies of head injury outcomes, involving 500 adult head-injured cases and 280 comparison subjects followed for 1 to 2 years prior to injury.

Findings: Outcomes are closely related to the severity of the brain injury and also to pre-injury characteristics of the individual, as well as other injuries sustained in the same accident.

Disruptions are most prevalent early on, but with recovery, most of the mildly injured do well by 1 year; with increasing severity, the probability of permanent disability and partial or complete dependence on others increases. Pre-injury alcohol abuse was frequent, with 42 percent of the patients legally intoxicated while in the emergency department. Alcohol problems had decreased sharply 1 month after injury, but after 1 year, drinking was almost to the level of the year preceding injury. The researchers suggest the 1-month period immediately after injury may be a natural window of opportunity in which to treat alcohol problems. Within the study, patients who received treatment for alcohol abuse after head trauma decreased the amount they drank per sitting from 6.4 to 3.0 drinks, compared with a decrease of 3.5 to 2.0 drinks for patients who did not receive treatment.

PI: Troy L. Holbrook, PhD, University of California, San Diego

Grant No.: R01 HS07611

Grant Period: 8/1/93-7/31/99

Title: **Prospective Study of Functional Limitation After Trauma**

Using the computerized San Diego County Regional Trauma System Registry (TREG) trauma patient database, this prospective epidemiologic study determined the incidence and predictors of functional limitation after major trauma in approximately 1,200 men and women admitted to the University of California, San Diego (UCSD) Trauma Center. Functional limitation after major trauma was measured using the Quality of Well-Being (QWB) scale at four time points; at discharge and 6, 12, and 18 months after discharge. Predictors measured include: (1) injury severity and body area(s) injured, (2) clinical course and treatment of the trauma, (3) sociodemographic characteristics, (4) social support, and (5) post-injury psychological sequelae, including depression and post-traumatic stress disorder.

Findings: Victims of major trauma as a whole are a significantly disabled group 6 months after the trauma, with only 11 percent back to the quality of well-being (QWB) they had prior to the traumatic injury. Those most likely to have lower quality of life 6 months after injury are those who suffered post-injury depression, post-traumatic stress disorder, or serious extremity injury and those who had a longer hospital stay. QWB scores (which measure mobility, physical activity, and social activity) before injury reflected the norm for a healthy adult population (mean of 0.81). However, QWB scores reflected significant functional limitation at discharge (mean of 0.401) and at 6-month followup (0.633). In fact, only 11 percent of patients 6 months after injury had QWB scores above 0.800. In contrast, activities of daily living (ADL) scores showed only moderate dysfunction at discharge (mean of 30) and at 6-month followup (mean of 15). The authors conclude that the QWB yields a more sensitive assessment of functional status of trauma victims than traditional ADL instruments.

PI: Troy L. Holbrook, PhD, University of California, San Diego

Grant No.: R01 HS09707

Grant Period: 9/30/98-9/29/03

Title: **Study of Functional Outcome After Trauma in Adolescents**

This study seeks to determine the incidence and determinants of functional limitation following major trauma in adolescents. This prospective epidemiologic study utilizes the trauma patient database of the San Diego County Regional Trauma System Registry to

determine the incidence and factors influencing functional limitation in 525 male and female adolescents aged 12-17 years admitted to six trauma centers in San Diego County. Functional limitation is measured using the Quality of Well-Being (QWB) scale. Possible predictors of functional limitation include post-injury psychological sequelae such as depression and post-traumatic stress disorder.

Findings: No findings are available at this time.

Violence

PI: Jacqueline S. Dienemann, PhD, RN, Georgetown University School of Nursing

Grant No.: R03 HS10731

Grant Period: 9/30/99-3/30/01

Title: Domestic Violence Assessment and Intervention

The purpose of this study was to: (1) determine the validity and reliability of the Domestic Violence Survivor Assessment (DVSA) tool, which profiles a survivor's perceptions of her relationship, the violence, and herself, and identifies a survivor's primary motivation for change; (2) identify survivor preferences for clinical intervention; and (3) develop a domestic violence clinical pathway.

Findings: The researchers have validated the DVSA screening tool. The DVSA instrument is being used as part of assessment in other research on battered women. The Montgomery County, MD, Department of Abused Persons and the House of Ruth in Baltimore arranged to use the DVSA for their counseling and victim assistance outcomes and shelter outcomes, respectively. The researchers also developed a clinical pathway, formatted as a 2-page foldout, for treatment after disclosure of intimate partner violence. Copies of the pathway have been sent to a review panel and members of Nursing Network on Violence Against Women International. The tool is fully described in the March 2002 *Patient Education and Counseling Journal* (46(3):221-8). Information can also be obtained on the AHRQ Web site.

PI: Emalee G. Flaherty, MD, Children's Memorial Hospital, Chicago

Grant No.: R03 HS09811

Grant Period: 3/1/98-2/28/99

Title: Childhood Injuries Evaluated in the Office Setting

This study examined instruments for assessing pediatric office management of injuries in children and recognition, reporting, and management of suspected child abuse by pediatricians in the office setting. This effort focused on three goals: (1) determining the incidence of suspected child abuse injuries seen in an office setting, (2) determining management and scope of childhood injuries seen in an office setting, and (3) testing the feasibility of the research design and instruments for a nationwide study. Health care providers in a regional practice-based network completed written survey forms about their experience in treating child abuse. The same providers then collected information prospectively about consecutive office encounters. They recorded detailed information about injury-related visits involving about 659 injuries treated during 12,510 office encounters.

Findings: Primary care physicians (PCPs) had "some suspicion" that 21 percent of the childhood injuries they evaluated were caused by abuse. Injuries not compatible with the child's medical history and parental delays in seeking medical care for the injury were red flags that raised doctors' suspicions of abuse. Suspicion of abuse was also more likely to be associated with higher injury severity, age less than 6 or 7 years old, Medicaid or self-pay health care, family risk factors for abuse such as domestic violence or substance abuse, and more recent physician education about child abuse. PCPs were more likely to suspect abuse of Hispanic or black children and children whose mothers had less than a college education. Most but not all cases were reported. PCPs cited past negative experiences with child protection agencies and perceived lack of benefit for the child as reasons for not reporting.

PI: Emalee G. Flaherty, MD, Children's Memorial Hospital, Chicago

Grant No.: R01 HS10746

Grant Period: 9/30/01-9/29/05

Title: Child Abuse Reporting Experience Study (CARES)

This prospective study of practitioner management will provide the first comprehensive description and analysis of the management of suspected child abuse (SCAN) in primary care practices. Data will be collected on 16,000 childhood injuries in the Pediatric Research in Office Setting (PROS) Network using a protocol that is derived from one that was piloted in a regional practice-based research network. The data collected will be used to

address the following specific aims concerning the care of SCAN by primary care providers (PCPs): (1) identify PCP-related factors that affect identification of maltreatment, (2) identify PCP-related factors that affect management of any suspicious injuries, and (3) assess the validity of PCP management of childhood injuries.

Multivariate logistic regression modeling will be used to develop a robust model of PCP decisionmaking concerning SCAN. This study will provide the most thorough description ever of SCAN in primary care, thus providing important data needed for both research and policy in the area of child abuse identification and management.

Findings: No findings are available at this time.

PI: Lise E. Fried, Health and Hospitals of the City of Boston (Dissertation Grant)

Grant No.: R03 HS08008

Grant Period: 9/30/93-9/29/96

Title: **Violence Against Pregnant Women and Pregnancy Outcomes**

The purpose of this study was to investigate the relationship between battering during pregnancy and the neonatal outcomes of the pregnancy, such as incidence of low-birth-weight babies and infant mortality. The study also sought to investigate the lives of abused women to achieve a greater understanding of the violence and its impacts.

Findings: This dissertation is not available to date.

PI: Janet Y. Groff, MD, PhD, University of Texas Health Sciences Center, Houston

Grant No.: R01 HS11079

Grant Period: 9/30/00-8/31/04

Title: **Treatment Outcomes for Abused Women in Public Clinics**

The objectives of this study are to create, administer, and test the proficiency of nurse case management and group education for African-American, Hispanic, and white abused women in inner-city primary care clinics and to analyze the effect of such intervention on the health and medical utilization of abused women's children.

Findings: No findings are available at this time.

PI: S. Paige Hall, MSPH, Durham, NC (Dissertation Grant)

Grant No.: R03 HS06944

Grant Period: 8/1/91-5/31/93

Title: **Intimate Relationship Abuse Perception Scale**

This research attempted to create and validate an Intimate Relationship Abuse Perception (IRAP) Scale by which the researchers could measure the degree to which battered women believe they have experienced intimate relationship abuse, including not just physical abuse but also sexual and psychological abuse. The scale was incorporated into a women's health survey and distributed to 150 women, both abused and nonabused, allowing the women themselves to rate their own health status including the IRAP measures.

Findings: No findings are available at this time.

PI: Laurel K. Leslie, MD, Children's Hospital Research Center (Small Meeting Grant)

Grant No.: R03 HS09563

Grant Period: 9/30/97-9/29/99

Title: **Medicaid Changes: Impact on At-Risk Children**

The goal of this study was to assess the impact of enrollment in Medicaid managed care on families at risk for child abuse and neglect concerning their access to primary care services as well as the effectiveness of the protective effect offered by home visitation services. The study sampled 448 mothers and their infants identified at delivery as at-risk who participated in a trial of home visitation services in San Diego County.

Findings: No findings are available at this time.

PI: Wendy Levinson, MD, University of Chicago

Grant No.: R01 HS11096

Grant Period: 9/30/00-8/31/03

Title: **An RCT of Computer Screening for Domestic Violence**

This randomized controlled trial aims to test the use of a self-administered computer health risk assessment of domestic violence (ED Prevent) to alert physicians of patients' high-risk behaviors. The study is being conducted in two emergency departments, one urban and one suburban, and will screen 800 women patients. The study also examines the outcomes of the utilization of ED Prevent concerning

communication, discussion, and referral of domestic violence.

Findings: No findings are available at this time.

PI: Laura McCloskey, PhD, Harvard University School of Public Health

Grant No.: R01 HS11088

Grant Period: 9/30/00-8/31/05

Title: **The Cost and Benefits of Intervening: Battered Women's Health Over Time**

The purpose of this study is to compare the impact of interventions, either by staff training or by in-house service programs, on the mental and physical health of abused women, as well as to assess the long-term health care utilization of the women. The study will track at least 400 women from several hospitals in Boston over a period of 4 years. The study will compare the medical costs of violence to both the cost to the physical and mental health of the women and the potential cost to society as a whole.

Findings: No findings are available at this time.

PI: Naomi Pless, MD, University of Rochester

Grant No.: R03 HS11490

Grant Period: 9/1/01-8/31/02

Title: **Domestic Violence: Pilot Detailing of Physicians**

Multimodal educational outreach, which has been shown to improve physician performance in areas other than domestic violence (DV), may be an effective tool for training physicians to screen and manage DV in primary care. Therefore, this study will: (1) evaluate the feasibility of an onsite multimodal intervention designed to improve physician screening and management of DV in primary care; (2) evaluate the impact of the intervention on physician attitudes, knowledge, behavior, and office systems regarding detection and management of DV; and (3) evaluate the feasibility of using simulated patients (SPs) to assess physician skills for screening and managing DV. This team will use multimodal educational outreach to four family practice physicians regarding appropriate screening and management of DV. A trained DV detailer will make periodic office visits to educate the physician and staff on appropriate screening and management of DV. The feasibility of this approach will be evaluated using quantitative and qualitative methods, including physician and patient surveys, chart reviews, simulated patients, semi-

structured interviews with physicians and staff, DV detailer notes, and review of audiotapes of detailing sessions, SP visits, and physician and staff interviews.

Findings: No findings are available at this time.

PI: Michael Rodriguez, MD, MPH, University of California, San Francisco

Grant No.: R01 HS11104

Grant Period: 9/30/00-9/29/04

Title: **Outcomes for IPV: Patient and Provider Perspectives**

The aims of this project are to quantify patient preference for potential health care outcomes for intimate partner violence (IPV) interventions, to quantify provider preference for potential health care outcomes for IPV interventions for their patients, and to determine the preference differences between patients and their providers. The project aims broadly to determine the short- and long-term health care outcomes for IPV interventions within the health care settings. The study will focus primarily on women of low socioeconomic status and minority women, specifically Latina women, who are receiving prenatal care from the public sector.

Findings: No findings are available at this time.

PI: Diana Shye, PhD, Kaiser Foundation Research Institute

Grant No.: R03 HS09525

Grant Period: 6/1/97-5/31/99

Title: **Domestic Abuse, Health Status, and HMO Health Care Use**

The purpose of this research was to analyze existing data sets of adult and child health maintenance organization (HMO) members to examine the relationship among exposure to domestic violence, health status, and the utilization and costs of health care services. The researchers used data from the Kaiser Permanente Northwest Region, a not-for-profit prepaid group practice HMO consisting of about 400,000 members. Researchers compared three populations: adults aged 18 years or more; women aged 18-49 years; and children aged 4-17 years.

Findings: A little over 12 percent of participants reported exposure to either verbal or physical abuse by someone close within the prior year, although only 2.3 percent reported any physical abuse. Both types of abuse were

more common for women than for men, especially those aged 18-49 years. Abuse was also more common for the unmarried and those living without partners than for the married or those living with partners. Participants exposed to abuse were significantly more likely to report high levels of ill health and functional limitations and less likely to report high levels of good health and absence of functional limitations. Participants exposed to abuse were also 3 to 4 times more likely to report high levels of depressive symptoms. Participants exposed to domestic violence (DV) were more likely to use outpatient specialty mental health care, to obtain prescriptions for antidepressants and anxiolytic medications, and to make outpatient visits and use emergency room or urgent care services. DV-exposed adults had higher primary care costs (5 percent) than non-exposed participants, and DV-exposed women aged 18-49 years had higher overall utilization costs (12 percent) than those not exposed to DV. The results of the child sample were inconclusive.

PI: Meredith N. Silverstein, MS, University of Colorado Health Science Center (Dissertation Grant)

Grant No.: R03 HS11269

Grant Period: 9/30/00-9/29/02

Title: *Intimate Partner Violence and Pregnancy in Primary Care*

The purpose of this research is to determine the prevalence of and factors contributing to interpersonal physical violence during pregnancy in a primary care population. The study proposes to administer surveys to about 1,600 pregnant women presenting for care in a primary-care-practice-based research network. The study also proposes to establish a set of easily detectable markers of an increased risk of abuse during pregnancy to be provided to primary care practitioners.

Findings: No findings are available at this time.

PI: Ellen Taliaferro, MD, Parkland Foundation, Dallas, TX

Grant No: R13 HS11837

Project Period: 6/1/01-5/31/02

Title: *First National Conference on Medical Care and Domestic Violence*

This conference will provide a forum for discussion and dissemination of current research on the treatment of domestic violence in areas of medical and psychiatric care. The goals of

the meeting are to improve the quality and effectiveness of general medical and psychiatric care delivered to victims and the health care system's ability to provide high-quality care. An integrated research agenda framework will be developed.

Findings: No findings are available at this time.

PI: Robert Thompson, MD, Center for Health Studies, Seattle

Grant No.: R01 HS07568

Grant Period: 3/1/95-5/17/98

Title: *Domestic Violence Identification: Outcomes/Effectiveness*

This study was designed to help primary care providers identify and treat victims of domestic violence (DV). The researchers tested a clinic-level intensive educational campaign to help physicians and other caregivers recognize adult patient injuries and other medical conditions, such as depression or chronic pain syndromes, that may be the result of DV. Another goal of the project was to identify ways to improve the overall management of cases involving DV. The project was conducted in four outpatient clinics of Group Health, a large staff-model health maintenance organization serving Washington State and Idaho, with special training provided in two of the clinics (ICs), while the other two clinics served as controls (CCs). The effects of the program on uncovering DV and the costs for implementing the DV intervention program were assessed.

Findings: A high percentage of clinicians and nurses/assistants believed that incidence of DV in their practices was low, and many had never identified an abused person. Forty-five percent of clinicians either never or seldom asked about DV when examining a patient, and all participants were more confident in asking about smoking habits or consumption of alcohol than about DV. Many participants believed that they lacked the strategies and management information to deal with DV and abused persons. The intervention had very positive effects on providers' self-efficacy and three other domains at 9 months, with sustained positive effects on self-efficacy, fear of offense, and safety concerns at 21 months. Record-based results at 1 year of followup were as follows: recorded asking about DV increased by 14.3 percent absolute, which was fourfold higher than the CC change; case-finding increased 1.3-fold in the ICs compared with the

CCs; and quality of recorded management did not change.

PI: Robert Thompson, MD, Center for Health Studies, Seattle

Grant No.: R01 HS10909-01

Grant Period: 4/1/02-3/31/06

Title: Long-Term Health Care Effects of Domestic Violence

These researchers will assess the longitudinal impact of domestic violence (DV) on the health care cost and utilization of women and their children over an 11-year period. The main outcomes to be examined are health care costs, utilization rates and patterns (from International Classification of Diseases codes), physical health status, mental health status, social functioning, and risk profiles. The methodology includes a population-based telephone survey of a random sample of 6,667 women 18-64 years who have been Group Health Cooperative enrollees over the last 3 years to establish the presence or absence of DV.

Findings: No findings are available at this time.

PI: Mary Zachary, MD, Montefiore Medical Center

Grant No.: 1 K08 HS011297

Grant Period: 10/1/02-9/30/07

Title: Cost Effectiveness of Domestic Violence Interventions

The goals of this project are to: (1) investigate the effectiveness of domestic violence intervention components; (2) establish a methodology to define outcome measures for domestic violence interventions that incorporate patient, community, and expert viewpoints; (3) explore the feasibility of monitoring these outcomes measures with a longitudinal cohort study; (4) based on outcomes of the first three goals, create a methodology for a cost-benefit analysis of domestic violence interventions; and (5) use the results of this project as the basis for an ROI application to investigate the cost effectiveness of primary-care-based domestic violence interventions in a controlled clinical trial. Accomplishment of Goal 5 will provide the foundation for the candidate's career development as an independent investigator.

Findings: No findings are available at this time.

Other

PI: Ronald M. Epstein, MD, University of Rochester

Grant No.: R01 HS10610

Grant Period: 9/30/00-8/31/03

Title: Patient-Centered Care and Health Care Costs

The objective of this study is to examine the relationship between patient-centeredness and health care costs, as well as impact on patient health status and patient satisfaction. The researchers are analyzing data from 100 primary care physicians and 50 patients per physician, administering various questionnaires and reviewing audiotapes to gauge the level of patient-centeredness, and utilizing a managed care database to assess case-mix-adjusted costs. The multimethod research methodology will provide a link between cost data and patient encounters, which may help to improve on, among other things, psychological assessments and detection of mental illness.

Findings: No findings are available at this time.

PI: Michael L. Ganz, BA, MS, PhD, Harvard School of Public Health

Grant No.: R03 HS13047

Grant Period: 4/1/02-9/30/03

Title: Child Mental Health and Mental Health Service Use

The purpose of this project is to examine the family, socioeconomic, clinical, and insurance correlates of mental health conditions and related services for children in the United States and to provide a baseline for tracking changes in the system over time. This project is motivated by the fact that there is little information about mental-health-related service use for children and about how key factors, including insurance characteristics, influence the use of those services, especially information based on current national surveys. It is also motivated by the fact that changes in financing methods for health insurance coverage for children may have important implications for access and utilization of needed services for children with mental health conditions. Furthermore, little is known about how child mental health conditions and mental health services use impact the family. The specific aims of this project are to: (1) characterize the population of children (21 years of age and under) in the United States who have

mental health conditions with respect to family, socioeconomic, clinical, and insurance coverage factors; (2) estimate utilization and expenditure patterns and sources of payment for overall health care and care within specific categories of services by age, diagnosis, insurance coverage groups, and family characteristics; and (3) assess the impact of a child's mental health condition on maternal employment.

Findings: No findings are available at this time.

PI: Michael S. Hendryx, PhD, Washington State University (Small Conference Grant)

Grant No.: R13 HS09851

Grant Period: 7/1/99-6/30/00

Title: Public Mental Health Outcomes Risk Adjustment

The purpose of this conference was to implement and assess a research agenda regarding risk-adjustment outcomes and utilization in public mental health organizations. Conference attendees included various public mental health representatives. Presentations focused on previous research on mental health risk adjustment, on important mental health treatments and utilization of health outcomes and predictors, and on current monitoring systems for mental health outcomes. Work group sessions focused on developing a research agenda. In addition to producing a research agenda, the conference intended to generate a structure for implementation of the research agenda and published proceedings.

Findings: The conference generated a written conference report and grant writing plans and teams. Several articles were published in a special section on risk adjustment of the *Journal for Mental Health Services Research*, Vol. 28, No. 3, August 2001. The meeting summary report is available for a fee from the National Technical Information Service, 800-553-NTIS.

PI: Michael S. Hendryx, PhD, Washington State University (Small Conference Grant)

Grant No.: R13 HS10112

Grant Period: 9/15/00-9/14/01

Title: Measuring Mental Health Outcomes Fairly

This conference built on the conference held in 1999 by bringing together various university researchers and public and private mental health representatives to work on developing and implementing a research agenda on valid measurement and use of mental health

outcomes. The meeting was a working conference, seeking the long-term objective of implementing and evaluating a valid approach to data collection, risk-adjustment analysis, and reporting in mental health organizations, so that outcomes may be used fairly in comparative evaluation of mental health services organizations. Another aim of the conference was to motivate collaboration projects. Products include a conference proceedings manuscript distributed on the national mental health outcomes e-mail listserv.

Findings: Specific research proposals were generated in three States (Washington, Oklahoma, and Virginia), and an R01 application was submitted to the National Institute of Mental Health to develop risk-adjustment models using each State's respective administrative databases. Another result of this conference is funding from the Evaluation Center at the Center for Human Services Research Institute (HSRI) to develop a risk-adjustment toolkit, an instructional CD, and an interactive Internet risk adjustment workshop to accompany the toolkit and CD. Additionally, a second conference on the issue of risk adjustment was funded by the Oklahoma Department of Mental Health and Substance Abuse Services. The meeting summary is available for a fee from the National Technical Information Service, 800-553-NTIS. The NTIS accession no. is PB2002-102930.

PI: Nancy E. Lombardo, PhD, Hebrew Rehabilitation Center for the Aged, Boston (Small Conference Grant)

Grant No.: R13 HS07696

Grant Period: 4/1/93-9/30/95

Title: Overcoming Barriers to Mental Health Care of Nursing Home Residents

This conference aimed to encourage research concerning: the status of and barriers to mental health care in nursing homes; the effects of Federal policies on access, treatment, costs, quality, staffing alternatives, and financing of mental health care to nursing home residents; the projected impacts of changes in demographics, Federal budget crisis situation, financing, and private and government funding sources on mental health care in nursing homes; and the research agenda needed to address the needs and advances made in care and treatment, program design, and financing of mental health services to individuals in nursing homes. The conference also intended to develop policy

options and recommendations to improve mental health care of nursing home residents.

Findings: A policy brief was published in 1995 in the *Journal of Mental Health and Aging*. It describes the activities of the conference and the specific recommendations that were developed as they related to the central themes of the meeting: financing and reimbursement, treatment and practice, and service delivery and quality management. Also addressed in the brief are the prevalence of mental health problems in nursing homes, treatment rates, and treatment gaps. Some descriptions of model programs are included, as well as past Federal and State policies relevant to mental health problems in nursing homes.

PI: Michael Marmot, MD, University College London, United Kingdom

Grant No.: R01 HS06516

Grant Period: 9/30/90-3/31/96

Title: Social Factors Influencing Medical Outcome Measures

The Whitehall II project is a prospective study that examined causes of socioeconomic inequalities in health among 10,314 male and female civil servants ages 35-55 in London. In order to supplement that study, AHRQ funded this project to measure health-related functioning. The objectives were to: (1) validate the MOS-General Health Survey in a general population sample in Britain; (2) examine the relationship between functional status and other self-reported and measured components of health; (3) examine the relationships among socioeconomic status, functional status, and perceived well-being; (4) assess the impact on functional status and perceived well-being of features of lifestyle, work environment, social networks and types of social support, and socioeconomic circumstances, both current and during childhood; and (5) establish a cohort in which the prospective significance of functional status can be investigated. Subsequent sickness absence, major morbidity, and mortality were related to the baseline measures of functional status.

Findings: Although it has commonly been believed that men's identities are tied more to their roles at work and women's to their roles at home, it has now been determined that the level of control at home and work affect men and women differently, but social position affects the extent of the impact. Women who had little latitude for decisionmaking at work had more

than a 40-percent risk for depression, and men with the same lack of control had a 50-percent greater risk for depression than women and other men who had greater latitude for decisionmaking at work. Both genders in middle employment grades with low control were at greater risk for depression and anxiety than those in lower or higher grades. Both genders with low control at home were also at greater risk for depression and anxiety. Women with low control had over twice the risk for depression of women with high control, even after adjusting for marital status, number of children, and caregiving status. In addition, 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. Men in the highest grade with low control at home were at higher risk for anxiety than men in lower grades, while women in the lowest grade had a higher risk for anxiety than women in higher grades. Overall, men and women in the lowest civil service grades had the highest risk for depression and anxiety. Factors such as social support, life events, and material problems may be influential. Differences in the health of individuals reflect inherent features of the societies in which they live.

The way a society organizes itself and delivers well-being to its members are major determinants of health. Social, economic, and political factors have an important influence on health and longevity. Social position and lifestyle only partially explain ill health. Psychosocial factors, such as a sense of isolation, deprivation, or loss of control, are also important. Governments can reduce health inequalities by ensuring that all policies are assessed for their potential impact on the health of all sectors of society.

Male British civil servants who consume 30 or more units of alcohol (a unit is equivalent to a glass of wine or beer or one ounce of spirits) a week have 12-percent more short work absences (1 week or less) than those who drink 10 or fewer units a week. Male employees who drink more than once a day have 18-percent more short work absences than those who drink once or twice a week. This study showed that work absences longer than 1 week were lowest in men who drank 11-15 units of alcohol each week and were highest in men who either did not drink at all or drank heavily. Women's long and short work absences were not related to how much or

how often they drank, with one exception. Women who never drank had 20 percent more short absences and 25 percent more long absences than women who drank once or twice a week. Men and women in the lower employment grades were more likely to be nondrinkers, while those in top administrative grades were more likely to drink alcohol at least once a day. Overall, men were more frequent and heavier drinkers than women, but these differences were less marked in higher employment grades.

PI: Ruvanee M. Pietersz, MA, University of Chicago (Dissertation Grant)

Grant No.: R03 HS10565

Grant Period: 9/30/99-6/30/01

Title: Psychosocial Interventions for Metastatic Breast Cancer

The goal of this dissertation was to give a descriptive account of the progressive psychosocial effects of metastatic breast cancer and to examine the impact of interventions to prevent psychosocial deterioration. The study analyzed data from an existing expressive-supportive group psychotherapy intervention study, from an Internet support group, and from a control no-intervention group to assess the effects of intervention on psychosocial factors in women with metastatic breast cancer.

Findings: This dissertation is not available at this time.

PI: Xinhua S. Ren, PhD, New England Medical Center Hospitals, Inc.

Grant No.: R03 HS09352

Grant Period: 9/30/96-3/31/98

Title: Assessment of Functional Health Status Among Elderly Chinese

The purpose of this research was to develop and test new measures of functional health status among elderly Chinese Americans. The researchers tested 219 elderly Chinese in Boston, using the newly developed Chinese version of the SF-36 health status questionnaire to explore how the elderly Chinese perceive their own health and how their perceptions of health status, as well as sociocultural factors, influence their health behaviors.

Findings: Although those interviewed perceived similar or better physical health compared with the norm for other U.S. populations, they reported worse mental health. Yet elderly Chinese are less likely to use mental health services because of the stigmatization of

mental problems and their fear of disgracing the family.

PI: John W. Robinson, Johns Hopkins University (Fellowship Grant)

Grant No.: F32 HS00068

Grant Period: 9/1/93-8/31/94

Title: Health Services Research and Biostatistics

The purpose of this study was to examine the factors influencing community-based primary care physician (PCP) recognition of mental health problems in patients presenting solely somatic reasons for visiting. The researchers reviewed 308 audiotaped interviews between patients indicating significant psychological distress and their respective PCPs to measure three effects on physician recognition of mental health problems. These effects were: (1) the effect of patient self-assessed emotional condition, measured independently from the encounter with the physician, on patient disclosure of psychological symptoms or psychosocial concerns later in the visit, subsequent to presentation of solely somatic reasons for the visit; (2) the effect of physician inquiry about psychological symptoms or psychosocial concerns on patient disclosure of such symptoms and concerns; and (3) the effect of patient disclosure of psychological symptoms or psychosocial concerns later in the visit, subsequent to presentation of solely somatic reasons for the visit.

Findings: Patient disclosure of psychosocial problems occurred in 51 percent of the visits and in 67 percent of the visits with prior psychosocial inquiry by the PCPs. The likelihood of disclosure was increased by prior inquiry, greater patient-physician familiarity, and greater severity of patient psychological distress. Sixty percent of patients who disclosed psychosocial problems were counseled by their PCP, and 30 percent of those patients who disclosed psychosocial problems were prescribed psychotropic medications. The likelihood of counseling for patients who disclosed psychosocial problems was lowest for new patients and otherwise inversely related to the number of previous visits. The counseling sessions, although brief, accounted for significant increases in visit durations. The researchers conclude that if PCPs inquire, especially by merely adding one or two questions about mood or interpersonal problems to their clinical interviews, most psychologically

distressed, somatically presenting patients will disclose psychosocial problems.

PI: Meredith B. Rosenthal, PhD, Harvard Medical School (Dissertation Grant)

Grant No.: R03 HS09660

Grant Period: 9/30/97-9/29/98

Title: Provider Risk Sharing in Managed Care

This research explored an increasingly prevalent and controversial way of containing costs in health plans: risk sharing with providers. This research examined impacts on utilization and outcome related to the design of risk-sharing contracts within a managed behavioral health organization (MBHO) as well as their impact in an outpatient mental health setting. The researcher utilized claims data, clinical and discharge data, and organizational data on the managed care organization and approximately 300 group practices with which it contracts.

Findings: Behavioral health providers reduce the duration of mental health therapy, given financial incentives to do so. When an MBHO changed the way it contracted for outpatient mental health care with its network providers from a fee-for-service system to a case-rate system (fixed payment for all covered treatment per patient), mental health visits went down 25 percent. It also appears that providers substitute “free” services, such as referrals to self-help groups and community care, when additional therapy becomes costly. No impact on mental health status was found.

PI: Richard Scheffler, PhD, University of California, Berkeley (UCB), and Harold Luft, PhD, University of California, San Francisco (UCSF)

Grant No.: T32 HS00026

Grant Period: 9/1/91-8/31/99

Title: Health Services Research Training Program

This broad-based interdisciplinary program used the resources of both UCB and UCSF to train health services researchers at both the pre- and postdoctoral levels. The training program has been part of major health services research training efforts and provided one of the richest health services research educational environments in the United States. The long-term objectives of the training program were to train the Nation’s most qualified health services researchers in order that they may make

significant contributions to the knowledge of health services issues and toward resolving current health policy crises. The training program gave trainees an indepth understanding of the U.S. health care system and the ability to deal with the system from social, political, and economic perspectives. The training occurred through a combination of courses, seminars, mentored hands-on research, and one-on-one career advising. All trainees received rigorous methodological and quantitative preparation that has enabled them to conduct important interdisciplinary health services research and to make contributions toward understanding the policy implications of the issues.

Findings: Implementation of the State-Local Program Realignment Act in California in 1991, which decentralized the State’s mental health system, enhanced access to inpatient and outpatient care for patients with the most severe mental illness. The impact of decentralization on patients with less severe diagnoses was mixed. With funds allocated directly to local governments to provide mental health services, both inpatient and outpatient service use increased significantly for patients with severe diagnoses and fell significantly for those with mild diagnoses. Patients with schizophrenia, mood disorders, other psychotic disorders, substance use disorders, and personality disorders received significantly more outpatient treatment. During the realignment, nearly 1 percent of patients with severe mental illness were shifted from State hospitals to community-based services, which may explain their increased use of outpatient services. Also, fewer patients with substance use disorders were hospitalized, and more patients with anxiety disorders were treated as outpatients. It has long been argued that substance abuse and anxiety disorders can be treated efficiently on an outpatient basis. Overall, the level of use of inpatient care after realignment was not cut as severely as one might expect. Patients with schizophrenia or other psychotic disorders received significantly more inpatient treatment. Outpatient services increased for patients with severe diagnoses and met the level of need for patients with most mild diagnoses. After realignment, the treatment cost per inpatient was significantly higher, suggesting that the sickest patients continued to receive expensive services when necessary. However, outpatient costs per user were significantly lower for all diagnoses,

probably as a result of service contracting prompted by the realignment program.

PI: Jinah K. Shin, DNSC, Columbia University (Fellowship Grant)

Grant No.: F32 HS00149

Grant Period: 9/1/00-8/31/02

Title: Utilization of Mental Health Services by Asian or Pacific Islander Americans

This study is investigating the occurrence of ethnic differences in the utilization of inpatient mental health services and determining the factors influencing utilization by Asian or Pacific Islander Americans as compared to other ethnic groups. The researcher is analyzing data on admissions to inpatient psychiatric services in New York State from 1995 to 1998 as available in the Statewide Planning and Research Cooperative System (SPARCS).

Findings: No findings are available at this time.

PI: Christine S. Spencer, Johns Hopkins University (Fellowship Grant)

Grant No.: F32 HS00080

Grant Period: 9/30/93-9/29/95

Title: Determinants of Structure of the Mental Health System

The purpose of this study was to develop theoretical and empirical models to describe the motivation for the availability and organization of mental health resources. Specifically, the researchers intended to analyze the structure of State mental hospitals and the level of decentralization of the community mental health system. The researchers used an existing data set developed specifically to explain the factors influencing State-level decisionmaking.

Findings: A literature review of relevant mental health and public economics material was completed. Work on a model of government determinants of allocation of public capital resources for the mental health sector was begun. Also, progress was made in the assembly of the statewide data set, including demographic, fiscal, organizational, and mental health resource data.

PI: Annie G. Steinberg, MD, Children's Seashore House, Philadelphia (Small Conference Grant)

Grant No.: R13 HS09813

Grant Period: 4/1/98-6/30/99

Title: Mental Health Services Delivery in Primary and Specialty Care Settings

This conference provided a forum for discussion of significant issues impacting the delivery of mental health care services in the primary care setting and the relationship to specialty care settings. The current state of research and evidence was also discussed. Conference proceedings and products included a literature review and brief presentations covering a number of topics, followed by a round-table discussion, and a monograph of the conference proceedings.

Findings: *Children's Mental Health: The Changing Interface Between Primary and Specialty Care* includes input from many of the conference's participants and addresses the following topics: (1) an evidence-based, best-practices approach to the primary care/specialty care relationship as it pertains to child mental health; (2) underrecognition of the mental health problems that affect children and adolescents and the poor outcomes that often occur; and (3) professional responsibilities across systems of care to avoid duplication, address shortages, and define health services research priorities. The monograph also presents implications for action and a series of recommendations for children's mental health services research topics spanning the next 5 years. An issue brief on children's mental health issues, entitled *Leonard Davis Institute of Health Economics Issue Brief—Children's Mental Health: Recommendations for Research, Practice, and Policy*, was also published. It covers the following topics: (1) changes in children's mental health services over the past decade; (2) increases in psychotropic drug use in children; (3) effects of managed care on the delivery of mental health services to children; (4) resources needed by primary care providers to identify and address children's mental health needs; (5) a promising system of care model; (6) a children's mental health research agenda; and (7) policy implications associated with meeting the need for mental health services among children. Both the monograph (AHRQ Publication No. 00-R040) and the issue brief (AHRQ Publication No. 00-R042) are available from the AHRQ Publications Clearinghouse.

PI: John E. Ware, Jr., PhD, New England Medical Center Hospitals, Inc.

Grant No.: R01 HS06073

Grant Period: 1/1/88-12/31/91

Title: Variations in Physicians' Practice Style and Outcomes of Care

The purpose of this grant was to supplement the collection and analysis of data from the Medical Outcome Study (MOS), an ongoing research effort designed to determine whether the health outcomes of patients with prevalent and treatable chronic conditions—depression, diabetes, hypertension, and heart disease—vary in relation to the kind of primary health care practice they use. Researchers investigated the extent of practice-style variation among three types of primary care providers—health maintenance organizations, multispecialty group practices, and solo fee-for-service medical practices—the reasons for the variations, and their implications for patient outcomes.

Findings: The SF-36, a 36-item short form, was developed in order to survey health status for the MOS. This form was designed for use in clinical practice and research, health policy evaluations, and general population surveys. The MOS is a multi-item scale that assesses eight health concepts, including one on general mental health (psychological distress and well-being). Using the MOS, researchers also were able to corroborate and strengthen previous findings that depression has considerable importance in clinical and social areas. Depression is found to be just as disabling and limiting as many other chronic, common medical conditions. There was clear evidence that dysthymia patients had the worst outcomes, while even patients with subthreshold depressive symptoms had a high chance of experiencing a major depression over 2 years.

Rates of detection in primary care settings were found to be low. If depressed patients were seen by a mental health specialist, there was a roughly 78-87 percent rate of detection, while patients seen by medical specialists had depression diagnosed 45-51 percent of the time. There were differences in detection based on payment types. Patients were more likely to receive a diagnosis if they received fee-for-service care.

Depressed patients followed by psychiatrists were more often treated with antidepressants than patients of other clinicians, but over time, the use of this treatment in prepaid compared to fee-for-service care dropped dramatically. Psychiatrists treated the sicker patients.

PI: Norma C. Ware, PhD, Harvard University

Grant No.: R01 HS10335

Grant Period: 9/30/99-9/29/01

Title: Cultural Relevance of a Continuity of Care Measure

The purpose of this study was to determine the cultural relevance of a new measure of continuity of care in mental health services for blacks, whites, and Puerto Ricans. This study built on a project funded by the National Institute of Mental Health in which 400 individuals with serious mental illness were interviewed. The researchers evaluated different mental health scales and then compared them among the three ethnic groups.

Findings: No findings are available at this time.

PI: Milton C. Weinstein, PhD, Harvard University (Training Grant)

Grant No.: T32 HS00020

Grant Period: 9/1/86-6/30/03

Title: Harvard University Health Services Research Training

This grant was funded to aid in the training of various investigators at the Harvard University Health Services Research Training Program in areas of health services research. Areas of research include quality of care, access, outcomes, cost-effectiveness, medical technology assessment, and AIDS policy. Mental-health-specific research and findings from this grant include: (1) a study of the determinants of and risk factors associated with death for adults seen by the Boston Health Care for the Homeless Program from 1988 to 1993; (2) a 1995 survey of 2,003 U.S. physicians to determine the impact of managed care plans' incentives and constraints upon delivery of care; (3) a review of data from the 1991 Medicare Current Beneficiary Survey to examine the relationship between psychiatric disorders—including affective, anxiety, psychotic, organic, substance abuse, and/or personality disorders—and care satisfaction in a national sample of elderly and disabled patients; and (4) a study of the results of the Massachusetts Group Insurance Commission's adoption in 1992 of a carve-out program to cover mental health/substance abuse services.

Findings: (1) In regard to deaths of adults in the homeless program, homicide was the leading cause of death among men aged 18-44 years, followed by traumatic injury and poisoning (including alcohol- and drug-related

deaths). Homeless persons may be at increased risk for pneumonia and influenza—frequent causes of death—because of a high prevalence of alcoholism, smoking, HIV infection, and chronic disease. The high risk of death from homicide and accidental injury is a predictable result of poverty, substance abuse, and living on the streets. The increased number of deaths during the first week of each month coincides with the arrival of disability checks, which often leads to a flurry of substance abuse, injuries, and deaths. The researchers suggest consideration of improved alcohol and drug treatment programs for homeless persons. Homeless individuals typically suffer from substance abuse, psychiatric disorders, and/or major medical illnesses. The risk of death was about twice as high among individuals with a history of abusing alcohol or cocaine and three times as high for those with a history of opiate abuse or injection drug use. (2) In the study of the impact of managed care, only about 3 percent of the types of care studied were ultimately denied, with coverage most frequently denied for mental health treatment, substance abuse treatment, and referral to a specialist of choice. (3) In the review of

Medicare data, it was found that aged and disabled Medicare beneficiaries with psychiatric disorders are significantly less likely than those without disorders to be satisfied with the overall quality of their health care. This group is particularly apt to be dissatisfied with followup care and physicians' concern for their overall health. However, it is not clear whether psychiatric impairment biases their assessments or whether these patients actually receive lower quality care than similar patients without psychiatric problems. (4) In the study of the carve-out program, researchers found that the carve-out resulted in a 54-percent decrease in total episode costs for individuals with unipolar depression and a 33-percent decrease for those with substance dependence. The researcher suggests that these savings were most likely due to the shift from traditional inpatient care to less intensive and less expensive partial hospitalization services and traditional outpatient care for people with unipolar depression, but he could not determine whether the carve-out arrangement resulted in a shift away from facility and outpatient treatments toward use of psychotropic drugs.

Intramural Research

Intramural research at AHRQ is focused on studies of the cost and financing of health care, as well as studies of the structure, organization, and behavior of the health care system and providers within it. AHRQ also develops data sets to support policy and behavioral research and analyses.

Much of AHRQ's intramural research on mental health is based on survey data. Since the 1970s, AHRQ and its predecessor agencies have conducted a series of national medical care surveys. These surveys provide information on the health care use, expenses, and insurance coverage of American families. They also provide the possibility for longitudinal analyses. These surveys are:

1. The National Medical Care Expenditure Survey (NMCES), conducted in 1977.
2. The National Medical Expenditure Survey (NMES), conducted in 1987.
3. The Medical Expenditure Panel Survey (MEPS), an ongoing survey conducted since 1996.

This section is generally organized in terms of specific areas of health services research. You can find intramural research for specific disorders by consulting the index.

Access

Barriers to children's mental health services.

Journal of the American Academy of Child and Adolescent Psychiatry 2002; 41(6), pp. 731-738. Authors: Owens P, Hoagwood K, Horwitz S, et al.

Researchers examined the characteristics associated with barriers to children's mental health services, focusing on the effect of children's psychosocial problems on parents. Data were derived from a first-grade, prevention-intervention project conducted in Baltimore, Maryland. Analyses were restricted to 116 families who participated in seventh-grade interviews and indicated that their child needed services. The Services Assessment for Children and Adolescents was used to measure barriers to children's receipt of mental health services. Over 35 percent of parents reported a

barrier to mental health services. Types of barriers included those related to structural constraints, perceptions of mental health, and perceptions of services (20.7 percent, 23.3 percent and 25.9 percent, respectively). Although parenting difficulties were associated with all barriers (structural: odds ratio=10.63, 95-percent confidence interval: 2.37, 47.64; mental health: odds ratio=8.31, 95-percent confidence interval: 1.99, 34.79; services: odds ratio=5.22, 95-percent confidence interval: 1.56, 17.51), additional responsibilities related to attendance at meetings were associated only with structural barriers (odds ratio=5.49, 95-percent confidence interval: 1.22, 24.59). Researchers and policymakers interested in increasing children's access to mental health services should consider strategies to reduce barriers related to perceptions about mental health problems and services in addition to structural barriers. Particular attention should be given to programs that focus on the needs of families who are most affected by their child's psychosocial problems.

Trends in mental health services use and spending, 1987-1996. *Health Affairs* Mar./Apr. 2001; 20(2), pp. 215-223.

Author: Zuvekas S.

Using data from the 1987 NMES and the 1996 MEPS, this study found that the population's access to ambulatory mental health and substance abuse services and psychotropic medications greatly increased between 1987 and 1996. However, despite these apparent gains, there is still much unmet need, and wide variations exist among population subgroups. Out-of-pocket expenses for ambulatory mental health, substance abuse, and psychotropic drug treatment remain high for the well-insured portion of the population residing in the community.

Income and employment among homeless people: The role of mental health, health, and substance abuse. *The Journal of Mental Health Policy and Economics* 2000; 3, pp.153-163. Authors: Zuvekas S and Hill S.

Income from employment and public programs may be critical to the ability of homeless persons to become domiciled. The focus of this work was on the effects of physical and mental health and substance use disorders on access to income to rent housing. Using panel data from a survey of homeless persons in Alameda County, California, it was found that few homeless persons work sufficient amounts of time to afford a low-rent domicile, and participation in public support programs is low relative to eligibility. Physical health problems and substance use disorders are barriers to higher levels of employment. Substance use disorders are also a barrier to participation in more generous public support programs. Those with greater income through higher work levels and public programs also gain housing and remain in housing for more time. Policies designed to help the homeless become domiciled need to take into account the high rates of health, mental health, and particularly, substance abuse problems among this population. These problems substantially reduce the earnings capacity of homeless persons and their ability to stop being homeless.

Cost

Health care use and costs for children with attention-deficit/hyperactivity disorder. *Archives of Pediatric Adolescent Medicine* May 2002; 156(5), pp. 504-511.

Authors: Chan E, Zhan C, and Cherkin D.

Data from the 1996 MEPS were used to compare the health care costs and use of children with attention deficit-hyperactivity disorder (ADHD), children with asthma, and the general pediatric population. A sample of 5,439 children ages 5-20 (representing 62 million children nationwide) who had ADHD, asthma, or neither were identified from ICD-9 codes and prescription records. For each group, researchers determined mean health care use (outpatient visits, emergency department [ED] visits, hospital discharges, home health visit days, and prescriptions) and total as well as component expenditures (outpatient, ED,

prescription, out of pocket, and other). Differences between means were compared among the three groups, both with and without adjusting for sociodemographic characteristics and access-to-care variables. Overall, costs of care for children with ADHD were comparable to costs for children with asthma and significantly greater than costs for the general pediatric population. Specific types of health care use and the sources of expenditures differ between children with ADHD and children with asthma. Because much ADHD-related care occurs within school and mental health settings and might not be captured by MEPS, these figures likely underestimate the true costs of caring for children with this condition.

Use and expenditures for the treatment of mental health problems. NMES Research Findings 22. AHCPR Pub. No. 94-0085. Rockville, MD: Agency for Health Care Policy and Research. July 1994.

Authors: Freiman M, Cunningham P, and Cornelius L.

This report used the 1987 NMES to provide national estimates of health care use and expenditures for the treatment of mental problems. Just over 18 million persons, or 7.6 percent of the U. S. civilian noninstitutionalized population covered by NMES, had some type of health care use for a mental problem during 1987. This use resulted in personal health care expenditures of 18.2 billion, with an average of just under \$1,000 per user. These expenditures comprised 5.0 percent of all personal health care expenditures. The rate of use for males (5.8 percent) was much lower than the rate for females (9.3 percent). Socioeconomic status also appeared to play an important role in the use of mental health care. There were 111 million ambulatory mental health visits in 1987, which cost a total of \$6.5 billion.

Hospitalization for the treatment of mental illness was a relatively rare event, but the high expense of such hospitalization made it a major component of mental health costs. Prescription medicines were also a large source of expenditure. These findings exclude a sizable portion of the expenditures for the treatment of the severely mentally ill. In particular, only a small percentage of the expenditures for State and county mental hospitals are included here. This report also does not include mental health expenditures for persons in nursing homes.

Personal characteristics and contextual factors associated with residential expenditures for individuals with mental retardation. *Mental Retardation* Apr. 2001; 39(2), pp. 114-129.

Authors: Rhoades J and Altman B.

This study demonstrated that severity of disability, facility characteristics, and community resources are associated with the long-term care costs for people with mental retardation. The mean daily expense was significantly greater for those with severe or profound mental retardation. Younger residents (under 22 years) and those with greater daily needs for assistance (limited to two or more activities of daily living) had greater daily expenses, and expenses were higher for minority residents than white. Expenses in larger facilities, with 16 or more beds, were higher than in those that had 3 to 15 beds. Nonprofit or government facilities, facilities with a higher number of services included in the basic charge, and facilities that routinely provide more additional services had higher daily expenditures. Finally, facilities located in the Northeast or Midwest had higher daily expenditures than facilities in other regions of the country. The level of community affluence (per capita income)—but not generosity of State programs—also influenced daily expenses for residents. After analyzing the interaction of these factors, the researchers conclude that moving people with borderline, mild, moderate, or severe mental retardation to smaller facilities could result in cost savings or at least no additional cost.

Institutional Care

Elderly persons with developmental disabilities in long-term care facilities. NMES Research Findings 25. AHCPR Pub. No. 95-0084. Rockville, MD: Agency for Health Care Policy and Research. 1995.

Author: Altman B.

This report from the Institutional Population Component of the 1987 NMES provides national estimates of the functional, behavioral, and health characteristics of the population with developmental disabilities living in residential facilities, including nursing homes. Developmental disabilities are defined as conditions that occur at birth or sometime else

before the age of 22 and that limit or slow an individual's intellectual or physical development. The most prevalent disability among this institutionalized population is mental retardation; others are autism, cerebral palsy, spina bifida, and epilepsy. The inclusion of nursing home residents in estimates of persons with mental retardation and other developmental disabilities who live in long-term care facilities indicates that there is a larger proportion over age 50 in this population than previously reported. A total of 19.2 percent were age 65 or over, and another 16.7 percent were ages 50-64. As in the general population, there is a decline in health among the elderly with developmental disabilities. The estimates indicate, however, that the highest level of functional disability among those age 65 and over was comparable to that in the age group from birth to 24, who often have multiple diagnoses, multiple limitations, and fragile health. While the causes of the need for services differ among these two age groups, their functional care needs are very similar, suggesting the usefulness of intergenerational service models that could accommodate the integration of both groups. (An earlier version of this paper was presented at the 1993 Meetings of the American Association on Mental Retardation.)

The dynamic process of movement in residential settings. *Journal of Mental Retardation* 1993; 98(2), pp. 304-316.

Authors: Altman B and Cunningham P.

Findings from the 1987 NMES show that almost 16 percent of the persons who spent some time in a residential facility during 1987 moved into other living arrangements within the system or outside of it during the survey year. A smaller number of persons had multiple moves during that period. Most of the movement occurred between residential facilities of the same type (e.g., group home to group home), and this movement did not result in significant changes in the total residential population between the beginning and end of 1987. Persons moving into the residential system from outside were more likely to end the year once again outside the system. Those living in institutions were the least likely to move at all. These findings suggest that there is considerably more mobility among the mentally retarded residential population than can be

observed by examining annual rates of change in residential populations. (An earlier version of this paper was presented at the 1990 meeting of the American Association on Mental Retardation.)

Characteristics of facilities for the mentally retarded. NMES Data Summary 6. AHCPR Pub. No. 92-0067. Rockville, MD: Agency for Health Care Policy and Research. 1992.
Authors: Beauregard K and Potter D.

Over the last 20 years there has been a steady trend toward the deinstitutionalization and integration of persons with mental retardation/developmental disabilities into the community. As this transition has occurred, large State institutions have been downsized and smaller community-based group homes have proliferated. This Data Summary presents national estimates of facilities for the mentally retarded based on data collected in the Institutional Population Component of the 1987 NMES. Estimates include the number of facilities, beds, and residents; geographic distribution; type of ownership; certification; and service provision. The percent of current residents who were mentally retarded is identified. Special emphasis is given to small residential facilities.

Sample design of the institutional population component. NMES Methods 6. AHCPR Pub. No. 94-0017. Rockville, MD: Agency for Health Care Policy and Research. 1993.
Authors: Cohen S, Potter D, and Flyer P.

This report describes the sample design of the Institutional Population Component (IPC) of the 1987 NMES. The IPC was established to provide an assessment of the utilization, costs, sources of payment, and health status of the U.S. population in nursing and personal care homes and in facilities for the mentally retarded for calendar year 1987. The IPC sample consisted of two distinct selections of 1987 institutional users: a sample of institutional residents as of January 1, 1987, and an independent sample of admissions over the course of 1987. Particular attention is given to the estimation strategy specified to correct for the multiple chances of selection in the IPC through the year and the problems of dual representation in the independent sampling frames of January 1, 1987, residents and 1987 admissions. The report also provides a summary of sample yields for the facility interview and subsequent

interviews for the sample of residents and admissions. Detailed specifications for the derivation of NMES sampling weights are provided. These sampling weights are employed to yield national estimates of health care parameters at both the facility and person levels. The specifications include adjustments to correct for survey nonresponse at each level of sample selection in addition to the poststratification adjustments. Appropriate methods of variance estimation that take into account survey design complexities are suggested. Copies of the report (AHCPR Publication No. 94-0017) are available from AHRQ.

The effects of sociodemographic and contextual factors on employment of persons with mental retardation living in residential facilities. *Journal of Developmental and Physical Disabilities* 1993; 5(4), pp. 281-296.
Authors: Cunningham P and Altman B.

Data from a 1987 national sample of persons in residential facilities were used to assess the effects of sociodemographic and contextual factors on rates of paid employment among this population. The results showed that age, race, facility type, and U.S. Census Region had significant effects on the likelihood of any type of paid employment, even when controlling for the individual's functional limitations, level of retardation, and Supplemental Security Income status. Sex and county unemployment rate had independent effects on the likelihood of being employed in supported or competitive employment. As more persons with mental retardation move into competitive employment arrangements, those concerned with increasing access to employment should give some consideration to factors not directly associated with physical and intellectual functioning. (An earlier version of this paper was presented at the 1990 Annual Meeting of the American Association for Mental Retardation.)

Characteristics of residents in facilities for the mentally retarded. NMES Research Findings 6. DHHS Pub. No. (PHS) 90-3468. Rockville, MD: Agency for Health Care Policy and Research. 1990.
Authors: Cunningham P and Mueller C.

The concept of deinstitutionalization has guided policies concerning the provision of residential services to the mentally retarded. The success of these policies depends on

matching client needs and facility resources. Data from NMES, which provides national estimates of residents of facilities for the mentally retarded in the United States, are used to compare clients residing in large public facilities with residents of community-based facilities. Findings indicate that residents of State institutions are more severely retarded and are more likely to have other disabilities and functional impairments than residents of community facilities. Nevertheless, the latter often also have significant impairments, and evidence suggests that they do not receive certain services routinely provided in larger State institutions. Additional research is needed on services received in community-based facilities and on whether needs match community resources. (An earlier version of this paper was presented at the 1988 annual meeting of the American Public Health Association.)

Questionnaires and data collection methods for the Institutional Population Component.

NMES Methods 1. DHHS Pub. No. (PHS) 89-3440. Rockville, MD: National Center for Health Services Research and Health Care Technology Assessment. 1989.

Authors: Edwards W and Edwards B.

This report from the 1987 NMES describes the operational design and instruments of the Institutional Population Component. This component comprises a set of surveys that collected information for calendar year 1987 on demographic characteristics, health and functional status, use of medical and other health care services, and related expenditures by individuals residing in nursing and personal care homes and facilities for the mentally retarded at some time during 1987. Information on both facility characteristics and residents was collected from facility administrators and caregivers in four rounds of interviews at the facility site. Personal and background information on the residents was collected from next of kin or other knowledgeable respondents over the course of the year in four or five interviews, depending on the time of selection into the sample. The report discusses in detail instrument design and data collection procedures, and it includes extensive exhibits illustrating the scope and focus of the various data collection instruments.

Nursing home reform and the mentally ill.

Health Affairs Winter 1990; 9(4), pp. 47-60.

Authors: Freiman M, Arons B, Goldman H, and Burns B.

Researchers calculated several estimates of the number of persons who might be eligible for placement out of nursing homes as a result of the 1987 Omnibus Budget Reconciliation Act (OBRA) nursing home reform, although greater weight was attached to estimates that utilized a lower measure of more severe mental illness. These rough estimates indicate that approximately 40 to 50 thousand nursing home residents, or between 3 and 4 percent, might be faced with out-placement. The effects of the OBRA provisions regarding prospective residents of nursing homes who would be turned away as a result of the regulations were not calculated. The estimates make several important empirical points about the overall number of persons potentially identified for alternative placement, the magnitude of the screening process, and the implied costs of identifying the population that is the focus of the regulations. Results indicate that the majority of mentally ill residents are appropriately placed with regard to nursing needs.

Risk of behavior problems among nursing home residents in the United States. *Journal of Aging and Health* Nov. 1997; 9(4), pp. 451-472.

Authors: Jackson M, Spector W, and Rabins P.

In 1987, over half (54 percent) of U.S. nursing home residents had some type of behavior problem. This study has concluded that certain mental and physical disabilities, as well as personal characteristics, increase the likelihood that a nursing home resident will have behavioral problems. Using the Institutional Population Component of the 1987 NMES, this team analyzed the data to identify which factors correlated with four types of behaviors: delusions/hallucinations, aggressive behaviors, collecting behaviors (hoarding and stealing), and wandering or inability to avoid dangers. Cognitive impairment; dependencies in activities of daily living, or ADLs (e.g., eating, dressing, bathing, using the toilet); incontinence; a history of psychiatric problems; difficulty understanding oral communications; and vision problems were associated with a higher likelihood of exhibiting disruptive behaviors. Being unable to walk decreased the likelihood of behavior problems, presumably because of increased isolation. The patterns of

association varied by type of disruptive behavior. Men were found to be more at risk for aggressive behaviors than women, who were more at risk for delusions and hallucinations. Generally, cognitive impairment, schizophrenia, and other psychoses had a greater impact for almost all behavior types. Impairment in receptive communication (understanding what is said) was a risk factor for all behaviors but had a more moderate impact. Incontinence and ADL dependencies, in general, had less impact and affected fewer behaviors.

Mental illness and the impact of nursing home reform: Estimates from the 1987 National Medical Expenditure Survey.

Gerontological Society of America Annual Meeting, 1989.

Authors: Lair T, Arons B, Freiman M, et al.

The Omnibus Budget Reconciliation Act of 1987 (OBRA) contains provisions that affect mentally ill residents of and admissions to nursing homes, and regulations are being revised to implement these provisions. States are required to review residents and screen potential new admissions in Medicaid-certified facilities for mental illness or mental retardation. If such individuals do not need nursing services or require more acute care, then it may be necessary to find other locations for them. Individuals with a primary diagnosis of dementia are excluded from screening, and residents of nursing facilities for at least 30 continuous months may choose to remain. This paper, using detailed simulations of these regulations, examines the potential size and composition of the population affected by the OBRA provisions for current residents of nursing homes. The data are from the 1987 NMES. Findings suggest that while a substantial percentage of residents would need to be thoroughly assessed, only a very small percentage of those would be identified for possible outplacement. The paper explores the implications of these results with regard to nursing home revenues, screening costs, and the availability of alternative facilities.

Mental health and functional status of residents of nursing and personal care homes.

NMES Research Findings 7. DHHS Pub. No. (PHS) 90-3470. Rockville, MD: Agency for Health Care Policy and Research. 1990.

Authors: Lair T and Lefkowitz D.

The Institutional Population Component of the 1987 NMES includes a nationally

representative sample of current residents of and new admissions to nursing and personal care homes. This report uses the current resident sample to describe the mental health and functional status of people living in nursing and personal care homes in the United States on January 1, 1987. National estimates of resident characteristics, including age, sex, marital status, and race, are presented. This report also provides estimates of cognitive impairment, mental disorders, emotional/behavioral problems, psychiatric symptoms, and the extent and nature of functional limitations in this population. Finally, selected measures of functional and mental status of the resident population are considered as they relate to various facility characteristics, such as certification, bed size, and facility type.

Availability of special nursing home programs for Alzheimer's disease patients.

American Journal of Alzheimer's Care and Related Disorders Research Jan./Feb. 1991; pp. 2-11.

Authors: Leon J, Potter D, and Cunningham P.

While still controversial, there is a growing belief that Alzheimer's disease patients require special programs across the service continuum. There is also a growing concern that nursing home facilities are not providing the programs required. Using data from the 1987 NMES, national estimates are presented on the number of nursing facilities that have special units or programs directed towards the specific needs of the cognitively impaired elderly—primarily patients with Alzheimer's disease. The findings represent the first national estimates on special nursing home programs and units for Alzheimer's disease patients based on a nationally representative sample of nursing facilities. The survey included 759 facilities and is weighted to be representative of all nursing facilities serving the elderly in 1987. The numbers of facilities with Alzheimer's disease programs, the patient capacities of these programs, the characteristics of the facilities, the future plans of facilities to either expand present programs or develop new ones, the availability of specialized training for staff of these programs, and the respite care these programs offer to nonresidents are examined. The discussion centers on the implications these analyses hold for the further development of

long-term care policies and program provisions regarding Alzheimer's disease patients.

Current and projected availability of special nursing home programs for Alzheimer's disease patients. NMES Data Summary 1. DHHS Pub. No. (PHS) 90-3463. Rockville, MD: Agency for Health Care Policy and Research. 1990.

Authors: Leon J, Potter D, and Cunningham P.

In 1987, there were approximately 53,800 nursing home beds—just over 3 percent of the Nation's supply at the time—for patients with Alzheimer's disease or related dementias. According to this study, the beds were located in 1,668 nursing facilities (just under 8 percent of all nursing homes) with special units for such patients. The study provides the first national estimates of the number and bed capacity of nursing facilities with special units or programs for patients with cognitive disorders related to Alzheimer's disease and other dementias. While the benefits of special units in either reducing costs or improving patient care are still in question, it is clear that the present number of specialty beds falls short of the potential demand. Unpublished NMES data show that in 1987 an estimated 640,000 nursing home patients suffered from dementias—almost 12 times the supply of special unit beds at that time. While not every nursing home resident with Alzheimer's disease or a related dementia may need care in a specialized unit, the researchers conclude that the potential demand clearly exceeds the supply by a substantial margin. The study also found that nearly 70 percent of the special unit beds for Alzheimer's disease patients were in for-profit nursing homes. The West had the highest percentage of Alzheimer's disease beds, followed in descending order by the South, Northeast, and Midwest. Less than 6 percent of all nursing homes provided specialized staff training for care of patients with Alzheimer's disease and other dementias. Even among nursing homes with special units, roughly a quarter of the facilities did not offer such training. (An earlier version of this paper was presented at the 1989 Annual Meeting of the Gerontological Society of America.)

Correlates of disruptive behaviors in nursing homes. *Journal of Aging and Health* May 1994; 6(2), pp. 173-184.

Authors: Spector W and Jackson M.

Some nursing home residents are disruptive because of their wandering, abusive behavior, and noisiness, as well as less common behaviors such as disrobing and stealing. Residents most likely to be disruptive are severely cognitively impaired; are unable to perform a number of activities of daily living (ADLs), such as feeding and walking; or are incontinent. Immobile patients are less likely to be disruptive and women are less likely to be abusive than men. Correlates of disruptive behaviors were analyzed in a representative sample of 3,351 residents in 103 nursing homes in Rhode Island in 1985. It was found that more cognitively disabled individuals were more likely to wander. Being female did not affect the likelihood of being disruptive in general, but women were less likely to be verbally or physically abusive. Residents with higher levels of ADL dysfunction were most likely to be abusive or noisy. The loss of independence in toileting and feeding, for example, further increased the likelihood of being disruptive, independent of mobility status. The researchers suggest that the loss of control of bodily functions results in frustration and increases "acting out" behaviors as a way of coping. On the other hand, immobility may isolate residents and reduce the number of potentially frustrating situations that they encounter. This may be why immobile patients were not only less likely to wander, but were also less verbally or physically abusive.

Measurement

Drug use, drug abuse, and labor market outcomes. *Health Economics* May 1998; 7(3), pp. 229-245.

Authors: Buchmueller T and Zuvekas S.

This paper examines the relationship between illicit drug use and labor market success, and in doing so addresses two major shortcomings of the previous literature. First, unlike many previous analyses, this work accounts for differences between moderate and pathological drug use using clinically based measures. Second, while recent studies focus only on young adults, this study analyzes a prime-age (30 to 45 years old) sample as well. Results indicate that these differences are important. It was found that pathological use is negatively associated with income among both young and prime-age men. The positive association between moderate drug use and income among younger men, found both in this study and in

previous studies, disappears among prime-age men. No significant association between either moderate or pathological use and employment among younger men was found, but a negative relationship between pathological use and employment among prime-age men was identified. The effects of illegal drug use on productivity are one justification for employer drug-testing policies and government policies designed to eliminate the consumption of illegal drugs.

Measuring functioning in daily activities for persons with dementia. *Alzheimer Disease and Associated Disorders* 1997; 11(6), pp. 81-90.

Author: Spector W.

This study reviews the measurement of functional disability for persons with dementia; emphasizes the concepts of validity, measurement bias, and scaling properties; and questions if dementia-specific scales measure the disability consequences of cognitive impairment or actual cognitive impairments.

Parity

The impacts of mental health parity and managed care in one large employer group. *Health Affairs* May 2002; 21(3), pp. 148-159.

Authors: Zuvekas S, Regier D, Rae D, et al.

This study examined the impact of a State's mental health parity mandate on a large employer group that simultaneously implemented a managed care "carve-out" for its mental health and substance abuse benefits. The researchers compared plan costs, use patterns, and access in the year prior to the changes with those in the 3 years following the changes. Because of confidentiality issues, the name of the large employer group, the State in which it is located, and the specific years of the study cannot be provided. Although the number of people treated for mental health problems increased nearly 50 percent, the costs to the plan for mental health services declined by almost 40 percent over the 4-year study period. Costs for employees and spouses together remained flat over the study period, while costs for children and adolescents declined by 64 percent. Most of this decline was due to reducing the lengths of stay for inpatient mental health treatment. Managed care did not limit access to outpatient treatment. There was nearly a 50-percent

increase in the number of people using outpatient treatment with no change in the average number of visits.

How would mental health parity affect the marginal price of care? *Health Services Research* Feb. 2001; 35(6), pp.1207-1227.

Authors: Zuvekas S, Banthin J, and Selden T.

Using the MEDSIM health care microsimulation model developed by researchers at AHRQ, this team computed marginal out-of-pocket costs from the cost-sharing benefits described by policy booklets under current coverage and under parity for various mental health treatment expenditure levels. Results show that as of 1995, parity coverage would substantially reduce the share of mental health expenditures that consumers would pay at the margin under their existing plan's cost-sharing provisions, with larger changes for outpatient care than for inpatient care.

Mental health parity: What are the gaps in coverage? *The Journal of Mental Health Policy and Economics* 1998;1, pp.135-146.

Authors: Zuvekas S, Banthin J, and Selden T.

This study compared the out-of-pocket spending for hypothetical episodes of mental health treatment as considered under a person's current insurance plan and when applied to a reform policy of full mental health parity. The data analyzed were actual health plan benefits using a nationally representative sample of the privately insured population under age 65 from the 1987 NMES. Findings showed that existing benefits in this population are quite inadequate and people are at risk for high out-of-pocket expenses should they develop serious mental illness. However, under simulated full parity coverage, significantly lower out-of-pocket costs were found. It was also found that persons with less generous mental health coverage usually had less generous physical health coverage too.

Utilization

Health care utilization and expenditures by Vietnam veterans. American Public Health Association Annual Meeting, 1991.

Authors: Beauregard K and Potter D.

This paper examines health care utilization and expenditures for veterans who served during the Vietnam War era. Data are from the

household survey of NMES. Information on approximately 1,100 Vietnam War era veterans is used to present national estimates of health care utilization and expenditures for inpatient hospital stays, hospital outpatient and emergency room visits, mental health care, and ambulatory care visits. Also examined are patterns of use of the Veterans Administration's health care system. Estimates are characterized by demographic, socioeconomic, and health status indicators comparing veterans to a cohort of nonveterans.

Determinants of ambulatory mental health services use for school-age children and adolescents. *Health Services Research* Oct. 1996; 31(4), pp. 409-427.

Authors: Cunningham P and Freiman M.

This study used the 1987 NMES to analyze a comprehensive multivariate model of the use of mental-health-related ambulatory care services by children ages 6-17. It was found that children with poor mental health in high-income families were more than three times as likely to have a mental-health-related visit as children with poor mental health in low-income families. The number of mental-health-related visits and the likelihood of seeing a mental health specialist also increased along with family income. Mental health use by other family members was strongly associated with use by children. The study concludes that the socioeconomic status of children is an important factor in explaining unmet need for mental health services.

Interactions between use of and insurance for specialty ambulatory mental health services.

Presented at the Seventh Biennial Research Conference on the Economics of Mental Health; Sept. 1994; Bethesda, MD. Discussion paper, June 1996

Author: Freiman M.

Data from the 1987 NMES were used to analyze some aspects of the interaction between the coinsurance rate for ambulatory mental health care and the probability of use of such care. Some evidence for selection effects was found, in that when an instrument is estimated for the coinsurance rate for ambulatory mental health services, this instrument is found to perform better than the actual insurance rate in a demand equation for these services. The results for the instrumental equation also suggest that

the selection bias often discussed with regard to mental health insurance and service use may involve both supply and demand side effects in the labor market. The implications of these results for estimating the effects of broad changes in coverage are discussed.

Use of health care for the treatment of mental problems among racial/ethnic

subpopulations. *Medical Care Research and Review* Mar. 1997; 54(1), pp. 80-100.

Authors: Freiman M and Cunningham P.

This paper uses the 1987 NMES to analyze the degree to which interactions among race, ethnicity, and other characteristics of a person and his or her local area are important in determining the probability of any mental health care use. Separate equations are estimated for "blacks and Hispanics" and "whites and other groups." Simulations are then performed where the probabilities of use are estimated for individuals in one racial/ethnic group using coefficients estimated for another racial/ethnic group. These simulations show that the probability of use for blacks and Hispanics would be similar to whites if they were subject to the same behavioral patterns (regression coefficients) as whites, and vice versa. The results indicate the limitations of simply using dummy variables to represent race/ethnicity and the value of learning more about how the health care system interacts with persons of different racial/ethnic backgrounds. Policies that directly affect the location, characteristics, and behavior of health care providers, as well as the behavior of consumers, may be as relevant to achieving equality of use or access as incremental changes in health coverage.

The demand for health care for the treatment of mental problems among the elderly. In:

Advances in Health Economics and Health Services Research. Volume 14. Greenwich, CT: JAI Press; 1993.

Authors: Freiman M, Cunningham P, and Cornelius L.

Much of the research on the demand for mental health care has focused on ambulatory care visits. This focus would not appear to be entirely appropriate for the elderly, as ambulatory visits are neither the most prevalent form of treatment nor the most expensive. In general, the mental health use the researchers found among the elderly was characterized by

its low intensity for those with any such use. The most common type of mental health treatment among the noninstitutionalized elderly in the 1987 NMES was prescription drugs. This use of medicines is substantially more prevalent among the elderly than other age groups. It was found that being newly widowed was a strong predictor of mental health treatment during the year. For such a situation, a limited-term prescription for a mild tranquilizer and/or hypnotic may be sufficient and appropriate. However, widowhood occurred for only 2.4 percent of the sample, so its potential to explain prescription drug treatment is limited. The frequency with which prescription medicines were found to be the sole form of treatment for a mental problem raises the question of whether at least some portion of these problems might better be treated with more intensive ambulatory care or other treatments.

Psychotropic medication use among the elderly. Presented at the NAMH Research Conference on Mental Health Services Research; Sept. 1995; Bethesda, MD. Discussion paper, August 1996. Authors: Freiman M and Norquist G.

Using the 1987 NMES, it was found that over four million elderly persons residing in the community used psychotropic medicines for a mental condition in 1987. Such use is substantially greater among the elderly than other age groups. These elderly psychotropic drug users utilize the health care system for a wider range of conditions and illnesses, use a larger number of nonpsychotropic medicines, and are more likely to have difficulties in basic locomotion and movement than elderly persons who are not taking psychotropic drugs. A notable feature of this drug use is the almost total absence of involvement with the specialty mental health sector. These results provide a useful baseline that raises some potential concerns, and against which results from later periods can be evaluated. The results also suggest that the high level of use of psychotropic drugs for mental conditions among the elderly, who often have other substantial health problems and limitations of functioning, and who make almost no use of the specialty

mental health treatment sector, remains a cause for concern.

Determinants of ambulatory treatment mode for mental illness. *Health Economics* July 2000; 9(5), pp. 423-434.

Authors: Freiman M and Zuvekas S.

A reduced-form bivariate probit model was used to jointly analyze the choice for ambulatory treatment from the specialty mental health sector and/or the use of psychotropic drugs. Significant differences in treatment choices by education, gender, and race/ethnicity were found. Women were more likely than men to use specialty mental health services and more likely to use psychotropic medications. Biases and misperceptions on the part of the patients must be considered when interpreting these differences, as well as traditional patient preferences. The results are further discussed in this article as they relate to other findings and policies.

Health insurance, health reform, and outpatient mental health treatment: Who benefits? *Inquiry* Summer 1999; 36, pp. 127-146.

Author: Zuvekas S.

This research examined the impact of proposed health policy changes on the use of outpatient mental health treatment among adults with different mental health needs using data from the 1987 NMES and the National Institute of Mental Health's Epidemiologic Catchment Area Study. It was found that health insurance substantially increases the use of treatment by those with severe mental disorders, but that increased health insurance coverage alone cannot meet the treatment needs of this group. It was also found that those in better mental health account for a significant proportion of additional expenditures when insurance coverage is expanded. The investigator concludes that policies intended to increase access to mental health treatment must carefully consider the potential costs of substantial increased use by those not targeted by these policies.

Other

The influence of parental separation on smoking initiation in adolescents. *Journal of Health and Social Behaviors* Mar 2002; 43(1), pp. 56-71.

Author: Kirby J.

In this study, it is suggested that parental separation is one possible risk factor for smoking initiation. To examine this, a nationally representative sample of American adolescents was interviewed at two points in time. Two questions were addressed: Is there a relationship between parental separation and the likelihood that an adolescent will initiate smoking? If there is a relationship, through what factors does parental separation operate to influence the initiation of smoking in adolescents? The findings suggest that parental separation increases the likelihood that adolescents will start smoking. It does so in part by raising depressive symptoms and rebelliousness in adolescents. Despite the significance of these indirect effects, however, the bulk of the effect of parental separation on smoking initiation is direct.

Carve outs and related models of contracting for specialty care: Framework and highlights of a workshop. *American Journal of Managed Care*, Jun 1998; 4 Suppl, pp. SP11-21.

Authors: Friedman B, Devers K, Hellinger F, et al.

This article provides an overview of papers presented at a workshop sponsored by AHCPR in January 1998. The papers, published in this special issue of the *American Journal of Managed Care*, focus on one set of strategies: the use of carve-outs and related models of contracting for specialty care. The defining common feature of these contracts is that they engage providers and management entities different from those otherwise available to care for the same patients within a health plan. The other common feature of these arrangements is that they receive significant attention in the marketplace and almost no attention from research. The purpose of the workshop and this special issue of the *American Journal of Managed Care* was to identify what is known

and not known about these arrangements and develop an agenda for future research.

Developing integrated mental health service delivery systems. *Living in the community with disability: A cross-group perspective*. 1998. V. Mor and S. Allen, editors. New York: Springer Publications.

Authors: Robinson G and Brach C.

This book chapter discusses three methods for integrating mental health services for persons with severe mental illness living in the community: case management, capitation, and central authorities.

Maternal psychological distress: the role of children's health. *Women and Health* 1996; 24(1), pp. 59-75.

Authors: Hahn B and Schone B.

This article examines the factors associated with psychological distress in women, combining clinical-based studies, which have focused on children's health and mother's distress, with sociological studies of the impact of social and economic factors on women's distress. Using data from NMES, this research examines the association between children's health and mother's distress, as well as whether that relationship is mediated by socioeconomic, demographic, and social network factors. Results of the study demonstrate that acute and chronic conditions have different effects on maternal distress and that marital stress affects the relationship between children's health and maternal distress by increasing the impact of some variables and decreasing the effect of others. These findings suggest that children's health has an important effect on symptoms of maternal distress; the results also suggest that the role of children's health must be considered in the context of other economic and social factors.

Evidence-Based Practice Reports

Under the Evidence-based Practice Program at AHRQ, 12 5-year contracts have been awarded to institutions in the United States and Canada to serve as Evidence-based Practice Centers (EPCs). The EPCs review all relevant scientific literature on assigned clinical care topics and produce evidence reports and technology assessments, conduct research on methodologies and the effectiveness of their implementation, and participate in technical assistance activities. Public and private-sector organizations may use the reports and assessments as the basis for their own clinical guidelines and other quality improvement activities. All evidence reports produced by AHRQ are available through the Agency Web site at:

www.ahrq.gov

Following is a list of completed evidence reports related to mental health.

Attention-Deficit/Hyperactivity

Jadam AR, Boyle M, Cunningham C, et al. *Treatment of Attention-Deficit/Hyperactivity Disorder*. Evidence Report/Technology Assessment Number 11. (Prepared by McMaster University, Hamilton, Ontario,

Canada under Contract No. 290-97-0017.) AHRQ Pub. No. 00-E005. Rockville, MD: Agency for Healthcare Research and Quality. Nov. 1999.

Depression

Mulrow CD, Williams JW, Trivedi M, et al. *Treatment of Depression: Newer Pharmacotherapies*. Evidence Report/Technology Assessment Number 7. (Prepared by the San Antonio Evidence-based Practice Center based at the University of Texas Health Science Center at San Antonio under Contract No. 290-97-0012.) AHCPR Pub. No. 99-E014. Rockville, MD: Agency for Health Care Policy and Research. Feb. 1999.

Alcohol Dependence

West SL, Garbutt JC, Carey TS, et al. *Pharmacotherapy for Alcohol Dependence*. Evidence Report/Technology Assessment Number 3. (Prepared by the Research Triangle Institute, Research Triangle Park, NC under Contract No. 290-97-0011) AHCPR Pub. No. 99-E004. Agency for Health Care Policy and Research. Jan. 1999.

Clinical Guidelines

AHRQ-supported clinical practice guidelines are in the public domain within the United States and may be used and reproduced without special permission. HSTAT (Health Services/Technology Assessment Text), a free electronic service, provides computer access to the full text of clinical practice guideline products and can be accessed at <http://text.nlm.nih.gov>. The HSTAT site includes AHRQ-supported guidelines, quick reference guides, and consumer guides in both English and Spanish on common clinical conditions. Following are descriptions of mental-health-related guidelines developed by AHRQ.

Treating Tobacco Use and Dependence

Chair of the Guideline Panel: Michael C. Fiore, MD, MPH, University of Wisconsin Center for Tobacco Research and Intervention

This Public Health Service clinical practice guideline, developed by a private-sector panel of experts convened by a consortium of Federal and nonfederal partners, was issued in June 2000. AHRQ was among the partners. The guideline was developed to assist all health care providers, especially those with direct patient contact, to help tobacco users quit. In addition, consumer materials for smokers who want to quit include *You Can Quit Smoking, A Five Day Plan To Get Ready, Help for Pregnant Smokers*, and others.

These materials are available at www.surgeongeneral.gov/tobacco/default.htm and through the AHRQ Web site (www.ahrq.gov). Tobacco guideline materials are available through the AHRQ Publications Clearinghouse.

This Public Health Service tobacco guideline supersedes an earlier AHRQ-sponsored guideline on smoking cessation.

Depression in Primary Care

Chair of the Guideline Panel: A. John Rush, MD, University of Texas Southwestern Medical Center

These clinical practice guidelines were developed to assist primary care providers,

including physicians, nurse practitioners, mental health nurse specialists, physician assistants, social workers, and others in the diagnosis of depressive conditions and the treatment of major depressive disorders. The guidelines were published in 1993 and were based primarily on research done in psychiatric settings. They included a clinical practice guideline, a quick reference guide for clinicians, and a patient guide. These guideline products are no longer current and are provided for archival purposes only at www.ahrq.gov/clinic/cpgarchv.htm. Several individuals who participated in the development of the original guidelines have reviewed studies published between 1992 and 1998 on treatment of depression in primary care settings. For more information, see "Treating Major Depression in Primary Care Practice: An Update of the Agency for Health Care Policy and Research Practice Guidelines," by Herbert C. Schulberg, Wayne Katon, Gregory E. Simon, and A. John Rush in the December 1998 *Archives of General Psychiatry* 55, pp. 1121-1127. CD-ROM disks featuring the depression guidelines, including the quick reference guide and patient booklets, are available at all 600 Federal Depository Libraries located throughout the country and at many medical libraries in hospitals, universities, and managed care organizations.

Early Identification of Alzheimer's and Related Dementias

Co-Chairs of the Guideline Panel: Paul T. Costa, Jr., PhD, National Institute on Aging, and T. Franklin Williams, MD, FACP, University of Rochester Medical Center

These guidelines were developed to aid clinicians, patients, and family members in the recognition, diagnosis, and treatment of Alzheimer's disease and related dementias. They included a clinical practice guideline, a quick reference guide for clinicians, and a patient and family guide. These guideline products are no longer current and are provided for archival purposes only at www.ahrq.gov/clinic/cpgarchv.htm.

National Guideline Clearinghouse

The National Guideline Clearinghouse (NGC) is a comprehensive database of evidence-based clinical practice guidelines and related documents. This database is produced by AHRQ, in partnership with the American Medical Association and the American Association of Health Plans. The NGC mission is to provide physicians, nurses, and other health professionals, health care providers, health plans, integrated delivery systems, purchasers, and others an accessible mechanism for obtaining objective, detailed information on clinical practice guidelines and to further their dissemination, implementation, and use.

Key components of the NGC include:

- Structured abstracts (summaries) about the guideline and its development.
 - A utility for comparing attributes of two or more guidelines in a side-by-side comparison.
 - Syntheses of guidelines covering similar topics, highlighting areas of similarity and difference.
 - Links to full-text guidelines, where available, and/or ordering information for print copies.
 - An electronic forum, NGC-L, for exchanging information on clinical practice guidelines, their development, implementation, and use.
- Annotated bibliographies on guideline development methodology, implementation, and use.

Currently, 100 mental-health-related guidelines are housed in the NGC. They are broken down into the following related subconcepts:

- Adjustment disorders—3 guidelines
- Anxiety disorders—9 guidelines
- Delirium, dementia, amnestic, cognitive disorders—23 guidelines
- Dissociative disorders—1 guideline
- Eating disorders—4 guidelines
- Factitious disorders—1 guideline
- Impulse control disorders—1 guideline
- Mental disorders diagnosed in childhood—24 guidelines
- Mood disorders—19 guidelines
- Neurotic disorders—1 guideline
- Personality disorders—2 guidelines
- Schizophrenia and disorders with psychotic features—6 guidelines
- Sexual and gender disorders—4 guidelines
- Sleep disorders—12 guidelines
- Somatoform disorders—1 guideline
- Substance-related disorders—26 guidelines

The Web address for the NGC is:

www.guideline.gov

It can also be accessed through the AHRQ Web site.

User Liaison Program

The User Liaison Program (ULP), established in 1978, contributes to AHRQ's mission by timely synthesis and dissemination of research findings to State policymakers and researchers. ULP's flagship products are small policy-thematic workshops and skill-building workshops, as well as workshops designed for specific States on request. The program also produces teleconferences and written products such as issue summaries, Web-based materials, and distance learning programs. In addition to providing information and tools to make informed health policy decisions, ULP serves as a bridge between State and local health policymakers and the health services research community, by bringing back to AHRQ the research questions being asked by key policymakers. Following are brief descriptions of workshops related to mental health.

Depression: Implications for State and Local Health Care Programs

This workshop was designed for State and local health officials from the executive and legislative branches responsible for designing, implementing, and managing programs and policies that influence the delivery of health services, particularly services related to depression. The workshop was held in Washington, DC, July 10-12, 2000.

At the completion of this workshop, participants were expected to be better able to:

- Understand the impact of depression and how it is addressed within the current health care system.
- Put into operation an evidence-based framework to consider health care system strategies to improve the diagnosis and treatment of the condition.
- Assess the latest health services research findings to identify promising approaches to meeting the needs of patients with depression.

- Analyze promising strategies and initiatives implemented by public and private organizations to better serve people suffering from depression.

Improving the Outcomes of State Health and Human Service Initiatives: Integrating Mental Health and Substance Abuse Strategies

This seminar offered State executive and legislative officials and senior-level State policymakers information to develop a better understanding of the individual insurance market and the impact that implemented reforms have had to date. It was held in Albuquerque, New Mexico, July 19-21, 1999.

The workshop objectives were developed to provide participants with:

- Important research about the nature of the mental health/substance abuse (MH/SA) problems that exist within program populations.
- Information on key trends and developments in the finance and delivery of MH/SA services.
- The opportunity to examine the cutting-edge efforts of States that are promoting better outcomes from program initiatives by incorporating MH/SA strategies.
- An examination of issues and opportunities regarding evaluation and impact of MH/SA-related strategies and interventions.
- A forum for discussing challenging issues within their own States and for sharing insights and lessons learned among participants.

The set of audiotapes from this workshop (AHRQ No. 00-AV04) is available for free from the AHRQ Clearinghouse. Ordering

information is available on the AHRQ Web site at <www.ahrq.gov/news/ulp/ulptapes.htm>.

Reducing Violence: Issues, Options, and Opportunities for State Governments

This workshop was designed for State and local officials and others responsible for initiating and supporting violence prevention policies and programs. The workshop was held in Albuquerque, New Mexico, on February 7-9, 2000.

At the completion of this workshop, participants were expected to be better able to:

- Assess research findings on violence reduction strategies.
- Put into operation a research-based framework to help guide the design of effective violence prevention strategies.

- Identify and use a range of strategies and policies regarding school and youth violence, intimate partner violence, suicide, and child/elder abuse.
- Determine methods that States and localities can use to collect and analyze data for design, monitoring, and evaluation of violence prevention initiatives.
- Recognize and take advantage of opportunities to play a leadership role in developing effective violence prevention initiatives in their communities.

The set of audiotapes from this workshop (AHRQ No. 00-AV09) is available for \$25 from the AHRQ Clearinghouse. Ordering information is available on the AHRQ Web site at <www.ahrq.gov/news/ulp/ulptapes.htm>.

Other Activities

U.S. Preventive Services Task Force

The U.S. Preventive Services Task Force (USPSTF), an independent panel of private-sector experts in primary care and prevention, was convened by the U.S. Public Health Service to rigorously evaluate clinical research in order to assess the merits of preventive measures, including screening tests, counseling, immunizations, and chemoprophylaxis. The Task Force's pioneering efforts culminated in the 1989 *Guide to Clinical Preventive Services*. A second edition of the guide, published in 1996, included assessments of more than 200 services offered in primary care settings for adults, pregnant women, and children. Now a third USPSTF is updating assessments and recommendations and addressing new topics.

The mission of the Task Force is to:

- Evaluate the benefits of individual services.
- Create age-, gender-, and risk-based recommendations about services that should routinely be incorporated into primary medical care.
- Identify a research agenda for clinical preventive care.

A recommendation on screening for depression has been released and is available for free from the AHRQ Clearinghouse: Screening for Depression, *What's New from the USPSTF*, AHRQ Pub. No. APPIP 02-0019.

Additional mental-health-related topics are in progress. They include:

- Screening: Dementia, family violence.
- Counseling: Avoiding problem drinking, prevention of suicide risk, prevention of youth violence.

Foundation for Accountability Abstracts

AHRQ funded a series of scientific papers to support the performance measurement efforts of the Foundation for Accountability (FACCT). The authors of these papers reviewed the science base and provided recommendations on measures. FACCT had identified the topics

covered in this series—population-level measurement areas such as satisfaction and a number of clinical conditions—as first priorities. The following mental-health related report is available.

Measuring Health Care Quality: Major Depressive Disorder—This discussion paper analyzes assessment tools for major depressive disorder (MDD) along the following dimensions:

- Diagnostic status, remission, and relapse.
- Severity of illness.
- Patient functioning and quality of life.
- Disease management.
- Family social support and family burden.
- Patient satisfaction.
- Disease progression.

The authors make recommendations concerning effective measures to use, measurement strategy, and risk adjustment. They then describe a number of quality measurement (accountability) systems. The authors conclude that measurement tools for MDD are readily available and can be used in conducting accountability systems. This discussion paper was written by G. Richard Smith, Cindy L. Mosley, and Brenda M. Booth, of the Center for Outcomes Research and Effectiveness, University of Arkansas for Medical Sciences. A print copy is available for free from the AHRQ Publications Clearinghouse: AHCPR Pub. No. 96-N023.

HIV Cost and Services Utilization Study

The HIV Cost and Services Utilization Study (HCSUS) was the first major research effort to collect information on a nationally representative sample of people in care for HIV infection. HCSUS examines costs of care, utilization of a wide array of services, access to care, quality of care, quality of life, unmet needs for medical and nonmedical services, social support, satisfaction with medical care, and knowledge of HIV therapies. HCSUS is funded through a cooperative agreement between

AHRQ, several other Federal agencies, and RAND. HCSUS is addressing a broad array of issues relevant to public policy formulation and health services research including: (1) cost, use, and quality of care; (2) access to care; (3) unmet needs for care; (4) quality of life; (5) social support; (6) knowledge of HIV; (7) clinical outcomes; (8) mental health; and (9) the relationship of these variables to provider type and patient characteristics.

Findings—A national sample of 2,864 HIV-infected adults receiving medical care were enrolled in HCSUS. The study showed that revealing their HIV-positive status triggered physical assaults on about 45 percent of the HIV-infected people who were attacked by someone close to them. Overall, 21 percent of women, 12 percent of men who reported having sex with men, and 8 percent of heterosexual men reported physical harm after their HIV diagnosis. Women who identified themselves as gay, lesbian, or bisexual reported partner or other relationship violence nearly as often as women who self-identified as heterosexual (24 vs. 20 percent). Yet women living with a male vs. female sexual partner were almost three times more likely to report violence after their HIV diagnosis (25 vs. 9 percent). Also, women whose CD4 cell counts were at least 500 reported nearly 75 percent more violence than women with lower cell counts, suggesting that revealing HIV status may have triggered the violence. National surveys of U.S. women aged 19-29 years in poor families indicate that 6 percent have been assaulted, which is less than one-third the rate reported by the HIV-infected women surveyed by HCSUS. Men at higher risk of being assaulted were those who reported having sex with men, were 40 years of age or younger, were Hispanic, self-identified as gay or bisexual, had no financial assets, had a female partner, were homeless, or reported a history of drug dependence. Men with a high school education or less had nearly three times the odds of being harmed as more educated men.

AHRQ Domestic Violence Scholar in Residence

Jeffrey Coben, MD, Associate Professor of Emergency Medicine, Surgery, and Public Health at the Hahnemann School of Medicine, Medical College of Pennsylvania, and Director, Center for Violence and Injury Control at Allegheny General Hospital, West Penn Allegheny Health System, was the AHRQ Domestic Violence Scholar in Residence from September 2000 to July 2001. This program was co-supported by the Family Violence Prevention Fund.

Dr. Coben worked with AHRQ's Center for Outcomes and Effectiveness Research on several projects that will provide scientific information on the cost, quality, outcomes, and effectiveness of domestic violence screening and interventions available to domestic violence victims in health care settings. The Donabedian model to measure quality of health care looks at the structure, process, and outcomes of the program. AHRQ attempts to achieve its mission through health services research, a field that investigates the structures, processes, and effect of health care services. The Scholar in Residence examined health care services as they relate to domestic violence, particularly the structure and process aspects. The goal is to better define these issues.

Findings—A toolkit designed to permit a formal assessment of a hospital's performance in implementing a program to deal with intimate partner violence (IPV) is near completion. The instrument contained in this toolkit was developed based on input from a panel of 19 experts, including IPV researchers, advocates, and program planners. The Delphi process of consensus development was used, and the panelists were instructed to concentrate on structural and process measures of program performance.

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