

Disparities in Health & Health Care

Call for Papers

Race, Ethnicity & Patients' Experiences with Health Care

Chair: *Carolina Reyes, M.D.*

Sunday, June 23 ● 10:00 a.m. – 11:30 a.m.

● **Associations between Receipt of Interpreter Services and Patients' Experiences with Healthcare.**

Leo Morales, M.D., Ph.D., Lorraine Brown, Ron D. Hays, Ph.D.

Presented by: Leo Morales, M.D., Ph.D., Assistant Professor and Natural Scientist, Medicine, UCLA and RAND, 911 Broxton Plaza, Los Angeles, CA 90024; Tel: (310) 794-2296; Fax: (310) 794-0732; E-mail: morales@rand.org

Research Objective: To assess the associations between the receipt of needed interpreter services and patients' reports and ratings of healthcare.

Study Design: Three core CAHPS composites were analyzed: provider communication (4 items, $\alpha = 0.79$), access to care (4 items, $\alpha = 0.76$), and timeliness of care (4 items, $\alpha = 0.67$). In addition, 3 global rating items were examined: ratings of the personal doctor, specialist care, and overall healthcare. All items were transformed linearly to a 0-100 possible range. Composites were derived by averaging non-missing items.

Receipt of interpreter services was constructed from 2 survey questions. One asked if a respondent ever needed an interpreter in the last 6 months and the other asked about how often an interpreter was provided when needed. The resulting variable had 5 levels: 1) needed an interpreter and never got one (never); 2) needed an interpreter and sometimes got one (sometimes); 3) need an interpreter and usually got one (usually); 4) needed an interpreter and always got one (always); and 5) did not need an interpreter in last 6 months.

Reports and ratings of care were regressed on the interpreter variable, adjusting for the respondents' age and education and the child's health status.

Population Studied: Between August and November 2000 the California Healthy Families program administered the CAHPS 2.0H survey to a representative sample of its enrollees using the HEDIS protocol. A total of 13,480 surveys were returned (65% adjusted response rate). Survey respondents (adult guardians of children) were 82% females, 32% had not graduated from high school, 31% were high school graduates, and 37% had more than a high school education. The modal age range was 25-34 years. The sample was 58% Latino, 21% Asian, 10% White, 8% American Indian, 2% African American and 1% other categories.

Principal Findings: Respondents who reported needing an interpreter but never (-13.13) or sometimes (-7.68) getting one rated their overall healthcare lower than those not needing an interpreter. Similarly, respondents who needed an interpreter but never (-19.30), sometimes (-13.48) or usually (-7.37) got one reported worse provider communication; respondents who reported never (-6.34) and sometimes (-4.03) getting an interpreter reported worse access to care; and respondents who reported never (-9.93) sometimes (-9.00)

and usually (-7.91) getting an interpreter reported worse timeliness of care. All findings are significant at the $p < 0.05$ level.

Conclusions: Not receiving an interpreter when one is needed results in worse provider communication, access to care, timeliness of care and a worse experience with healthcare overall. Healthcare providers serving patients with limited English proficiency need to provide interpreters when needed, to reduce disparities in the quality of health care.

Implications for Policy, Delivery or Practice: All providers delivering healthcare to patients with limited English proficiency.

Primary Funding Source: The Commonwealth Fund

● **Regarding Race: How to Use Conversation Analysis in the Investigation of Racial Disparities**

Charlene Pope, B.S.N., C.N.M., M.P.H., Ph.D.

Presented by: Charlene Pope, B.S.N., C.N.M., M.P.H., Ph.D., Postdoctoral Fellow in Preventive Cardiology, Community and Preventive Medicine, University of Rochester, 601 Elmwood Ave, Rochester, NY 14642; Tel: (585) 275-0470; Fax: (585) 461-4532; E-mail: charlene_pope@urmc.rochester.edu

Research Objective: 1) To demonstrate the application of conversation analysis with a random sample from a quantitative health service research investigation, as a useful qualitative means to examine communication patterns during health service delivery. 2) To use Communication Accommodation Theory to generate a taxonomy to investigate racial disparities in health communication

Study Design: Case comparisons of Black teens and White teens who spoke with the same White physicians are compared for evidence of disparity patterns in ambulatory visits.

Population Studied: First, a secondary analysis was performed of racial differences in health promotion advice to 436 teens from 15 to 18 years of age from the University of Rochester study "Measuring Adolescent Preventive Services" (MAPS), principal investigator, Jonathan Klein. From this sample, detailed conversation analysis was used to generate side-by-side comparisons of randomly selected and matched pairs of Black and White teens of similar age, gender, and private insurance in talk with the same White physicians.

Principal Findings: First, statistically significant differences were found in health promotion advice by race in the group of 436 teens. Then, in transcript analysis and teen focus group feedback, all teens experience authoritarian physician styles, gender-specific practices, teasing, restricted questions, comments of social bias, and heterosexual assumptions. All teens receive less health promotion advice than recommended by the American Medical Association Guidelines, but Black teens receive less than White teens, with less positive affect, time, talk, humor, White physician self-disclosure, and participation. Black teens receive more selective attention, close-ended questions, missed cues, stereotypes, threats, power-oriented interruptions, and White withdrawal from experiences with racism. Differences in ethnic vernacular are not associated with racial differences in process and outcomes.

Conclusions: Though labor-intensive, conversation analysis methods can be applied in a targeted fashion to produce results that illuminate the subtleties of racial/ethnic disparities in health services.

Implications for Policy, Delivery or Practice: Evidence-based patterns from populations with demonstrated racial/ethnic disparities can be used as the basis for quality audits, patient service evaluations (report cards), and continuing education for both physicians and patients to improve health encounter interactions.

Primary Funding Source: National Science Foundation

● **Racial Differences in Consumer Assessments at Health Plans: Evidence from Commercial and Medicare Populations**

Nicole Lurie, M.D., Judith Sangl, Sc.D., Chunliu Zhan, M.D., Ph.D.

Presented by: Judith Sangl, Sc.D., Health Scientist Administrator, CQuIPS, Agency for Healthcare Research and Quality, 6011 Executive Blvd., Suite 200, Rockville, MD 20852; Tel: 301-594-1702; Fax: 301-594-2155; E-mail: jsangl@ahrq.gov

Research Objective: Examine racial/ethnic differences in consumer assessments of care and explore variation in such differences across health plans, using the Consumer Assessment of Health Plans Survey (CAHPS).

Study Design: We compared adjusted mean CAHPS global ratings (overall health plan, health care received, personal doctor, specialist seen most often) and composites (getting needed care, getting care quickly, doctor communication, helpfulness of office staff, and customer service) as well as access to and use of care reported by whites, blacks, Hispanics and Asians. The latter measures included: percent reporting having a personal doctor, percent with no office visits in past year, and percent who felt they needed to see a specialist and actually did. We assessed variation in the differences between plan means for whites and blacks and for whites and Hispanics across plans

Population Studied: Data include 160,694 CAHPS responses from 307 commercial health plans and 177,489 Medicare beneficiaries in 308 Medicare +Choice plans for 1999

Principal Findings: In both commercial and Medicare populations, minority respondents rated their experience and satisfaction with care similar to or higher than whites, with the exception of Asians. However, they reported significantly larger barriers to and less use of health care. The differences between blacks and whites, and black and Hispanics in CAHPS measures and access/use measures vary dramatically from plan to plan.

Conclusions: Significant race/ethnic differences in access to and use of care exist in health plans. Minorities' higher scores on satisfaction measures indicate that satisfaction may measure quality of care in a domain independent of access to and use of care, and should not be used alone

Implications for Policy, Delivery or Practice: The substantial variation in racial differences suggests opportunities for quality improvement by investigating plans where little or no differences exist for best practice ideas

Primary Funding Source: Government, Intramural funding

● **Impact of Race/Ethnicity and Language on Patients'**

Assessments of Medicaid Managed Care using CAHPS® 2.0

Robert Weech-Maldonado, Ph.D., Leo S. Morales, M.D., Ph.D., Marc Elliott, Ph.D., Karen L. Spritzer, Grant Marshall, Ph.D., Ron D. Hays, Ph.D.

Presented by: Robert Weech-Maldonado, Ph.D., Assistant Professor, Health Policy & Administration, Pennsylvania State University, 116 Henderson Building, University Park, PA 16801; Tel: (814) 865-1926; Fax: (814) 863-2905; E-mail: rxw25@psu.edu

Research Objective: Consumer assessments of health care are increasingly being used as an indicator of the quality of care provided by health plans and providers. These evaluations provide important information about how well health plans and clinicians meet the needs of the people they serve. The purpose of this study was to examine whether consumer reports and ratings of care in Medicaid managed care vary by race/ethnicity and language.

Study Design: The data analyzed are from the National CAHPS® Benchmarking Database (NCBD) 3.0. The CAHPS® data were collected by telephone and mail, and surveys were administered in Spanish and English. The average response rate for all plans was 37.7%. Data were analyzed using linear regression models. The dependent variables are CAHPS® 2.0 global rating items (personal doctor, specialist, health care, health plan) and multi-item reports of

care (getting needed care, timeliness of care, provider communication, staff helpfulness, plan service). The independent variables are race/ethnicity (White, African American, Asian, Pacific Islander, American Indian, White/American Indian, White/African American, Hispanic, and Other) and language spoken (English, Spanish, Bilingual -English/Spanish, and Other), controlling for gender, age, education, and health status.

Population Studied: 42,542 adults and 39,284 children enrolled in 294 Medicaid managed care plans distributed across 14 states in 2000.

Principal Findings: Racial/ethnic minorities tended to report worst care than whites. Compared to whites, Asians had the lowest scores for timeliness of care ($b = -4.94$), provider communication ($b = -3.39$), and staff helpfulness ($b = -4.09$), while White/American Indian had the worse reports of care for getting needed care ($b = -4.99$) and plan service ($b = -6.38$). Regression results show less variation in global ratings of care; with most racial/ethnic minorities having higher ratings than whites for their health plan. Non-English speakers reported worse care than English speakers, with Spanish speakers having the lowest scores for getting needed care ($b = -20.38$), plan service ($b = -18.47$), timeliness of care ($b = -8.35$), staff helpfulness ($b = -7.78$), and provider communication ($b = -4.77$). Compared to English speakers, other language speakers had lower global ratings but no Spanish monolinguals or bilinguals.

Conclusions: This study suggests that racial/ethnic and limited English speaking minorities face barriers to care, even after Medicaid has assured financial access. Race/ethnicity and language have independent negative associations with reports and ratings of care. However, language has a stronger negative effect on reports of care than race/ethnicity. Further research is needed to examine why lower reports of care did not necessarily translate into lower global ratings, especially among Spanish speakers.

Implications for Policy, Delivery or Practice: Health care organizations should address the observed disparities in access to care for racial/ethnic and limited English speaking minorities as part of their quality improvement efforts. The development of national standards on cultural and linguistically appropriate services (CLAS) is a step in the right direction.

Primary Funding Source: Foundations

Call for Papers

***Trust & Communication in the Clinical Encounter:
The Effect of Race & Ethnicity***

Chair: Joseph R. Betancourt, M.D., M.P.H.

Sunday, June 23 ● 3:15 p.m. – 4:45 p.m.

● **A Qualitative Exploration of Racial Disparity in Access to Coronary Angiography**

Melanie Arthur, Ph.D., Thomas A. LaVeist, Ph.D.

Presented by: Melanie Arthur, Ph.D., Research Instructor of General Surgery, Oregon Health & Science University, 3181 SW Sam Jackson Park Rd, L223A, Portland, OR 97201; Tel: 503-494-7862; Fax: 503-494-6519; E-mail: arthurm@ohsu.edu

Research Objective: To elucidate factors related to patient race which affect the likelihood of receiving appropriate medical care.

Study Design: 6 focus groups were conducted among patients who had been hospitalized within the past year with a primary cardiac diagnosis. Patients were randomly selected for participation by race (white vs. African-American) and treatment group (received the procedure, referred but did not receive, and those not referred).

Physicians were surveyed regarding reasons patients receive or fail to receive appropriate treatment. Qualitative analysis of patient focus group transcripts and physician survey responses was performed. **Population Studied:** Patients hospitalized within the past year at three participating hospitals and whose medical record indicated they had been appropriate candidates for coronary angiography (according to American College of Cardiology/American Heart Association guidelines). All physicians who treated cardiac patients at the participating hospitals were surveyed, n=185 (50%) responded.

Principal Findings: African-American patients placed more emphasis than white patients on the importance of a physician's interpersonal skills, expressing general agreement that a good doctor must have good interpersonal skills, while white patients were willing to waive this requirement if a doctor had a good knowledge of medicine. Black patients generally expressed greater fear of medical procedures than white patients. Some of the African-American participants had been exposed during childhood to negative urban myths regarding the treatment of black patients by local doctors and hospitals. Further, some participants in all African-American focus groups were aware of the Tuskegee Syphilis Study, while white patients were not. Finally, black patients made repeated references to putting their fate in God's hands to get them through the procedure. This was, for several of the patients, a primary coping mechanism for overcoming the fear associated with undergoing surgery. No white patients mentioned their religious faith with reference to their medical care or decision making. Neither African-American nor white patients generally agreed that racial discrimination might affect medical care, though they acknowledged its past role. Several African-American patients, however, refused to answer that question. Physicians, when asked for reasons patients would not be referred for needed procedures, listed patient refusal as the primary reason. When asked why patients might refuse a procedure, they most often listed patient fear. Two-thirds of surveyed physicians disagreed with the statement "It has been my experience that some physicians treat black patients worse than white patients."

Conclusions: These analyses reinforce past research indicating that African-American patients may have less trust of health care providers due to their awareness of past discrimination. Coping mechanisms which facilitate attainment of appropriate medical care may differ by race, with black patients seeking out doctors with good interpersonal skills and "putting it in God's hands." Physicians expressed awareness of the problem of patient fear, but generally did not indicate that providers bear any responsibility for its alleviation. There was a lack of awareness among both patients and providers of the continuing problem of racial disparity in access to care.

Implications for Policy, Delivery or Practice: Delivery of culturally competent medical care demands increased awareness of the role of race in access to care.

Primary Funding Source: National Heart, Lung and Blood Institute

● Race, Mistrust and Utilization of Healthcare Services

Thomas LaVeist, Ph.D.

Presented by: Thomas LaVeist, Ph.D., Associate Professor, Health Policy and Management, Johns Hopkins Bloomberg School of Public Health, 624 N. Broadway, Baltimore, MD 21205; Tel: 410-955-3774; Fax: 410-614-8964; E-mail: tlaveist@jhsph.edu

Research Objective: Racial and ethnic disparities in healthcare utilization are well documented. However, the reasons for this disparity are not well understood. Health insurance status, lack of a usual source of care and SES are known barriers to care, but these factors do not explain racial disparities. Previous research has demonstrated significant differences by race in trust in the medical care system, but research on trust as an explanatory factor in race disparities is also lacking. In this paper we examine the effect of mistrust on racial/ethnic disparities in healthcare utilization.

Study Design: Analysis of a nationally representative sample of African Americans, whites, Hispanics, and Asian Americans. Multivariate modeling is used. We examine several indicators of health services utilization: 1) failure to use needed care, 2) delay in seeking needed care, and 3) volume of care received.

Population Studied: Data for this study come from the 1994 Commonwealth Fund Minority Health Survey (MHS). The MHS is a national representative sample of adults 18 years of age and over residing in households with telephones within the 48 contiguous United States. Interviews were conducted via telephone using random-digit dialing. African Americans, Hispanics, and Asian Americans were over-sampled in the MHS. The present analysis examines the sub-sample of 2,720 respondents who reported having a usual source of care (910 whites, 745 blacks, 676 Hispanics, and 389 Asian Americans). Because of over-sampling of minority respondents, all analyses of the full sample will incorporate sampling weights. The weights will maintain the representative nature of the sample. However, weights will not be used for race specific analyses.

Principal Findings: 1) There were substantial racial/ethnic differences in trust of the medical care system. 2) The patient's reported level of trust is an important predictor of health services utilization. 3) Trust was an important factor in explaining racial disparities in utilization of health services.

Conclusions: There are many well recognized reasons for racial minorities to have mistrust of the healthcare system. Trust appears to be a partial explanation for race disparities in health service utilization.

Implications for Policy, Delivery or Practice: Strategies to engender trust among patients should receive greater attention in medical training.

Primary Funding Source: Russell Sage Foundation

● Race and Ethnic Differences in Patients' Trust of Physicians

Donna McAlpine, Ph.D.

Presented by: Donna McAlpine, Ph.D., Assistant Professor, Health Services Research and Policy, School of Public Health, University of Minnesota, MMC 729 420 Delaware Street S.E., Minneapolis, MN 55455; Tel: 612-625-9919; Fax: 612-624-2196; E-mail: mcalp004@umn.edu

Research Objective: This paper describes differences in the amount African Americans, Hispanics and white Americans express trust in their physicians. Differences in socioeconomic status, access to care, insurance arrangements, utilization of services and interpersonal aspects of the patient-physician relationship are examined as possible explanations for variations in trust.

Study Design: Data come from the 1996-1997 Community Tracking Household Study, a national study focused on examining changes in the health care system in sixty representative communities across the United States. Logistic regressions were computed examining the correlation between race/ethnicity and reports of low trust in one's usual physician. Hierarchical analyses examine whether insurance status, unmet need for care, utilization of services, education, income, and perceived physician practice style mediate the relationship between race/ethnicity and trust.

Population Studied: Adult respondents from the 60-site sample of the Community Tracking Study who completed the self response portion of the survey. All analyses are weighted to be representative of the nation.

Principal Findings: Approximately 10 percent more African Americans and Hispanics report low trust in their usual physician compared to white Americans. Persons without health insurance report the lowest levels of trust; however, the gap between whites and minority populations is greatest among Medicare recipients. Hispanics and African Americans are more likely to perceive their physician's practice style negatively and, regardless of insurance status, this partially explains why they also report lower levels of trust.

Conclusions: The low level of trust in physicians reported by Hispanic and African American patients is not just a reflection of the greater barriers to access and higher rates of uninsurance that have been reported in these populations. Instead, perceived negative treatment during the medical encounter, as reflected in perceived negative physician practice style and excessive time waiting in the office prior to an appointment, are more likely to be reported by African Americans and Hispanics and undermine trust.

Implications for Policy, Delivery or Practice: Need to address low levels of trust expressed by African Americans and Hispanics in their physicians. Both actual and perceived differences in experiences during the medical encounter that led to low trust are potential targets for intervention.

Primary Funding Source: The Robert Wood Johnson Foundation

● **Racial and Ethnic Variations in Patient-Physician**

Communication and Adherence to Doctor's Advice

Karen Scott Collins, M.D., M.P.H., Dora L. Hughes, M.D., M.P.H., Michelle M. Doty, Ph.D.

Presented by: Karen Scott Collins, M.D., M.P.H., Vice President, The Commonwealth Fund, 1 E. 75th Street, New York, NY 10021; Tel: (212) 606-3854; Fax: (212) 249-1276; E-mail: ksc@cmwf.org

Research Objective: To understand how patient-physician communication varies across racial and ethnic groups.

Study Design: A national survey on healthcare quality was conducted in 2001 by the Commonwealth Fund and Princeton Survey Research Associates. The survey over-sampled African Americans, Hispanics and Asian Americans, and was conducted in five languages. The survey sample, obtained through random digit dialing, consisted of 6772 adults with 1037 African Americans, 1153 Hispanics and 669 Asian Americans. A series of questions explored patient-physician communication including respondent ratings of how well doctors listen and are understood; whether questions go unasked; and factors influencing adherence to doctor's advice. The survey also collected information on satisfaction with care, linguistic and cultural competency, access and use of health services and use of alternative therapies.

Population Studied: African American, Hispanic and Asian American adults, age 18 and older, with a healthcare visit in the past two years.

Principal Findings: Significant differences between minority and white populations were identified across various domains of patient-physician communication. One-third of Hispanics, and one-quarter of African and Asian Americans, compared with 16 percent of whites, reported one or more communication problem with their doctor. Forty-six percent of Asian Americans felt their doctors listened to everything they said, compared with 68 percent of white Americans. Forty-six percent of Asian Americans, 56 percent of Hispanics and 61 percent of African Americans said they understood everything the doctor said, compared with 69 percent of white patients. Nineteen percent of Hispanics had questions they did not ask, compared with 10 percent of whites. Hispanic responses varied significantly by whether or not English is the primary language: 43 percent of Spanish-speaking Hispanics had one or more communication problem, compared with 26 percent of English-speaking Hispanics. Twenty-two percent of African Americans, Hispanics and Asian Americans report non-adherence to their doctor's advice; reasons for non-adherence varied significantly across groups. Additional measures of patient-physician interaction show Hispanic and Asian Americans to be less likely than whites and African Americans to have a great deal of confidence in their doctor, to be as involved in decision making as they wanted, or to have as much time with their doctor as they wanted. Further analysis will be done to assess factors that may explain the racial and ethnic variations such as age, income, education, English proficiency and physician characteristics.

Conclusions: Minority Americans, particularly Hispanics and Asian Americans, have higher rates of communication problems with their physicians when compared to white Americans. In addition, minority populations are less likely to have confidence in their doctor, to have as much time with their doctor as they want, to be as involved in decision-making as they want, and are less likely to follow their doctor's advice.

Implications for Policy, Delivery or Practice: National efforts to improve quality and eliminate racial and ethnic disparities in healthcare must focus on improving patient-physician communication. Strategies for accomplishing this include training physicians in cross-cultural communication skills; activating patients with information and guidance; and improving access to effective language interpretation services.

Primary Funding Source: Foundations

Call for Papers

Disparities in Health & Health Care: Correlates & Causes

Chair: Jose J. Escarce, M.D., Ph.D.

Monday, June 24 ● 11:30 a.m. – 1:00 p.m.

● **Contribution of New Technologies to Racial Disparities in Healthcare**

Ernest Moy, M.D., Claudia Steiner, M.D., Carolyn Clancy, M.D.

Presented by: Ernest Moy, M.D., Senior Research Scientist, Center for Outcomes and Effectiveness Research, Agency for Healthcare Research and Quality, 6010 Executive Blvd., Suite 300, Rockville, MD 20852; Tel: (301) 594-9927; Fax: (301) 594-3211; E-mail: emoy@ahrq.gov

Research Objective: To examine the role of differential diffusion of new technologies on racial disparities in healthcare.

Study Design: Secondary analysis of hospital discharge data. Two methodologies were used to identify new technologies. First, new technologies were identified by the introduction of new ICD-9-CM procedure codes between 1986 and 1998. Second, because new applications or subtle modifications of technologies may not lead to new procedure codes, new patterns of technology use were sought by examining volume changes between 1994 and 1998; diffusing technologies were defined as procedures that doubled in volume between these years. Use rates of newer technologies per 1000 hospitalizations by race were compared with rates of older technologies between 1994 and 1998. Rates of diffusing technologies by race were compared with rates of more slowly growing procedures.

Population Studied: Discharge data from Agency for Healthcare Research and Quality's Nationwide Inpatient Sample (NIS), 1994-1998. The NIS approximates a sample of U.S. community hospitals (~1100 hospitals and 7 million discharges per year) from which national estimates of inpatient healthcare use and outcomes can be generated. Patients with race other than white or black were excluded.

Principal Findings: 1) Overall, black patients had lower rates of major procedures than white patients did. 2) Disparities in procedure rates between black and white patients were larger for newer technologies compared with older technologies and largest for the technologies with the most recently introduced ICD-9-CM procedure codes.

3) Disparities in procedure rates between black and white patients were larger for procedures that grew rapidly in volume between 1994 and 1998 compared with procedures that grew more slowly.

4) Over time, disparities in procedure rates between black and white patients for new and diffusing technologies tended to attenuate.

Conclusions: 1) White patients tend to receive newer and diffusing technologies earlier than black patients do, but over time, disparities tend to diminish.

2) Because newer and diffusing technologies account for only a small fraction of all inpatient procedures, their role in disparities in general is relatively modest; the bulk of racial disparities in procedures can be attributed to common, well-established procedures.

3) However, studying disparities in new technologies, whose indications, benefits, and risks may not be firmly established, may provide insight into the root causes of racial disparities.

Implications for Policy, Delivery or Practice: 1) Establishment and evaluation of strategies to reduce expected racial disparities associated with new technologies warrant serious consideration as a component of efforts to understand and reduce inappropriate disparities in health care delivery. All patients should be offered information about all appropriate therapeutic modalities, including new technologies.

2) Efforts to study disparities in healthcare should include new technologies. Research on new technologies may offer unique opportunities to study the reasons that different populations receive different types and amounts of healthcare. For example, are black patients less comfortable with the uncertainties and risks often associated with new technologies? Do providers put white patients higher on the waiting list for new technologies?

Primary Funding Source: AHRQ

● Disparities in Access to High Quality Cardiac Surgeons:

Race, Income, and Hospital Effects

Barbara M. Rothenberg, Ph.D., Dana B. Mukamel, Ph.D., Michael McDermott, Ph.D., Thomas Pearson, M.D., Ph.D., Jack Zwanziger, Ph.D.

Presented by: Barbara M. Rothenberg, Ph.D., Health Policy Director, Excellus Health Plan, 165 Court Street, Rochester, NY 14647; Tel: (585) 327-6576; Fax: (585) 327-6559; E-mail: Barbara.Rothenberg@excellus.com

Research Objective: To investigate the relative importance of race, income, and hospital referral patterns in explaining observed racial disparities in access to high quality (low risk-adjusted mortality rate) cardiac surgeons for coronary artery bypass graft surgery (CABG).

Study Design: Hospital discharge data for CABG patients were combined with surgeon- and hospital-specific risk-adjusted mortality rates (RAMR) and census data on patients' zip code of residence.

The association between race--White, African American, or Asian/Pacific Islander--and surgeons' RAMR was estimated using multivariate regression analyses. Variables included age, gender, payer, discharge year, region, admission type (elective, urgent, emergent), rural residence, whether the patient transferred from another hospital, median income and education in the zip code of patient residence, selected comorbidities, and hospital indicator variables. Additional regressions were estimated with the hospitals' RAMR and surgeon volume as the dependent variables.

Population Studied: 27,969 New York state residents undergoing CABG surgery who were discharged from New York hospitals in 1996 or 1997.

Principal Findings: After controlling for the factors listed above, African Americans and Asian/Pacific Islanders were more likely to have surgery performed by surgeons with high RAMRs. The differences in RAMR compared to Whites was 0.3 percentage points for African Americans and 0.4 percentage points for Asian/Pacific Islanders. The overall mortality rate among all patients was 2.22%-2.44%. After adding hospital indicator variables to the model, the coefficients for both groups fell to 0.2 and remained statistically

significant. The observed association between race and surgeons' RAMR was attenuated by income. The association was the same for Whites regardless of income category and for African Americans with high incomes, but African Americans of low and medium income were more likely to be treated by surgeons with significantly higher RAMR. Asian/Pacific Islanders of all income groups were more likely to be treated by surgeons with higher RAMR.

Conclusions: African Americans and Asian/Pacific Islanders are more likely to be treated by surgeons with higher RAMR, partly due to hospital referral patterns. Income interacts with race to modify the association with surgeons' RAMR.

Implications for Policy, Delivery or Practice: The need to target information on provider quality specifically to African Americans and Asian/Pacific Islanders and to understand better the mechanisms by which this association between race and access to high quality care occurs.

Primary Funding Source: The Commonwealth Fund

● The Attenuation of Race, Gender, and Income Disparities at the End of Life

Lisa R. Shugarman, Ph.D., Diane E. Campbell, Ph.D., Jon Gabel, M.A., Chloe Bird, Ph.D., Tom A. Louis, Ph.D., Joanne Lynn, M.D., M.A., M.S.

Presented by: Lisa R. Shugarman, Ph.D., Associate Policy Researcher, RAND, 1700 Main Street, PO Box 2138, Santa Monica, CA 90407-2138; Tel: (310) 393-0411; Fax: (310) 393-4818; E-mail: Lisa_Shugarman@rand.org

Research Objective: Assess the extent to which race, gender, income, age, and region disparities exist in Medicare-funded services at the end of life.

Study Design: Using Medicare's five percent sample denominator and claims files for 1993-1999 and multivariable modeling, we estimate gender, race, income, age and regional disparities within each of the last three years of life for mean total expenditures, controlling for co-morbidities and other variables.

Population Studied: Fee-for-service Medicare beneficiaries age 65 and older with 36 months of continuous Part A and Part B enrollment prior to death in 1996-1999, N=245,326.

Principal Findings: Substantial disparities in Medicare expenditures by gender, race and income evident three and two years before death virtually disappear in the last year of life, LYOL. The ratio of Medicare expenditures for blacks versus whites increased from 42%, p<0.05, three years before death to 97%, n.s., in the LYOL.

Similarly, three years before death Medicare beneficiaries with area incomes over \$40,000 expended 46% more on Medicare services compared to beneficiaries with incomes under \$20,000, p<0.05. No statistically significant differences in payments by income group persisted in the LYOL. The difference in overall mean expenditures for women versus men in the LYOL was \$948, p=0.16. Conversely, regional and age differences became evident only in the LYOL. Total average expenditures ranged from \$30,903 in the youngest age cohort to \$18,177 in the oldest age cohort, p<0.001. New England and East South Central census region expenditures were 30% higher than the Pacific Coast census region. Small LYOL disparities in expenditures shrink with a log transformation, indicating remaining differences lie among high-cost beneficiaries.

Conclusions: The use of medical treatment services is dramatically lower for blacks, women, and the poor through most of life.

However, these disparities do not persist in the LYOL. This attenuation of disparities may be due to improved access to health services, more consistent recognition of service needs for the fatally ill or a "ceiling effect" in the volume of services that can ordinarily be used within the LYOL. These findings reflect attenuation of disparities only in overall expenditures by Medicare. Considerable disparities may yet exist in the nature of services or the quality of care at the end of life.

Implications for Policy, Delivery or Practice: Evaluating the origins of these unusual findings might well shed light upon disparities generally as well as help policymakers to shape reforms in payment and care delivery toward the end of life. If the attenuation of disparities arises largely from an effective saturation of possible support services in Medicare, then the changes that remove that "ceiling" might have an especially severe budgetary impact. Research to understand regional differences and trade-offs among public and private payors might be illuminating. Research and reform addressing race, income, or gender disparities for those approaching death might best focus upon issues of quality, rather than access.

Primary Funding Source: AHRQ, Fan Fox-Leslie Samuels Foundation, National Institute on Aging

● **The Roles of Socioeconomic Status, Health Behaviors, and Health Insurance in Explaining Racial/Ethnic Disparities in Health Status and Mortality in Late Middle Age.**

Joseph J. Sudano, Jr., Ph.D., David W. Baker, M.D., M.P.H.

Presented by: Joseph J. Sudano, Jr., Ph.D., Senior Instructor of Medicine, Center for Health Care Research and Policy, Metrohealth Medical Center, Case Western Reserve University, Rammelkamp 236, 2500 MetroHealth Drive, Cleveland, OH 44109; Tel: (216) 778-1399; Fax: (216) 778-3945; E-mail: jsudano@metrohealth.org

Research Objective: This study determined the contributions of socioeconomic status (SES), health behaviors, and health insurance coverage in explaining racial/ethnic disparities in health among adults in late middle-age.

Study Design: We used data from the 1992 and 1998 Health and Retirement Study (HRS), a nationally-representative sample of U.S. adults age 51-61. We defined 2 outcomes: (1) major decline in self-reported overall health, defined as a change from a) excellent/very good/fair to poor, or b) a change from fair to poor; and (2) death. The combined outcome of major decline/death was used in logistic regression to determine (1) the degree to which SES, health behaviors, and insurance independently explained racial/ethnic disparities in health outcomes, and (2) how much of the SES effect was mediated by the relationship between low SES, adverse health behaviors, and lack of insurance. All multivariate analyses included a core set of baseline (1992) covariates, including age, sex, marital status, self-reported health, physical limitations, and chronic diseases, with adjustment for analytic weights and survey design.

Population Studied: 9,824 persons participated in 1992; 1,349 (13.7 percent) were lost to follow-up and 75 had incomplete records, leaving 6,286 non-Hispanic whites (W), 1,391 non-Hispanic Blacks (B), 405 English-speaking Hispanics (E/H), and 318 Spanish-speaking Hispanics (S/H).

Principal Findings: Major decline in health or death occurred in 29.0 percent of B (p less than 0.001), 25.3 percent of E/H (p LT 0.01), and 36.4 percent of S/H (p LT 0.001) compared to 18.9 percent of W. After adjusting for demographics and baseline health, adjusted relative risks for major decline/death were 1.24 for B (95 percent CI 1.09-1.40), 1.23 for E/H (1.01-1.49), and 1.68 for S/H (1.36-2.04) compared to W. When SES was added to the model, there were no longer any significant differences in the risk of major decline/death, suggesting that the differences between racial/ethnic groups were fully explained by differences in SES. In contrast, adding health behaviors to the baseline model did not change the RR for B and actually slightly increased the RR for E/H (1.27) and S/H (1.77). Adding insurance to the baseline model reduced RR for B to 1.21, 1.18 for E/H, 1.50 for S/H. Adjusting for all independent variables, adjusted RR's were 1.12 for B (0.98-1.27), 1.12 for E/H (0.90-1.37), and 1.28 for S/H (1.00-1.61). Health behaviors moderated 13.3 percent and insurance status 6.7 percent of the effect of SES.

Conclusions: Most of the higher rate of morbidity and mortality among blacks and Hispanics results from lower SES. The effect of SES on health was mostly direct, with only 20 percent of the SES

effect explained by higher rates of adverse health behaviors and lower rates of insurance coverage among those with lower SES.

Implications for Policy, Delivery or Practice: Public health initiatives that promote changing individual health behaviors and increasing rates of insurance coverage among blacks and Hispanics will not eliminate racial/ethnic health disparities. To eliminate disparities, we must increase efforts to understand the social-structural and institutional mechanisms mediating the relationship between SES and health.

Primary Funding Source: AHRQ

Invited Papers

Understanding Disparities & Improving Health

Chair: David Mechanic, Ph.D.

Monday, June 24 ● 3:00 p.m. – 4:30 p.m.

● **Panelists:** Peter Arno, Ph.D., Dalton Conley, Ph.D., Sara Rosenbaum, J.D., David Williams, Ph.D. (*no abstracts provided*)

Invited Papers

The Effect of Patient Non-Clinical Characteristics on Clinical Encounters & Treatment

Chair: Michelle Van Ryn, Ph.D., M.P.H.

Tuesday, June 25 ● 9:30 a.m. – 11:00 a.m.

● **Panelists:** Lisa Cooper, M.D., M.P.H., Nancy Kressin, Ph.D., Edward Krupat, Ph.D. (*no abstracts provided*)

Related Posters

Poster Session A

Sunday, June 23 ● 11:45 a.m. – 1:15 p.m.

● **Diagnosis and Treatment of Depression in Ambulatory Care Visits - Differences in Office Based and Hospital Outpatient Visits**

Ayse Akincigil, M.A., James T Walkup, Ph.D., Michelle Kennedy, B.A., Stephen Crystal, Ph.D., Usha Sambamoorthi, Ph.D.

Presented by: Ayse Akincigil, M.A., Research Associate, Institute for Health, Health Care Policy and Aging Research, Rutgers The State University of New Jersey, 30 College Avenue, New Brunswick, NJ 08901; Tel: (732) 932-7190; Fax: (732) 932-8592; E-mail: aakincigil@ihhpcpar.rutgers.edu

Research Objective: Describe patterns of depression care provided in a national sample of physician visits in hospital outpatient departments (OPDs), comparing rates and predictors of depression diagnosis and depression treatment found there with rates and predictors of diagnosis and treatment found in a national sample of visits to physician offices.

Study Design: Diagnosis of depression was identified with ICD-9-CM diagnosis codes recorded during the ambulatory care visits. Treatments included prescription of antidepressants or administration of psychotherapy or both. Bivariate analyses and multivariate logistic regressions were used to determine the predictors of diagnosis of

depression and of treatment once depression is diagnosed. Models control for gender, age, race, source of payment, urbanicity, whether the physician is the primary care physician, illness status, duration of the visit, and existence of a comorbid medical condition.

Population Studied: Data from the 1998 and 1999 National Ambulatory Medical Care Survey (NAMCS) and the National Hospital Ambulatory Medical Care Survey (NHAMCS), on visits by patients aged 18 or older, based on 3288 (non-weighted) diagnosed depression visits to the ambulatory care settings.

Principal Findings: The estimated rate of diagnosed depression in OPD visits was significantly higher (3.6%) than in office based physician visits (3.1%). Controlling for a range of other variables, (a) payer status had a significant impact on the probability of depression diagnosis in OPD visits, but not in office visits and (b) in OPD visits, but not in office visits, primary care physicians were significantly more likely to diagnose depression. For visits when depression was diagnosed, rates of treatment did not differ significantly in the two sites (84% in offices vs. 80% in hospitals). Controlling for other variables, (a) illness severity significantly increased the probability of receiving treatment in OPD visits, but not in office visits and (b) in office visits, but not OPD visits, primary care physicians were significantly less likely to provide any treatment.

Conclusions: The analyses provide evidence that the depression care in hospital outpatient departments is different than care provided in offices. While rate of diagnosed depression in OPD visits was significantly higher than in office based physician visits, the rate of treatment, once depression is diagnosed were similar. Patients visiting offices compared to OPDs appeared healthier. Interventions aiming to improve depression care should be tailored according to provider settings.

Implications for Policy, Delivery or Practice: The extensive literature on ambulatory care diagnosis and treatment of depression has been based very largely on visits to physician offices. Overall, the approximately 8% of outpatient visits that occur in OPDs are more likely to be made by patients who are African American, sicker, and to have less continuity of care. Evidence that patterns of depression care differ suggests caution in using existing findings as a basis for improving depression care in OPDs and underline the need for further studies to uncover distinctive organizational and other dynamics influencing care provision.

Primary Funding Source: Foundations

● Do Differences Exist Between the Service Utilization Patterns of HIV-infected American Indians/Native Alaskans and Other Racial/Ethnic Groups?

Jill J. Ashman, Ph.D., David Perez-Jimenez, Ph.D., Katherine M. Marconi, Ph.D.

Presented by: Jill J. Ashman, Ph.D., Health Statistician, OSE, DHHS/HRSA/HAB, 5600 Fishers Lane Parklawn Bldg Rm 7-90, Rockville, MD 20857; Tel: (301) 443-4364; Fax: (301) 594-2511; E-mail: JAshman@hrsa.gov

Research Objective: Examine whether the characteristics and service utilization patterns are the same for HIV-infected American Indian/Native Alaskans and individuals from other racial/ethnic groups.

Study Design: Standard chi-square tests were used to test for statistically significant differences ($p < 0.05$) between the demographic characteristics and service utilization patterns of matched pairs of HIV positive American Indian/Native Alaskans with HIV positive individuals of other racial and ethnic backgrounds. Individuals were matched on gender, age, insurance, AIDS diagnosis, and site. Other data examined include client characteristics: income, homelessness, HIV exposure category, and source of health care; health indicators: CDC-defined disease stage, CD4+ counts, substance abuse and psychiatric illness; and service utilization: medical care, case

management, dental care, substance abuse, mental health counseling and support services.

Population Studied: Data are from the Health Resources and Services Administration's (HRSA) Client Demonstration Project (CDP), which examines characteristics, service utilization, and health outcomes of all HIV infected clients who reside in participating states or eligible metropolitan areas (EMAs) and who receive services at an agency funded through the Ryan White CARE Act.

Principal Findings: There were no statistically significant differences between the two groups for HIV exposure category, CD4 count, substance abuse problem, being homeless and in their likelihood to receive medical care, mental health or substance abuse treatment/counseling, dental care, food, emergency financial, and transportation assistance, as well as buddy/companion and client advocacy services. American Indians were more likely to have a psychiatric illness. They were also less likely to receive their medical care at a public clinic (41% vs. 50%) and more likely (8% vs. 2%) to have no usual place to go for their HIV-related primary medical care. They were more likely (55% vs. 46%) to receive case management services than the matched individuals from other racial/ethnic groups. They were also more likely to receive housing assistance (35% vs. 25%).

Conclusions: The analysis provides evidence that when individuals are matched on key demographic and health characteristics, few differences remain between HIV positive American Indians/Native Alaskans and other racial/ethnic groups. The fact that they are more likely to have no usual place to go for their HIV-related primary medical care, suggest that they're a more vulnerable population. However, despite this vulnerability, their utilization of case management and housing assistance is greater, suggesting that the Ryan White CARE Act is meeting its objective of reaching vulnerable populations and getting them into care.

Implications for Policy, Delivery or Practice: A way to reduce even further, American Indians having no usual place to go for HIV care would be for case managers to make a concerted effort to refer American Indians to medical services at public clinics.

● Does Selection Bias Mask the Impact of Prenatal Care among Low-Income Women enrolled in Medicaid?

Martin Atherton, M.P.H., DrPH

Presented by: Martin Atherton, M.P.H., DrPH, Assistant Professor, Health Systems Management, George Mason University, 3535 North Glebe Road, Arlington, VA 22207; Tel: (703) 532-4001; Fax: (520) 447-5511; E-mail: mjather@umich.edu

Research Objective: Managed care is still perceived as one solution to health care reform. Within the context of this model, the gatekeeper construct has proven to be effective in bridging access to preventive health services. The focus of this research is to test the association between health plan model enrollment (fee-for-service versus commercial managed care) and access to prenatal care as well as resulting birth outcomes among pregnant women enrolled as Medi-Cal beneficiaries in California.

Study Design: A retrospective cohort design was implemented in which study participants were classed according to their Medi-Cal enrollment status. Because Medicaid is administered at the county level in California, county residence was used to ascertain enrollment in traditional fee-for-service Medi-Cal benefits. Enrollment in a commercial managed care health plan was determined by linking live birth records to the beneficiary rolls of a large California-based Medi-Cal health plan.

Population Studied: The study population was comprised of 70,000 women enrolled during 1995-1997 in either a commercial Medicaid managed care program or in traditional fee-for-service health plans. Because use of prenatal care has been associated with self-selection bias, a reduced model was specified using instrumental variables to control for endogenous inputs to the demand for prenatal care.

Principal Findings: Commercial MC enrollees were less likely to delay seeking prenatal care until after the 1st trimester (O.R. 0.7, 95% C.I. 0.66, 0.74) and were less likely to receive 'inadequate' prenatal care (O.R. 0.64, 95% C.I. 0.60, 0.68) compared to FFS enrollees. An OLS model specification suggested that MC enrollment is associated with an average decrease in birth weight of 62.41 grams (± 7.13); however, after correction for endogeneity bias using 2SLS model specification, MC enrollment was associated with an average birth weight increase of 109.35 (± 915.86) grams, although the enrollment coefficient was not significant. Notably, OLS model specification suggested that each month delay in prenatal care was associated with a decrease in birth weight of 28.22 grams (95% C.I. ± 4.112) 2SLS model specification suggests that each month delay in prenatal care is associated with a decrease in birth weight of 152.45 grams (95% C.I. ± 35.21)

Conclusions: Self-selection bias can result in underestimates of the observed relationship between the use of prenatal care technology and live birth weights among low-income women. After controlling for this bias, reduced models suggest that managed care enrollment may be associated with increased birth weights among poor and underserved women.

Implications for Policy, Delivery or Practice: The managed care model may represent one solution to the problem of improving birth outcomes among selected women enrolled in Medi-Cal commercial managed care programs.

Primary Funding Source: Foundations, Pew Trusts

● **Determinants of Internet Use for Health Information Among a Diverse Workforce**

Lisa Benton, MD, MPH

Presented by: Lisa Benton, MD, MPH, General Surgeon, Surgery, Stanford University Hospital and Clinics, 3200 Middlefield Road, Suite B, Palo Alto, CA 94306; Tel: 510-521-5727; Fax: 650-494-1582; E-mail: lisa_benton@hotmail.com

Research Objective: To measure the frequency of online access to obtain health information among a diverse industrial medicine population, and identify factors that impact their Internet and email use for health information.

Study Design: One clinician interviewer in English, Spanish or via an interpreter using five consecutive binary questions accomplished this study. Questions focused on the availability of a computer, access to Internet training, frequency of general Internet use, and interest of seeking health and medical information in general or pertaining to a specific medical problem. Opportunity for additional comment and discussion of each question was encouraged.

Demographic and occupational health information was also queried.

Population Studied: Seventy-six consecutive patients presenting for work-related injuries or health problems to an outpatient industrial medicine clinic in a high technology penetration metropolitan area. Verbal consent to participate was received from each participant prior to the interview.

Principal Findings: Medically related use of the Internet in this sample population remains limited and is not homogeneously distributed. Among this ethnically diverse populations language and instruction in basic technology applications remain primary and significant barriers to using the computer to access health information. Older participants were reluctant to use a computer but felt it was important to have one readily available in the home for their children and grandchildren despite the issue of cost of purchase of a computer. Lack of availability of non-English computer instructional classes was common. Reliance on learning the Internet in groups with friends or relatives with variable levels of computer competency was a frequent source of education. When access to the Internet was fluent in participants with a medical problem, health-related web sites were regularly visited.

Conclusions: While Internet use to access health and medical information may be directly correlated with income, other factors

such as lack of culturally appropriate computer training also impact how and why health information is unevenly distributed across racial and ethnic groups. Growing literature on ethnic disparities in health confirms that patients from diverse backgrounds have problems accessing and receiving appropriate health care. This technology barrier to care and patient education may be accentuated as a workforce with a diverse educational, social, and ethnic backgrounds continues to evolve.

Implications for Policy, Delivery or Practice: As web-based services become more vital to providing quality health care efficiently, existing gaps in communicating health information will only become more visible.

Primary Funding Source: No Funding

● **Parent's Mood and Interactions with Pediatric Health Care Providers**

Stephen Blumberg, Ph.D.

Presented by: Stephen Blumberg, Ph.D., Senior Survey Statistician, National Center for Health Statistics, Centers for Disease Control and Prevention, 6525 Belcrest Road, Suite 850, Hyattsville, MD 20782; Tel: (301) 458-4107; Fax: (301) 458-4035; E-mail: sblumberg@cdc.gov

Research Objective: Just as few people ask for a raise when the boss is in a bad mood, pediatric health care providers may believe that the provision of preventive health care information to parents will be less effective when these parents are experiencing negative moods. This analysis examined whether the general mood of parents of young children predicted the proportion of preventive health care topics discussed by the child's health care providers and parents' desire for such discussions.

Study Design: In the National Survey of Early Childhood Health (NSECH), parents of children under three years of age identified whether their children's doctors or health providers had discussed a series of age-appropriate preventive health care topics during the past 12 months. For topics not discussed, parents reported whether a discussion of that topic would have been helpful. In addition, parents reported which of a series of psychosocial issues they believed should be discussed by doctors or health providers. The proportion of topics discussed, the proportion of topics not discussed that would have been helpful, and the proportion of psychosocial issues that should be discussed were each regressed on a continuous measure of general mood over the past 30 days that was developed from factor analysis of the Medical Outcome Study's Mental Health Index (MHI5). These analyses controlled for household income, a significant predictor of overall mood. Data were weighted to account for probability of selection, non-response, and non-coverage of non-telephone households.

Population Studied: Self-reported survey data from the parents or guardians of 2,068 randomly selected children aged 4-35 months were analyzed. This nationally representative survey was conducted in 2000 by the National Center for Health Statistics of the Centers for Disease Control and Prevention as a module of the State and Local Area Integrated Telephone Survey.

Principal Findings: Children whose parents were more often in a positive mood during the past month had doctors and health providers who discussed more preventive health care topics with the parents. But, parents who were more often in a positive mood were less likely to believe that preventive health care topics are problems that need to be discussed. That is, these parents identified fewer topics for which discussions would have been helpful and identified fewer psychosocial issues that should be discussed by doctors or other health care providers.

Conclusions: Pediatric health care providers should be aware that parental moods could affect parent/provider interactions. The primary limitation of this conclusion concerns the retrospective nature of the survey: Positive moods can lead to better recall of

information provided during the visit and may bias the recall of whether discussions would have been helpful in the past.

Implications for Policy, Delivery or Practice: Efforts to improve parental moods may improve the quality of the care received by their children.

Primary Funding Source: The NSECH was sponsored by the American Academy of Pediatrics (AAP) with funding from the Gerber Foundation. The Maternal and Child Health Bureau and the AAP Friends of Children Fund provided additional funds.

● Rural/Urban and Ethnic Differences in Perceived Access

Indicators Among an Older Population

Tyrone Borders, Ph.D., Gina Kruse, M.S.

Presented by: Tyrone Borders, Ph.D., Assistant Professor, Health Services Research and Management, Texas Tech University Health Sciences Center, 3601 4th St., Room 1C165, Lubbock, TX 79430; Tel: (806) 743-6984; Fax: (806) 743-1292; E-mail: somtbf@ttuhsc.edu

Research Objective: The objective of the present study was to identify problems with access to medical care among Hispanic and rural elders using perceived access indicators.

Study Design: Data were collected through a cross-sectional telephone survey of approximately 5,000 community-dwelling elders. Perceived accessibility was measured with the Consumer Assessment of Health Plans Survey (CAHPS). Multivariate ordered logit regression was used to adjust for the effects of other potential confounders when comparing rural non-frontier and rural frontier to urban residents and Hispanics to non-Hispanic whites.

Population Studied: 5,000 elders (age 65 and older) residing in the 105-county region comprising West Texas, a largely sparsely settled area.

Principal Findings: Controlling for demographic, economic, social, and health factors, rural frontier residents were less satisfied with access to personal providers than urban residents. Rural non-frontier residents were less satisfied with access to specialists. Hispanics were less satisfied with their access to personal providers and specialists as well as the promptness of illness-related and routine care.

Conclusions: Access remains a concern for rural and Hispanic elders residing in the largely sparsely settled region of West Texas.

Implications for Policy, Delivery or Practice: Health policy makers and planners should periodically conduct community-based surveys to more specifically identify problems with access. Subsequently, policies and programs might be more fruitfully targeted at population subgroups which are more vulnerable for inadequate access to medical care, such as the rural and Hispanic elderly.

Primary Funding Source: AHRQ

● Disparities in Health-Related Quality of Life among an Older Population in a Rural Western Region

Tyrone Borders, Ph.D., Lu Ann Aday, Ph.D., Ke Tom Xu, Ph.D.

Presented by: Tyrone Borders, Ph.D., Assistant Professor, Health Services Research and Management, Texas Tech University Health Sciences Center, 3601 4th St., Room 1C165, Lubbock, TX 79430; Tel: (806) 743-6984; Fax: (806) 743-1292; E-mail: somtbf@ttuhsc.edu

Research Objective: The purpose of this study was to analyze the principal correlates of functional disability and health-related quality of life disparities among the noninstitutionalized elderly residing in a largely sparsely settled and medically underserved western region of the United States.

The original Behavioral Model developed by Andersen and colleagues was modified to more clearly distinguish the different types of resources available for enhancing health, including social capital, human capital, material capital, and the availability of health care resources.

Study Design: A large-scale telephone survey of 65,000 households was conducted to identify a sample of elderly persons. Health status measures included need for assistance with ADLs and IADLs, physical and mental health-related quality of life, and worry about health status.

Population Studied: Approximately 5,000 persons age 65 and older residing in the 105 counties comprising West Texas. The area represented in the survey captures a somewhat unique population of elderly, including a relatively high percentage of Mexican Americans and individuals living in sparsely settled frontier counties.

Principal Findings: Those groups of the community-dwelling elderly in the poorest health were over 75 years of age, Black/African-American, had less than a high school education, were retired or unemployed, and had low household income.

Conclusions: The modified version of the Behavioral Model assists in the identification of the types of resources available for enhancing health among the community-dwelling elderly. To maintain the physical, social, and psychological health of older persons residing in urban and remote rural areas, social services as well as medical care and related supportive services are needed, particularly among the most socially and economically disadvantaged rural elderly.

Implications for Policy, Delivery or Practice: Health and social policies for reducing rural/urban and ethnic disparities in health and well-being among older persons.

Primary Funding Source: Government, Administration on Aging

● Health Care Disparities and the Study of Cervical Cancer

Cathy Bradley, M.P.A., Ph.D., Charles W. Given, Ph.D., Caralee Roberts, Ph.D.

Presented by: Cathy Bradley, M.P.A., Ph.D., Associate Professor, Department of Medicine, Health Services Research Division, Michigan State University, B212 Clinical Center, East Lansing, MI 48824; Tel: (517) 432-3405; Fax: (517) 432-9471; E-mail: Cathy.Bradley@ht.msu.edu

Research Objective: Reducing disparities in health care has become a national priority. Cervical cancer is an example of an illness where detection and treatment are easy, effective, and relatively inexpensive, yet disparities in detection and survival are apparent.

Study Design: Statewide data sets including the Michigan cancer and death certificate registries and Medicaid enrollment and medical claim files for recipients enrolled in the fee-for-service system are supplemented with the Detroit Surveillance, Epidemiology, and End-Results registry.

Population Studied: We identified 5,038 women with a primary cervical cancer diagnosis; Medicaid insured 1,096 of them. Cervical cancer incidence among Medicaid and non-Medicaid insured women, stage at which cervical cancer was detected, types of treatment provided, and survival was evaluated. Among women who died and were insured by Medicaid, all medical claim files prior to death were examined to determine if inappropriate care contributed to early death.

Principal Findings: Medicaid insured nearly one-quarter of all women diagnosed with cervical cancer. When compared with the general population, the cervical cancer incidence rate for Medicaid recipients was higher for every 5-year age group between 25 to over 85 years of age. Older age (65 years or older) (OR=9.80, 95% CI 7.52, 12.77) and low-income, as defined by Medicaid insurance (OR=2.58, 95% CI 1.97,3.38), appear to be risk factors for late stage disease at diagnosis, although cervical cancer cases overwhelmingly are detected in early stages (92% of all cases in Michigan). Among older, Medicaid-insured women, residing in a long-term care facility and having no Medicaid insurance prior to cervical cancer diagnosis were associated with late stage diagnosis. Eighty-six percent of women in the Detroit Metropolitan area had surgery for cancer, regardless of patient demographics and Medicaid insurance. Only cancer stage predicted the receipt of surgery with both very early and very late stages less likely to be treated with surgery. Death from

cervical cancer was associated with low-income and older age. However, deaths could not be attributed to lack of treatment. Nearly every patient who died received some form of treatment prior to death. Among women insured by Medicaid who died (n=69), only women who had advanced stages or were very old or residing in a nursing home did not receive treatment.

Conclusions: Cervical cancer is a considerable public health problem that needs the attention of Medicaid planners. Our research suggests that to reduce disparities in cervical cancer outcomes, a substantial investment in case finding targeted toward older women where incidence is lower will be required. In some cases, particularly among the very old, this raises practical and ethical decisions regarding screening and treatment and may prove very costly and difficult to implement. Among the young, low-income population, screening programs that reach out to the uninsured are likely to attract symptomatic women—not women practicing preventive health behaviors. Therefore once a positive diagnosis is made, the cancer is likely to be in late stages where unfavorable outcomes are more likely. The task at hand requires changing behaviors and a health care system that supports regular care beyond screening.

Implications for Policy, Delivery or Practice: To raise awareness of the magnitude of the task to reduce health disparities.

Primary Funding Source: NCI

● Reports of Unfilled Prescriptions in the Medicare Population: Does Having Prescription Coverage Matter?

Becky Briesacher, Ph.D.

Presented by: Becky Briesacher, Ph.D., Director of Research, Peter Lamy Center, University of Maryland, 506 W. Fayette, Baltimore, MD 21201; Tel: (410) 706-1490; Fax: (410) 706-5389; E-mail: bbriesac@rx.umaryland.edu

Research Objective: To assess the role of prescription drug coverage in reports of unfilled prescriptions in the Medicare population

Study Design: This study used data from the 1996-1998 Medicare Current Beneficiary Survey (MCBS), a nationally representative dataset of in-home interviews of the Medicare population. The MCBS provides detailed information on the prescription use and drug benefits of the Medicare population including their access problems in getting prescriptions filled. Prescription data include the names of filled and unfilled medications, and self-reported reasons for any filling problems. Study methods consisted of annual prevalence estimates and panel data logit models to assess the effect of prescription drug coverage, relative to no drug coverage, on the probability of having unfilled prescriptions. Secondary models assessed the probability that certain types of medications are not filled. Explanatory variables comprised demographic traits, cognitive skills, attitudes toward physicians, income, geographic residence, functional status, health status, co-morbidities, type of prescription coverage, and the therapeutic drug classes of prescribed medicines.

Population Studied: Study samples consisted of 27,000 community-dwelling Medicare beneficiaries (weighted n=55 million individuals) and 540,000 medications prescribed for them between 1996 and 1998.

Principal Findings: The results indicate that only 3 percent of Medicare beneficiaries (approximately 800,000 individuals) have unfilled prescriptions each year. Only a quarter missed more than 1 prescription during the year and their average prescription use compared with that of beneficiaries who never missed any prescriptions (22.9 fills vs. 24.9 fills). Most nonfillers described prescription costs as the main reason for the problem (55.5%), while the other half had biases against taking medications or disbelief in the medical need. Multivariate analysis revealed high variability. Estimates from the multivariate model suggest that beneficiaries with prescription coverage from employer-sponsored plans had a lower probability of nonfills (95% Confidence Interval [CI] 0.42 - 0.67) than the uninsured. Other forms of drug benefits did not appear to

offer similar protection. Related indicators of economic vulnerability showed weak correlations and appeared less important than personal factors such as feeling health had worsened in last year (CI 1.23 - 1.83) or having no confidence in physicians (CI 1.74 - 3.91). Type of medication also predicted nonfilling behavior: medications most likely to go unfilled included: skin preparations, analgesics, and eyes, ears, nose and throat preparations. Those least likely were diuretics, hormones and cardiac drugs.

Conclusions: The evidence reveals high variation in the decision of whether or not beneficiaries comply with medication filling orders. Nonfills affect a small group of beneficiaries who share complex disadvantages related to inadequate prescription coverage, low health status, and distrust of the medical community, among other factors. The only characteristic uncovered that reduces unfilled prescriptions is access to drug benefits designed like employer-sponsored plans. More research needs to be performed to understand how nonfilling behavior relates to specific drug benefit features.

Implications for Policy, Delivery or Practice: Despite the protective effect of prescription benefits, they provide only a partial solution to reducing the problem of unfilled medicines. Better patient-clinician relationships and more attention to prescription choices may also improve prescription-filling decisions.

Primary Funding Source: Foundations

● Training Culturally Competent Physicians in Graduate Medical Education

Sarah Brotherton, Ph.D., Fred Donini-Lenhoff, M.A.

Presented by: Sarah Brotherton, Ph.D., Director, Data Acquisition Services, American Medical Association, 515 N. State St., Chicago, IL 60657; Tel: (312) 464-4487; Fax: (312) 464-5830; E-mail: sarah_brotherton@ama-assn.org

Research Objective: To understand the relationship, if any, between characteristics of graduate medical education programs and the likelihood of programs providing their residents/fellows with instruction in complementary/alternative medicine, cultural competence, and non-English language acquisition.

Study Design: The American Medical Association (AMA), with the Association of American Medical Colleges, annually surveys all US residency/fellowship programs accredited by the Accreditation Council for Graduate Medical Education, as well as combined programs jointly approved by applicable certification boards. The AMA also collects demographic information on residents in these programs. Using logistic regression, characteristics of programs (size, setting, and specialty) and of residents potentially related to the likelihood of providing such instruction (percent minority, female, international medical graduate, etc) were compared between programs that did or did not offer instruction in these areas.

Population Studied: The National GME Census surveyed 7,985 residency/fellowship programs in academic year 2000-2001, of which 78.5% responded to the full program survey. Programs in larger specialties, those with currently enrolled residents, those with higher percentages of white residents, and those in community hospitals were more likely to respond. These analyses are restricted to 5,171 programs with residents enrolled and in specialties with 25 or more programs responding to the survey.

Principal Findings: Nearly one-third (32.9%) of the responding programs offered instruction in complementary/alternative medicine, 42.5% in cultural competence, and 28.7% in non-English language acquisition. In general, programs with higher percentages of minority and female residents were more likely to offer instruction in these three areas, as were larger programs and programs in community hospitals and “other” settings (versus university hospitals). Once specialty entered the equations, however, the significance of resident characteristics typically diminished, with program setting remaining significant. Family practice, medicine-pediatrics, preventive medicine and rehabilitation, and psychiatry programs were more likely to provide alternative/complementary

medicine instruction compared to obstetrics/gynecology (the reference specialty, with 34.5% with instruction). The percentage of African-American residents was positively related to cultural competence instruction, and, relative to obstetrics/gynecology (51.1%), psychiatry, child and adolescent psychiatry, and family practice programs were more likely to provide this training. Higher percentages of Mexican-American and Puerto Rican residents were related to non-English language instruction, and, relative to obstetrics/gynecology (28.3%), medicine-pediatrics, pediatric pulmonology, family practice, and emergency medicine programs were more likely to provide this instruction. Many specialties not known for high patient contact (eg, radiology, pathology) were less likely to provide training in these areas; however, some specialties involving the care of children also were in this group.

Conclusions: Controlling for other study variables, family practice, psychiatry, and medicine-pediatrics appear to be at the forefront in preparing physicians for patient diversity. Programs in community hospitals, or settings other than university or military hospitals, are also more likely to offer such training. Programs with a higher percentage of residents who may speak Spanish are more likely to have non-English language training.

Implications for Policy, Delivery or Practice: Training a physician workforce adept at treating patients with different cultural backgrounds and values concerning medical treatment is increasingly important in light of the nation's growing diversity. Physicians in non-primary care specialties, while not expected to maintain longitudinal relationships with patients, should still have the opportunity to enhance their skills at patient communication and understanding.

Primary Funding Source: American Medical Association

● **Consumer Informatics for Individuals with Severe Chronic Conditions**

Gordon Brown, Ph.D., Joseph Hales, Ph.D., Joseph Quetsch, M.D., Laura Schopp, Ph.D.

Presented by: Gordon Brown, Ph.D., Professor and Chair, Health Management & Informatics, University of Missouri-Columbia, School of Medicine, 324 Clark Hall, Columbia, MO 65212; Tel: (573) 882-6179; Fax: (573) 882-6158; E-mail: Westje@health.missouri.edu

Research Objective: To assess the value of consumer information systems for individuals with severe and chronic health problems determined by their ability to know about available services and resources and to coordinate their own services. We explore the potential of Internet-based information technology for addressing special needs of this population to gather and integrate information from multiple health professionals, various health organizations, different financing systems with different eligibility requirements and disparate social and human service agencies. We assess the value of combining health information with transportation, educational and training, employment, and public agencies to as a means of accessing and coordinating services.

Study Design: Focus groups followed by survey, interview, direct observation and monitoring of the use of information by consumers to accomplish tasks from their home or workplace. Information was used to design and test a consumer informatics model.

Population Studied: Individuals with spinal chord injuries, institutions and people who serve them: family members, health professionals and managers of organizations.

Principal Findings: Individuals with spinal cord injury reflect special and unmet information needs due to their use of disparate institutions and providers. Knowledge about their needs and services is difficult to obtain even from the serving institutions. They rely on peers for information but have difficulty finding a peer with the answer. They perceive value in an online community of local peers who manage local knowledge.

The current design of consumer informatics makes them dependent on each organization used for the amount, nature and format of information provided. Consumers empowered through increased availability of information remain dependent on health providers for personal information. Integrating information to coordinate care remains difficult. Institution-centric health systems intuitively take on the monumental task of developing integrated information systems by directly linking institutional databases across professional, institutional and sector boundaries.

The model information system was designed to circumvent factors impeding cross-institutional integration by passing information via the consumer. Consumers desire to control personal data by delivering information to providers and sharing knowledge with other individuals about special problems, available resources, and providers. Individuals expressed the desire to remain independent and to leverage the value of personal information by linking with others.

Conclusions: Individuals with severe chronic conditions need additional and different types of information than is provided by institution-based information systems to order to access and coordinate services. They value networking with peers, the ability to integrate all health and social services and to avoid duplicative and disjointed databases. Personally controlled data systems and community knowledge management outside of institutions is practical and desired by the study population.

Implications for Policy, Delivery or Practice: Individuals and the peer community are replacing institutions as the focus of service delivery in the minds of the population. This is especially true for individuals with severe and chronic conditions who must integrate and coordinate services. The design of consumer information systems should reflect their needs. This design will re-define the problem of integrating across institution-centric information systems.

Primary Funding Source: University Research Development Grant

● **Impact of Dementia on Inpatient Stays: Excess Cost?**

Sarah Wackerbarth, Ph.D., Samuel Brown, Ph.D., MBA, Samuel L. Brown, Ph.D., Megan E. Streams, M.A., Kelly B. Hatman, B.A.

Presented by: Samuel Brown, Ph.D., MBA, Assistant Professor, Public Administration, University of Nebraska at Omaha, 6001 Dodge Street, Omaha, NE 68182-0276; Tel: (402) 554-2575; Fax: (402) 554-2625; E-mail: slbrown@mail.unomaha.edu

Research Objective: To explore the impact of dementia on the length of inpatient stays and total charges and to examine potential contributing factors.

Study Design: We used multiple linear regression models to predict length of stay and total charges using SAS general linear modeling (GLM). Independent variables were presence of dementia, principle diagnosis, age, gender, race, marital status, admission source, discharge status, presence of Medicaid as secondary payer (a proxy for poverty), and co-morbidities. We developed a single omnibus model including the five most frequent principal diagnoses of the dementia group and separate models for each of these five frequent categories.

Population Studied: Discharge data from the Maryland Health Services Cost Review Commission on all patients age 65 and older discharged from hospitals in Maryland during 1998.

Principal Findings: Our examination of per-visit cost for acute care stays found either no impact of a dementia diagnosis on charges or a negative effect on charges for specific common diagnoses (that together account for over one-fourth of dementia discharges)-- indicating that higher cost for acute care is not uniform with respect to diagnosis.

Conclusions: Results provide relevant information to policymakers considering policies affecting access to care for vulnerable populations such as patients with dementia.

Implications for Policy, Delivery or Practice: Given that government entities such as federal state and local governments and private insurers are all involved in setting reimbursement rates for

acute case services, they should be concerned about the kind of cost information contained herein. While a review of previous research suggest an excess cost of dementia, those studies focused on annual cost per person. Our examination of per-visit cost for acute care stays found either no impact of a dementia diagnosis on charges or a negative effect on charges for specific common diagnoses (that together account for over one-fourth of dementia discharges)-- indicating that higher cost for acute care is not uniform with respect to diagnosis.

Primary Funding Source: No Funding,

● **The Impact of Fee-For-Service and Managed Care Insurance on Access to Cardiac Care in Maryland**

Samuel Brown, Ph.D., MBA

Presented by: Samuel Brown, Ph.D., MBA, Assistant Professor, Public Administration, University of Nebraska at Omaha, 6001 Dodge Street, Omaha, NE 68182-0276; Tel: (402) 554-2575; Fax: (402) 554-2625; E-mail: slbrown@mail.unomaha.edu

Research Objective: To examine access to cardiac procedures for Acute Myocardial Infarction Patients in Maryland to assess the impact of health insurance in an all-payer rate setting system.

Study Design: Logistic regression analysis was used to predict access to cardiac care. Independent variables were the presence of Acute Myocardial Infarction, age, sex, race and co-morbidities. Three separate logistic regression models were developed to predict access to cardiac catheterization, angioplasty and CABG surgeries.

Population Studied: Discharge data from the Maryland Health Services Cost Review Commission on all patients diagnosed with Acute Myocardial Infarction discharged from hospitals in Maryland in 1998.

Principal Findings: HMO patients were less likely to receive cardiac catheterization and CABG, but slightly more likely to receive PTCA than FFS (fee-for-service) patients.

Conclusions: Our examination indicates that type of insurance is a significant predictor of access to cardiac care even in an acute care regulatory system design to reduce disparities in access to care.

Implications for Policy, Delivery or Practice: Type of insurance may be more significant than a hospital regulatory system in reducing disparities in access to cardiac care.

Primary Funding Source: None

● **Racial/Ethnic and Urban/Rural Disparities in Health**

Insurance Coverage and Uninsurance in California: Results from the California Health Interview Survey

E. Richard Brown, Ph.D., Thomas Rice, Ph.D., Ninez Ponce, Ph.D., Shana Alex, M.P.H.

Presented by: E. Richard Brown, Ph.D., Director, UCLA Center for Health Policy Research, 10911 Weyburn Avenue, Suite 300, Los Angeles, CA 90024; Tel: 310-794-0812; Fax: 310-794-2686; E-mail: erbrown@ucla.edu

Research Objective: The California Health Interview Survey is designed to provide policy-relevant data to assess the health insurance coverage, access to health care, and eligibility for public programs of California's geographically and ethnically diverse population.

Study Design: CHIS is a bi-annual telephone survey of more than 55,000 households drawn from every county in the state, grouped into 41 sampling strata. The CHIS sample was primarily a random-digit-dial survey with over sampling of Asian Americans/Pacific Islanders, American Indians/Alaska Natives, and rural counties. CHIS is designed to generate statewide and county-level estimates as well as estimates for California's major ethnic groups and a number of ethnic subgroups.

Population Studied: California population

Principal Findings: CHIS 2001 includes data on current health insurance coverage (including employment-based insurance,

privately purchased coverage, and a large number of public programs), continuity of coverage during past 12 months, reasons for lack of coverage, eligibility for Medicaid and SCHIP programs in California, and health services access and utilization for a sample adults in each of more 55,000 households. It also includes parallel data for 6,000 adolescents and 12,000 children under age 12.

Conclusions: Conclusions will be presented regarding the extent of racial/ethnic and urban/rural disparities in health insurance status and resulting effects on access to health care. The effects on population estimates of methodological differences between CHIS and the Current Population Survey will also be explored.

Implications for Policy, Delivery or Practice: CHIS data will be used to develop outreach and enrollment strategies and programs for Medicaid and SCHIP programs and to inform policy development and advocacy.

Primary Funding Source: Government, Foundations

● **Examining the Role of Safety Net Dental Providers in Access to Oral Health Care in Illinois**

Gayle Byck, Ph.D., Judith A. Cooksey, M.D., M.P.H., Hollis J. Russinof, MUPP

Presented by: Gayle Byck, Ph.D., Senior Research Specialist, Illinois Regional Health Workforce Center, University of Illinois at Chicago, 850 W. Jackson Blvd., Suite 400, Chicago, IL 60607-3025; Tel: (312) 355-4761; Fax: (312) 355-2801; E-mail: gbyck1@uic.edu

Research Objective: While access to oral health care for underserved populations is a nationally recognized problem, little information is available on the role of the dental safety net in meeting the oral health needs of low-income and other underserved groups. This study describes Illinois safety net dental clinics and provides a framework for understanding how these dental providers affect access to dental care in their communities.

Study Design: A confidential written mail survey to all Illinois safety net dental providers, which included federally qualified health centers, community health centers, local health departments, private not-for-profit clinics, schools of dentistry and dental hygiene clinics, school-based clinics, and other safety net dental providers. The response rate was 75% (71/95).

Population Studied: Illinois safety net dental providers.

Principal Findings: Strengths of the Illinois dental safety net included: The dental clinics tended to be well-established (open for an average of 18 years), and offered a wide range of services to low-income adults and children and many special population groups (disabled, HIV/AIDS, homeless). Most clinics (79%) provided a variety of oral health outreach and education programs, and were located at sites where other health care services were also provided (71%). On average, each site provided 3,150 annual dental visits. Challenges: Dental clinics operated with few staff - 36 clinics only had one full-time paid dentist each, 25 clinics operated with only part-time paid or volunteer dentists, and only 15 clinics had a full-time paid dental hygienist - and had difficulties recruiting new staff. Almost two-thirds of dental clinics had a budget less than \$200,000. Almost one-fourth of all appointments each week were missed by patients. Notably, only 8 of the 71 clinics reported that they were able to meet all of their patient's dental needs.

Barriers faced by patients: Few dental clinics were open any evenings (25 clinics) or weekends (7 clinics). Not all types of services were provided, and not all clinics treated all types of patients, particularly migrant farmworkers, persons with HIV/AIDS, and the homeless. About half of the clinics also had jurisdictional and financial restrictions which limited the type of patients who could receive services. Medicaid patients had to wait an average of five weeks to obtain an appointment for routine care. Dental clinics reported difficulty in referring patients to other sources, particularly for uninsured patients and those needing complex restorative care, oral surgery, and other specialty services. In addition, three-fourths of Illinois counties did not even have a safety net dental clinic.

Conclusions: These dental clinics are essential in helping underserved population groups in Illinois meet their oral health care needs. These findings should assist oral health care professionals and policymakers in their efforts to improve the delivery of oral health care services to low-income and underserved population groups.

Implications for Policy, Delivery or Practice: Access to oral health care for underserved populations and provision of oral health care through the safety net.

Primary Funding Source: Foundations, Health Resources and Services Administration, Illinois Primary Health Care Association, and the UIC Illinois Regional Health Workforce Center

● **Wisconsin Dentists and Medicaid: Who Participates**

Gayle Byck, Ph.D., Judith A. Cooksey, M.D., M.P.H., Hollis J. Russinof, MUPP

Presented by: Gayle Byck, Ph.D., Senior Research Specialist, Illinois Regional Health Workforce Center, University of Illinois at Chicago, 850 W. Jackson Blvd., Suite 400, Chicago, IL 60607-3025; Tel: (312) 355-4761; Fax: (312) 355-2801; E-mail: gbyck1@uic.edu

Research Objective: Assess the dental workforce in Wisconsin to assist the state with policy discussions about improving access to dental care for underserved populations. One objective of the study is to assess the characteristics of dentists who do and do not participate in Medicaid, and other volunteer and charitable activities.

Study Design: A written survey was sent from the Wisconsin Bureau of Health Information to all dentists licensed in Wisconsin as of November 2000. The response rate was 94% (4301/4563).

Population Studied: Dentists who indicated that they were currently practicing dentistry in Wisconsin (66%, 2842/4301).

Principal Findings: Statewide, there were 53 dentists per 100,000 population. While 94% of dentists accepted new patients into their practice, only 42% treated Medical Assistance /Medicaid/BadgerCare ("state program") patients and 20% accepted new state program patients. About 16% each of dentists offered a sliding fee scale or volunteered at a clinic serving uninsured patients. Almost half of dentists provided some pro bono services.

There were differences in Medicaid participation based on dental school attended, specialty, race, and urban/rural area. Dentists who graduated from out-of-state dental schools were significantly more likely than dentists who graduated from a Wisconsin dental school to treat (50% vs. 37%, $p < .0001$) and accept new (26% vs. 17%, $p < .0001$) state program patients. Pediatric dentists were more likely than general practitioners to treat (73% vs. 41%, $p < .0001$) and accept new (64% vs. 16%, $p < .0001$) state program patients as well as to volunteer at a clinic (29% vs. 15%, $p < .01$). Other specialists were also more likely than general practitioners to accept new state program patients (34% vs. 16%, $p < .0001$). Non-white dentists were significantly more likely than white dentists to accept new patients in general (98% vs. 94%, $p < .02$), and to treat (55% vs. 42%, $p < .02$) and accept new (37% vs. 20%, $p < .0001$) state program patients. No significant differences were found based on years of experience.

When Wisconsin counties were categorized by metro-central (MC), metro-other (MO), rural-adjacent (RA), and rural-nonadjacent (RN), the dentist-to-population ratios were 41 for RA and 40 for RN compared to 53 for MO and 64 for MC. The RN category had the lowest proportion of dentists who accepted new patients in general (87%), and the highest proportion who treated state program patients (59%). Only 27% of MC dentists treated state program patients. About 18% of both MC and MO dentists accepted new state program patients compared to 24% of RA dentists and 20% of RN dentists.

Conclusions: Limited dentist's participation in Medicaid has been cited as a major problem restricting access for Medicaid-enrolled children. Self-reported participation rates indicated that 42% of Wisconsin dentists participated overall, with notable differences based on dentist characteristics. Knowledge of these differences may make it easier to target Medicaid outreach and enrollment activities to dentists who are most likely to participate, as well as to target

education programs to dentists who are less familiar with the Medicaid program.

Implications for Policy, Delivery or Practice: Access to care for Medicaid enrollees, dentist participation in Medicaid programs.

Primary Funding Source: Foundations, Health Resources and Services Administration, Wisconsin Primary Health Care Association, and the UIC Illinois Regional Health Workforce Center

● **Racial Differences for Improvements in Knee Osteoarthritis**

Margaret Byrne, Ph.D., Margaret Byrne, Ph.D., Kimberly O'Malley, Ph.D., Julie Soucek, Ph.D., Maria Suarez-Almazor, M.D., Ph.D.

Presented by: Margaret Byrne, Ph.D., Assistant Professor, Department of Medicine, University of Pittsburgh, 3708 Fifth Avenue, Suite 300, Pittsburgh, PA 15213; Tel: (412) 647-0899; Fax: (412) 647- 5877; E-mail: byrnem@pitt.edu

Research Objective: Although knee osteoarthritis (OA) appears to be at least as prevalent in African-Americans than Caucasians, Caucasians have age-adjusted rates of total knee arthroplasty (TKA) that are two to five times higher than for African Americans. The aim of this study was to determine whether the strength of preferences for improvements in knee OA was also higher for Caucasians than for African Americans and Hispanics.

Study Design: Contingent valuation surveys using willingness-to-pay (WTP) methodology were conducted to elicit preferences for three OA scenarios. Participants were asked what amount of money they would be willing to pay to: a) eliminate moderately painful osteoarthritis of the knee (MOA), b) eliminate extremely painful osteoarthritis of the knee (SOA), and c) move from SOA to MOA state. WTP amounts were calculated as a percentage of income to control for differences in ability to pay. Sociodemographic information was collected, and a relative propensity to spend variable, adjusted for income was constructed for each individual from WTP values for 5 non-health items. Univariate and multivariate regression analyses were conducted to determine whether there were differences across race in WTP for health improvements and non-health items.

Population Studied: White (63), African American (64), and Hispanic (63) individuals over the age of 18 who live in Harris County Texas were interviewed.

Principal Findings: WTP as a percentage of income for each of the three scenarios was highest for Caucasians, followed by Hispanics, and lowest for African Americans (e.g. 32.9%, 26.4%, and 16.7% for MOA). Univariate analyses showed that for each scenario, WTP as a percentage of income for Caucasians was significantly higher than for African American ($p < 0.05$), and WTP for the move from SOA to MOA was significantly higher for Hispanics than for African Americans. Multivariate regression analyses, including variables for age, insurance status, religion and education level, retained the significant differences for Caucasians and African Americans, with moderate R2 values (MOA R2= 15.8%, SOA R2= 12.3%, SOA to MOA R2= 18.8%). A multivariate regression model with propensity of spend as the dependent variable and race as the independent variable of interest, controlling for sociodemographic variables, showed that African Americans had significantly higher WTP as a percentage of income for non-health items than did Caucasians.

Conclusions: African-Americans report lower preferences in terms of WTP for improvements in knee osteoarthritis than do Caucasians, but higher propensity to spend on non-health related items. Thus the differences in the rates of TKA between African Americans and Caucasians are consistent with reported preferences for knee OA improvements. However, reasons for differences in preferences ? e.g. trust in the medical system ? should also be explored before disparities in TKA rates are seen as appropriate based on patient preferences.

Implications for Policy, Delivery or Practice: Racial disparities in health care procedures may be due to a variety of causes including differences in preferences. When differences in preferences are

found, differences in procedure rates may be justified, but additional factors affecting reported preferences must also be considered as well.

Primary Funding Source: AHRQ

● Age and Ethnic Disparities to Insurance Coverage in

Minnesota: Implications for Other States

Kathleen Call, Ph.D., Kathleen Call, Ph.D, Anna Sommers, M.S., Lynn Blewett, Ph.D., Vishakha Bansiya, M.D., Yvonne Jonk, Ph.D.,

Presented by: Kathleen Call, Ph.D, Associate Professor, Division of Health Services Research and Policy, University of Minnesota, School of Public Health, 420 Delaware St. SE, MMC 729, Minneapolis, MN 55455; Tel: (612) 624-3922; Fax: (612) 624-2196; E-mail: callx001@tc.umn.edu

Research Objective: This study describes trends in variation in health insurance coverage by age and minority status, examines barriers to insurance and health care access, explores options for reducing the access gap, and discusses the implications for achieving universal coverage.

Study Design: We analyze data from four statewide random digit dial (RDD) telephone surveys of Minnesotans conducted in 1990, 1995, 1999 and 2001, presenting weighted estimates and tests of significance. All four waves of data are used to describe trends in coverage by age and ethnicity; 2001 data are used to explore barriers to access among the uninsured (e.g., availability of insurance through employers, family members, estimated eligibility for public coverage, awareness and perceived attractiveness of public programs, use of services). We draw on census data to describe demographic trends within the state and place the Minnesota data within the broader national context.

Population Studied: General population surveys (non-institutionalized Minnesotans) based on statewide probability samples were conducted each year. The 2001 data are based on a stratified sampling design that over-sampled low-income, minority and rural areas in the state.

Principal Findings: The rate of uninsurance in Minnesota has remained low and stable since 1990; however this masks important gaps in coverage among subsets of the population. For example, the 2001 rate of 5.4% masks important disparities in coverage among young adults (15.9%) and among members of Minnesota's minority communities with uninsurance rates among whites at 4.4% as compared to rates among Hispanic/Latinos (17.6%), Black/African Americans (14.5%), American Indians (15.9%), and Asian Americans (7.2%). The barriers to gaining health insurance such as being ineligible for insurance through family members and employers, as well as the cost of insurance vary by age and ethnicity. Furthermore, among ethnic minorities with insurance coverage, the type of coverage obtained varies greatly. For example, a greater proportion of Asian Americans, Hispanic/Latinos and Whites have access to employer subsidized insurance whereas a greater proportion of Blacks and American Indians are covered by public programs.

Conclusions: State initiatives targeting children and low-income residents have been somewhat successful, but are missing the mark for young adults and ethnic minorities. Minnesota's experience suggests that state uninsurance rates hide disparities in access among particular subgroups. In fact, the trend data indicates that disparities in access to insurance are growing at the same time that the state's population is becoming increasingly diverse. Patterns of uninsurance and type of coverage among those covered indicate important structural disadvantages among different age and ethnic groups.

Implications for Policy, Delivery or Practice: Although the data are from one state, this pattern of disparities is witnessed across the nation, with uninsurance status representing another indicator of structural disadvantage experienced by different segments of America's population. A "one size fits all" approach to increasing access to insurance is not likely to work in Minnesota, let alone in other states with more diverse populations. We describe several

options for closing the age and ethnic gap in insurance coverage, and as much as possible, estimate the potential of each to close this gap.

Primary Funding Source: HRSA, Blue Cross Blue Shield Foundation of Minnesota

● The Use of Technology for Managing High-Risk Patients with Chronic Conditions

Miriam Cannon-Wagner, BSN, David R. Walker, Ph.D., Richard P. Vance, M.D.

Presented by: Miriam Cannon-Wagner, BSN, Director of Clinical Practice, Outcomes Research, CorSolutions, 1009 Kingscote Drive, Harleysville, PA 19438; Tel: (215) 513-4328; Fax: (215) 513-4326; E-mail: mcannon@corsolutions.com

Research Objective: To measure the availability of e-mail and the use of the Internet by patients enrolled in a disease management program and to assess basic characteristics of patients who use this technology.

Study Design: The Internet is rapidly changing the way Americans access health information. In a survey by the Pew Internet and American Life Project, an estimated 52 million Americans have used the Internet to access information about medical treatment, diseases, medications, and availability of clinical trials. The report states that 55% had accessed health information but only 9% had used this method of communication to exchange e-mails with their physicians. The elderly and patients with a chronic illness may utilize the Internet and e-mail less often than most Americans. This study assesses the availability of e-mail and the use of the Internet by patients enrolled in a disease management program over a two-year period. Patients can use e-mail to contact their disease management nurse and/or the nurse can use e-mail to keep patients informed about medications and other topics. Patients use the Internet site of the disease management company to access information about their chronic condition, take health related surveys or to monitor their health (daily blood sugar levels).

Population Studied: All high-risk patients enrolled in a disease management program of a large disease management company as of March 2000 (n=14,948) and as of January 2002 (n = 19,425).

Principal Findings: For the patients enrolled in March 2000, 6.6% had used the Internet and/or had an e-mail address available for contacting the disease management nurse. The average age of the total enrolled population was 68 years but for the users it was 60. The percent male in total enrolled was only 56% but they made up 71% of users. By September of 2001 21% of all high-risk patients enrolled in a disease management program had used the Internet and/or have an e-mail address. The average age of the patient in the enrollment population was 69 years with 53% male. For the 21%, the average age was 62 and 67% were male. In addition, 29% of those with an e-mail address are 70 years of age and older (Up from 24% in March 2000). Of those who used the Internet, 20% were at least 70 years of age.

Conclusions: The percent of chronically ill patients in a disease management program who use the Internet or have access to e-mail more than tripled within two years. The users tend to be younger and more male than the general patient population. However, a significant number are above the age of 65.

Implications for Policy, Delivery or Practice: The use of technology by patients with chronic conditions for managing their health is important and growing at a fast rate.

Primary Funding Source: CorSolutions

● Access to Health Care for Latino Populations in the Rural Midwest

Michelle Casey, M.S., Lynn Blewett, PhD

Presented by: Michelle Casey, M.S., Research Fellow, Health Services Research and Policy, University of Minnesota, 2221 University Ave SE, Suite 112, Minneapolis, MN 55414; Tel: (612) 627-4251; Fax: (612) 627-4415; E-mail: mcasey@tc.umn.edu

Research Objective: To provide an in-depth assessment of the response of local health care systems to the unique needs of growing Latino populations in rural Midwest communities. This project documented access to care problems as well as successful programs and outreach efforts that have been used to increase access to care and improve service delivery to a growing Latino population in the rural Midwest.

Study Design: Qualitative case study approach using key informant interviews with community leaders; health care providers; social services, public health and school health providers; and focus groups conducted in Spanish with Latino community members. Secondary analysis of 1990/2000 Census Data, and state and county data on health care resources and demographics.

Population Studied: In-depth case studies of rural communities with Latino populations and ten focus groups were conducted in four Midwestern states.

Principal Findings: The unprecedented growth in their Latino populations has challenged existing health and social service systems in many rural areas of the Midwest. These rural Latino populations have high rates of uninsurance, and face language and cultural barriers as they attempt to access health care services. Many rural Latino residents are employed in food processing plants, which results in occupational health concerns. The growth in Latino populations is having a significant impact on health care systems in rural communities, and has created new challenges in terms of education about US health care, how to access public programs and communication strategies that take into consideration cultural norms and perspectives.

Conclusions: The case studies provided evidence of the impact that the substantial growth of Latinos in rural communities is having on local health care systems, and documented the development of new services, programs and communication strategies to improve access to care. At the same time, the focus groups also provided evidence of unmet needs and frustrations with the complexities of the US health care system and ongoing pressures on local health care systems.

Implications for Policy, Delivery or Practice: More attention should be focused on access to care for diverse populations in rural communities. Successful strategies could be adopted by other rural communities facing similar challenges posed by changing demographics.

Primary Funding Source: HRSA

● Disparities in Health Status and Health Care Among Racial/Ethnic Minorities in Missouri

Fungai Chanetsa, Ph.D., MPH, E. Andrew Balas, M.D., Ph.D.,

Presented by: Fungai Chanetsa, Ph.D., MPH, Clinical Instructor/BRFSS Manager, Health Management and Informatics, University of Missouri, 324 Clark Hall, Columbia, MO 65211; Tel: 573-882-7310; Fax: 573-884-3482; E-mail: chanetsaf@health.missouri.edu

Research Objective: 1. To critically determine the magnitude of disparity in health status; and 2. To determine factors associated with racial disparities in health status among Missourians.

Study Design: The report is a compilation of data from reports, monographs and published data from the Missouri Department of Health and Senior Services.

Population Studied: Missourian 18 years and older

Principal Findings: In Missouri, minorities are over-represented in lower income groups and under-represented in higher income groups

and their level of education is generally lower than that of whites. Minorities of all ages continue to experience an excess of mortality from chronic diseases. Despite a lower incidence rate of cancer, minorities experience almost double the mortality compared to white counterparts. The high rate of end stage-renal disease among blacks is attributed to diabetes and high blood pressure. Blacks experience two times higher rates of diabetes and five times higher rates of hypertension than whites. This also accounts for the higher stroke mortality in this population. Stroke mortality is 1½ times higher among black males than whites. Black women had the most rapid increase in obesity prevalence from 1987 to 2000. At every group age, the prevalence of arthritis is higher in blacks than in whites or other minorities and peaks in those over 65. Over 85% of BRFSS respondents reported having health insurance coverage and minorities represented the highest proportion of individuals with no health care coverage. Indicators of access to health care including curative and preventive care suggest lower proportions of minorities utilizing these services despite insurance coverage. These findings suggest that minorities may experience barriers to health care access compared to white counterparts.

Conclusions: Despite marked improvements in the overall health of Missourians, racial/ethnic minorities continue to experience significantly higher incidence of disease and mortality than do whites. Race is a proxy for many adverse social conditions that place minorities at higher risk for ill health and injury. Racial disparities in health may also be attributed to lifestyle and behaviors of racial minority groups that may be a consequence of cultural practices and tradition as well as lack of knowledge. These factors suggest that a biological explanation for health disparities is unlikely.

Implications for Policy, Delivery or Practice: Ameliorating disparities in health and health care access requires measures that address social inequities as well as implementing policies that assure access to resources that facilitate healthier environments and lifestyles. Besides addressing equity in health care access, health providers, researchers and health policy formulators must support interventions that are strategically designed to target high-risk population groups.

Primary Funding Source: Centers for Diseases Control and Prevention

● Racial Disparities in Pregnancy Outcomes for Women

Covered under Medicaid: a Cross-Sectional Study

Monique Chireau, M.D., M.P.H., Katherine Hartmann, M.D., Ph.D., Nancy Berkman, Ph.D., Norma Gavin, Ph.D., Kathleen Adams, Ph.D., M. Beth Benedict, Dr.P.H., J.D.

Presented by: Monique Chireau, M.D., M.P.H., Postdoctoral fellow, North Carolina Program for Women's Health Research, The Cecil G. Sheps Center for Health Services Research, 725 Airport Road, Chapel Hill, NC 27713; Tel: (919) 966-7638; Fax: (919) 806-0314; E-mail: chireau@mail.schsr.unc.edu

Research Objective: To evaluate racial disparities in rates of preterm labor, delivery of a live infant before 36 weeks pregnancy, preterm rupture of membranes, premature rupture of the amniotic sac, and fetal growth restriction, small-for-gestational-age fetuses and neonates

Study Design: Descriptive analysis of levels and cost of care among women with pregnancy related complications, using initial findings from a larger study comparing racial disparities in health services use about pregnant Medicaid recipients in four states. Medicaid enrollment and claims data for the nine-month period prior to delivery and three months postpartum, for births occurring between 1 October 1994 and 30 September 1995, were used.

Population Studied: Women with Medicaid coverage, who delivered children in Florida and New Jersey. This includes 32 331 births in New Jersey and 46 943 births in Florida. Exclusion criteria were: HMO coverage, undocumented alien status, dual enrollment in

Medicaid and Medicare, no enrollment record, and a second delivery within one year.

Principal Findings: In New Jersey, 33.9 percent of births to women covered by Medicaid were to Hispanic women, 31.3 percent were to Black non-Hispanic women and 28.7 percent to White non-Hispanic women. In Florida, 23.3 percent of births covered under Medicaid were to Hispanic women, 25.4 percent to Black non-Hispanic and 48.3 percent to White non-Hispanic women. In New Jersey, 12.7 percent of Hispanic women's pregnancies were complicated by preterm labor, as opposed to 17.2 percent of Black non-Hispanic and 10 percent of White women's pregnancies. For Black women this difference was significant compared to New Jersey White women. In the general population, the rate of preterm birth is estimated at 10 percent. The percentage of Hispanic women who experienced premature rupture of membranes was 4.4 percent, for Black women 6.2 percent, and for White women 5.1 percent; the difference for Black women was statistically different from New Jersey White women. The percentage of Hispanic women whose babies had fetal growth restriction was 5.2 percent, for Black women 6.4 percent and for White women 7.3 percent; for both Hispanic and Black women, these differences were significant compared to New Jersey White women. In Florida, for Hispanic women 9.8 percent of pregnancies were complicated by preterm labor, in comparison to Black women, 12.9 percent and for White women, 12.7 percent; the difference for Hispanic women was significant compared to Florida White women. For premature rupture of membranes, the percentages were 3.2 percent, 3.8 percent and 3.7 percent for Hispanic, Black and White women respectively. For fetal growth restriction, by race the percentages were 1.1 percent for Hispanic women, 1.5 percent for Black women and 2 percent for White women, with statistically significant differences between Black and Hispanic women and White women. In the general population, fetal growth restriction is estimated to affect 3-7 percent of all deliveries.

Conclusions: Analysis of this large data set reveals striking racial disparities in rates of preterm labor, premature rupture of membranes and fetal growth restriction which conflict with previous reports and challenge current thinking about racial variation in adverse pregnancy outcomes. The findings from New Jersey, a highly industrialized northeastern state, and Florida, a more rural southeastern state, are especially noteworthy. In Florida, White women had the highest rates of fetal growth restriction compared to Black and Hispanic women, and Hispanic women had the lowest rates of preterm labor among the three racial groups.

Implications for Policy, Delivery or Practice: These results are at variance with other findings regarding the epidemiology of adverse pregnancy outcomes within racial groups, with potential implications for risk assessment and resource utilization, especially as Medicaid programs move toward more sophisticated, clinically oriented disease management efforts. The results also raise intriguing questions regarding rural-urban differences in health services in Medicaid populations as well as the homogeneity of these populations. Multivariate analysis and epidemiologic investigation are needed to further elucidate these complex relationships.

Primary Funding Source: CMS

● Trust in Communication between Mexican Americans and their Physicians

Serena Chu, Ph.D., Kimberly O'Malley, Ph.D., Paul Haidet, M.D., Barbara Sharf, M.D., Clint Ladd, Tracie Collins, M.D., Michael Johnson, Ph.D., Ahn Tran

Presented by: Serena Chu, Ph.D., MIRECC Fellow, HCQCUS (152), Houston VAMC, 2002 Holcombe Blvd, Houston, TX 77030; Tel: (713) 558-4500; Fax: (713) 748-7359; E-mail: schu@bcm.tmc.edu

Research Objective: A number of studies have documented disparities in health care between Mexican Americans and whites, but few studies to date have examined what factors contribute to the

disparities. A possible factor may be physician-patient communication barriers, especially with regards to trust. The objective of this qualitative study was to explore communication barriers reported by Mexican Americans.

Study Design: Three trained moderators conducted 4 in-depth focus groups. We audio taped and transcribed all of the interviews. All authors read the transcripts and documented initial impressions. An analysis team of 3 authors, SC, TC, and MJ, discussed these initial impressions and devised a coding scheme based upon themes emerging from the data. This coding scheme was then presented back to the entire project team for further discussion and revision.

Population Studied: As part of a study exploring patient's trust levels of the health care system, we recruited 17 Mexican Americans stratified by type of health system, such as city/charity, private, and veterans affairs, who reported interaction with multiple levels of the system over the past year. The predominantly male sample had a mean age of 56 years, with an age range of 26-74 years. Participants were diverse with regards to health status.

Principal Findings: A number of physician-patient communication themes emerged from our analysis. Barriers to effective communication, which negatively impacted trust, included physicians not listening to patients, breaching confidentiality, ignoring the treatment needs of the patient, and having a discriminatory attitude toward the patient. Trust was facilitated by physicians giving patients sufficient medical information, being professional in their interactions, being attentive to treatment needs, and listening closely to the patient.

Conclusions: Physician-patient communication barriers may significantly contribute to trust in healthcare among Mexican Americans. Negative communication interactions resulted in patients having less trust in their providers, which also adversely affected their trust in the US health care system. Positive communication experiences increased the patients' level of trust for their providers, but did not significantly impact their feelings of trust for the US health care system.

Implications for Policy, Delivery or Practice: It is particularly important for physicians to understand how to effectively communicate with this ethnic group. By identifying communication barriers that affect patient trust, we hope to make progress towards eliminating health care disparities for this fast growing population.

Primary Funding Source: AHRQ

● Disparities in the Cost of HIV Disease Treatment by Race

Elinor C.G. Chumney, MSc, Kit N. Simpson, Dr.P.H.

Presented by: Elinor C.G. Chumney, MSc, Instructor, Pharmacy Practice, Medical University of South Carolina, 280 Calhoun Street, PO Box 250144, Charleston, SC 29425; Tel: (843) 876-1242; Fax: (843) 792-1712; E-mail: chumneye@musc.edu

Research Objective: To identify disparities in the cost of HIV disease treatment by race and assess whether such differences result from either reporting errors or differences in disease severity.

Study Design: Retrospective analysis of archival data from the HIV Cost and Services Utilization Study (HCSUS) survey data set. We compare annual HIV disease treatment costs by race using standard cost weights to estimate costs for hospital and nursing home stays and emergency room and physician visits.

Population Studied: The HCSUS survey enrolled a sample of 2,864 HIV-infected adults who were receiving ongoing or regular medical care in the first two months of 1996. Patients receiving services in hospitals, clinics, and private practice settings were enrolled. The sample was 48% white (n=1384), 33% African-American (n=935), and 14% Hispanic (n=539).

Principal Findings: Our analysis found a strong and consistent association between race and total cost. The average annual HIV disease treatment costs were found to be 60% higher for African-Americans (\$8,018) and 18% higher for Hispanics (\$5,904) than for whites (\$5,002). We further analyzed the data by AIDS status and

CD4 cell count ranges and found that treatment costs for African-Americans were consistently higher than those for whites. The difference became especially pronounced for patients with CD4 cell counts of at least 500, with the annual treatment costs for African-Americans with AIDS (\$6,013) three times higher than for whites (\$2,009). The large difference in treatment costs by race persisted when we analyzed the data by AIDS status and viral load (VL). It was most striking for patients without AIDS and with undetectable VL where treatment costs for whites (\$1,453) were less than a third the treatment costs for African-Americans (\$5,306). Small numbers in these sub-categories limited our ability to draw conclusions for the Hispanic population. We are in the process of performing logic checks for systematic data collection errors and examining the effects of SES, comorbidity, and care delivery site variables. The results of these analyses will be reported.

Conclusions: We found evidence that treatment costs vary significantly by race, even within HIV disease stages where we would expect relatively homogenous costs. These differences may be influenced by reporting errors in the survey data or by comorbidities. Our findings indicate that more resources may be used by African-American patients with HIV disease, and that this may especially true for healthier patients.

Implications for Policy, Delivery or Practice: Disparities in the cost of HIV disease treatment by race

● Duped by Cries of Duplication

Robert James Cimasi, ASA, CBA, AVA, FCBI

Presented by: Robert James Cimasi, ASA, CBA, AVA, FCBI, President, Health Capital Consultants, 9666 Olive Boulevard, Suite 375, St. Louis, MO 63132; Tel: (314) 994-7641; Fax: (314) 991-3435; E-mail: rcimasi@healthcapital.com

Research Objective: Conduct a probative analysis of the published research and literature related to Certificate of Need (CON) laws to determine any consensus on their impact on healthcare costs, quality, access, and market competition.

Study Design: Secondary research, including the analysis and summarization of state CON laws, CON applications, available primary research statistical measures (related to costs, facilities, medical equipment, utilization, etc.), and demographic measures as they relate to CON thresholds for need.

Population Studied: N/A

Principal Findings: The number of States with active CON laws has fallen recently and there are several States currently reconsidering their CON laws. CON has not been effective in reducing health costs and limits access to health services.

Conclusions: CON appears to be a flawed concept, applied poorly, which does not achieve its objectives. CON laws are a barrier to market competition and thereby shield existing providers from pressures to reduce costs. Even notwithstanding these theoretical problems, CON laws must be administered and CON applications evaluated using detailed and accurate data on utilization, demographics, alternate treatments, and the costs associated with lack of healthcare. Accepted public health research and analysis methods must then be utilized in order to determine the health facility and equipment needs of local markets. Current CON evaluation criteria and methods do not generally appear to include these types of analyses.

Implications for Policy, Delivery or Practice: Controlling competition and the availability of health facilities and equipment as a means of controlling public healthcare costs by essentially rationing care is an extremely difficult and ambitious endeavor. It appears to be beyond the current scope and budget of the States' regulatory bodies which administer CON and evaluate CON applications. Most of the U.S. economy depends on market competition to control costs and maintain quality. Poorly administered CON laws raise costs, reduce access, discourage the introduction of new technologies, and are certainly worse for public health and budgets than no CON laws

● The Impact of Health Care Coverage Within a Family on an Individual's Access to Care

Robin Cohen, M.S., Ph.D., John Pleis, M.S.

Presented by: Robin Cohen, M.S., Ph.D., Statistician, Division of Health Interview Statistics, National Center for Health Statistics, 6525 Belcrest Road, Hyattsville, MD 20782; Tel: (301) 458-4152; Fax: (301) 458-4035; E-mail: rzc6@cdc.gov

Research Objective: There is much concern about the access to care and delivery of health services for working-age persons covered by private health insurance and for persons covered by government sponsored health plans such as Medicaid. This paper will explore differences in the access to health care for working-age adults with private or public coverage taking into account the insurance status of other family members.

Study Design: This study uses a combined sample from the 1999 and 2000 National Health Interview Surveys (NHIS) which is a nationally representative sample of the U.S. civilian noninstitutionalized population. This survey is conducted as a face-to-face household interview. The data used for this paper is from two questionnaires, the Family Core and the Sample Adult Core. There is only one sample adult per household. In 1999 and 2000, a total of 37,499 sample adults 18-64 years of age in families of 2 or more people provided information about their health. The overall response rate for this combined file is 70.8 percent, which takes into account household, family, and sample adult non-response.

Population Studied: Working-age adults 18-64 years of age in families with two or more people.

Principal Findings: Working-age adults with private insurance, in families where other family members had no health insurance coverage (P+NC), were less likely to have a regular source of care (78%) than those privately insured adults in which other family members had some type of coverage (90%). Persons in a P+NC family were twice as likely to have unmet medical needs (the need for medical care or services but the inability to obtain them for financial reasons) than those individuals in families where all family members had private insurance coverage (20% vs 9%). For persons with public coverage there was no impact of other family members insurance status on an individual having a regular source of care. Individuals with public coverage who were in families where the other family members were uninsured were more likely to report unmet medical needs (36% vs 26%) and two or more emergency room visits in the past year (26% vs 16%) than those adults in families in which all family members were covered by public insurance.

Conclusions: Although an individual having a regular source of care and health insurance facilitates his or her use of health services, it is important to look at the health care coverage of all members of a family. Persons with private health insurance in which the rest of the family lacks private coverage or is uninsured are at a greater risk for having problems with access to care.

Implications for Policy, Delivery or Practice: These results suggest that it is important to look at an individual's access to health care in combination with the health care coverage of all family members. Persons who belong to families with a mixture of health care coverage types may have different patterns of access and health care utilization than those in families in which all have the same type of coverage.

Primary Funding Source: CDC, National Center for Health Statistics

● Ischemic Outcomes Assessment Survey for Patients with Peripheral Arterial Disease: A Pilot Study

James Howard, P.A., Tracie Collins, MD, MPH, Julie Soucek, Ph.D., Tracie Collins, M.D., M.P.H.

Presented by: Tracie Collins, MD, MPH, Assistant Professor of Medicine, Physician Health Services Researcher, Medicine, Houston Center for Quality of Care and Utilization Studies, 2002 Holcombe Blvd. (152), Houston, TX 77030; Tel: 713-558-4526; Fax: 713-748-7359; E-mail: tcollins@bcm.tmc.edu

Research Objective: Peripheral arterial disease (PAD) is defined as atherosclerosis of the abdominal aorta and arteries of the lower extremities. Patients with PAD are at increased risk for stroke, myocardial infarction (MI) and cardiovascular death. The incidence of such events increases with age. Prior studies have focused on the prevalence of PAD, but the rate of ischemic outcomes among a diverse group of patients with PAD has not been well studied. The purpose of this pilot study was to develop an ischemic outcomes survey that could be used in place of the labor intensive chart review. The purpose of this study was to develop and validate an ischemic outcomes questionnaire.

Study Design: A data abstraction form was used as a guide in blinded chart reviews to compare what the patient related his medical history to be, versus those ischemic events that had been recorded in the patient's medical records. The proportion agreement, Cohen's kappa, and its ninety-five percent confidence interval were used to measure the agreement and the statistical significance of this agreement between the questionnaire and chart review items.

Population Studied: Fifty-one patients from the Houston VA Medical Center with a history of PAD were consented and interviewed using a 23-item questionnaire which focused on the ischemic events of unstable angina, myocardial infarction, cerebral vascular accident, transient ischemic attacks, lower extremity bypass or lower extremity amputation.

Principal Findings: The proportion agreement between the questionnaire and the chart abstraction was statistically significant for several yes/no items. The proportion agreement was .76 for myocardial infarction, .74 for heart catheterization, .76 for the use of aspirin, and .94 for lower extremity amputation.

Conclusions: We found that the ischemic outcomes questionnaire was a useful research tool. It yielded statistically significant kappa values on most of the items. Although additional work is needed, the present survey provides a good framework on which to develop the final questionnaire. The final questionnaire will be used in a large prospective cohort study to determine the role of race/ethnicity as a risk for ischemic events in patients with PAD. We also anticipate the additional use of this questionnaire in future prospective cohort studies.

Implications for Policy, Delivery or Practice: Well developed surveys can be used to replace the labor intensive task of chart review for epidemiologic cohort studies.

Primary Funding Source: The Robert Wood Johnson Foundation

● Does the Person Tradeoff Elicit Equity Considerations? A

Think Aloud Protocol

Laura J. Vancouver, M.S., M.P.H., Laura J. Damschroder, M.S., M.P.H., Peter A. Ubel, M.D., Susan Metosky, M.P.H., Christine Goldstein, M.S.W., Mary Miklosovic, B.A.

Presented by: Laura J. Damschroder, M.S., M.P.H., Program Manager, Program for Improving Healthcare Decisions, Center for Practice Management & Outcomes Research, Ann Arbor VAMC and University of Michigan School of Medicine, 300 N. Ingalls Rm 7C27, Ann Arbor, MI 48105; Tel: (734) 615-8377; Fax: (734) 936-8944; E-mail: vancouverl@umich.edu

Research Objective: Cost effectiveness analysis (CEA) shows how the health related utility of a population can be maximized where utilities are typically measured through instruments such as the Time

Tradeoff (TTO). However, CEA does not consider the distribution of these utilities, which some say is discriminatory to the disabled and the elderly. Some researchers propose an alternative utility measure called the Person Tradeoff (PTO) which potentially captures people's preferences for helping vulnerable populations. However, no one has explored whether people really consider issues of equity when responding to PTO elicitation. TTO and PTO lead to different utility values. In this study, we explore whether this difference arises in part because people consider equity issues when responding to PTO elicitation.

Study Design: Subjects were asked to think aloud in face-to-face interviews as they responded to TTO and PTO elicitation. Subjects responded to a TTO valuation of paraplegia relative to perfect health, or shortness of breath relative to leg pain. In addition, subjects were randomized to one of three PTO scenarios that required the subject to determine a number at which they would find it difficult to choose between two alternatives: 1) saving the lives of 100 healthy people versus saving the lives of some number of people with pre-existing paraplegia; 2) curing 100 people of extreme shortness of breath versus curing some number of people of moderate leg pain; or 3) saving the lives of 100 healthy people versus curing some number of paraplegics. The research team independently identified dominant themes from transcribed interviews. The themes were used to create a common list, which was used to code results. Relative comparisons between TTO and PTO were done. Quantitative responses to each elicitation were also recorded.

Population Studied: A convenience sample of 66 members of the general public.

Principal Findings: Eleven dominant themes were identified. In the TTO, subjects primarily considered the QOL inherent with the health states in question. By contrast, in the PTO, people considered a wide range of issues beyond QOL such as concerns for avoiding discrimination against people with pre-existing disabilities. Due in part to the different considerations in TTO and PTO, TTO values were significantly lower than from the PTO. The most dramatic example of this contrast was for subjects who thought paraplegia was as bad as death in the TTO (implying a utility of 0 on a 0-1 scale) but who also said in the PTO, that saving the life of a paraplegic was just as valuable as saving the life of a healthy person (implying a utility of 1 on the same scale). When subjects were confronted with this type of discrepancy, most did not want to change their response to either elicitation, claiming that the TTO and PTO were asking different questions.

Conclusions: The PTO elicitation appears to incorporate values related to fairness and equity.

Implications for Policy, Delivery or Practice: The PTO has potential for incorporating societal values into CEA to minimize discrimination against those who are worse-off in healthcare allocation decisions.

Primary Funding Source: National Institutes of Health - NICHD

● The Distribution of Avoidable Hospitalizations across

Neighborhoods: Averages versus Extremes

Derek DeLia, Ph.D.

Presented by: Derek DeLia, Ph.D., Senior Research Analyst, Division of Research, United Hospital Fund, Empire State Building, 350 Fifth Ave., 23rd Floor, New York, NY 10118-2399; Tel: (212) 494-0756; Fax: (212) 494-0801; E-mail: ddelia@uhfnyc.org

Research Objective: Describe the shape, stability, and impact of socioeconomic variables on the statistical distribution of local ambulatory care sensitive admission rates (ACSAR's).

Study Design: Age and sex adjusted rates of ACS admissions were calculated at the small-area level. The distribution of ACSAR's was analyzed across socioeconomic strata and over time using kernel density estimation, which avoids the biases commonly found in ordinary histograms. Quantile regression analysis was used to determine the impact of socioeconomic variables (income, race,

immigration, births to unwed mothers) on various percentiles of the conditional ACSAR distribution and ordinary regression was used to determine average effects.

Population Studied: Patient discharge data for residents under age 65 in 810 zip-code areas in New York State from 1990-98 combined with Census and birth record data for 1990.

Principal Findings: Although average ACSAR's have fallen over time, the skewness in their distribution, particularly in low-income neighborhoods, has not changed. The classification of neighborhoods into ACSAR quintiles remained quite stable over the nine year study period. The relationship between income and average ACSAR's is negative and is driven largely by a thicker right tail in the ACSAR distribution for low-income neighborhoods. Holding other factors constant, the African-American share of local population is positively associated with ACSAR's, an effect that appears only above the median of the ACSAR distribution and when the population share of African-Americans is above the 67th percentile. The Hispanic share of local population is a stronger predictor of high ACSAR's and has greater impact at higher ACSAR percentiles. The concentration of Asians has a negative impact on ACSAR's, which is consistent across all ACSAR percentiles. A high concentration of immigrants is associated with higher ACSAR's, particularly near the middle of the ACSAR distribution. Finally, the percentage of births to unwed mothers is a very strong predictor of high ACSAR's with increasing influence at higher percentiles of the ACSAR distribution.

Conclusions: Several measures of socioeconomic disadvantage appear to change the entire shape of the distribution of avoidable hospitalizations rather than simply shift that distribution to the right. Recent declines in avoidable hospitalization rates appear to be driven more by system-wide changes in admitting practices rather than improvements in the delivery of ambulatory care to disadvantaged neighborhoods. The stability of avoidable hospitalization quantiles over time points to a chronic deficiency of timely ambulatory care in the most underserved neighborhoods. However, the predictive strength of the family structure variable (i.e., births to unwed mothers) suggests that part of the deficiency is driven by factors that are not readily changeable by access to medical care alone.

Implications for Policy, Delivery or Practice: Disparities among average members of comparative socioeconomic strata may be different from disparities faced by those with more extreme levels of deprivation. A greater focus on percentiles rather than averages can help target resources more effectively. Moreover, much of the data for this task can be obtained from existing administrative and population databases.

Primary Funding Source: Foundations

● Social Inequalities in Occupational Health Care

Allard Dembe, Sc.D., Judith A. Savageau, M.P.H., J. Bianca Erickson, M.P.H., Steven Banks, Ph.D.

Presented by: Allard Dembe, Sc.D., Associate Professor, Center for Health Policy and Research, University of Massachusetts Medical School, 222 Maple Avenue, Higgins Building, Shrewsbury, 0 01545; Tel: (508) 856-6162; Fax: (508) 856-5688; E-mail: Allard.Dembe@umassmed.edu

Research Objective: This study is aimed at determining whether there are disparities in the incidence of occupational injuries and illnesses and in medical care for those disorders, based on workers' race, ethnicity, and socioeconomic status (SES). Few previous studies have investigated social inequalities in occupational health. Based on existing fragmentary evidence, we hypothesize that Blacks, Hispanics, and workers with low SES have a disproportionately high incidence of occupational injuries and illnesses, receive inferior medical care, suffer more severe disability, return to work more slowly, and are less likely to receive compensation benefits than are whites and those with high SES.

Study Design: Retrospective cross-sectional analysis of two existing national population-based surveys: the National Ambulatory Medical

Care Survey (NAMCS) and National Longitudinal Survey of Youth (NLSY). Pilot studies by us have demonstrated the usefulness of these databases in providing new information about occupational health care. This study will result in descriptive analyses of work-related cases from each database, including stratified sub-analyses comparing patient experiences among racial, ethnic, and socioeconomic patient groups, and selected multivariate analyses to assess the interactive effect of patient sociodemographic characteristics with employment experiences, medical services, and vocational outcomes.

Population Studied: The NAMCS covers physician-reported data for a nationally representative sample of 46,875 ambulatory medical care visits made in 1997-1998. 1,179 of those visits (2.5%) were for diagnosis and treatment of work-related conditions. Our analysis of the NLSY covers the experiences of 7,508 persons aged 33-41 who were interviewed in 1998, of which 563 (7.5%) self-reported experiencing an occupational injury or illnesses in the 2-year period preceding the interview.

Principal Findings: Both analyses suggest that there are significant disparities among the social groups studied. In the NAMCS, Hispanics with work-related conditions required insurer authorization for care 57% more often than non-Hispanics, and Blacks 14% more often than whites. On average, Blacks saw a physician during their visit 6% less often than whites, and Hispanics 5% less often than non-Hispanics. Blacks had blood pressure measured at the visit 32% less often than whites, and Hispanics 11% less often than non-Hispanics. The NLSY analysis indicated that following a work-related condition, Blacks were 16% more likely to miss work, had 28% more missed work days, and were 18% more likely to lose wages than non-Blacks. Similar patterns were observed among Hispanics compared to non-Hispanics, and low-SES (as indicated by educational attainment and family income) compared to high-SES workers.

Conclusions: Preliminary data from two national health care surveys indicates disparities in occupational health and health care for work-related conditions based on patients' race, ethnicity, and SES. These studies have demonstrated the usefulness of national survey databases as a novel source for collecting information about the health and vocational experiences of injured workers.

Implications for Policy, Delivery or Practice: This study helps demonstrate the barriers that Black, Hispanic, and low-SES workers face in accessing occupational health care, and their susceptibility to more severe vocational impacts following a work-related injury. These findings will help alert policymakers and public health advocates to the need to devise specific strategies for protecting the health and earning capacity of minority and low-wage workers.

Primary Funding Source: CDC, National Institute for Occupational Safety and Health

● The Safety Net for the Uninsured – Does it Improve Access and Reduce Racial/Ethnic Disparities?

Mark Doescher, M.D., M.S.P.H., Barry Saver, M.D., M.P.H., Kevin Fiscella, M.D., M.P.H., Peter Franks, M.D., J. Morel Symons, M.S.

Presented by: Mark Doescher, M.D., M.S.P.H., Assistant Professor, Family Medicine, University of Washington, Box 354696, Seattle, WA 98195-4696; Tel: (206) 616-9207; Fax: (206) 685-0610; E-mail: mdoesche@u.washington.edu

Research Objective: To examine the effect of community-level safety-net factors on access to care and racial/ethnic disparities in access among uninsured adults.

Study Design: A cross-sectional study of participants in the 1996-97 Community Tracking Study (CTS) household survey, a representative sample of the United States population residing in 60 communities, 12 of which were case study sites with larger sample sizes. Dependent measures included respondents' reports of having a regular site of care and an annual physician visit. Race/ethnicity, was classified in the CTS as primarily Spanish-speaking Hispanic,

primarily English-speaking Hispanic, African American or non-Hispanic white. Individual-level covariates included predisposing, need and enabling factors. Twelve community-level safety-net factors were examined including annual number of outpatient visits to community health centers and to teaching hospitals per capita, charity care reported by physicians and number of office-based physicians and generalists per capita.

Population Studied: Uninsured adults aged 18 to 64 (N=5,015).

Principal Findings: After adjustment for individual-level factors, uninsured racial/ethnic minority group members, particularly Spanish-speaking Hispanics, were less likely to identify a regular site of care (Spanish-Speaking Hispanics: 39.2%; 95% Confidence Interval [CI]: 34.2%-44.1%; English-Speaking Hispanics: 51.4%; CI: 45.9% -57.0%; African Americans: 54.6%; CI: 48.0%-61.1%) than Non-Hispanic Whites (64.0%; CI: 61.1%-66.3%). Spanish-speaking Hispanics also were less likely to report having an annual physician visit (Spanish-Speaking Hispanics: 33.6%; CI: 28.8%-38.4%; English-Speaking Hispanics: 51.6%; CI: 43.5%-59.8%; African Americans: 53.7%; CI: 49.3%-59.8%; Non-Hispanic Whites: 54.4%; CI: 52.2%-56.6%). However, there was wide variation in access by race/ethnicity across the case study communities. For example, the difference between African Americans and whites for site of care was less than 5% in four communities and greater than 20% in three. After accounting for individual factors, the number of generalist physicians, and number of visits to teaching hospital outpatient departments in a community were associated significantly with having a site of care. Only number of teaching hospital outpatient visits was associated with having an annual visit. However, none of these safety-net factors had a statistically significant influence on the observed racial/ethnic disparities in access to care.

Conclusions: The availability of services for uninsured adults largely reflects the structure of their local health care safety-nets. However, a number of measures characterizing local safety-nets did not explain racial/ethnic disparities in health care access by the uninsured. A better understanding of variation in racial/ethnic disparities by communities is needed.

Implications for Policy, Delivery or Practice: Policies directed at reducing racial/ethnic inequities in access to care for the uninsured rely mainly on local efforts to bolster the safety-net. While all the factors examined in this study potentially could be manipulated through local or state-level policy interventions, these factors had no influence on disparities in minority group members' likelihood of accessing care. If the goal of Healthy People 2010 to reduce racial/ethnic disparities in health is to be achieved, community factors that lead to reductions in disparities and that can be manipulated through public policy interventions must be identified.

Primary Funding Source: American Academy of Family Practice

● Racial/Ethnic Differences in Emergency Department Utilization

Leonard Egede, M.D., M.S., Michael A. Smith, M.D.

Presented by: Leonard Egede, M.D., M.S., Assistant Professor of Medicine, Medical University of South Carolina, 326 Calhoun Street, P.O. Box 250100, Charleston, SC 29425; Tel: (843) 953-8902; Fax: (843) 953-8901; E-mail: EGEDEL@MUSC.EDU

Research Objective: Blacks and Hispanics are disproportionately more likely to lack a usual source of care than whites. On the contrary, the current assumption is that blacks and Hispanics have higher emergency department (ED) utilization than whites. This study used a nationally representative sample to assess racial/ethnic differences in emergency department utilization.

Study Design: We defined ED utilization as having at least one ED visit in 1996. We used the Anderson and Newman model to identify factors likely to affect ED utilization. Predisposing factors included age, gender, race/ethnicity, education, and marital status. Enabling factors included health insurance, poverty category, employment, and having a usual source of care (USC), while need factors included the

perceived physical health status of the individual. We used Chi-square to compare ED utilization in blacks, Hispanics, and whites. We ran multiple logistic regression with ED utilization as dependent variable, and predisposing, enabling, and need factors as independent variables. We calculated odd ratios and 95% confidence intervals of adjusted ED utilization. We used STATA for statistical analyses to account for the complex sampling design of MEPS and to provide nationally representative estimates.

Population Studied: We analyzed data on 15,745 adults 18 years and over from the 1996 Medical Expenditure Panel Survey (MEPS).

Principal Findings: Overall, 12.5% of US adults had 1 or more ED visit in 1996. Individuals with a USC (12.9% vs. 10.9%, $p < 0.01$), the unemployed (14.5% vs. 11.6%, $p < 0.01$), and those with income $< 125\%$ of federal poverty level (17.9% vs. 11.4%, $p < 0.01$) had higher unadjusted ED utilization. ED utilization were also higher in individuals with $<$ high school education (16.6% vs. 11.5%, $p < 0.01$), unmarried adults (14.5% vs. 11.0%, $p < 0.01$), and those in poor physical health (16.9% vs. 9.7%, $p < 0.01$). There were no significant differences in ED utilization in whites vs. blacks (12.3% vs. 13.3%, $p = 0.30$) and in whites vs. Hispanics (12.3% vs. 12.9%, $p = 0.48$). Similarly, there were no significant differences by age, gender, or insurance status. However, after controlling for predisposing, enabling, and need factors, whites were ~ 1.8 times more likely to utilize ED services than blacks (OR 1.7, 95% CI 1.4, 2.0) or Hispanics (OR 1.8, 95% CI 1.5, 2.2). In addition, individuals with a USC were ~ 3 times more likely to utilize ED services than individuals without a USC (OR 2.9, 95% CI 2.6, 3.3).

Conclusions: Independent of predisposing, enabling, and need factors, whites appear more likely to utilize ED services than blacks or Hispanics, and individuals with a USC seem more likely to utilize ED services than their counterparts without a USC.

Implications for Policy, Delivery or Practice: The results of this study challenge the assumption that blacks and Hispanics over utilize ED services. In addition, it suggests that access to care for black and Hispanic adults may be problematic in both outpatient and ED settings.

Primary Funding Source: AHRQ

● The Effects of Race/Ethnicity on Quality of Care in a Safety-Net Integrated Delivery System

Sheri Eisert, Ph.D., Patricia Gabow, M.D., Laura Ringle, M.P.H., Jodi Drisko, M.P.H.

Presented by: Sheri Eisert, Ph.D., Director of Health Services Research, Health Services Research, Denver Health, 633 Delaware, MC 8701, Denver, CO 80204; Tel: (303) 436-4072; E-mail: sleisert@dhha.org

Research Objective: To determine if there are differences in the quality of care by race/ethnicity and payer type for those patients receiving care in a safety-net.

Study Design: A random sample of medical charts were reviewed by nurses from 1999-2001. A questionnaire was completed for each medical chart review concerning documentation of cancer screening, blood pressure control and diabetic care. These questionnaires were scanned into a database which included the patient's medical record number. Race/ethnicity and payer type information was obtained by merging patient medical record number with the Denver Health utilization and demographic database. A patient's payer type was defined by the most frequent payer type documented during the 24 months prior to the medical chart review since payer type at time of visit was not documented on questionnaire.

Population Studied: Medical charts were reviewed for 4,448 adult patients from 10 integrated community health centers of the Denver Health safety-net system from 1999 through 2001. The criteria for medical chart review include: patient had at least 3 encounters during the previous 3 years and that there is at least a 3 month interval between the first and third visit.

Principal Findings: Whites are less likely than Blacks and Hispanics to receive PAP smear and no significant difference in mammograms. If diabetic, whites are less likely than Hispanics and more likely than Blacks, to order eye exam, have feet examined and to have obtained more than one HgbA1c in the last 12 months. Self-pay patients were less likely to receive mammogram than Medicaid patients. If diabetic, self-pay patients were less likely to have obtained lipid profile in last 2 years, to have ordered eye exam, to have ophthalmology visit, obtain urine protein or serum creatinine, or HgbA1c in last 12 months than Medicaid patients.

Conclusions: The quality of care received in a safety-net is less a function of race/ethnicity and is more a function of ability to pay.

Implications for Policy, Delivery or Practice: Increasing insurance rates may improve quality of care for vulnerable populations receiving care in the safety-net more than improving cultural competency of providers. This may be because providers in the safety-net are already trained in the area of cultural competency.

Primary Funding Source: Foundations

● **Physicians' Referral to Physical Therapy: A Comparison of Primary Care and Orthopedic Physicians' Management of Musculoskeletal Conditions**

Janet Freburger, PT, Ph.D., George M. Holmes, Ph.D., Timothy S. Carey, M.D., M.P.H.

Presented by: Janet Freburger, PT, Ph.D., NRSA Postdoctoral Fellow, Cecil G. Sheps Center for Health Services Research, University of North Carolina, 725 Airport Road, CB# 7590, Chapel Hill, NC 27599-7590; Tel: (919) 966-3794; Fax: (919) 966-5764; E-mail: janet_freburger@unc.edu

Research Objective: Musculoskeletal conditions are common reasons for ambulatory care visits to primary care or orthopedic physicians and to physical therapists. The goal of physical therapy (PT) is to maximize a patient's physical functioning and minimize recovery time. Physicians play an important role in access to PT because most insurance plans only cover PT prescribed by a physician. Little is known about factors associated with physicians' referral to PT and whether patients have appropriate access. The objective of this study was to identify determinants of primary care and orthopedic physicians' referral to PT for musculoskeletal conditions and to explore whether specialty-specific differences existed.

Study Design: A cross-sectional analysis of National Ambulatory Medical Care Survey data (1995-1999). Separate probit models were estimated to determine the likelihood of PT referral by specialty (primary care or orthopedic). Explanatory variables in the models included patient characteristics (demographics, insurance, diagnosis, illness severity), physician characteristics (allopath or osteopath, mean visit time, whether counseling on exercise was provided), and geographic characteristics (PT supply, census region). A bivariate probit model was also estimated to determine factors associated with the likelihood of PT referral, while controlling for observed and unobserved differences between the characteristics of visits to primary care and orthopedic physicians.

Population Studied: Visits to primary care (N=4911) or orthopedic (N=4201) physicians for musculoskeletal conditions. Surgical visits and physician-referred visits were excluded.

Principal Findings: Diagnosis, illness severity, and PT supply were strong predictors of PT referral in all three models. Insurance status was also a strong predictor and varied by specialty. Primary care visits covered by Medicaid were 27 percent less likely to be referred to PT, relative to visits covered by private insurance. Primary care visits covered by managed care were also 27 percent less likely to be referred to PT. Orthopedic visits covered by workers compensation and managed care were 35 percent and 25 percent more likely to be referred to PT. Some physician characteristics were strong predictors of PT referral and varied by specialty. Of particular note, osteopathic primary care visits were 80 percent more likely than allopathic

primary care visits to be referred to PT. The bivariate probit results indicated that, given identical visit characteristics, orthopedic visits were 95 percent more likely than primary care visits to be referred to PT. In addition, there were unobserved differences in the characteristics of orthopedic visits that decreased the probability of PT referral. Therefore, although overall observed referral rates were similar for primary care (19 percent) and orthopedic (20 percent) visits, within-specialty referral rates differed by visit characteristics.

Conclusions: Significant differences exist in primary care and orthopedic physicians' referral to PT, both within and across specialties. After controlling for diagnosis, illness severity, and PT supply, insurance status and physician characteristics, particularly orthopedic specialty and osteopathic primary care specialty, remained strong predictors of PT referral.

Implications for Policy, Delivery or Practice: Variation in PT referral may be indicative of problems with access and/or inappropriate referral and may ultimately affect quality of care for patients with musculoskeletal conditions.

Primary Funding Source: AHRQ

● **Why Are There Race Disparities in Health Care Use?**

Bowen Garrett, Ph.D., Timothy Waidman, Ph.D.

Presented by: Bowen Garrett, Ph.D., Senior Research Associate, Health Policy Center, The Urban Institute, 2100 M Street NW, Washington, DC 20037; Tel: 202-261-5866; Fax: 202-223-1149; E-mail: bgarrett@ui.urban.org

Research Objective: African Americans and Latinos tend to use fewer health services than non-Hispanic white Americans, even after controlling for age, education, income, family structure, and health status. Several factors may underlie these differences, including socioeconomic status, social and cultural attitudes about health and the health care system, and discrimination. The proposed research explores reasons for such unexplained race/ethnicity differences. One of the main questions we address is whether these race/ethnicity use gaps are systematically related to economic race/ethnic disparities.

Study Design: Using data from the 1997 and 1999 National Survey of America's Families (NSAF), we estimate service utilization and access regressions that control for individual demographic, economic, and health measures, and estimate baseline race/ethnicity use gaps from the coefficients on a set of race/ethnicity dummy variables. The outcome measures we examine are having any doctor visit, perceived unmet need for medical care, and perceived satisfaction with medical care. We construct a measure of the race/ethnic wage gap at the state by MSA status level from log wage regressions controlling for human capital variables, and other factors using Current Population Survey data. We link this measure to the NSAF observations, and re-estimate the access/use models allowing for systematic variation in the use gap with the wage gap. The study also examines the role of local health care supply variables, residential segregation measures, and individual-level attitudinal variables.

Population Studied: A nationally representative sample of non-aged adults.

Principal Findings: Our baseline use models find large and significant differences in use by race/ethnicity after controlling for other factors, similar to the findings of prior studies (Waidmann and Rajan, 2000). Furthermore, there is statistically significant geographical variation in the race/ethnicity use gaps at the state/MSA status level we examine. In preliminary results, we do not find evidence in support of the hypothesis that use gaps can be explained by wage gaps at the state by MSA status level.

Conclusions: If race/ethnicity gaps in health care use and access are related to geographical variation in race/ethnicity wage gaps, after controlling for other factors, then there are two likely explanations. First, that racial/ethnic discrimination in both labor markets and health care systems are related. Second, that there are unobservable differences between racial/ethnic groups (e.g. in health status, proximity to jobs, proximity to health care services) that affect both

wages and use and vary by locality. We do not find evidence in favor of either of these scenarios.

Implications for Policy, Delivery or Practice: The elimination of race/ethnicity disparities in health care is a specific policy goal of Healthy People 2010. If race/ethnicity gaps in health care use are not related geographically to race/ethnic economic disparities, then the policies that would seek to lessen use gaps will need to employ different strategies than those targeted at reducing economic disparities.

Primary Funding Source: The Robert Wood Johnson Foundation, Assessing the New Federalism Project

● 'How Do You Spell Gonorrhea?' Adolescents' Health

Literacy and the Internet

Nicola Gray, Ph.D., Jonathan Klein, M.D. M.P.H., Judith Cantrill, M.Sc., Peter Noyce, Ph.D.

Presented by: Nicola Gray, Ph.D., Harkness Fellow in Health Care Policy, Division of Adolescent Medicine, University of Rochester, 601 Elmwood Avenue Box 690, Rochester, NY 14642; Tel: (585) 273-1679; Fax: (585) 242 9733; E-mail:

Nicola_Gray@urmc.rochester.edu

Research Objective: To use the Internet to find health information, adolescents need to know and spell words and phrases associated with health and disease. We explored adolescents' health literacy, and the effect of entering commonly mis-spelled terms into popular search engines upon the results retrieved for the user.

Study Design: Focus groups of adolescents were convened to explore their experience of Internet use. During the discussion, participants were asked to generate an anonymous paper-based list of words and/or short phrases that they associated with health and illness, and that they might enter into an Internet search engine such as Google (www.google.com) or AskJeeves (www.ask.com). Terms that were commonly included in these lists, and most commonly mis-spelled by the students, were entered into popular search engines.

Population Studied: Middle and high school students (11-18 years old) have been studied at seven school sites across England and Scotland in Great Britain, and will be studied within Monroe and Ontario Counties, New York, in the United States. The participants represent a diversity of age, gender, ethnicity and socioeconomic groupings.

Principal Findings: British students' lists of words and phrases suggested awareness of a wide range of terms such as cancer, arthritis, gonorrhea, antibiotics and asthma, but differences were seen among groups with respect to ability to spell these different terms. Younger males generated lists with more spelling mistakes than did females and older students. During focus group discussions, participants expressed concerns about their inability to spell medical terms. They themselves perceived that this might limit their information-gathering success. Arthritis and Asthma were commonly mis-spelled, and when these mis-spellings were entered into search engines page retrieval was reduced and changed. Asthma, for example, was commonly mis-spelled as Astma; in one search engine this resulted in retrieval of Scandinavian foreign-language sites, for which the term was correctly spelled. Some search engines offered users the opportunity to change to alternative spellings, but with no explanation of their meaning. Comparisons will be made with data from the United States.

Conclusions: The Internet is a text-driven information tool. Retrieval of useful information about health and medicines relies on individual ability to spell relevant terms. Adolescents are generally not exposed to written medical terms within everyday life, although they may hear them frequently from family, friends and the media. Differences between early adolescent men and women's ability to spell medical terms may reflect their relative consumption of media, such as magazines, that expose them to health information.

Implications for Policy, Delivery or Practice: School health educators, and providers of Internet health information for

adolescents, should consider how to help them find correct medical terms in order to maximize their benefit from this medium. Examples of tools to facilitate this may include pictorial prompts and online dictionaries. Fear of a digital divide has resulted in measures ensuring physical access to computers and Internet connections; disparities in use will persist if policymakers do not also address teens' health literacy.

Primary Funding Source: The Commonwealth Fund

● Health Risk Disparities and Sexual Assault in the Military

Terry Gromala, D.C., M.P.H., Susan G. Gerberich, Ph.D., M.S.PH, Melanie Wall, Ph.D.

Presented by: Terry Gromala, D.C., M.P.H., Research Fellow, Health Services Research & Policy, University of Minnesota, PO Box 14784, Minneapolis, MN 55414; Tel: (612) 339-4267; Fax: (612) 624-5920; E-mail: groma001@tc.umn.edu

Research Objective: (1) Understand the potential risk factors for actual or attempted sexual assault or rape and sexual harassment occurring among active-duty military personnel. (2) Examine how disparities such as income, rank, race/ethnicity, age, and marital status impact the likelihood of sexual assault or rape in the military environment.

Study Design: The conceptual model was developed based on relevant occupational health, sociology, and violence literature. A retrospective analytical study was conducted using data from the 1995 Department of Defense (DOD) Survey of Sex Roles in the Active-Duty Military that were collected from all active-duty military services. Potential risk factors, including personal/personnel and environmental characteristics, were examined with regard to: (1) actual or attempted sexual assault or rape, and (2) any of nine forms of sexual harassment including actual or attempted sexual assault. Logistic regression analysis was used to model the dependence of (1) actual or attempted sexual assault or rape, and (2) sexual harassment on each exposure of interest and selected confounders.

Population Studied: Stratified random sample of active-duty military personnel (n=13,599) in the Air Force, Army, Coast Guard, Marine Corps, and Navy. Women and minorities were oversampled to ensure adequate numbers for statistical analysis.

Principal Findings: Rate ratios were increased in both models for the following: younger persons; females; persons with lower paygrades; single marital status; service in the Army, Marine Corps, and Navy; persons who reported perceptions of a "hostile or intimidating environment;" and persons with knowledge of co-workers' sexual harassment experiences. For Model 1 (actual or attempted sexual assault or rape) increased rates were also identified among several other environment factors. For Model 2 (all forms of sexual harassment) rate ratios of greater magnitudes were identified for two environmental factors, the perception of co-workers' experiences of sexual harassment and the perception of a hostile or intimidating environment.

Conclusions: Disparities in rank, income, age, marital status, and service type resulted in increased likelihood of sexual assault or rape in the military. Race/ethnicity and education were not significant potential risk factors.

Implications for Policy, Delivery or Practice: These findings serve as a basis for further research endeavors being developed by the Department of Defense.

Primary Funding Source: AHRQ

● **Physician Distribution and Child Demographics: A Case Study of the Social Geography of the District of Columbia**

Mark Guagliardo, Ph.D., Cynthia R. Ronzio, Ph.D., Ivan Cheung, Ph.D., Elizabeth Chacko, Ph.D., Jill G. Joseph, Ph.D., M.D.

Presented by: Mark Guagliardo, Ph.D., Assistant Professor, Children's Research Institute, Children's National Medical Center/GWU, 111 Michigan Ave. NW, Washington, DC 20010; Tel: (202) 884-3293; Fax: (202) 884-3425; E-mail: mguaglia@cnmc.org
Research Objective: To determine the association between pediatric primary care physician (PCP) location and child socio-demographic characteristics.

Study Design: Ecological study of geo-coded pediatrician, family practitioner, and general practitioner office addresses from the American Medical Association (AMA) masterfile, and 1990 census tract variables from the Washington, DC metropolitan area. Methods: Spearman's correlations of census tract variables and number of physicians within a 3-mile radius of each tract. These relationships were also mapped using Arcview.

Population Studied: Children residing in Washington, DC and pediatric primary care physicians practicing in DC.

Principal Findings: There are 183 populated, non-military tracts representing 109,316 children <18 years of age and 381 PCPs within 3-mile radii of the District tracts. Thirty-two percent (122) of the PCPs practice in two academic medical centers that are clustered in a disadvantaged area. Nonetheless, disparities in physician location are apparent. The number of local PCPs within a 3-mile radius of each study tract is significantly and negatively correlated with the following tract sociodemographic characteristics: the number of children living below the federal poverty line (FPL) ($r=-0.36$), the percent of children living below the FPL ($r=-0.29$), and the percent of African Americans ($r=-0.55$). All correlation statistics are significant at $p<0.0001$. Tracts with high PCP counts also tended to have fewer children ($r=-0.33$, $p<0.0001$). Maps showing the city's patterns of residential segregation in relation to provider location aid in interpreting the statistical results.

Conclusions: The location of PCPs serving children in the District tends to be inversely related to children's geographic social disadvantage. The proximity of D.C.'s pediatric academic medical centers to disadvantaged neighborhoods mediates, but does not eliminate, income and race/ethnic disparities in local availability of pediatric primary care physicians.

Implications for Policy, Delivery or Practice: Policies addressing physician location may be needed to reduce disparities in access to pediatric primary care.

● **Racial Variations in Access to Hyperactive Retroviral Therapy (HAART); Medicaid FFS Versus Medicaid Managed Care**

James Guwani, Ph.D (Candidate), Robert Weech-Maldonado, Ph.D, Peter Kemper, Ph.D

Presented by: James Guwani, Ph.D (Candidate), Department of Health Policy Administration, The Pennsylvania State University, 116 Henderson Building, University Park, PA 16802; Tel: (703) 206 7408; Fax: (703) 206 7754; E-mail: GuwaniJ@usa.redcross.org

Research Objective: Increasingly, government is relying on the managed care sector to provide coverage for the Medicaid population as a cost-containment mechanism and to potentially increase access. This study examines the effects of the switch from Medicaid fee-for-service (FFS) to Medicaid managed care (MC) on racial differences in health services utilization and care delivered to patients living with HIV/AIDS in the US

Study Design: The study is designed to compare racial variations in access to Hyperactive Retroviral Therapy (HAART) between Medicaid FFS and Medicaid MC. The dependent variable is access to HAART. Three sets of independent variables are used to reflect the components of the Behavioral Model of Health Services Utilization:

enabling, predisposing, and need factors. The study uses Logistic Regression to adjust for any possible cofounders. The two main regression models examine race effects, and race and insurance interaction effects on access to treatment. This study was therefore designed and aimed at providing reliable estimates of the magnitude of the difference between FFS and MC systems.

Population Studied: This study uses the HIV Cost and Services Utilization Study (HCSUS) data set to analyze Black and White Medicaid enrollees with HIV/AIDS in 1996 ($n = 862$).

Principal Findings: Our findings indicate that compared to their white counterparts, black HIV/AIDS patients experienced lower levels of access to standard HAART treatment (O.R. = .5521, p -value = .001). While blacks in Medicaid managed care fared relatively better than blacks in FFS in access to HAART, the difference was not statistically significant.

Conclusions: This study suggests that African Americans still face barriers in access to care, even after Medicaid has assured financial access. Furthermore, the study suggests that managed care is not a panacea to eliminating disparities in care, since there were disparities in access to HIV/AIDS treatment in both Medicaid FFS and MC systems. Future research should investigate other factors that may explain these disparities in access to care, such as patient preferences and physician bias.

Implications for Policy, Delivery or Practice: As HIV/AIDS spreads into different communities and as new therapies become available, policymakers interested in dealing with racial disparities require reliable information about the types and health care utilization patterns persons with HIV/AIDS receive, so that informed decisions can be made. This study is informative, because it suggests that even though managed care has a potential of reducing such disparities, it does not by itself eliminate such differences. This is especially important given the rising cost of HIV/AIDS treatment.

● **Data Access vs. Confidentiality: Creating the Public Use File for the California Health Interview Survey**

Lee Habte, Wei Yen, Ph.D.

Presented by: Lee Habte, CHIS Data Access Center Manager, UCLA Center for Health Policy Research, 10911 Weyburn Avenue, Suite 300, Los Angeles, CA 90024; Tel: 310-794-2684; Fax: 310-794-2686; E-mail: lhabe@ucla.edu

Research Objective: To explore the balance between providing easy and timely access to survey data and at the same time ensuring the confidentiality of the survey participants.

Study Design: The construction of the public use file was led by a Data Disclosure Review Committee. The committee reviewed multiple approaches to assessing the risk of statistical disclosure for national survey research files. The committee then adopted, through successive iterations, an approach for state and local-level data that involved assessing risk at the file level and at the individual record level.

Population Studied: California population

Principal Findings: With growing attention to privacy and confidentiality in health services research, providing public data on health disparities, health status, and health insurance in small geographic areas has become increasingly challenging. Striking a balance between data access and confidentiality requires compromises. Researchers play a key role in ensuring that the trade-offs are made in a way that optimizes the utility of the file.

Conclusions: The CHIS survey has completed preparation of its first Public Use File. The paper will present the results of the confidentiality analysis, the guidelines used, and the decisions made.

Implications for Policy, Delivery or Practice: The importance of considering confidentiality issues in the early stages of planning for surveys cannot be overemphasized. Furthermore, it is critical to consider a range of options, including restricted access arrangements and web-based query systems to address the needs of data users.

Primary Funding Source: Government, Foundations

● **Native Americans Lag Behind in Health Insurance Coverage, Access, and Use: Evidence from the National Survey of America's Families**

Stephen Zuckerman, Ph.D., Jennifer Haley, M.A., Jennifer Haley, M.A., Angela Yip, B.A.

Presented by: Jennifer Haley, M.A., Research Associate, Health Policy Center, The Urban Institute, 2100 M St., NW, Washington, DC 20037; Tel: (202) 261-5862; Fax: (202) 223-1149; E-mail: jhaley@ui.urban.org

Research Objective: Study differences between Native Americans and other racial/ethnic groups with respect to health insurance coverage as well as health care access and use. While most data sources are outdated (such as the 1987 Survey of American Indians and Alaskan Natives (SAIAN)), do not contain indicators of health care access and use, or are rarely used to study Native Americans, we use recent data to examine a comprehensive set of health care indicators.

Study Design: This study uses the 1997 and 1999 rounds of the National Survey of America's Families (NSAF), a nationally representative survey of households that over-samples the low-income population. Individuals are classified according to the racial/ethnic identification provided during the interview, allowing for sample sizes of nearly 2,500 Native Americans and about 170,000 members of other racial/ethnic groups. Health insurance, access, and utilization of Native Americans are compared with that of other groups, both descriptively and in multivariate analysis that controls for socioeconomic and family characteristics.

Population Studied: Nonelderly U.S. population in 1997 and 1999, focusing on the contrast of Native Americans (those who report being American Indian, Aleutian or Eskimo, either with Hispanic or non-Hispanic ethnicity) with non-Hispanic whites, non-Hispanic blacks, and Hispanics.

Principal Findings: We find that 34% of Native Americans are uninsured, and less than half of these report Indian Health Service (IHS) clinics as their source of coverage. This is not surprising given that most Native Americans live in urban areas, while most IHS clinics are located on reservations. The uninsurance rate for Native Americans is much higher than the 12% for whites and 19% for blacks and similar to the 32% for Hispanics. Native Americans are also disadvantaged with respect to access to care: for example, compared to whites, they are less likely to have had a doctor or health professional visit in the previous year, less likely to be confident they can get care when they need it or to be satisfied with the care their family receives, and more likely to report communication problems with their health care provider. Many, although not all, of these differences are explained by differences in demographic factors across racial/ethnic groups such as age, education, family structure, geographic location, work status, and family income.

Conclusions: In addition to their increased likelihood of being uninsured, evidence from the NSAF indicates that Native Americans experience worse access to and utilization of health care than whites. Many of these differences exist because Native Americans have lower levels of education, are less likely to be employed, and have lower family incomes than other groups.

Implications for Policy, Delivery or Practice: Efforts to increase the health status of Native Americans cannot simply focus on improving the Indian Health Service; most Native Americans do not see this as a source of coverage. In addition, policymakers should focus on targeting other inequalities across racial/ethnic groups such as access to education and work opportunities. Parity in those areas would go a long way toward creating parity in health care access and use.

Primary Funding Source: The Henry J. Kaiser Family Foundation

● **Time Spent in Hospital in the Last Six Months of Life in Patients Who Died of Cancer in Ontario**

William Mackillop, M.D., Jenny Huang, MD, Msc, Jina Zhang-Salomons, M.Sc, Patti Groome, Ph.D

Presented by: Jenny Huang, MD, Msc, Research associate, Department of Oncology, Queen's University, APPS Level 4, Kingston Canada, 0 K7L 5P6; Tel: (613) 548 6149; Fax: (613) 548 6150; E-mail: Jenny.Huang@krcc.on.ca

Research Objective: To describe hospital bed utilization in the final six months of life, in patients dying of cancer in Ontario, and to identify factors that influence hospitalization rates

Study Design: Hospital separation records were linked to the Ontario cancer registry to identify factors associated with hospitalization in the 203,713 patients who died of cancer in Ontario in 1986-98

Population Studied: 203,713 patients who died of cancer in Ontario in 1986-98

Principal Findings: Between 1986-98, 5.3% of all acute care beds in Ontario were devoted to the care of cancer patients in the last six months of life. The mean time spent in hospital in the last six months of life before death from cancer was 34.1 days. Hospitalization rates increased exponentially during the last month of life. Patients younger than 50, women, or residents of poorer communities spent significantly longer in hospital than other patients. Hospitalization rates differed very little among the common solid tumours, but patients with Central Nervous System (CNS) malignancies, the lymphomas and the leukemias spent significantly longer in hospital than the other groups. Patients with metastasis to the CNS or bone, and those with debilitating complications of cancer spent longer in hospital than others. There were significant inter-regional variations in hospitalization that were not explained by differences in case mix. There was a significant inverse relationship between the rate of use of palliative radiotherapy and the hospital bed use in the county in which the patient resided. Over the thirteen years of the study, there was a very large decrease in the total time spent in hospital during the last six months of life

Conclusions: The frequency and duration of hospital admissions for cancer patients in the last six months of life have declined over the last decade, but general hospitals continue to play a large role in the care of patients who are dying of cancer.

Implications for Policy, Delivery or Practice: Today, bed utilization for this group of patients varies widely across Ontario, and the medical and economic implications of these variations in practice warrant further study

Primary Funding Source: National Cancer Institute of Canada

● **Asking about Race and Ethnicity in the Health Care Setting: Minority Patients' Perspectives**

Elizabeth Jacobs, M.D., MPP, Eric Whitaker, M.D., M.P.H., Romina Kee, M.D., M.P.H., Rael Slavensky, R.N., M.A., Marjorie Charles-Damte, R.N.,

Presented by: Elizabeth Jacobs, M.D., MPP, Assistant Professor of Medicine, Collaborative Research Unit, Cook County Hospital, 1900 W Polk St, 16th Floor, Chicago, IL 60612; Tel: (312) 633-6791; Fax: (312) 633-6783; E-mail: ejacobs@rush.edu

Research Objective: The debate over whether and how race and ethnicity variables should be used in research continues to grow. While the academic arguments for and against asking about race and ethnicity have been clearly delineated, very little is known about what patients think about these variables and how they feel when asked to identify their race and/or ethnicity. The purpose of this study was to explore the meaning of race and ethnicity to the patient population we serve and their attitudes towards questions about their race and/or ethnicity.

Study Design: Six focus groups were conducted with a convenient sample of patients who received care at one of three Cook County affiliated clinics. The interview guide contained questions addressing

the meaning of the terms race and ethnicity, self and external identification, the appropriateness of asking about race and ethnicity in the health care setting and how well they thought the census captured data on race and ethnicity. Focus groups were moderated by culturally appropriate focus group leaders. Discussions were audio taped, transcribed and coded by themes for interpretation using grounded theory.

Population Studied: Twenty-three African American patients 20 to 76 years of age and 11 Spanish-speaking patients 18 to 60 years of age.

Principal Findings: Common themes included: 1. Categorization of race leads to discrimination. 2. Questions about race and ethnicity in the health care setting may or may not be appropriate. Participants thought it was appropriate if they believed the information was used to target care and inappropriate if they believed it was used as a means of discrimination. 3. Their willingness to answer these questions depended on how and why they were asked. 4. The 2000 Census race and ethnicity questions were confusing and difficult to answer. Themes specific to African Americans included confusion regarding the difference between the terms race and ethnicity and the lability of the terms used to identify them over time. They specifically discussed how racial and ethnic labels had changed over time and identification preferences differed between generations. Spanish-speaking patients made a clearer distinction between race and ethnicity, viewing race as pedigree and ethnicity a representation of one's national/cultural origin. They considered questions about race rude and preferred questions about ethnicity.

Conclusions: While academics and health care providers think they are doing the best for patients by asking them to identify their race and/or ethnicity their minority patients may view their motives very differently.

Implications for Policy, Delivery or Practice: Culturally sensitive methods and tools should be developed to collect this information in a valid and non-threatening manner.

● **Experiences in Interacting with the Health Care System, Access, and Coverage Among Lesbians, Gays, and Bisexuals: Results of a Nationally Representative Survey**
Jennifer Kates, M.A., M.P.A., Randall L. Sell, Sc.D., Mollyann Brodie, Ph.D.

Presented by: Jennifer Kates, M.A., M.P.A., Senior Program Officer, Kaiser Family Foundation, 1450 G. Street, NW, Suite 250, Washington, DC 20005; Tel: (202) 347-5270; Fax: (202) 347-3055; E-mail: jkates@kff.org

Research Objective: Little is known about the health care experiences of lesbians, gays, and bisexuals. Prior studies, based largely on convenience samples or small sample size, have demonstrated disparities in access to care and a correlation between prejudice/discrimination and poor health outcomes. This paper is drawn from a larger survey research project designed to assess the experiences of a representative sample of lesbians, gays, and bisexuals. It focuses on a subset of survey questions concerning access, coverage, and interactions with the health care system, and compares self-reported receipt of care with national treatment standards. It also explores the relationship between prejudice/discrimination and health care access.

Study Design: A representative, random sample of telephone households geographically limited to the 15 major metropolitan households in the U.S. was assembled. A screener was used to identify whether there was an adult who was gay, lesbian, or bisexual. Telephone surveys were conducted with 405 of these randomly selected, self-identified lesbian, gay, and bisexual adults 18 years and older. The margin of sampling error is +/- 5.9 percentage points.

Population Studied: 405 self-identified lesbian, gay, and bisexual adults 18 years or older in the 15 major metropolitan areas of the U.S.

Principal Findings: Most lesbians, gays, and bisexuals report having health coverage (87%), a rate similar to the general population overall. Forty-six percent say they or someone they know has experienced discrimination in getting health care or health insurance. Less than half (44%) report having had a provider ask about their sexual orientation and 64% say they have voluntarily told their doctor about their sexual orientation. National treatment guidelines recommend that all men who have sex with men be vaccinated against Hepatitis B. Only 59% of gay and bisexual men sampled report having ever been vaccinated against Hepatitis B. National treatment guidelines for women recommend routine gynecological care. Seventy-six percent of lesbians and bisexual women sampled report having had a routine gynecological exam in the past year, a proportion similar to women overall. The paper will correlate these health care access and coverage variables with key demographic characteristics and with personal experience with prejudice/discrimination, which we found to be high (74%).

Conclusions: Random sampling of lesbians, gays, and bisexuals is critical for assessing their health experiences, access, and needs. Our study is one of the first to assemble such a sample and to query about health care experiences and access. While gay people report coverage rates similar to the population overall, they also experience discrimination in getting coverage and care. Less than half of all providers have asked about their sexual orientation, despite the importance of such information for treatment, and this population is not receiving needed care at recommended rates. We also explore the relationship between access and experiences with prejudice/discrimination.

Implications for Policy, Delivery or Practice: Important implications for increasing provider awareness and delivery of recommended treatment to gays, lesbians, and bisexuals and the need for additional surveying of this population about health care experiences.

Primary Funding Source: Foundations

● **Access to Preventive Services for Latina Immigrants: The Roles of Citizenship and Acculturation**
Judith Katzburg, M.P.H.

Presented by: Judith Katzburg, M.P.H., Doctoral Candidate, Department of Health Services, UCLA, 801 Sassafras Way, Oak Park, CA 91377; Tel: (818) 889-8739; Fax: (818) 735-0321; E-mail: jkatzbur@ucla.edu

Research Objective: Latina immigrants are at risk for under-utilization of preventive health care services. Recent legislation impedes access to health care for non-citizens. Lack of acculturation also may play an important role. This research is designed to examine utilization of preventive services by both naturalized and non-citizen Latina immigrants living in Los Angeles County with the intent of determining whether citizenship status and/or acculturation explain discrepancies in access.

Study Design: The conceptual model is based on the Andersen Behavioral Model of Health Services Utilization. Data was obtained from the 1997 Los Angeles County Health Survey, a population-based, random digit dialing telephone survey of 8,004 households in Los Angeles County. For each of the preventive services measures (mammography and Papanicolaou (Pap) test), a series of staged logistic regression analyses were undertaken to determine the impact of citizenship and acculturation variables in addition to predisposing, enabling, and need controls.

Population Studied: The study population included immigrant Latinas living in Los Angeles County who participated in the telephone survey and met the age criteria for preventive testing: ages 18 years or older for Pap smear and ages 50 years or older for mammography.

Principal Findings: While both citizenship and one acculturation variable, proportion of years in the United States relative to age, were important predictors of access in earlier stages of analysis, both

became non-significant in the fully specified model. In the restricted models, prior to the addition of enabling variables, non-citizen status and limited residency exerted a negative and significant effect on the likelihood of receiving a Pap. While citizenship was not predictive in the full model, an interactive effect between citizenship and health insurance was found to be significant. Results indicate that naturalized citizens are more likely to benefit from health insurance than are non-citizens. For the mammography population, in earlier stages of the analysis, the proportion variable was found to be an important predictor whereas citizenship was not. Once again, in the final model, the proportion variable was non-significant. However, the proportion variable appears mediated by both health insurance and regular source of care variables.

Conclusions: Both lack of U.S. citizenship and less acculturation appear to present access barriers to Pap smears for Los Angeles County Latina immigrants while less acculturation is an apparent barrier to mammography. In the case of Pap smears, the impact of citizenship is significantly and differentially modified by the interactive effect of health insurance. A mammogram is less likely for those with limited residency who then tend to lack health insurance and a regular source of care.

Implications for Policy, Delivery or Practice: Outreach efforts should be made to the vulnerable segments of the immigrant Latina population including the non-citizens and the less acculturated who are more likely to lack health insurance and a regular source of care. However, providing health insurance to non-citizens will not ensure their access to Pap smears. Additional research is needed to determine why naturalized citizens appear to benefit more from having health insurance than do non-citizens and to identify additional barriers to access for this non-citizen population.

Primary Funding Source: AHRQ, University of California, Los Angeles

● Access, Service Use and Costs for Rural Residents with Chronic Illness

Kathleen T. Call, Ph.D., Jill Klingner, RN, MS

Presented by: Jill Klingner, RN MS, Rural Health Research Center, University of Minnesota, 2221 University Ave SE, MPLS, MN 55414; Tel: 612-627-4163; E-mail: klin0089@tc.umn.edu

Research Objective: Provide a descriptive profile of access, service use and costs of medical care for elderly and disabled rural residents with chronic conditions, and to contrast this with a similar profile for urban residents with chronic conditions.

Study Design: Access, cost and use for Medicare beneficiaries with chronic conditions were compared using data from the Medicare Current Beneficiary Survey (MCBS). Chronic conditions selected were diabetes; emphysema, asthma and COPD; rheumatoid arthritis, other heart conditions, and hypertension. A MCBS respondent provides information on chronic conditions, health status and functioning, living arrangements, demographic characteristics, health insurance coverage, access to and use of health services, and health care spending. This survey data is linked to Medicare administrative and claims data for all respondents to assess utilization and cost of services. Respondents with chronic conditions were separated by location of residence and by reason for eligibility. Two- and three-way location comparisons were done of access, cost and use variables while controlling for other factors.

Population Studied: The MCBS files from 1994 and 1996 were used. The MCBS is a continuous panel survey of a nationally representative sample of the aged and disabled Medicare population. The sample is restricted to cases appearing in both the Access to Care and the Cost and Use datasets, cases with an urbanicity code, cases that were non-institutionalized, and cases that are eligible for both Medicare Part A and B. Respondents with end stage renal disease (ESRD) were excluded due to inadequate sample size. The resultant sample size is 9,874 beneficiaries in 1994 and 8,973 in 1996.

Principal Findings: Although rural and urban elderly residents report similar numbers of chronic conditions and limitations on activities, fewer rural elderly residents report being in excellent health. Rural residents have longer inpatient stays and fewer outpatient visits. Use of outpatient services among aged beneficiaries with chronic conditions exceeds use among the general sample, regardless of residency.

Location affects accessing care. Rural beneficiaries with chronic conditions or with a disability are more likely to report delaying care due to cost. Twice as many rural elderly and disabled residents, than urban go without supplemental insurance. Disabled beneficiaries are three to four times more likely than age eligible beneficiaries to not have supplemental insurance.

More dramatic than the rural/urban comparison among beneficiaries with chronic conditions are the differences in access among beneficiaries with disabilities as opposed to age eligible beneficiaries reporting chronic disease. A much larger proportion of disabled than chronically ill beneficiaries report having trouble getting health care, delaying care due to cost, and forgoing care. This is especially troubling since a larger proportion of disabled than aged beneficiaries indicate they have no supplemental insurance.

Conclusions: The most concerning result is the finding that rural residents report delaying care due to cost. Although less than 10 percent of beneficiaries indicate delaying care this can be of critical consequence among people with chronic conditions. Explanations for the disparity of supplemental insurance coverage for the disabled and the rural aged should be explored.

Implications for Policy, Delivery or Practice: Access to supplemental coverage may be key to overcoming the access problems of the rural aged and the disabled.

Primary Funding Source: The Robert Wood Johnson Foundation

● Disparities by Medicaid Status in the Use of Breast

Conserving Surgery for Breast Cancer Treatment

Siran Koroukian, Ph.D., Gregory S. Cooper, M.D.

Presented by: Siran Koroukian, Ph.D., Senior Instructor, Epidemiology and Biostatistics, Case Western Reserve University, 10900 Euclid Avenue, Cleveland, OH 44106-4945; Tel: (216) 368-3197; Fax: (216) 368-3970; E-mail: sxx15@po.cwru.edu

Research Objective: Breast Conserving Surgery (BCS) is recommended for early stages of breast cancer. Although previous studies have documented variations in the use of BCS by patient characteristics, little is known about the use of BCS by Medicaid status. The objective of this study is to assess the presence of disparities in the use of BCS by Medicaid status and other patient characteristics, including cancer stage, age, and race.

Study Design: This is a cross-sectional study using the linked Ohio Cancer Incidence Surveillance System (OCISS) and Medicaid files. The databases were linked using identifiers, including name, social security number and date of birth. Medicaid status was assigned if a case was identified in both databases, and if the individual was enrolled in Medicaid at the time of cancer diagnosis. All other study variables were retrieved from OCISS, including stage of cancer at diagnosis, surgical therapy, as well as the patient's age and race. Multivariate logistic regression analysis was performed to study the association between Medicaid status and BCS after controlling for cancer stage and patient demographics.

Population Studied: Women residing in Ohio and diagnosed in situ, local, and regional stages of breast cancer, 1996-1998.

Principal Findings: A total of 24,078 patients were diagnosed with non-metastatic breast cancer. The mean age was 61.0; 9% were African American, and 9% were Medicaid beneficiaries. 18% were diagnosed with in situ breast cancer; 58% and 26% were diagnosed at local and regional stages of cancer respectively. BCS was performed in 50% of the study population; however, this proportion changed significantly by Medicaid status, stage of cancer at diagnosis, and other patient characteristics. BCS was performed in 51% of non-

Medicaid women, and 44% of Medicaid beneficiaries ($p < 0.0001$; adjusted Odds Ratio (AOR)=0.76, 95% Confidence Interval (CI)=0.69-0.84). In addition, the use of BCS was 66% among women diagnosed with in situ breast cancer, compared with 54% among women diagnosed at local stages of disease (aOR=0.61; 95%CI=0.56-0.65), and 31% among women diagnosed with regional metastases (aOR=0.23; 95%CI=0.21-0.25). Compared with women 50 years of age or younger, BCS was performed more often among women 50-64 years of age (aOR=1.13; 95%CI=1.05-1.21), and less frequently among women 65 years of age or older (aOR=0.91; 95%CI=0.86-0.98). African American women were also more likely than others to undergo BCS (aOR=1.21; 95%CI=1.10-1.33).

Conclusions: Medicaid beneficiaries are significantly less likely than their non-Medicaid counterparts to undergo BCS for non-metastatic breast cancer.

Implications for Policy, Delivery or Practice: The results reflect the presence of disparities by Medicaid status in the type of surgery received for breast cancer. This may be due to differences in patient preferences, physician recommendations, and other unmeasured clinical factors.

Primary Funding Source: NCI

● **Racial Disparities in Use of Antidiabetic Medications among US Nursing Home Residents with Diabetes Mellitus**
Kate Lapane, Ph.D., Rebecca Toppa, Ph.D.

Presented by: Kate Lapane, Ph.D., Assistant Professor of Medical Science, Center for Gerontology and Health Care Research, Brown University, Box GB-222, Providence, RI 02912; Tel: (401) 863-9424; Fax: (401) 863-3489; E-mail: Kate_Lapane@brown.edu

Research Objective: We quantify racial/ethnic differences in the receipt of medications for diabetes mellitus in US nursing homes. To understand where inequitable treatment may be occurring, examination of conditions where patient preference is unlikely to explain differences in utilization of resources is warranted.

Study Design: Data for this cross-sectional study were obtained from the Systematic Assessment of Geriatric Drug Use via Epidemiology - SAGE- database. SAGE is an integrated database that includes information obtained through the Health Care Financing Administration's Case-Mix Reimbursement and Quality Demonstration Project from 1992-1996. Nursing home staff at all 1492 Medicare and Medicaid certified nursing homes in Kansas, Maine, Mississippi, Ohio, New York, and South Dakota have evaluated residents using the federally mandated Resident Assessment Instrument, which includes the 350-item Minimum Data Set-MDS. The MDS includes sociodemographic information, clinical items including physical and cognitive function, and all clinical diagnoses. We conceptualize the term 'race' as a social category which reflects the life-long experience of being members of a socially-assigned group that experiences economic -for example, lower income without health care benefits- and noneconomic -for example, providers withholding medical procedures- forms of discrimination by the majority group. We performed descriptive analyses stratified by state and gender. In addition to crude prevalence rates, we estimated prevalence rates adjusted for indicators of disease severity, and measures of physical and cognitive functioning.

Population Studied: We focus on drug treatment of residents with diabetes mellitus. We identified 60,939 residents with diabetes mellitus documented on their MDS assessment who also had medication information documented on the MDS. We evaluated specific drug regimens including the use of insulin and sulfonylureas, as well as any appropriate pharmacologic treatment for diabetes.

Principal Findings: Overall, nearly half of residents did not receive any pharmacologic treatment for diabetes. Racial differences in treatment patterns varied by gender, state, and disease. Among residents with diabetes mellitus after adjustment for confounders, American Indian men and women were less likely than non-Hispanic

whites to receive any antidiabetic treatment if residing in a nursing facility in South Dakota, but were equally likely to receive treatment in New York. The adjusted prevalence difference indicating less treatment among American Indians in South Dakota was 11.9% among men and 10.8% among women. Regardless of gender, Asian-Pacific Islanders were equally likely to receive anti-diabetic agents, whereas less treatment was only observed among Hispanic men with an adjusted prevalence difference of 4.6%. Regardless of location, Black men were less likely to receive pharmacologic treatment for diabetes than white men with estimates ranging from absolute differences of 5.3% in Kansas, to 13.5% less treatment in Ohio. Among women, differences between Blacks and non-Hispanic whites were attenuated.

Conclusions: Our examination of the nursing home population reveals the complex health status of the elderly diabetic living in long-term care. Chronic medical conditions existing within this population increased the level of disability and made diabetes management more difficult. Our data revealed that nearly half of the diabetics living in long-term care received no antidiabetic medications. Although the absence of residents' blood glucose or HbA1c values prevents us from making a definitive judgment about the adequacy of diabetic care, some resident's diabetic care, especially minorities, may not be optimal. Reasons for the differences and variability in treatment patterns by race/ethnicity need to be explored.

Implications for Policy, Delivery or Practice: Pharmacologic therapy for diabetes may be less than optimal in the long term care setting, and further reduced among people of color. Whether these data reflect institutionalized racism - that is minorities differentially residing in homes with fewer resources - is unknown. Given the adoption of a prospective payment system which bundles the cost of medications in the per diem rate, we are concerned with the potential for increasing race/ethnic differences in treatment patterns. The extent to which racial differences in treatment patterns affects patient outcomes needs to be evaluated. Also, these differences may simply reflect lifelong deprivation to appropriate medical care, and not the delivery of health care in the nursing home. Nevertheless, the nursing home stay may be an opportunity to reverse disturbing trends in treatment patterns by race/ethnicity. Integration of pharmacists into health care teams in nursing home settings may be one solution to improving prescribing in general, although who would pay for their services remains unknown.

Primary Funding Source: NIA

● **Schizophrenia Care and Assessment Program (SCAP):**

Examination of Treatment Pattern Differences by Race

Tami Mark, Ph.D., Lisa Palmer, Ph.D., Patricia A. Russo, Ph.D., M.S.W., R.N., Joseph Vasey, Ph.D.

Presented by: Tami Mark, Ph.D., Associate Director, Outcomes Research and Econometrics, The MEDSTAT Group, 4301 Connecticut Avenue, Suite 330, Washington, DC 20008; Tel: (202) 719-7832; Fax: (202) 719-7801; E-mail: tami.mark@medstat.com

Research Objective: To examine differences in treatment patterns for schizophrenia among African-Americans and Non-African Americans enrolled in the U.S. Schizophrenia Care and Assessment Program (SCAP), an observational study with six U.S. sites.

Study Design: Baseline data were used to assess treatment differences by race and by race-gender pairings ($n=2239$). Symptomology and functionality scores (PANSS, MADRS, GAF and AIMS) were used as measures of schizophrenia severity. Utilization was measured by service type. Antipsychotic agents were coded for first generation agents only, any second generation (except clozapine), clozapine, and no antipsychotic use. Presence of Antiparkinson/Anticholinergic medications and presence of depot administration were also examined. Descriptive and logistic regression modeling was employed.

Population Studied: Persons with schizophrenia enrolled in the SCAP study, stratified by race.

Principal Findings: Symptoms and Functionality: Analyses indicate that while African-Americans were more likely to be diagnosed with paranoid schizophrenia, they were no more likely than Non-African Americans to present with greater positive symptoms. The symptom profile found in this analysis indicates that African-Americans exhibited more negative symptoms, lower quality of life scores, and higher AIMS scores than Non-African Americans. Utilization: African-Americans had fewer individual therapy sessions, less day treatment and more rehabilitation visits than Non-African Americans. Medications: African-Americans were less likely than Non-African Americans to be prescribed any second-generation antipsychotic medications, including Clozaril and more likely than Non-African Americans to be prescribed Antiparkinson and Anticholinergic agents. The proportion of African-Americans males receiving a depot formulation was greater than the proportion for African-American females, Non-African American males and Non-African American females. Multivariate Analysis: Controlling for demographics, symptom severity, insurance and route of administration, African-Americans were 1.6 times more likely than Non-African Americans to be prescribed only a first generation antipsychotic agent. Presence of depot administration was also positively associated with first generation antipsychotic use but the difference by race remained even after controlling for depot administration.

Conclusions: In this study population there is an interesting differential noted for treatment patterns for African-Americans and Non-African Americans. Symptom profiles of African-Americans included in this analysis indicate that prescribing second-generation antipsychotic agents would be clinically appropriate (greater negative symptoms, higher AIMS and Antiparkinson/Anticholinergic use, and lower QLS). Our research indicates however, that African-Americans were significantly less likely than Non-African Americans to be prescribed second-generation antipsychotic medications. Multivariate analysis indicates however that even after controlling for schizophrenia subtype and route of administration, African-Americans are more likely than Non-African Americans to receive a first generation antipsychotic.

Implications for Policy, Delivery or Practice: These findings suggest that race, rather than clinical presentation, is a significant determinant of antipsychotic medication choice for the treatment of schizophrenia. Adjusted results corroborate results that non-clinical indicators drive differences in treatment patterns among African-Americans.

Primary Funding Source: Eli Lilly and Company

● Predictors of Overall Patient Satisfaction at an Urban County ER

Jill Marsteller, MPP, ABD, Russ Braun, M.D., M.P.H., M.B.A., Corita Grudzen, M.D., Janis Farnholtz Provinse, R.N., M.S.

Presented by: Jill Marsteller, MPP, ABD, Health Services and Policy Analysis, UC-Berkeley School of Public Health, 140 Warren Hall, Berkeley, CA 94720; Tel: 510-643-0350; Fax: 510-643-8613; E-mail: Jmarstel@yahoo.com

Research Objective: To identify factors associated with overall patient satisfaction at an urban County Emergency Department (ER) with emphasis on three specific components of medical care (Timing, Thoroughness, and Compassion/Respect). Multiple demographic, socioeconomic, and health status variables were also considered.

Study Design: A cross-sectional study of patients assessed overall patient satisfaction (a 5-question composite variable accounting for acquiescence bias) and components of care using a multilingual (English, Spanish, or Chinese) questionnaire. Some demographic and health status variables were abstracted from patient charts. A series of OLS multiple regression models on overall satisfaction added classes of variables in succession to assess changes in fit.

Demographic, socioeconomic and health status covariates of the components of care were also examined.

Population Studied: Patients who completed treatment over six consecutive days in August 2000 at the emergency or urgent care centers of an urban county hospital. 373 patients completed the survey, or an estimated 42% of patients who presented for care between 8 and 12AM on survey days. The sample was 55% female, 54% black, 19% Hispanic and 64% uninsured, with mean age 42, average medical acuity, 1.6 (3-pt. scale), average health status, 2.9 (5-pt scale), and mean LOS of 9.4 (+/- 7.3) hours.

Principal Findings: Findings demonstrate overall favorable patient satisfaction. On a 5-pt. scale, mean overall satisfaction was 3.5 (between "good" and "very good"). Questions on "timing" (length of time waited, during treatment, and time spent with provider) had a mean of 3.2. Questions on thoroughness/quality of care had a mean of 3.7. Finally, patients were especially pleased on average with the respect shown them by staff and providers (mean 3.9). Multivariate regression on all three components of care demonstrated significant positive correlation with overall satisfaction and explained just over half the variance (Adj. R2 =0.51). A larger model adding demographic, health, and economic factors improved fit (Adj. R2 =0.64), but satisfaction with the three medical care components remained the strongest significant predictors (Time, b=0.25, Respect, b=0.20, Thoroughness, b=0.17, all p<0.05). Other positive and significant covariates included health status and age. Female gender and the number of previous ER visits reduced satisfaction, other things equal. Grouped socioeconomic and demographic variables and health status variables explained very little of the variance in satisfaction with any one component of care or in overall satisfaction. Better health status significantly increased satisfaction with time and thoroughness, as did gender for time satisfaction and insured status for thoroughness.

Conclusions: Overall, patient satisfaction was high despite long waits and time for treatment. Other things equal, satisfaction with Time is the most important covariate of overall ER satisfaction, which was only minimally affected by demographic, socioeconomic, and health status factors.

Implications for Policy, Delivery or Practice: Health care researchers and policy makers concerned about disparities in treatment of patients in urban county emergency departments may have less to worry about. For the most part, patients' demographic, socioeconomic and health status variables did not influence their satisfaction with the time they waited, the respect shown to them, the thoroughness and quality of care, or their overall satisfaction. This research suggests that patient/provider interactions in this urban emergency department were positive by and large and did not tend to suffer from prejudicial disparities.

● Mental Health Disparities in an Elderly Urban Population

R. Michael Massanari, M.D., M.S., Daniel Barth-Jones, Ph.D., Elizabeth Chapleski, Ph.D., Leslie Mahlmeister, M.B.A., Herbert Smitherman, M.D. M.P.H.

Presented by: R. Michael Massanari, M.D., M.S., Director, and Professor of Medicine and Community Medicine, Center for Healthcare Effectiveness Research, Wayne State University School of Medicine, 4325 Brush Street, Detroit, MI 48201; Tel: (313) 577-5189; Fax: (313) 577-1773; E-mail: mmassana@med.wayne.edu

Research Objective: We assessed health status, quality of life, and access to community services among an urban, low-income population living independently in a major metropolitan community.

Study Design: We utilized a random digit dialing telephone survey to assess health status and quality of life among adults 60 years and older. A random sample of 604 subjects represented a population of approximately 15,000 older adults. The survey tool consisted of 115 items including a standardized survey for mental and physical health status (SF-12), access to care, living conditions, socio-economic status, and social support networks.

Population Studied: Adults 60 years and older who live independently in one of four zip codes in central city Detroit, Michigan.

Principal Findings: The sample was 75% female and 88% African-American. The age distribution was 60-74 (51%), 75-84 (41%), and > 85 (8%). Sixty-six percent of subjects lived alone, 35% reported an annual income of < \$10,000, and 48% reported less than high school education. Consistent with their age, 30% of subjects reported fair-poor health, and 92% one or more chronic diseases. Among seniors, 21.3% reported emotional problems, 16.3% reported that emotional problems interfered with their routine activities, and 12.8% reported feeling depressed a "good bit, most," or "all of the time." When the summary mental status scores (MHS) for the SF-12 were compared with age-matched US normative data, urban seniors were not significantly below norms. Indeed, "older" seniors (> 75 years) scored significantly higher than US age-matched norms. To further assess mental health status, we stratified respondents into quartiles based on the MHS (<48, 49-56, 57-60, 61-70). Low MHS scores were associated with fewer years' education (p=.047), unemployment (p=.006), greater frequency of chronic medical conditions (<.001), lower SF-12 physical health scores, and recent discharge from a healthcare facility. We created a logistic regression model to control for age, race, gender, education, employment, income and marital status. The number of chronic medical conditions and social isolation were independently associated with MHS in the lowest quartile. Subjects with lower MHS scores were also more likely to report "ability to pay" as a barrier to health care (p=.016).

Conclusions: Overall mental health status scores among seniors representing this urban minority population were similar or somewhat higher than age-matched national norms. However, based on greater likelihood of multiple chronic diseases and social isolation, subjects with low MHS were highly vulnerable. Subjects with low MHS scores were also more likely to report inability to pay as a barrier to access to health care.

Implications for Policy, Delivery or Practice: In face of recent reductions in State funding for mental health care, access to services for the most vulnerable, isolated seniors should be scrutinized.

Primary Funding Source: Foundations

● **Racial/Ethnic and Urban/Rural Disparities in Asthma**

Prevalence and Management in California: Results from the California Health Interview Survey

Ying-Ying Meng, Ph.D., Kenneth Fisher, M.D., Elizabeth Malcolm, M.D., Susan Babey, Ph.D., E. Richard Brown, Ph.D., Neetu Chawla,

Presented by: Ying-Ying Meng, Ph.D., Senior Researcher, UCLA Center for Health Policy Research, 10911 Weyburn Avenue, Suite 300, Los Angeles, CA 90024; Tel: 310-794-2931; Fax: 310-794-2686; E-mail: yymeng@ucla.edu

Research Objective: The study is designed to provide policy-relevant data to assess the prevalence and management of asthma for California's geographically and ethnically diverse population.

Study Design: CHIS is a bi-annual telephone survey of more than 55,000 households drawn from every county in the state, grouped into 41 sampling strata. The CHIS sample was primarily a random-digit-dial survey with over sampling of Asian Americans/Pacific Islanders, American Indians/Alaska Natives, and rural counties. This study includes a sample of 7,000 adults, 900 adolescents, and 1,400 children who reported having asthma.

Population Studied: California population.

Principal Findings: The CHIS survey has completed data collection, analytic data files are being prepared, and the study of asthma will be published in May 2002. This paper will present findings from that study. The study examines racial/ethnic and urban/rural disparities in asthma prevalence, control of symptoms, limitations in activities and school attendance, emergency room visits and hospitalizations for asthma, health insurance status, and access to and use of ambulatory health care services.

Conclusions: Conclusions will be presented regarding the extent of racial/ethnic and urban/rural disparities and the effects of health insurance status and access to health care services on disease management, emergency room visits and hospitalizations for asthma.

Implications for Policy, Delivery or Practice: Findings from this study will be used by the state and local health departments to develop policies and programs more effectively manage asthma.

Primary Funding Source: Government, Foundation

● **Access to Reproductive Health Services: The Impact of the Mandatory Waiting Period for Women with Medicaid Requesting a Tubal Ligation**

Virginia Miller, Dr.P.H., R.N., Michael Massanari, M.D., M.S., Lynnette Essenschmacher, B.S.

Presented by: Virginia Miller, Dr.P.H., R.N., Assistant Professor, Center for Healthcare Effectiveness Research, Wayne State University School of Medicine, 4325 Brush Street, Detroit, MI 48201; Tel: (313) 993-1332; Fax: (313) 577-1773; E-mail: vmiller@med.wayne.edu

Research Objective: To examine the impact of the policy mandating a 30-day waiting period for women with Medicaid who requested and consented to a tubal ligation, but did not undergo the procedure.

Study Design: A survey instrument was designed to conduct structured interviews to address barriers to receiving a tubal ligation including the following factors: the mandatory 30-day waiting period; hospital or clinic practices; difficulties with Medicaid coverage; problems with personal life or health.

Population Studied: The study population included 52 low-income, minority Michigan women receiving their prenatal care at a university-based prenatal clinic, enrolled in Medicaid, and having a signed consent for a tubal ligation to be performed following the delivery of their infant.

Principal Findings: Among the women interviewed, 26 women received and 26 women did not receive a tubal ligation. Specifically related to the waiting period, 25%(13) reported not knowing about the 30-day waiting period. When asked if the waiting period had anything to do with getting or not getting the tubal ligation, 17%(9) indicated that it had. A variety of reasons were offered to explain how the 30-day waiting period negatively affected their process of obtaining the tubal ligation. The responses included reasons such as the following: a number of days short of the waiting period; found out too late after changing hospitals; not told about the waiting period; and inconvenient.

Conclusions: Among the women interviewed, the 30-day waiting period may not be the single, primary reason for women not having a tubal ligation, however, it interplays with other system factors, such as problems with a clinic or hospital, or problems with Medicaid.

Implications for Policy, Delivery or Practice: The policy of the mandatory 30-day waiting period for women with Medicaid requesting a tubal ligation may interact with other factors to limit access for low-income women.

Primary Funding Source: Blue Cross Blue Shield of Michigan Foundation

● **The Physician Patient Relationship: A Sociological Perspective'**

Subhasis Misra, M.B.B.S (Bachelor of Medicine; Bachelor of Surgery)

Presented by: Subhasis Misra, M.B.B.S (Bachelor of Medicine; Bachelor of Surgery), Student, Health Systems Management, Rush University, 1700 W Van Buren St, Chicago, IL 60612; Tel: (312)733-0546; E-mail: drsubu@hotmail.com

Research Objective: To explore the nature of the relationship between the physicians and the patients and the ways in which this relationship is affected by culture, gender roles, social class and presence of managed care.

Study Design: Certain models of interaction between the physician and patients and their outcomes based on various factors are studied.

Population Studied: Literature Review. Previous research and reviews on the subject of physician-patient relationships are studied in-depth from textbooks, journals and from authoritative information available on the Internet.

Principal Findings: Effective communication, which can be the key to a satisfying relationship between the physician and the patient, is hampered by cultural and gender differences. Social changes occur slowly and are evidenced in this study. Healthcare consumerism is gradually changing the current scenario of the physician patient relationship.

Conclusions: The sublime nature of the physician patient relationship is affected by cultural and gender differences, social class and by the presence of managed care.

Implications for Policy, Delivery or Practice: Positive physician-patient interaction can lead to better clinical and patient satisfaction outcomes.

Primary Funding Source: Foundations, Department of Health Systems Management

● Racial and Language Differences in Parents Assessment of Provider Communication in a Medicaid Managed Care Health Plan

David Mosen, Ph.D., M.P.H., Matthew J Carlson, Ph.D., Pamela Hanes, Ph.D.

Presented by: David Mosen, Ph.D., M.P.H., Research Associate, Research and Evaluation, CareOregon Health Plan, 522 SW 5th Avenue, Portland, OR 97204; Tel: (503) 416-1476; Fax: (503) 416-3720; E-mail: mosend@careoregon.org

Research Objective: Disparities in health care are a topic of continuing concern to policy makers, providers, and consumers alike. Because most research on consumer experiences with care focuses on adults, little is known about the quality of pediatric care provided in Medicaid Managed Care. This study examines racial and language differences in adults' ratings of pediatric provider communication within a large Managed Medicaid Health Plan located in the Pacific Northwest.

Study Design: The data analyzed are from the 1998-1999 National Consumer Assessment of Health Plans Study (CAHPS) survey and consisted of parental responses for 299 children enrolled in a large Managed Medicaid Plan in Oregon. The survey response rate was 45%. Data were collected by telephone and mail, and surveys were administered in Spanish and English.

Dependent variables included four individual items that make up the CAHPS 2.0 Provider Communication Composite Measure. Within the six months prior to interview, parents were asked how often (never, sometimes, usually, always) physicians or health care providers: 1) listened carefully, 2) explained things well, 3) respected their comments or concerns, or 4) spent enough time when their children received health care. Logistic regression was used to calculate the odds of rating each provider communication item most positively (always response) among Hispanic-Spanish Speaking, Hispanic-Non-Spanish Speaking, and African-American children compared to White children; adjusting for parent's gender, child's gender, children's health status, and reported barriers to care.

Population Studied: Low-income families receiving pediatric care in Medicaid Managed Care in the State of Oregon.

Principal Findings: Ratings of Provider Communication did not vary by Race/Ethnicity or Language for 3 of 4 individual measures: 1) listened carefully, 2) explained things well, and 3) respected comments or concerns. However, Spanish-Speaking Hispanic Parents were less likely (O.R. 0.40; 95% CI = 0.20-.0.70) to report that their child's physician/provider "always" spent enough time with their child, compared to parents of White children, even after adjusting for gender (parent and child), children's health status, and reported barriers to care. Ratings on this item did not differ for parents of

English Speaking Hispanics or African-American children compared to parents of white children.

Conclusions: Ratings of Provider communication do not vary by Race or Language for most of the individual items tested. However, language appears to be the strongest predictor of whether parents reported that health providers spent enough time with their children with Hispanic spanish speaking parents being significantly more likely to report poor satisfaction compared to White parents. Surprisingly, reported barriers to care did not explain the lower satisfaction scores among Hispanic Parents.

Implications for Policy, Delivery or Practice: In the current study, differences between English and Spanish speaking parents in the reported quality of doctor-patient communication were less than expected. Nevertheless, more research is needed to understand why Spanish-speaking parents are less likely to report that physicians and care providers spend enough time with their children when receiving health care services. Such research will inform providers and policy makers in order to improve the quality of care for Spanish speaking Hispanic families.

Primary Funding Source: CareOregon

● Dimensions of Interpersonal Processes of Care in Diverse Patients

Anna Nápoles-Springer, Ph.D., Jasmine Santoyo, B.A., Alice Fike, R.N., M.S.N., Anita L. Stewart, Ph.D.

Presented by: Anna Nápoles-Springer, Ph.D., Asst. Adjunct Professor, Medicine, University of California San Francisco, 3333 California Street, Suite 335, San Francisco, CA 94118-1944; Tel: (415) 476-6290; Fax: (415) 502-8291; E-mail: ans@medicine.ucsf.edu

Research Objective: Identify dimensions of quality of interpersonal processes of care in ethnically diverse groups that may be missing from current definitions of quality and that might be linked to disparities in technical processes and outcomes of care.

Study Design: Nineteen one-time focus groups, stratified by ethnicity, age and gender, were audiotaped, translated if necessary, and transcribed. Transcripts were analyzed using a grounded theory/constant comparison method for content analysis. A conceptual framework of domains of interpersonal processes of care based on prior work guided coding; modifications were made based on study findings. Two investigators independently coded transcripts using qualitative data analysis software; findings were reconciled and synthesized.

Population Studied: 61 African Americans, 45 Latinos and 57 Whites were recruited from community-based organizations, senior centers, educational institutions, and employment offices in the San Francisco Bay Area. Their average age was 48 years; 45% were women.

Principal Findings: The following major themes of interpersonal processes of care occurring during medical visits were identified: elicitation of patient concerns, explanations, decision making, cultural sensitivity/discrimination, and interpersonal style of the clinician. All three ethnic groups felt that quality care requires that clinicians give patients the opportunity to voice their concerns and that obtaining a response to their concerns requires that patients be assertive during visits. Both African Americans and Latinos felt they were given inadequate explanations because physicians assumed they would not understand. All three ethnic groups felt vulnerable and dependent on physicians; when making decisions, they preferred being presented with treatment options and being given an opportunity to state their preferences. African Americans and Latinos felt they were seldom informed of treatment options and they tended to defer to physicians based on their training. There was a pervasive sentiment across all three groups that ethnicity was irrelevant to their care as long as they were treated humanely. Nonetheless, African Americans and Latinos cited experiences of discrimination, stereotyping and expressed distrust of physicians. For

all groups, being treated with compassion and as unique individuals were of critical importance. All three groups defined trust in clinicians in terms of relationship building and clinician competence. Limited time with physicians was a salient concern of all groups.

Conclusions: Results confirmed the initial conceptual framework of interpersonal processes of care and identified new dimensions relating to the time spent with the patient and trust in clinicians. Across ethnic groups, attention to patient concerns, being given the option to participate in decision making, and compassion were viewed as indications of quality care. Non-white patients more frequently perceived having received inadequate explanations and insufficient opportunities to participate in making decisions than white patients.

Implications for Policy, Delivery or Practice: Further research needs to clarify if ethnic differences in perceptions of adequacy of explanations of care and opportunities to participate in decision making may partially explain disparities in technical processes and outcomes of care. If empirical studies find such patterns of associations, interventions to decrease health disparities could be developed.

Primary Funding Source: AHRQ

● **Racial/Ethnic Differences in Childhood Obesity in a New York City WIC Population**

Jennifer Nelson, M.P.H., Mary Ann Chiasson, Dr.P.H., Viola Ford, M.S.W., C.S.W.

Presented by: Jennifer Nelson, M.P.H., Research Associate, Research and Evaluation, Medical and Health Research Association of New York City, Inc., 40 Worth St. Ste 720, New York, NY 10013; Tel: (212) 285-0220; Fax: (212) 385-0565; E-mail: jnelson@mhra.org

Research Objective: Determine the prevalence of obesity among a population of low-income, racially and ethnically diverse young children enrolled in a New York City WIC program. Describe the extent of obesity in this population, with particular emphasis on how obesity is distributed by race/ethnicity and age.

Study Design: Information from all families enrolling or recertifying in the MHRA New York City Neighborhood WIC Program during one week was collected using a brief self-administered questionnaire. Additional data from certification forms were collected, without personal identifiers, for each family member enrolling or recertifying that day. For children aged 2-4, body mass index (BMI) was calculated and compared to the CDC BMI-for-age reference percentiles.

Population Studied: Children aged 2-4 enrolled in the MHRA New York City Neighborhood WIC Program, which serves more than 55,000 women, infants, and children each year. A total of 1255 families completed questionnaires at 18 WIC sites, resulting in data for 1444 individual family members, including 557 children aged 2-4.

Principal Findings: A full 40% of the children were overweight or at risk of overweight: 22% were overweight (BMI \geq 95th percentile) and 18% were at risk of overweight (BMI \geq 85th and $<$ 95th percentile). Among Hispanic children, the total was nearly 50%. This WIC program serves a large number of Hispanic participants, which is reflected in this sample: 59% were Hispanic, 19% black, 10% Asian, and 8% white. The population was evenly distributed by gender and age. While no difference was found between boys and girls with respect to percentage overweight or at risk of overweight, significant differences in percentage overweight were found among racial/ethnic groups. Twenty-seven per cent of Hispanic children, 13% of black children, 19% of Asian children, and 11% of white children were overweight ($p < 0.001$). When compared to all other groups combined, Hispanic children were significantly more likely to be overweight or at risk of overweight (OR = 2.6 [95% CI: 1.8,3.8]). No differences were observed among Hispanics of

various ancestry. In addition, 2-year-old children were significantly less likely to be overweight than 3- or 4-year-old children ($p = 0.04$).

Conclusions: A significant proportion of young children enrolled in a New York City WIC Program were overweight or at risk of overweight. Hispanic children, in particular, were more likely to be overweight. Although this is not an unbiased sample because this is a high-risk population and excessive weight for stature is one of the nutritional risk factors that qualifies a child for WIC, the health consequences for this population are potentially serious. Further research, with attention to differences between racial/ethnic groups, is necessary to understand the links between obesity, health behaviors, and home environment, especially for children at young ages.

Implications for Policy, Delivery or Practice: The high prevalence of childhood obesity in populations already participating in a nutrition program reinforces the necessity of obesity prevention as a crucial component of WIC counseling. Obesity prevention programs need to be culturally sensitive, targeted to specific populations, and begun at a very early age.

● **Factors Leading to Passage of State Dental Practice Laws Allowing Alternative Models of Preventive Oral Health Care Delivery to Low-Income Children**

Lea Nolan, M.A., Jennel Harvey, M.H.S.A., Lissette Vaquerano, Sarah Blake, M.A., Brian Kamoie, J.D., Jeffrey Levi, Ph.D.

Presented by: Lea Nolan, M.A., Senior Research Scientist, Center for Health Services Research and Policy, The George Washington University, 2021 K Street, NW Suite 800, Washington, DC 20006; Tel: (202) 530-2341; Fax: (202) 530-2361; E-mail: lea@gwu.edu

Research Objective: Examine the impact of state dental practice laws permitting alternative models of delivering preventive oral health care to low-income children.

Study Design: Study states' process of passing legislation and/or rules and regulations allowing an alternative model; and whether the alternative model created a change in the delivery system for preventive oral health care by: 1) collecting and analyzing existing state dental practice statutes and regulations; and 2) conducting case studies of six states' alternative models of delivering preventive oral health care. Alternative models included: provision of preventive oral health care by dental hygienists under general supervision or unsupervised practice; and use of topical fluoride application by primary care physicians.

Population Studied: Dental hygienists and primary care providers involved in alternative oral health care models in Connecticut, Iowa, New Mexico, North Carolina, South Carolina, and Washington serving low-income children insured by Medicaid.

Principal Findings: Changing the law does not necessitate a change in the oral health care delivery system, nor does it automatically lead to a change in the health outcomes of low-income children. Rather, a combination of essential factors are required to implement an alternative oral health care model, whether or not a new public health-oriented law has been enacted. The alternative oral health care models' success lay not in the law itself, but in certain factors essential to its implementation. The factors include: 1) dentists' support (both organized and individually); 2) reimbursement streams for providers in the alternative model; 3) state Medicaid department support; 4) a referral mechanism for treatment services; 5) the type of alternative model and the providers involved; 6) an incremental approach to changing the oral health care delivery system; 7) a need for outreach and training on the alternative model; and 8) a recognized and accepted need for the alternative model.

Conclusions: Public health-oriented laws and alternative models have had little to no impact on the service delivery system for preventive oral health care services, and on the health care status of low-income children. Although most have been implemented for several years, it may be too soon to tell which alternative model(s) will be most successful. The law and models have not significantly changed the way that dental hygienists work in Connecticut, New

Mexico, and South Carolina; few dental hygienists are working under the alternative models. Alternative models using medical personnel have had mixed success in Iowa, North Carolina, and Washington.

Implications for Policy, Delivery or Practice: Development of alternative oral health care delivery models and lessons learned.

Primary Funding Source: CDC

● **Social Risk Factors for Psychological Distress: A Test of the Multiple Jeopardy Hypothesis**

Amani Nuru-Jeter, M.P.H., Thomas A. LaVeist, Ph.D.

Presented by: Amani Nuru-Jeter, M.P.H., Doctoral Candidate, Health Policy and Management, Johns Hopkins Bloomberg School of Public Health, 1220 East-West Hwy #708, Silver Spring, MD 20910; Tel: (240) 350-8821; E-mail: anjeter@jhsph.edu

Research Objective: Examine the effects of income, race, and gender on psychological distress and the role of confounding variables on these relationships in order to test the multiple jeopardy hypothesis. Test effects in order to: (1) identify and discuss the relevant social risk factors that contribute to disparities in psychological distress (2) prioritize the relevant risk factors by level of importance in predicting psychological well being, and (3) develop conceptual models that link relevant risk factors to psychosocial health outcomes.

Study Design: The data for this study come from the 1994 Commonwealth Fund Minority Health Survey, a telephone survey of a nationally representative sample of non-institutionalized adults age 18 and over (n=3789). Psychological distress was assessed for all combinations of black, white, Hispanic, and Asian male and female respondents of high and low income. Inferential statistics were used to test multivariate models for single, double, and multiple jeopardy using multiple linear regression. Psychological distress was measured using a summary score consisting of the five-item mental health subscale of the SF-36 and a single-item indicator of general well-being (i.e., life-satisfaction) (Cronbach's alpha = .78).

Population Studied: National survey data from the 1994 Minority Health Survey (n=3789). This study examines the sub-sample of 2,910 respondents who responded to both the psychological distress and income questions (29% white, 28% African American, 27% Hispanic, 16% Asian).

Principal Findings: Results of multivariate analyses examining combinations of risk factors for multiple jeopardy support the multiple jeopardy hypothesis. The results show that compared to non-poor white males, poor African American, Hispanic, and Asian females have higher levels of psychological distress (1.95, 1.90, and .835 times higher, respectively) prior to adjustment. Consistent with previous analyses, poor Asian females are no longer significant after adjusting for employment, education, and age. Effects of poor African American and Hispanic females remain significant after adjustment for covariates. The data show that the addition of multiple risk categories statistically significantly increases the risk of psychological distress (p-value<.01), using non-poor white males as a comparison group.

Conclusions: Socially disadvantaged groups (poverty, racial minorities, females) are at increased risk for psychological distress. Examination of social risk factors in isolation may accentuate (or hide) the magnitude of the true independent effects. Multiple social risk factors increase the risk of psychological distress.

Implications for Policy, Delivery or Practice: Access to behavioral health (e.g., mental health) services for disadvantaged populations; standards of care guidelines for assessing psychological distress during routine primary care; health education programs including coping mechanisms.

Primary Funding Source: The Commonwealth Fund

● **Homeless Women's Lack of Appropriate Health Care Visits for Eleven Symptoms**

Helen Oster, M.D., Ronald M. Andersen, Ph.D., Barbara D. Leake, Ph.D., Lillian Gelberg, M.D., M.S.P.H.

Presented by: Helen Oster, M.D., Health Services Research Fellow, Family Medicine and Health Services Research, UCLA, 50-071 Center for Health Sciences, Los Angeles, CA 90095-1683; Tel: (310) 825-6301; Fax: (310) 794-6097; E-mail: hoster@ucla.edu

Research Objective: The homeless have greater morbidity and higher age-adjusted mortality rates than the general population. Despite having greater health care needs, homeless persons may have disproportionate difficulty accessing medical care. Homeless are likely to lack a regular source of care and to have basic subsistence needs competing with their need for health care. Lack of early medical attention for health problems can result in unnecessary complications and more costly medical care. We sought to identify homeless women at greatest risk for medical symptoms and for not using appropriate health care visits in response to their symptoms. This study is unique because: 1 it compares actual vs. recommended health care use for a predetermined set of symptoms, and 2 it incorporates an expert panel to determine recommendations for appropriate use.

Study Design: Homeless women were asked about eleven medical symptoms that were validated in a previous study. For each symptom given a positive response, the respondent was asked whether she saw a physician for that symptom. These data on homeless women's actual use of care were then compared to recommendations gathered from an expert panel. Using the Behavioral Model for Vulnerable Populations, we evaluated predisposing, enabling, and need variables as predictors of: 1) number of medical symptoms reported and 2) appropriateness of use of health care visits in response to symptoms.

Population Studied: The UCLA Homeless Women's Study is a probability survey of 974 homeless women of reproductive age living in the Los Angeles area.

Principal Findings: 706 women (75%) had one or more of the eleven medical symptoms and 56% of these 706 women saw a doctor for any of their symptoms. Homeless women, on average, received a health care visit in response to symptoms half as often as was recommended by the expert panel. Predictors of having three or more of the eleven symptoms were rape (OR=2.739, p=0.004), depression (OR=1.907, p=0.003), and a longer total duration of homelessness (OR=1.222, p= 0.041). Failure to make appropriate health care visits in response to symptoms was predicted by: lack of a regular source of medical care (OR=2.545, p=0.008), a lifetime history of drug dependence (OR=2.166, p=0.023), more basic subsistence needs competing with the need for health care (OR=1.592, p=0.049), a greater sense of mastery (OR=1.466, p=0.046), and more symptoms (OR=1.203, p=0.026).

Conclusions: Homeless women receive too few needed health care visits for their symptoms, which may lead to more costly care late in the course of illness. Provision of permanent housing, improved mental health outreach and treatment, and programs to address the needs of homeless women who have recently been raped are essential steps in addressing the medical problems of homeless women.

Implications for Policy, Delivery or Practice: To promote early and appropriate use of medical visits, efforts should be made to facilitate a regular source of care for all homeless women, drug and mental health treatment should be integrated with medical services, and medical outreach should be implemented at soup kitchens and shelters.

Primary Funding Source: AHRQ, Robert Wood Johnson Foundation

● Disparities in the Rate of Hospitalization for Pneumonia Patients in Rural and Urban Areas

Maria Owings, Ph.D., Margaret J. Hall, Ph.D.

Presented by: Maria Owings, Ph.D., Health Statistician, Division of Health Care Statistics, National Center for Health Statistics, CDC, 6525 Belcrest Road, Room 956, Hyattsville, MD 20782; Tel: (301) 458-4409; Fax: (301) 458-4032; E-mail: mowings@cdc.gov

Research Objective: Examine the characteristics of hospitalized pneumonia patients from urban and rural areas, characteristics of the counties in which they live, and their hospital care, in order to identify reasons for the disparities in the rate of hospitalization for pneumonia. A pneumonia hospitalization is generally considered to be an avoidable hospitalization since timely and appropriate primary care should prevent the need for treatment in the inpatient setting. The rate of pneumonia hospitalization for rural residents was double the rate for urban residents. It was significantly higher for rural than for urban residents in three age groups -- 15-44, 45-64 and 65 years and over. This could indicate disparities in the availability of, access to, and/or quality of outpatient treatment, as well as differences in lifestyle factors which contribute to ill health, e.g. smoking.

Study Design: This study uses data from the National Hospital Discharge Survey, a nationally representative sample of discharges from short-stay and general hospitals in the United States. Merged with this data set are county level data from the Area Resource File (ARF) which provide extensive data about the characteristics of the counties in which the hospitalized patients lived including median income, education, availability of health services (including home health and nursing home care), and racial composition. Information about whether patients lived in urban or rural areas, or were treated in urban or rural hospitals, is also available through linked files.

Population Studied: Patients treated in acute-care hospitals from urban and rural areas with a first-listed diagnosis of pneumonia (ICD codes 480 to 486).

Principal Findings: In 2000 there were over 1.2 million patients hospitalized for pneumonia. Two-thirds were from urban areas and one-third from rural areas. The rural pneumonia patients were on average older (64.6 years) than those from urban areas (59.0 years) but they were not sicker. The rural patients' average length of stay was shorter (5.1 vs. 6.2 days). Similar percentages of patients (close to two-thirds) were discharged home following hospitalization and about 20 percent were transferred either to other short-stay or to long term care institutions. Factors which could be influencing the differential pneumonia hospitalization rates include a lower rate of active physicians in rural areas, fewer constraints imposed by managed care (rare in rural areas), greater insurance coverage of hospital than outpatient care, coverage of prescription drugs only in the hospital settings, and less ability to afford out-of-pocket health expenses.

Conclusions: Hospitalization is used to a much greater extent for the treatment of pneumonia in rural residents. Less access to treatment for respiratory conditions early in the course of the illness may be contributing to the higher rate of inpatient pneumonia cases.

Implications for Policy, Delivery or Practice: Efforts to increase the access of rural patients to physician care, further development of managed care options, and the expansion of Medicare prescription drug coverage could all help to decrease the avoidable hospitalizations for pneumonia in rural areas. Efforts to encourage patients, particularly the elderly, to get influenza and pneumonia immunizations, and to stop smoking, could also help eliminate the disparities between urban and rural patients.

Primary Funding Source: Centers for Disease Control and Prevention

● How Community Health Centers Manage Their Uninsured Caseloads

Heidi Park, Ph.D., M.P.H., Michael Gusmano, Ph.D., Gerry Fairbrother, Ph.D.

Presented by: Heidi Park, Ph.D., M.P.H., Research Associate, Health and Science Policy, The New York Academy of Medicine, 1216 Fifth Avenue, New York, NY 10029; Tel: (212) 419-3525; Fax: (212) 822-7369; E-mail: hpark@nyam.org

Research Objective: To understand better what care is likely to be deferred or delayed for uninsured patients. To examine strategies providers use to assist patients who are uninsured. To inform the general public about the ability to provide necessary care to uninsured patients from the providers' perspectives.

Study Design: A qualitative study of Executive Directors of community health centers (CHCs) located in 10 geographically-representative states was conducted using semi-structured face-to-face and telephone interviews. This data was supplemented by written questionnaires administered to Medical Directors at each site. CHCs were selected based upon urban-rural location and representativeness of CHCs nationwide.

Population Studied: Executive Directors and Medical Directors of 20 CHCs located in 10 states. Data was collected on the extent to which they are able to provide care for their uninsured patients.

Principal Findings: Our data indicates that while community health centers (CHCs) provide many services, such as primary care, immunizations and basic lab services, most of the health centers surveyed do not offer special procedures or specialty care. In fact, 76% of physicians included in our study indicated that their patients very frequently or frequently require specialty procedures and 82% required specialty referrals that were not provided by the CHC, and almost half fail to follow up with care. While some services such as behavioral health, prescription drugs and medical supplies were more likely to be provided by the CHC by some method, 47% of physicians reported that patients failed to get recommended care. The majority of physicians reported cost was the main obstacle in obtaining specialty procedures (76%), specialty referrals (70%), behavioral health counseling (77%), and medications (82%). Additional reasons for failing to obtain necessary care included transportation and cultural barriers.

Conclusions: Contrary to the public's misconception that "uninsured Americans can still get the care they need," our findings indicate that while some services can be provided for the uninsured, there are many services required that cannot be obtained. The primary obstacle to providing care to this vulnerable population is financial in nature, thus limiting the ability of the uninsured to access the additional care they need. As CHCs must face complex issues from a growing uninsured and culturally diverse population, further analysis of a larger sample of CHCs can give us a more comprehensive view of their specific challenges and how they can be addressed.

Implications for Policy, Delivery or Practice: Improving access and quality of care for the uninsured.

Primary Funding Source: Foundations

● Infant Survivability by Place

Grace Poertner, R.N., M.S.W., Ph.D.

Presented by: Grace Poertner, R.N., M.S.W., Ph.D., President, Wellness Research, a not-for-profit corporation, 119 South Main Street, Suite 203, St. Charles, MO 63301-2863; Tel: (636) 946-4555; Fax: (636) 946-4555; E-mail: gpoertne@mail.win.org

Research Objective: Does infant survival relate to place of maternal residence at birth, after controlling for family demographics? This presentation develops a typology that measures the relationship of US infant survival to poverty health policy differences among the states.

Study Design: Logistic regression analyzes individual odds of mortality among infants born above-very-low-birthweight (Above-VLBW: 1500 grams or more). Infant mortality is defined as death by

one year of age. Independent variables are: parental (maternal age/education and a dichotomy for marriage); healthcare (a dichotomy for inadequate prenatal care); place of maternal residence at birth -- by county (3 dichotomies: urban, suburban, rural) and by state (individual records are assigned appropriate state Medicaid averages for expenditure data and percent of the poor receiving benefits).

Population Studied: A one-year US birth cohort (about 4 million newborns) is the population studied. From these NCHS linked birth/infant-death data, an 8% random sample is drawn (N = 275,895). These represent infants from the 50 states & DC. Of these, the sample studied here includes only Caucasian infants born Above-VLBW (N = 220,325). This group of babies is chosen because (1) there are adequate numbers within each of the 50 states & DC and (2) to control for the effects of race. Infant race is defined as that reported on the birth certificate.

Principal Findings: Descriptively, US infant mortality varies by state from a low of 0.8% to a high of 2.0%. Results from this logistic regression equation show that, among Caucasian Above-VLBW infants, increased mortality risk is significantly related to: inadequate prenatal care (OR: 1.6); single-parenthood (OR: 1.25); low maternal schooling; and, by place, to maternal residence in a rural county or in a state where Medicaid covers a smaller percentage of the poverty population.

Conclusions: Birth at VLBW is known to greatly increase the risk of infant mortality; here, however, that risk factor is removed from the equation. Also removed from the equation is the infant race factor. Risk of Caucasian Above-VLBW infant mortality is found to increase with single-parenthood and low maternal education, with inadequate prenatal care, and with maternal residence in a rural county or in a state that provides low levels of Medicaid coverage for its poor.

Implications for Policy, Delivery or Practice: Research such as this, with its individual unit of analysis, needs to be replicated among other infant race groups and among other birth cohorts, say, with one study per decade. The results found here support the ideas of improving public coverage of maternal/fetal prenatal care and other maternal/infant preventive health care and of focusing improved health care coverage on rural areas or for single mothers wherever they live.

Primary Funding Source: AHRQ, National Association of Social Workers

● Parallel Issues Related to Cancer Control Measurements in the California Health Interview Survey and National Health Interview Survey

Ninez Ponce, Ph.D., Nancy Breen, Ph.D., Susan Babey, Ph.D., Delight Satter, M.P.H., Charles DiSogra, Ph.D., E. Richard Brown, Ph.D.

Presented by: Ninez Ponce, Ph.D., Senior Researcher and Assistant Professor, UCLA School of Public Health, UCLA Center for Health Policy Research, 10911 Weyburn Avenue, Suite 300, Los Angeles, CA 90024; Tel: 310-794-0992; Fax: 310-794-2686; E-mail: nponce@ucla.edu

Research Objective: Achieve culturally relevant measurements of cancer control behaviors in diverse population groups applicable to both the California Health Interview Survey and the National Health Interview Survey.

Study Design: CHIS 2001 interviewed more than 55,000 households drawn from every county in the state, grouped into 41 sampling strata. CHIS 2001 was a statewide random-digit-dial survey that incorporated multiple over-samples of such groups as Asian Americans, American Indian and Alaska Natives, and rural counties. CHIS is designed to generate statewide and county-level population estimates for California's major race/ethnic groups and a number of specific Asian groups. A multistage cultural and linguistic adaptation process was employed in the questionnaire development with

monitoring and interviewer debriefing used to assess the quality of the measurements during data collection.

Population Studied: California population with multiple geographic and ethnic group sub-samples.

Principal Findings: After a cultural review by panels of culture-specific bilingual experts, questions were designed to be closely parallel with cancer-related questions used in the National Health Interview Survey. Selected basic prevalence estimates based on the measurements will be presented for cancer screening behaviors, protective behavior and some cancer history information among several different Asian groups (Chinese, Filipino, Korean, Vietnamese, South Asian, Cambodian), American Indian and Alaska Natives, and a diverse Latino population - - all of which constitute relatively large sub-samples within the overall CHIS sample. A number of cognitive and linguistic issues related to the questions asked and relevant to the interpretation of findings among these culturally diverse groups will be presented.

Conclusions: The CHIS survey has completed data collection for cancer control and has achieved its sample and measurement objectives in the multiple diverse population groups. Both the development process and results will enhance national measurements in surveys such as the NHIS.

Implications for Policy, Delivery or Practice:

Implications for Policy, Delivery, or Practice: CHIS data will be used to develop descriptive estimates related to cancer control that will be used for policy analysis, policy development, and advocacy. CHIS data will be sufficient for direct estimates statewide and for medium and large counties. Small-area estimation methods will be developed using CHIS data to produce estimates for local jurisdictions and for small population groups including multiple ethnic groups.

Primary Funding Source: Government, Foundations

● Factors Affecting Vulnerable Medicare Managed Care Enrollees Satisfaction with their Health Plan

Cynthia Robins, Ph.D., Mary Anne Myers, Ph.D., Amy Heller, M.P.H.

Presented by: Cynthia Robins, Ph.D., Senior Study Director, OMRG, Westat, 1650 Research Blvd., RA1167, Rockville, MD 20850; Tel: (301) 738-3524; Fax: (301) 294-3928; E-mail: robinsc@westat.com

Research Objective: To learn why vulnerable sub-populations, within Medicare Managed Care (MMC), rate their experiences with their managed health care plans differently than non-vulnerable populations. Analysis of Consumer Assessment of Health Plan Survey (CAHPS) scores for MMC enrollees indicate that enrollees who are disabled, and enrollees who are aged and in self-reported fair/poor health and/or have limited independence have lower ratings of health plan performance than other MMC enrollees. Individuals with MMC who identify as being an ethnic minority are more satisfied with their health plans overall when compared to other MMC enrollees, yet are less satisfied specifically with the processes of care and their ability to access needed services.

Study Design: Stratified purposeful sample of approximately 160 MMC enrollees. Focus groups were conducted at four Medicare M+C sites around the country with cohorts of beneficiaries traditionally viewed as 'vulnerable.'

Population Studied: People with MMC who were Hispanic or African American seniors (over age 65) who self-described their health status as "fair" or "poor," and disabled under 65 MMC enrollees. Research team members also conducted focus groups with separate "controls" of Caucasian seniors who described their health status as "fair" or "poor," as well as with Hispanic, African American, and/or Caucasian seniors who self-described their health status as "good" or "excellent."

Principal Findings: Researcher participation in the focus groups and careful review of the transcripts indicated that the categories initially

designated by the research team as indicating “vulnerability” within the Medicare managed care system generally were not consistent with how beneficiaries recognized their own vulnerability. While study team members had included the individual’s race, ethnicity, and the enrollee’s disability status as independent variables, MMC beneficiaries viewed their vulnerability within the health care system along three different, inter-related dimensions. These included the enrollee’s health status; his/her sense of financial well-being; and his/her ability to negotiate the barriers inherent in a managed care system.

Importantly, these categories were not independent of one another, but formed a nested hierarchy of needs. Thus, an individual whose health was failing but who had adequate financial resources did not express as much dissatisfaction with his/her health plan as another individual whose health status was similar, but who did not have sufficient financial supports to pick up where the managed care plan left off. Similarly, enrollees who were able to work around the inherent impediments to service use within managed care were more satisfied with their plans and health care than those individuals who had no such negotiating skills or supports.

Conclusions: These findings suggest that the concept of ‘vulnerability within a health system is not necessarily related to immutable demographic factors, such as age, race, or ethnicity, but may include other dimensions of the enrollee’s life that are directly affected by the exigencies of the health insurance system.

Implications for Policy, Delivery or Practice: Enrollee satisfaction with MMC plans appears to be related to their perceptions of well-being along multiple dimensions. Efforts to improve MMC plan performance should take into account these self-reported areas of potential vulnerability.

Primary Funding Source: CMS

● **Health Service Use by the Seriously Mentally Disabled**

Pamela Salsberry, R.N., Ph.D., Carol Kennedy, R.N., Ph.D.

Presented by: Pamela Salsberry, R.N., Ph.D., Associate Professor, College of Nursing, Ohio State University, 1585 Neil Ave, Columbus, OH 43210; Tel: (614) 292-4907; Fax: (614) 292-4948; E-mail: Salsberry.1@osu.edu

Research Objective: To describe health service use and cost for physical and mental health care for persons with a serious mental disability (SMD).

Study Design: Data documenting encounters with the health care delivery system were used to profile service use and costs for patients with a SMD in one large urban county in Ohio. Data from multiple systems were combined to develop the data set. Data from the substance abuse and mental health agencies were combined with data from the Medicaid program to account for the full range of services delivered to these clients. Using a longitudinal design, Medicaid enrolled clients with a documented SMD were identified in 1996 and followed for two additional years (1997, 1998) to determine their patterns of service use over time. Type and location of service were the primary study variables. Type of service included pharmacy, dental, vision, and health screening measures. Location of services included inpatient, outpatient, and emergency department. Costs of services were determined by year.

Population Studied: Of the 3,281 patients that met the SMD criteria in 1996, 1,725 were enrolled in Medicaid all three years of the study. The study group was 63% female, 64% white, and 57% under the age of 45.

Principal Findings: The utilization of health services was significant and skewed toward acute care services. Injury-related diagnoses occurred in at least one-third of these patients—an epidemic proportion of injuries. 85% of the group had at least one ED visit in the three years, and one-half of the group had a visit in more than one year. Office-based care was mixed. While 89% of the group had at least one office visit in the three year period, only 57% were seen yearly. There was a high rate of admission to general hospitals, with 56% of

the group having an admission during the three-year study period. While there was access to the systems, there was an alarming lack of preventive and health maintenance care being provided to this population. Over half of the group had no dental visit during the three year period, 59% had no vision visit, and only 11% of the women over 40 had a mammogram during the three year period. Costs for care were high—approximately \$12,000 per year. Drug costs represented a significant portion of the cost and increased by 40% per patient across the 3 years. Patients who fell into the dual diagnosis category of SMD and substance abuse problem were the most expensive at \$20,000 a year.

Conclusions: The lack of provision of health promoting and maintenance services to this SMD population was alarming. Systems must be designed to promote provider accountability for providing this vulnerable group with the necessary preventive and health maintenance care.

Implications for Policy, Delivery or Practice: Providers and systems of providers must develop measures for quality evaluation and institute financial incentives for the care of all the health needs of these patients.

Primary Funding Source: The Ohio Department of Mental Health, Office of Evaluation and Research

● **Episode of Care and Interactive Effects of Racial Disparity with Treatment Environments on Mortality and Outcomes**

Jay J. Shen, Ph.D., Jonathan B. Perlin, M.D., Ph.D.

Presented by: Jay J. Shen, Ph.D., Assistant Professor of Health Economics and Policy, Health Administration and Human Services, Governors State University, 1 University Parkway, University Park, IL 60466; Tel: (708) 235-2131; Fax: (708) 534-8041; E-mail: j-shen@govst.edu

Research Objective: Systemically examine racial disparities in an episode of hospital care that consists of five dimensions: severity of illness, care-seeking characteristics, process, efficiency and outcomes. Test the interactive effects between race and other factors on outcomes.

Study Design: Severity-of-illness was measured by a CHF-specific comorbidity index. Care-seeking patterns were measured by admission through a hospital transfer, through emergency room (ER), in a teaching hospital, and in an urban hospital. Process-of-care was measured by use of invasive cardiac services and use of critical care services. Efficiency-of-care was measured by length-of-stay and the total charges. Outcome-of-care was measured by in-hospital mortality and discharge as a transfer to another acute hospital. Risk adjustment considered such factors as age, sex, and CHF-specific comorbidities. Race, the primary exploratory variable, was categorized as non-Hispanic White, African American, Hispanic American. Control variables were health insurance status, median-income by zip code, geographic area, and year of discharge.

Population Studied: 373,158 congestive heart failure (CHF) patients discharged from 780 hospitals in 19 states in 1995-97 from the National Inpatient Sample, the Hospital Cost and Utilization Project.

Principal Findings: Compared to non-Hispanic White patients, both African-American and Hispanic-American patients had a higher comorbidity index score; were less likely to be transferred from another hospital (ORs, 0.63, 0.62); were more likely to seek care through emergency room (ER) (Odds Ratios [ORs], 1.84, 1.30), at teaching hospitals (ORs, 2.99, 2.00), or urban hospitals (ORs, 6.70, 3.72); were less likely to receive invasive services (ORs, 0.66, 0.70); stayed hospital longer and incurred higher total charges; and were less likely to die in hospital (OR, 0.68, 0.87). Comorbidities, ER, hospital transfer, and intensive services were interacted with African Americans to give them a survival advantage over non-Hispanic White patients, while teaching hospitals was interacted with Hispanic-Americans to give them a survival advantage.

Conclusions: Although systematic differences exist between non-Hispanic Whites and minorities in the five dimensions of a hospital

care episode for CHF, racial disparities in health care is a highly complex issue. Disparities relate not only to process and outcome of care, but also to care-seeking patterns and access to variable components of the health care delivery system. When interaction between race and other factors are considered, the racial effect may be underscored by access to care environments where more experienced physicians and clinically effective services are promptly available. The hospital transfer process creates a survival disadvantage for non-Hispanic White patients as ER admission and teaching hospitals respectively give African American patients and Hispanic-American patients a survival advantage.

Implications for Policy, Delivery or Practice: ER, teaching hospitals, or urban hospitals provide convenient access and a safety-net for historically socioeconomically disadvantaged minority populations. The sophistication of skill and technology offered in these environments may offset the greater risks of vulnerable populations. Counter-intuitively, public attention should also be given to those non-Hispanic Whites (especially living in rural areas) who are traditionally believed to have better care and outcome, but who may, in fact, be disadvantaged in the case of CHF. Enhancing access to more experienced physicians and hospitals to reduce the need for hospital transfer should improve their outcome.

Primary Funding Source: Primary Funding Source, The GSU Faculty Research Grant

● **The Influence of Race, Socioeconomic Status, And Psychiatric Morbidity on Healthcare Utilization and Expenditures: Differences between African Americans and Whites over the Life Course**

Darren Sherkat, Ph.D., Baqar Husaini, Ph.D., Van Cain, M.A., Clinton Craun, M.A., Robert Levine, M.D.

Presented by: Darren Sherkat, Ph.D., Associate Professor, Sociology, Southern Illinois University, Department of Sociology, SIU, Carbondale, IL 62901; Tel: (618) 549-2851; E-mail: Sherkat@siu.edu

Research Objective: To assess the impact of race, gender, and psychiatric morbidity on health service utilization and costs, and how these effects vary over the life course.

Study Design: Secondary analysis of the 1996 MEPS data, confined to adult respondents. Negative binomial regression is used to examine service utilization, and OLS regression is employed for health costs. Separate analyses are presented for respondents 18-64 and those over age 65. Coefficients from the age group analyses are compared to uncover life course differences in the effects of race, gender and psychiatric disorder on utilization and costs.

Population Studied: The study is confined to whites and African Americans in the 1996 MEPS, and further limited to patterns of utilization and costs for adult respondents.

Principal Findings: Multivariate models of service utilization show that African Americans and the disadvantaged have particular patterns of service utilization that lead to lower costs early in the life course, but higher costs when they become elderly. Psychiatric impairment has a strong impact on patterns of service utilization, and its importance as a predictor of costs increases with age.

Conclusions: Our findings suggest that African Americans' underutilization of health services early in the life course increase future costs for insurance companies and public assistance programs, and that alleviation of mental health problems could substantially decrease health expenditures.

Implications for Policy, Delivery or Practice: Our results suggest that race disparities in health outcomes are a function of patterns of service utilization that vary over the life course. Eliminating these disparities will require significant investments in health education to increase regular physician visits and preventive care early in the life course--when most African Americans are covered by private insurance providers. Failure to do so increasingly shifts the burden of

care to the Federal government, when serious illness arises later in life and Medicare is responsible for coverage.

Primary Funding Source: AHRQ

● **Inpatient Stays for Asian Patients in New York City Diagnosed with Psychiatric Disorders between 1995 and 1999.**
Jinah Shin, D.N.Sc., NPP

Presented by: Jinah Shin, D.N.Sc., NPP, Post-doctoral Fellow, School of Nursing, Columbia University, 617 West, 168th Street, NYC, NY 10032; Tel: (212) 305-0794; Fax: (212) 305-7022; E-mail: js124@columbia.edu

Research Objective: To assess whether race, specifically, Asian contributes to longer inpatient stays for patients diagnosed with psychiatric disorders.

Study Design: Using general linear models, the researcher examined whether Asians experience longer length of stay, controlling for the variables of demographic differences, admission/discharge types, psychiatric diagnoses, and insurance types. Logistic regression analyses were conducted for predicting the probability of hospitalizations with psychiatric diagnoses among Asians in New York City.

Population Studied: A secondary data analysis of inpatient discharges between 1995 and 1999 in New York City using the New York State Department of Health Statewide Planning and Research Cooperative System (SPARCS) data sets.

Principal Findings: The weighted ALOS among Asian patients (14.3 days) is longer than that of non-Asians (10.4 days) over the five years. Being Asian added 2.15 days in 1995, 2.59 days in 1996, 1.82 days in 1997, 1.03 days in 1998, and 1.67 days to the LOS compared to non-Asian LOS, controlling for the variables of age, sex, religion, admission source and type, discharge disposition, insurance, and diagnoses. Average age among Asians discharged with psychiatric disorders was between 44.7 and 48.3 years old. More Asian males were hospitalized than Asian females. Asians had a higher percentage of admission through emergency room and showed a lower percentage of admission through physician referrals and clinics than did non-Asians. Schizophrenia and affective psychosis were the most frequent diagnoses among Asians while alcohol and drug dependence were the most frequent diagnoses among non-Asians. In a logistic regression model, Asians were as much as 71 percent less likely to be hospitalized with psychiatric diagnoses than were non-Asians. People between 18 and 45 years old, male, and with Medicaid were about two times more likely to be hospitalized with psychiatric diagnoses over the five years.

Conclusions: Asians were less likely to be hospitalized than were non-Asian patients but stayed significantly longer than did non-Asians when they were hospitalized with psychiatric diagnoses. Most Asian patients were admitted to hospitals through emergency room under emergency situation. They also showed higher percentage of severe diagnoses such as schizophrenia and affective psychosis than did non-Asians when they entered the inpatient service system.

Implications for Policy, Delivery or Practice: The results of this large-scale study can be a useful marker in planning and policy evaluation for timely appropriate care to Asians with mental illness. A better understanding of the barriers to utilizing mental health services among Asians with mental illness may contribute to reducing ALOS and its related costs during hospitalization.

Primary Funding Source: AHRQ

● **Racial and Gender Disparities in the Use of Antiretroviral Medication for AIDS/HIV among Medicaid beneficiaries in South Carolina**

Kit N. Simpson, DrPH, Holly Yu, M.S., Rajes Sarang, M.D., M.P.H., Tonya Moore, B.S.

Presented by: Kit N. Simpson, DrPH, Professor, Pharmacy, Medical University of South Carolina, 280 Calhoun Street, Charleston, SC 29425; Tel: (843) 876-1243; Fax: (843) 792-1712; E-mail: simpsonk@musc.edu

Research Objective: A combination of at least three antiretroviral (ARV) drugs is considered necessary for highly active antiretroviral therapy (HAART). HAART therapy is strongly suggested for most individuals with advanced HIV-disease, and uniformly recommended by clinical guidelines for patients with AIDS. Economic barriers to HAART exist, but they should not be a factor for Medicaid patients with AIDS, because ARV drugs are covered, and patients with AIDS are exempt from prescription limits. The objective of this study was to describe HAART use for the S.C. Medicaid population, and identify any patterns of racial and/or gender disparities in the use of this life-saving therapy.

Study Design: Retrospective analysis of archival data.

Population Studied: Billing data from 1996 through 2001 (1st quarter) for all Medicaid beneficiaries were extracted from the time of the first appearance of a diagnostic code of AIDS. The size of this population increased over time from 2,554 to 2,961 beneficiaries. In 1996, 49% of persons with AIDS in our data set were female, and 72% were AA. The distribution in our 2000 data set is 48% female and 71% AA.

Principal Findings: Variables were constructed to indicate when a quarterly pattern of prescription bills for ARV was consistent with HAART. Beneficiaries with billing patterns consistent with HAART as recommended by clinical guidelines increased from 4.8% in 1996 to 36.1% in first quarter of 2001. Of the 2478 Medicaid beneficiaries included in the 2000 data set, 42% received no antiretroviral (ARV) drugs, 15% received 2 ARV drugs, and 4% received only 1 ARV drug. Thus, it appears that more than half of SC Medicaid beneficiaries with AIDS are not treated in accordance with internationally accepted clinical guidelines. In this group, AA women are much less likely to receive HAART than white males. Further, patients seem to have different geographic patterns of care seeking behavior. AA patients are more likely to get care close to where they live. The average AA patient live about 5 miles closer to their providers office than the average white beneficiary. Differences in serious comorbid conditions, such as renal impairment, diabetes, heart disease, and hypertension also vary by race and gender.

Conclusions: There are disparities in the quality of ARV drug therapy received by AA and female Medicaid beneficiaries in SC. AA AIDS patients receive care closer to home and have more serious comorbid conditions unrelated to AIDS. Further analysis is needed to identify key providers and high priority geographic areas to target for interventions under development.

Implications for Policy, Delivery or Practice: AIDS drug therapy and patterns of minority disparities in access and quality of care.

Primary Funding Source: AHRQ, AHRQ, EXCEED Project

● **Access to Health Promotion and Disease Prevention at Community Health Centers (CHCs): The Impact of BBA of 1997**
Tony Sinay, Ph.D., Simon Geletta, Ph.D.

Presented by: Tony Sinay, Ph.D., Associate Professor and Associate Director, Division of Health Management, Des Moines University, 3200 Grand Avenue, Des Moines, IA 50312; Tel: (515) 271-1610; Fax: (515) 271-1614; E-mail: tony.sinay@dmu.edu

Research Objective: Recent revenue reductions from managed Medicaid (due to the BBA of 1997) and declining federal grants threaten the viability of health centers and the availability of health services. This study investigates (1) the referral patterns of HPDP

services, and develops (2) a conceptual model to explain the relationship between the utilization of selected Health Promotion and Disease Prevention (HPDP) services and a group of explanatory factors that affect this relationship.

Study Design: The first part of the study provides a trend analysis of all HPDP services offered (or discontinued) at centers from 1996 to 1999 to track CHCs referral patterns, using three variables available in the data: (1) providing a particular service onsite (Yes or No); (2) referring the patient to a local provider with payment and (3) referring the patient with no payment. Following the descriptive analysis in Part I, which provides input into Part II, a conceptual model is developed to estimate five OLS regressions; two for health promotion and three for health protection/disease prevention programs. The dependent variables are the number of encounters of (1) health education, (2) contraceptive management, (3) HIV test, (4) Mammogram and Pap Smear, and (5) immunization and health supervision of infant and child. Two years of data are pooled (1996 and 1999) to test the slope changes on regression coefficients from pre-to post-BBA, using dummy variables (Chow test). Institutional and resource-dependence theories along with market place and demographic characteristics provide theoretical foundation for the model's independent variables.

Population Studied: Data for community health centers come from the Bureau of Primary Health Care's "Uniform Data Systems, 1996 and 1999" (UDS), which included 670 community health centers in 1996. Another data source is the Area Resource File, which provides information for the managed care penetration, the number of physicians and short-term hospitals at the county level. The last data source is the Community Health Status Report Database, which contains variables related to market characteristics-age, race and poverty-and the measures of health by county.

Principal Findings: Our preliminary findings suggest that the BBA of 1997 significantly affected community health centers nationwide, encouraging these centers to develop close relationships with other providers in or around the same geographic markets. Regression estimates, however, are not ready at this time for reporting. This part of the study is currently underway.

Conclusions: Significant revenue reductions will necessitate trade-offs among the number of persons to be served, the range of services to be offered, and the amount of care to be provided to any registrant seeking care. If the CHC must limit the types of care provided, it does not fulfill its promise of offering comprehensive care in a single setting. If it tries to limit use of the center by any single individual, it is failing to provide continuity of care together with the quality of care which makes the CHC unique serving the health needs of the poor. Providing a continuity of care and a comprehensive range of services fosters utilization of the center. More registrants will use centers and users will receive a greater number of services, if the centers provide full basic ambulatory care including HPDP services. This study draws conclusions for the above issues.

Implications for Policy, Delivery or Practice: Understanding the links among federal, state and local programs, and the impact of managed care revenues on CHCs is a timely issue on the nation's health policy agenda since CHCs are safety net providers to uninsured and Medicaid patients. President George W. Bush supports a legislation that makes \$3.6 billion in federal money over a five-year period available to create 1,200 new centers. However, changes in government programs lack consistency in coordination to overhaul the system of care for the poor and uninsured. For instance, the spread of Medicaid managed care and the Balanced Budget Act of 1997 provisions are worsening the financial straits of CHCs while the administration is planning to increase funding to CHCs to improve access to care for poor and needy. Therefore, this study has important policy implications by understanding the determinants of HPDP services at community health centers.

Primary Funding Source: In review by the Agency for Healthcare Research and Quality

● **Disparities in Care: Assessing the Impact of Private Pay**

Assisted Living on Care for the Elderly in New York State

David Smith, Ph.D., Cynthia Rudder, Ph.D., Geoffrey Lieberman, M.S.

Presented by: David Smith, Ph.D., Professor, Risk, Insurance and Healthcare Management, Temple University, Ritter Annex (004-00), Philadelphia, PA 19122; Tel: (215) 204-8082; Fax: (215) 204-3851; E-mail: dbsmith@temple.edu

Research Objective: Assisted living facilities in New York State that limit themselves to private pay residents have been able to develop without being licensed by the state and expanded rapidly in the late 1990's. The objective of this study was to assess the comparability of the care provided by such unlicensed private pay settings as opposed to predominantly public pay ones and assess the potential impact on services to the elderly.

Study Design: The study included a telephone survey of administrators of facilities in New York. Ten of the surveyed facilities were selected for in depth field studies. The field studies included interviews with key staff, residents, and relatives of residents and reviews of its promotional and resident assessment materials.

Population Studied: Surveys of 470 assisted living facilities in New York State (84% response rate) and field studies of five exclusively private and five predominantly public facilities, matched on the basis of size, geographic location and ownership.

Principal Findings: Unlicensed facilities catered to a less disabled (.98 average ADLs versus 2.0) and had a higher residents to staff ratios (9 versus 3.5). They provided private apartment like living and other amenities to residents that were not financially feasible in most cases for those catering to predominantly public pay clients. The unlicensed facilities indicated a greater willingness to accommodate to the growing dependency needs of residents but little tolerance for those residents who exhausted their ability to pay privately. The majority of residents in the unlicensed private pay facilities had estimated incomes of less than \$25,000 per year and, as a result, were either spending down their personal assets or relying on support from adult children or other family members. The admission process was successful in limiting the number of residents that needed to be discharged for financial reasons and those so discharged were typically admitted to nursing homes as Medicaid patients.

Conclusions: The unlicensed assisted living facilities were successful in marketing their care as a way of avoiding the stigma of nursing homes. In the process, they tended to reduce the private pay market share of nursing homes.

Implications for Policy, Delivery or Practice: New York State has been more successful than most states in assuring a single standard of care for nursing home residents and preventing the development of separate nursing homes for Medicaid and private pay residents. While offering a more attractive and more home like alternative, the expansion of private assisted living has the potential for recreating the two class system of care and returning nursing homes to their 19th century almshouse roots. Only careful redesign of the financing and regulation of long term care will prevent this eventuality.

Primary Funding Source: The Fan Fox and Leslie Samuels Foundation

● **Determinants of Care-Seeking Behavior for Primary Care**

Denise Soffel, M.P.A., Ph.D., Leslie E. Wells, B.S.

Presented by: Denise Soffel, M.P.A., Ph.D., Senior Policy Analyst, Health, Community Service Society, 105 East 22nd Street, NY, NY 10024; Tel: (212) 614-5308; Fax: (212) 614-9441; E-mail: dsoffel@cssny.org

Research Objective: To identify how patient characteristics influence whether people have a health care home and where they seek primary care; to identify attributes of primary care settings that influence choices and preferences in where people seek primary care.

Study Design: Survey teams canvassed 18 buildings in a low-income New York City neighborhood. All residents were asked to participate in a survey about primary care choices and preferences, and offered a \$25 stipend. The 25-minute survey asked whether the individual had a place that they usually go for medical and health care needs; what type of place it was; how long they had been going there. In addition respondents were asked to rate the relative importance of a number of attributes of primary care sites, including waiting times; communication; accessibility; ambience; and the availability of support services such as radiology, pharmacy, counseling and child care.

Population Studied: Residents of three low-income housing developments in the Bedford-Stuyvesant neighborhood of Brooklyn, New York. Of 490 apartments, 308 households completed surveys for a response rate of 63 percent.

Principal Findings: 304 of 308 residents could identify a place they go for primary care. Of those, 30 percent went to hospital out-patient departments, 26 percent went to hospital-sponsored health centers, 28 percent went to neighborhood health centers and 13 percent saw private physicians. Older people, people in poor health, and people without health insurance were more likely to seek care at a hospital out-patient department. Those enrolled in managed care and those with private insurance were more likely to seek care at a neighborhood health center. Attributes that respondents liked about primary care sites included quality - 30 percent, convenience - 17 percent, good service - 10 percent and short waits - 9 percent. Respondents were satisfied with their primary care sites. When asked what they did not like about where they go for care, 43 percent reported that there was nothing they did not like. Long waits was the next most frequently mentioned negative attribute - 23 percent. Respondents were surprisingly homogenous in terms of preferences.

Conclusions: The vast majority of residents of this low-income community can identify a health care home, regardless of their insurance status. Patient characteristics influence where they seek primary care. Preferences related to the attributes and organization of primary care are remarkably similar regardless of patient characteristics.

Implications for Policy, Delivery or Practice: The high degree of connection with the health care system was surprising given the socio-economic profile of this inner-city neighborhood. This may be due to the stability of the population in this subsidized housing development (the average respondent had lived in New York 34 years). Not surprisingly, where people seek primary care is determined in part by their health status and age. The need to adjust payments to different types of providers in a way that reflects the difference in underlying health status, and therefore in likely utilization, is essential as managed care penetration increases. Finally, although residents relied on a variety of sites for their health care, the things that mattered to them were strikingly consistent. Factors that relate to the "art" of care are consistently rated as very important; availability of support services was less important.

Primary Funding Source: United Hospital Fund; Altman Foundation

● **Are Variations in Breast Conservation Surgery (BCS)**

Related to Race?

Andrew Stewart, M.A., Susan DesHarnais, Ph.D., Greer Gay, Ph.D., Rachel Jean-Baptiste, Ph.D.

Presented by: Andrew Stewart, M.A., Manager, National Cancer Data Base, Cancer, American College of Surgeons, 633 N. St. Clair, Chicago, IL 60611; Tel: (312) 202-5285; Fax: (312) 202-5011; E-mail: astewart@facs.org

Research Objective: Preliminary analysis indicated that type of surgical treatment for women with Stage 0 and Stage I breast cancer varies greatly by locality. Place of residence and treatment appear to be important determinants of whether women get BCS or mastectomies. We compared 1) five-year survival rates with Stage 0

and Stage I breast cancer, by race and type of surgery; 2) the use of BCS in 1998, by race, insurance, region, rural/urban areas, and patient age.

Study Design: A cohort of 1993-1998 stage 0 and I cases was followed to track survival by ethnicity and surgical management for rural/urban cases. A cross-sectional design was used to examine racial differences in treatment in 1998. All cases were from the National Cancer Data Base, which contains about 75% of all newly diagnosed cancer cases in the U.S.

Population Studied: The 1993-1998 cohort population consisted of 51,490 women with stage 0 and I breast cancer (47,941 white; 3,549 African-American). The 1998 population had 68,092 women (62,635 white; 5,457 African-Americans) who received surgical treatment in 1,669 hospitals.

Principal Findings: Five year survival rates (1993-1998) were similar following initial surgical management, regardless of race (African-American/white) or surgical management (BCS/mastectomy). Differences in surgical management did not lead to differences in survival rates. Overall, ethnicity did not have a great impact on type of surgical management in the U.S.. However, when data were analyzed by region and urban-rural location, interesting patterns emerged. In New England 71.5% of African-Americans had BCS, whereas 78.9% of whites got BCS; however, in the mid-South and South-Central regions the rates of BCS are much lower (52-57%), regardless of race. Women aged 50-69 are most likely to receive BCS, whereas younger and older women are less likely, regardless of race. These findings are consistent in most regions. Insurance was not a strong predictor of BCS, for either race.

Conclusions: BCS rates are not systematically related to race. However, use of BCS varies greatly by region and urban/rural designation.

Implications for Policy, Delivery or Practice: Use of BCS for women with Stage 0 or I breast cancer is not a racial disparities issue. Outcomes of care, as measured by survival rates, do not differ by type surgery performed. Surgical practices may instead be a factor of distance to facility, since rural cases are more likely to receive more radical surgery. It is unclear whether this pattern represents the preferences of rural women, who may not be able to follow recommended treatment protocols for BCS (several weeks of radiation therapy), or whether these women would prefer BCS.

Primary Funding Source: American College of Surgeons and American Cancer Society

● Charges of HIV Discrimination in the Workplace: the Americans with Disabilities Act in Action

David Studdert, LL.B., Sc.D., M.P.H.

Presented by: David Studdert, LL.B., Sc.D., M.P.H., Assistant Professor, Health Policy and Management, Harvard School of Public Health, 677 Huntington Avenue, Boston, MA 02115; Tel: (617) 432-5209; Fax: (617) 432-4494; E-mail: studdert@hsph.harvard.edu

Research Objective: To describe charges filed under the Americans With Disabilities Act (ADA) alleging employment-related HIV discrimination and to investigate how workers with HIV/AIDS make use of these legal protections.

Study Design: Using a national database of all HIV discrimination charges filed since the ADA's inception, we described respondent employers, issues in dispute, and outcomes of charges. Next we used multivariate regression analyses to compare the sociodemographic characteristics of charge filers with those of a nationally-representative baseline sample of workers with HIV.

Population Studied: All workers who have filed charges alleging HIV discrimination with the Equal Employment Opportunity Commission since 1992, and a national probability sample of individuals with HIV in care.

Principal Findings: Of the 3520 HIV discrimination charges filed through 1999, 18.0% had merit and 14.1% received monetary compensation. Workers who were female (Odds Ratio [OR]=0.79,

p<0.01), aged <25 years (OR=0.36, p<0.01) and aged 25-34 years (OR=0.77, p<0.01) filed disproportionately few charges. Controlling for underlying rates of discrimination in the baseline population magnified this "underclaiming" among young workers.

Conclusions: The findings should help target dissemination and support activities designed help workers take advantage of antidiscrimination protections to the subgroups of workers who need them most. More generally, this study helps to illustrate the significant potential for epidemiologic methods to be applied toward understanding the complex interaction of claimants and potential claimants with the legal system.

Implications for Policy, Delivery or Practice: Protection of Americans living with HIV from workplace discrimination.

Primary Funding Source: AHRQ

● Voting with Their Feet: Exit, Racial Differences, and Some Cautionary Notes

Ming Tai-Seale, Ph.D., M.P.H.

Presented by: Ming Tai-Seale, Ph.D., M.P.H., Assistant Professor, Health Policy and Management, Texas A&M University School of Rural Public Health, 3000 Briarcrest Drive, Suite 300, Bryan, TX 77802; Tel: (979) 845 2387; Fax: (979) 862 8371; E-mail: mtaseale@srph.tamu.edu

Research Objective: In recent years there has been a great deal of interest in health disparity. It has long been thought that the more elastic the demand i.e., the more rapidly consumers exit the market whenever deterioration occurs, the better for the functioning of the economic system. Consumers have been advised that it is not enough for patients to complain about quality; they must be willing to withdraw their business from low-quality providers. Relatively little is known on whether there are racial differences in the propensity to exit and the reasons associated with exit. This study examined the effects of race, health care system, managed care penetration, geographic location, and other consumer demographic characteristics on both the propensity to change one's usual source of care and the reasons for such change. It further explored potential social costs of exit on vulnerable populations.

Study Design: The study uses household survey data collected during 1996-97 by the Center for Studying Health System Change from over 53,000 individuals in 60 randomly selected communities or sites that represent the nation. The sample for this paper consists of all people younger than age 65 and those who are insured either with employer-paid private insurance or Medicaid. A logit analysis was used to estimate the propensity to change one's usual source of care whereas a multinomial logit regression was used to examine the reasons associated with such change. The analyses accounted for if the respondent had changed health insurance plans, and if so, was the change voluntary (e.g. to switch to a plan with better services or one that is less pricy) or involuntary. The involuntary reasons include own or spouse job change, employer's offering change, and eligibility change. Probability weight was used in the logistic regression analysis to account for the survey design.

Population Studied: A random sample of non-elderly adult in 60 randomly selected communities or sites that represent the nation.

Principal Findings: While over 90% of the respondents to the Community Tracking Study survey have a usual source of care (USC), only 14% of them reported to have changed their USC. Latinos were less likely than whites to change their USCs among those who had voluntarily changed their health plans. Blacks did not differ from whites in their propensity to change USCs. People from other racial groups were more likely to have changed their USC due to quality concerns. Respondents in better health were less likely to change their USCs regardless whether they had changed their health insurance plans, or if so, whether the change was voluntary or involuntary. Similarly, they were also less likely to state quality of care as the reason for changing their USC if they did change their USC. They seemed to be more likely to change their USCs due to

changes in their own needs or because their USCs were no longer available, if they had not changed their health insurance plans.

Conclusions: Only a small proportion of Americans had changed their usual source of care while almost one-third of them had voluntarily changed their previous health insurance plans. The nature of insurance change was associated significantly with race, insurance status, health status, location and urbanization, and additional demographic characteristics in affecting one's propensity to change physicians and the reasons for the change.

Implications for Policy, Delivery or Practice: Some racial differences exist in consumers' propensity to change providers and the reasons for such change. Before further advocating exit as a strategy to improve market efficiency, we must consider issues surrounding the effects of exit. It is likely that those customers who care most about the quality of care and who, therefore, are those who would be the most active, reliable, and creative agents of voice are for that very reason also those who are apparently likely to exit first in case of deterioration in quality of care. This study suggests that Latinos are less likely than whites and blacks to change and those from other races are even more likely than whites to change. The exit of the more financially and politically resourceful customers, could leave those left behind in further deterioration since the agent of change have escaped. This would be an unintended social cost of advocating for exit as a strategy. As the physician service market is often characterized as monopolistic competitive, using the voice option either as a complement or a substitute of the exit option may be well advised.

Primary Funding Source: Government, Faculty Research Award, Research and University Graduate School, Indiana University/National Institute of Mental Health/Indiana Consortium for Mental Health Services Research

● **Charting the Type II Diabetes Epidemic: Trends among Children Receiving Medicaid in Kentucky**
Jeffery Talbert, Ph.D., Sarah B. Wackerbarth, Ph.D., Kelly B. Hattman, M.A.

Presented by: Jeffery Talbert, Ph.D., Associate Professor, Martin School of Public Policy and Administration, University of Kentucky, 433 Patterson Office Tower, Lexington, KY 40506-0027; Tel: (859) 257-5742; Fax: (859) 323-1937; E-mail: jtalb1@uky.edu

Research Objective: Type-II diabetes mellitus is now a recognized epidemic among American children, and its incidence continues to increase. Numerous studies of minority populations, drawing on data from diabetes clinics, have documented the emergence of the epidemic, which appears to be disproportionately concentrated in African American, Hispanic American, and Native American populations. Genetic factors aside, studies based on clinical data have proven the epidemic to be closely linked with obesity, a factor which hugely increases the likelihood that a child will develop the three leading risk factors for type-II diabetes: high insulin levels, high blood pressure, and elevated triglyceride levels. The close link between obesity and type-II diabetes is undisputed, and though studies of type-II diabetes in children have focused primarily on minority populations, ample evidence exists for the spread of the obesity epidemic among American children of all ethnicities. It is the lifestyle changes contributing to the obesity epidemic over the past several decades that are the primary environmental culprits in the diabetes epidemic. Our study relies on Kentucky Medicaid data to chart the epidemic over the past ten years within the population of poor white Kentucky children and adolescents. By showing that the rate of increase for type-II diabetes within this cohort is approximately equal to the corresponding statistic within minority populations examined in clinical studies, we demonstrate that in addition to genetic factors linked to ethnicity, the lifestyle of poverty is a central factor responsible for the epidemic.

Study Design: Statistical analysis of 8 years of Kentucky Medicaid claims data from 1994 to 2001. Trends of disease incidence were

determined by calculating the portion of members with a primary or secondary diagnosis of type-II diabetes. In addition to tracking incidence rates over time, we then build yearly datasets for members with diabetes focusing on utilization and expenditures for diabetes related health services, and overall health services (inpatient, outpatient, ER, pharmacy).

Population Studied: Kentucky Medicaid recipients, aged 2 - 18, with recorded diagnoses of type-II (non-insulin dependent) diabetes mellitus (ICD-9-CM category 250 with fifth-digit subclassification 0 or 2).

Principal Findings: During the years understudy, approximately 250,000 children received Medicaid services annually. During this timeframe the overall incidence of type-II diabetes was greater than the general population and comparable to the rates found in previously conducted studies of minority populations. Analysis of the incidence trend reveals that factors related to poverty are equivalent or exceed those factors related to genetic predisposition.

Conclusions: The rate of increase for type-II diabetes within a white population (Kentucky children on Medicaid) is equivalent to the rate of increase within minority populations; thus poverty (and resulting obesity) should be included in development of overall policy decisions to address the type-II diabetes epidemic in children.

Implications for Policy, Delivery or Practice: By examining a sampling of data across the population of poor white Kentuckians (a genetically homogeneous group), this study illustrated the importance of various environmental factors linked to poverty, in the spread of diabetes in Kentucky children and adolescents.

Primary Funding Source: Kentucky Department for Medicaid Services

● **Assessment of Sexually Transmitted Disease Patients' Willingness -to-Pay for Hepatitis A and Hepatitis B Vaccinations**

Ellen Thometz Rudy, Ph.D., Gerald Kominski, Ph.D., Roger Detels, M.D., Sander Greenland, Dr.P.H.

Presented by: Ellen Thometz Rudy, Ph.D., Post-doctoral Fellow, Health Services Research, UCLA, 10833 LeConte Avenue, Los Angeles, CA 92464; Tel: (714) 962-7006; E-mail: egrudy@earthlink.net

Research Objective: To use the willingness-to-pay (WTP) to test if health beliefs, perceptions about the vaccines, and demographics affect WTP for the HAV and HBV vaccines in a sexually transmitted disease (STD) clinic setting.

Study Design: Concurrent with a Vaccine Demonstration Project that assessed the feasibility of providing HAV and HBV vaccinations in an STD clinic setting, a knowledge, attitudes and behavior study was administered to consenting participants to assess factors associated with HAV and HBV vaccination refusal. Questionnaires were completed at the beginning of the participants' visit. Included in the questionnaire participants were asked two questions, If the vaccines were not free how much would you be willing to pay for the HAV (or HBV) vaccines? Participants were given five fixed-choice responses: \$0 per dose, \$10 per dose, \$15 per dose, \$25 per dose and \$45 per dose. Patients were offered the vaccines at no cost at the end of their visit. Pearson chi-square test statistic was used in bivariate analysis to compare WTP of \$0 with WTP more than \$0. Continuation-ratio logistic regression was used to assess the independent effect of the exposure variables on the multi-category outcome, WTP.

Population Studied: Consecutively sampled men who have sex with men who attend the Los Angeles Gay & Lesbian Center's STD clinic (HAV sample N=444, HBV sample N=395).

Principal Findings: The median value for both vaccines was \$10 per dose. Overall, 15% of patients reported WTP of \$0, however of participants reporting no income, 41% reported WTP of \$0. In bivariate analysis, those reporting WTP of \$0 were also more likely to have no more than a high school degree (HAV P=0.06, HBV P=0.09), more likely to have no health coverage (HAV P=0.06, HBV P=0.08), less likely to be involved in the gay community (HAV

P=0.06, HBV P=0.06) and more likely to be concerned about the side effects of the vaccines (HAV P=0.01, HBV P=0.03). In multivariate analysis, lower income was strongly associated with lower WTP (HAV, HBV P<0.01). After controlling for income, participants who perceived the HAV disease as serious (P=0.05) or who were concerned about getting the HAV disease (P=0.04) had higher WTP associated with the HAV vaccine compared with participants less concerned. Participants who reported slightly more number of sex partners in the past 6 months had lower WTP associated with the HBV vaccine (P=0.06).

Conclusions: Although most patients in the STD clinic were willing to pay something for HAV and HBV vaccinations, this analysis highlights that charging any fee will discriminate on income and risky behavior. STD clinics reach a population with limited access to health care and high-risk behaviors. If clinics charge a fee, it is important that program planners consider ways to provide vaccinations to the disadvantaged to ensure complete vaccination coverage. Donation-request only may be a sufficient alternative.

Implications for Policy, Delivery or Practice: STD clinics, access to affordable vaccinations for vulnerable populations.

Primary Funding Source: National Institute of Allergy and Infectious Diseases

● **Persistence of the Use of Cardiovascular Medications: Does Ability to Pay Matter?**

Jennifer Tjia, M.D., JS Schwartz, M.D.

Presented by: Jennifer Tjia, M.D., Physician-Scientist Fellow, General Internal Medicine, University of Pennsylvania, 1208 Blockley Hall, Philadelphia, PA 19104; Tel: 215-573-9309; Fax: 215-573-8778; E-mail: jetjia@mail.med.upenn.edu

Research Objective: We sought to identify factors associated with non-persistence of chronic medication use.

Study Design: We conducted a cross-sectional analysis of a nationally representative sample of adults using antihypertensive or cholesterol-lowering medications.

Population Studied: The population studied were respondents to the 1998 National Health Interview Survey (NHIS), a population-based survey of households in the United States. Subjects were asked whether they had ever received a prescription for blood pressure or cholesterol lowering medication, whether they were currently taking the medication, and whether during the past 12 months there was any time when they could not afford their prescription medications. We used bivariate and multivariate analyses to identify risk factors for non-persistence of medication therapy.

Principal Findings: Of 5,297 adults who received a prescription for blood pressure treatment, overall 13% stopped medication use. Discontinuation differed across age groups (<65 yo vs > 65 yo: 17.9% vs 7.7%; p<0.001) and health insurance coverage (coverage vs no coverage: 36.3% vs 11.5%; p<0.001). Of the 1,731 adults who used cholesterol-lowering medications, overall 23% stopped medication use. In addition to age and health insurance, annual income was also associated with differences in discontinuation of cholesterol therapy (> \$20,000 vs < \$20,000: 27% vs 21%; p= 0.01). Overall, 7% reported they could not afford their medication in the past 12 months. Among subjects who discontinued use without the consent of their physician, the strongest independent predictors of discontinuance were having a decline in health status over past 12 months (odds ratio [OR] 2.09; 95% confidence interval [95% CI], 1.27-3.42), inability to afford medications in the past 12 months (OR 1.71; 95% CI, 1.01-2.89), and male sex (OR, 1.61; 95% CI, 1.19-2.18). Having employer-sponsored health insurance (OR 0.60; 95% CI 0.38-0.96), college education (OR 0.49; 95% CI 0.25-0.96) and recent outpatient physician visits (OR 0.65; 95% CI 0.57-0.73) were associated with persistent medication use.

Conclusions: Discontinuation of antihypertensive and lipid-lowering therapy is associated with inability to pay for prescriptions, particularly among certain vulnerable groups. The uninsured and

lower income populations are at greater risk of discontinuing therapy due to economic issues, and may ultimately be at greater risk of poor health outcomes as a result.

Implications for Policy, Delivery or Practice: Provision of prescription drug insurance to the poor and uninsured may contribute to adherence to chronic medication regimens, and may ultimately lead to improvements in health outcomes.

● **Racial and Ethnic Differences in Health Service Use Among Patients with Diabetes Enrolled in Medicaid: A Comparison Across Three States**

Roberto B Vargas, M.D., Roger B Davis, Sc.D., Ellen P McCarthy, Ph.D., Lisa I Iezzoni, M.D., M.Sc.

Presented by: Roberto B Vargas, M.D., Research Fellow, Division of General Internal Medicine, Beth Israel Deaconess Medical Center, Harvard Medical School, 330 Brookline Avenue LY-330, Boston, MA 02215; Tel: (617) 667-1960; Fax: (617) 667-2751; E-mail: rvargas@caregroup.harvard.edu

Research Objective: Identify racial and ethnic differences in the rates of ambulatory care visits and hospitalizations across three states for adults with diabetes enrolled in Medicaid.

Study Design: We used the 1994-5 State Medicaid Research Files for California (CA), Georgia (GA), and New Jersey (NJ). We identified ambulatory care visits using Current Procedural Terminology (CPT-4) codes for evaluation and management (E&M) services provided in outpatient offices, these codes were validated using the place of service identifier in the database. We identified unique hospitalizations using admission and discharge dates and eliminated hospitalizations with 0 day lengths of stays. We created a multivariable Poisson regression model to examine the effect of race on ambulatory care visits and hospitalization rates, adjusting for age, sex, reason for Medicaid eligibility, health status, and duration of enrollment. Fully adjusted rate ratios (RR) and 95 percent confidence intervals (CI) are given for minority groups with white patients as the reference group.

Population Studied: Patients that self identified as Asian/Pacific Islander (A/PI), black, Hispanic, or white who were enrolled at least 3 months in fee-for-service Medicaid in CA, GA, and NJ, with diagnoses or medications for diabetes, aged 18-64, and not pregnant.

Principal Findings: Of 138,685 patients with diabetes, 4% were A/PI, 30% were black, 24% were Hispanic, and 42% were white; 73% were women; and mean age was 47 years. Black patients in NJ had significantly fewer ambulatory care visits RR 0.90 CI (0.86,0.94) and significantly more hospitalizations RR 1.15 CI (1.11,1.20) compared to whites. In GA the opposite was true: black patients had significantly more ambulatory care visits RR 1.48 CI (1.40,1.56) and significantly fewer hospitalizations RR 0.81 CI (0.79,0.84) than whites. In CA black patients had slightly more outpatient visits RR 1.02 (1.00,1.03) and higher hospitalization rates RR 1.18 CI (1.16,1.21) compared to whites. We also found regional variation in outcomes for Hispanic patients compared to whites. In NJ, Hispanic patients had more ambulatory care visits RR 1.15 CI (1.08,1.23) and no significant difference in hospitalizations RR 0.97 CI (0.90,1.05) compared to white patients. In contrast, in CA Hispanic patients had significantly fewer ambulatory care visits RR 0.88 CI (0.86,0.90) and more hospitalizations RR 1.08 CI (1.05,1.12) compared to whites. Asian/Pacific Islander patients had significantly more ambulatory care visits RR 1.27 CI (1.23,1.30) and significantly lower rates of hospitalization RR 0.76 CI (0.71,0.81) compared to whites.

Conclusions: Among Medicaid enrollees with diabetes, there are significant racial and ethnic differences in ambulatory care visit rates and hospitalization rates. For black and Hispanic patients these discrepancies vary by state. We found an inverse relationship between ambulatory care visit rates and hospitalization rates for most groups.

Implications for Policy, Delivery or Practice: Our results suggest that state level resource and policy differences may impact racial and ethnic differences in service use.

Primary Funding Source: AHRQ

● **Access to Care for Veterans with Colorectal Cancer**

Katherine Virgo, Ph.D., M.B.A., Lucille C. Dauz, M.A., Lan H. Marietta, M.A., Brandie S. Adams, B.S., Walter E. Longo, M.D., M.D., Frank E. Johnson, M.D., M.D.

Presented by: Katherine Virgo, Ph.D., M.B.A., Professor, Department of Surgery, St. Louis University HSC & St. Louis VAMC, 3635 Vista at Grand Blvd., Saint Louis, MO 63110-0250; Tel: (314) 289-7023; Fax: (314) 289-7038; E-mail: virgoks@slu.edu

Research Objective: Analyze patterns of health services utilization after diagnosis among veterans with colorectal cancer and differentiate patients with a sole source of care (Department of Veterans Affairs (VA) or Medicare-reimbursed) from those with dual sources of care (VA and Medicare-reimbursed). It was hypothesized that a substantial population of VA colorectal cancer patients were dual users for whom continuity of care could be substantially improved if all care could be provided through a single health care system.

Study Design: Retrospective analysis of 13 years of nationwide Medicare and VA inpatient and institutional outpatient data beginning with the three years pre-diagnosis (1986-1990) through a minimum of five years post-diagnosis (1994-1998) to identify patterns of utilization. Data were also extracted from tumor registry files, Computerized Patient Record System Files, and paper medical records at each VA.

Population Studied: All VA patients diagnosed with colorectal cancer and surgically treated for cure during the 5-year period 1989-1993, who were Medicare-eligible at diagnosis, and survived the index admission.

Principal Findings: Using very conservative definitions of relevant CPT codes and the baseline admission or visit, inpatient dual users (those who use both VA and Medicare-reimbursed systems of inpatient care) constituted slightly less than 15 percent of the 6612 veterans diagnosed with and surgically treated for colorectal cancer. Their average total volume of VA admissions was 4.4 with an average total length of stay of 119.4 days. Their average total volume of Medicare-reimbursed admissions was 2.0 with a significantly shorter average total length of stay of 17.5 days. Similarly, outpatient dual users constituted less than 20 percent of this population. Their average total volume of visits was 22.8 VA visits versus 9.6 Medicare-reimbursed visits. A broader definition of relevant CPT codes and the baseline admission or visit increased inpatient dual users to approximately 32 percent of the population and outpatient dual users to 36.4 percent of the population.

Conclusions: Use of multiple systems of care is prevalent among veterans with colorectal cancer. Ways in which continuity of care could be improved if all care could be provided through a single health care system, as well as chronology of utilization and types of services utilized when patients switch from one source of care to another are currently under analysis.

Implications for Policy, Delivery or Practice: These analyses are of particular interest to the Department of Veterans Affairs as the veteran population size declines and the VA concurrently attempts to reach its "Ten for 2002" goal of increasing the number of users of the VA health care system by 20 percent. Further, since individual VA facilities are now able to retain Medical Care Cost Recovery dollars collected from third party payers such as private insurance plans and in the near future may be able to keep dollars collected from Medicare, real health care dollars are lost when patients cross over to another health care system.

Primary Funding Source: Department of Veterans Affairs Heartland Network

● **HMO Penetration and Outcomes in a Nascent Price-competitive Market**

Kevin Volpp, M.D., Ph.D.

Presented by: Kevin Volpp, M.D., Ph.D., Assistant professor, Medicine, University of Pennsylvania school of medicine, 1232 Blockley Hall, 423 Guardian Drive, Philadelphia, PA 19104-6021; Tel: (215) 573-9718; Fax: (215) 573-8778; E-mail: volpp70@mail.med.upenn.edu

Research Objective: To examine whether the increases in HMO penetration that accompanied the New Jersey Health Care Reform Act (HCRA), which transformed the hospital payment system from hospital rate-setting to price competition and reduced subsidies for hospital care for the uninsured, affected outcomes for the uninsured. **Study Design:** AMI was chosen as the study condition because it is a common, high mortality condition for which all patients are hospitalized. New York was used as a control for intertemporal changes in New Jersey because it is a large, adjacent state which had no changes in its hospital rate-setting system during this period. Within zip code areas grouped by the size of increases in HMO penetration post-HCRA, changes in the rate of in-hospital mortality were assessed in New Jersey compared to New York for all patients and for the uninsured only. By focusing on measuring how individual AMI mortality risk changed over time for all patients within geographic areas (zip code areas), the importance of risk adjustment was mitigated because the risk characteristics of patients admitted with AMIs within the same geographic area does not change greatly over time. Linear probability models were used to model how to changes in individual mortality risk compared in different parts of the two states, controlling for individual patient comorbidities and intertemporal changes common to the two states.

Population Studied: Patient discharge data for all 271,076 patients in New Jersey (NJ) and the control state New York (NY) from 1990 to 1996 hospitalized with the primary diagnosis of AMI were obtained.

Principal Findings: Among uninsured patients, there was a significant difference in the relative increase in AMI mortality risk in New Jersey post-reform, as patients in the third of New Jersey with the biggest increases in HMO penetration had a mortality risk of 9.62 percentage points (on a base of about 12 percent) higher than their counterparts in New York, while patients in the third of New Jersey with the smallest increases HMO penetration had a 3.15 percentage point increase in mortality risk relative to their counterparts in New York. Among all patients the differential between high HMO areas (1.46 percentage points) and low HMO areas (1.09 percentage points) was much smaller.

Conclusions: The adverse effects of a market-based reform in New Jersey on quality of care for uninsured AMI patients appear to be greatest in the areas of New Jersey with the biggest increases in HMO penetration. Possible mechanisms for this will be further explored.

Implications for Policy, Delivery or Practice: When legislators institute reforms that are designed to save money, systematic study of the quality impacts should be mandated to ensure that the full societal impact of the reforms is understood.

Primary Funding Source: The Robert Wood Johnson Foundation

● **Access to Hospital Charity Care**

Linda Wenzel, Ph.D., David Weiss, Ph.D., David Weiss, Ph.D., Elissa Giffords, D.S.W., Rosemarie Guercia, M.D., Donna Kass, M.P.A.

Presented by: David Weiss, Ph.D., Associate Professor, Health Professions & Family Studies, Hofstra University, 126 Hofstra Dome / 220 Hofstra University, Hempstead, NY 11549-2200; Tel: (516) 463-5932; Fax: (516) 463-3810; E-mail: dmweiss@optonline.net

Research Objective: Determine the availability and access to nonprofit hospital charity care by uninsured and underserved populations.

Study Design: Charity care is defined as medical care provided to low income, uninsured people by a hospital or other provider for which payment is not expected. Hospital charity care was studied by (1) a charity care monitoring survey conducted by calling or visiting hospitals using a standardized protocol inquiring about availability of charity care and access policies to such care; and (2) review of hospitals' mission statements, community service plans, and financial reports relating to charity care costs, as required by New York State Health Care Reform Act of 1996, amended in 2000.

Population Studied: Seven nonprofit hospitals in western Suffolk and Nassau Counties on Long Island, New York.

Principal Findings: Data revealed (1) inconsistent reporting by hospitals about availability of charity care; (2) several hospitals reported that no charity care was available; (3) uninsured surveyors were less likely to obtain responses than surveyors from community agencies or faith-based organizations; (4) non-English speaking surveyors were rarely able to obtain information about hospital charity care; (5) policy materials were difficult to obtain; (6) required reports were often incomplete; (7) few details provided about community identified priorities and hospital' implementation of related community benefits program; (8) lack of clarity by State governing required and demonstrated hospital financial and operational commitments to charity care.

Conclusions: Hospitals need to (1) improve obligatory charity care services; (2) articulate, document, and better inform their personnel about available and required charity care; and (3) communicate charity care information to the community. Communities need to (1) be aware of State hospital requirements regarding charity care; (2) monitor availability of charity care; (3) publicize availability of charity care; (4) participate in hospital advisory boards, particularly setting priorities for obligatory hospital community programs. State agencies need to (1) clarify hospital charity care requirements; (2) monitor compliance with obligatory community benefits; and (3) develop a consistent reporting schedule and review process.

Implications for Policy, Delivery or Practice: Implications pertain to (1) improved access to hospital care by vulnerable populations; (2) improved health status of populations; (3) increased community involvement in hospital community benefits programs; and (4) State regulatory functions.

Primary Funding Source: Annie E. Casey Foundation

● Access to Care for Uninsured Patients in Academic Health Centers

Joel Weissman, Ph.D., Manjusha Gokhale, M.A., ER.Nest Moy, M.D., Eric G. Campbell, Ph.D., Nancyanne Causino, Ed.D., David Blumenthal, M.D.

Presented by: Joel Weissman, Ph.D., Senior Scientist, MGH Institute for Health Policy, Harvard Medical School, 50 Staniford Street 9th Floor, Boston, MA 02114; Tel: (617) 724-4731; Fax: (617) 724-4738; E-mail: jweissman@partners.org

Research Objective: Academic health centers (AHCs) often are seen as safety net institutions, especially those affiliated with public universities. We measured AHC faculty perceptions of access to care by privately insured and uninsured patients at AHCs, and assessed organizational barriers faced by AHC faculty that discourage them from seeing uninsured patients.

Study Design: Questions modeled on the Center for the Study of Health System Change's Community Tracking Study assessed hours of charity care and clinicians' ability to obtain services for patients, including specialty care, non-ER admissions, high tech services, and behavioral health services. Organizational barriers, e.g., hospital or group practice policies, also were assessed.

Population Studied: Mail survey of 2,989 faculty (Response Rate =66.5%) at 124 U.S. medical schools in 2000. Analyses were limited to faculty in direct patient care (n=2295). Responses were weighted to produce national estimates.

Principal Findings: Approximately one-half of AHC clinical faculty provided charity care, amounting to 11.5% of their clinical time. Respondents were more likely to report access problems (rarely/never able to obtain services) for uninsured patients compared with privately insured patients for specialty care (13% vs. 1%), non-ER admissions (25% vs. 10%), high tech care (23% vs. 8%), and outpatient mental health services (41% vs. 22%) (all p<.001). Also, 23% reported having to limit care or being unable to admit uninsured patients. Access problems for uninsured patients were reported more frequently by respondents in non-primary care departments than primary care or psychiatry departments. There were no significant differences by public versus private universities.

Faculty physicians cited the following major factors limiting the number of indigent patients seen: small number of indigent referrals (40%); inadequate reimbursement (26%); discouraged by hospital (18%); and discouraged by group or practice (19%).

Conclusions: Uninsured patients face significant access barriers at AHCs, including patients treated at institutions normally considered to be part of the social safety net. Many faculty believe that their primary teaching hospital or group practice discourages them from seeing uninsured patients.

Implications for Policy, Delivery or Practice: Reducing the number of uninsured should be a priority of the U.S. health system.

Meanwhile, AHCs and affiliated group practices should examine policies that might limit access for indigent patients.

Primary Funding Source: Pew Charitable Trusts, Commonwealth Fund, Doris Duke Charitable Foundation, and Burroughs-Wellcome Fund.

● Managed Care and Minority Physicians: A Report from the Field

Carol J. Simon, Ph.D., William D. White, Ph.D., Virginia H. Bartot, Ph.D., Martha Van Haitsma, Ph.D., Luningning Cristina Hernandez, B.A., Carrie James, M.A.

Presented by: William D. White, Ph.D., Associate Professor, Epidemiology and Public Health, Yale University School of Medicine, 60 College St., P.O. Box 208034, New Haven, CT 06520-8034; Tel: (203) 785-6924; Fax: (203) 785-6287; E-mail: william.white@yale.edu

Research Objective: This research draws on qualitative field research to examine how minority physicians are faring under managed care and to consider the implications for minority patients, who traditionally have disproportionately turned to minority physicians as a source of care. Analysis focuses specifically on African-American physicians, but Hispanic physicians are also considered.

Study Design: Data for this research was collected through open ended qualitative interviews with doctors, practice managers and key informants in five states (California, Texas, Massachusetts and Wisconsin). Study states were selected to represent a range of different market environments with respect to managed care. Key objectives of interviews included gaining a better understanding of ongoing trends in managed care and participants' perceptions of factors underlying these trends and developing hypotheses to be explored in future quantitative research.

Population Studied: A total of 325 interviews were conducted with doctors, practice managers and key informants in the five study states during the spring and fall of 2001. 127 of these interviews were with physicians, 106 with key informants in government and private organizations and 92 with managers in medical practices. These interviews included 294 interviews representative of the general population of study states and 31 supplemental interviews of minority (African-American and Hispanic) physicians.

Principal Findings: Findings suggest a strong sense of mission among African-American physicians to provide care to minority patients. But they also suggest managed care is making it more difficult for them to fulfill this mission across a variety of practice

settings. In part because of historical patterns of discrimination, but also out of a sense of mission, older African-American physicians are disproportionately located in practice settings especially vulnerable to problems with managed care?e.g. solo primary care practices in lower income minority neighborhoods. Not only are they at a disadvantage in dealing effectively with Managed Care Organizations (MCOs), but MCOs are seen as siphoning off paying patients, for example through Medicaid Managed Care, leaving behind the uninsured and most vulnerable patients. This is creating a very difficult practice environment and making it increasingly difficult to support a mission of serving vulnerable minority patients. In the case of younger African-American physicians, new opportunities have emerged for these physicians and they are entering more typical group practice settings. Many continue to see serving minority patients as an important mission and see disproportionately more minority patients. However, minority dominated group practices are rare. Particularly in the face of managed care, African-American group members, many of whom are employees rather than owners, report pressures to limit provision of services to uninsured patients. (Indeed, some report it is easier to donate services to free clinics than to attempt to provide indigent care within their practices). The picture is more complex for Hispanics, but findings suggest similar forces are also at work for this group.

Conclusions: Older African-American physicians in particular disproportionately report problems with managed care which appear strongly associated with the types of practice settings in which they are located. At the same time, both younger and older African-American physicians report pressures associated with managed care are making it more difficult to serve vulnerable minority populations, especially the uninsured.

Implications for Policy, Delivery or Practice: Findings raise concerns that managed care may be disproportionately affecting important groups of minority physicians. More generally, to the extent managed care is making it more difficult for minority physicians to serve vulnerable groups of minority patients, especially the uninsured, this raises important issues about access to care because of the traditional role of minority physicians in disproportionately providing care to minority populations.

Primary Funding Source: AHRQ

● **A Pleasant, but Puzzling Surprise: Twice as Many AIAN Are Found in a Large Health Survey in California**
Wei Yen, Ph.D., Delight Satter, M.P.H.

Presented by: Wei Yen, Ph.D., Associate Director, California Health Interview Survey, Center for Health Policy Research, UCLA, 10911 Weyburn Ave., Suite 300, Los Angeles, CA 90024; Tel: (310)794-2399; Fax: (310)794-2686; E-mail: weiyen@ucla.edu

Research Objective: The recently completed California Health Interview Survey (CHIS 2001) encountered twice as many as expected American Indian and Alaska Native (AIAN) respondents. This paper explores the possible causes for this happening in this large population-based health survey (more than 55,000 households) and its impact on the precision and interpretation of the survey results.

Study Design: The CHIS 2001 actual AIAN sample yield will be compared to the expected AIAN sample yield that is based on the Census 2000. With a focus on the AIAN ethnic group, factors will be examined that are known to have contributed to fluctuation of sample yields in population surveys. Finally, the possible impact of the unexpected large AIAN on the survey's weighting scheme and on the interpretation of the survey results will be discussed at length.

Population Studied: American Indian and Alaska Native in California

Principal Findings: The AIAN sample yield in CHIS 2001 is twice as expected using estimates from the Census 2000. The authors of this paper will share with the audience plausible explanations to this occurrence and its impact on data estimation and accuracy.

Conclusions: While it is generally desirable to have a larger than expected sample yield in surveys, the unusually high or low sample yield requires close examination as it directly affects the precision and interpretation of survey results.

Implications for Policy, Delivery or Practice: Health surveys have played an increasingly large role in informing health policy/program development. Health survey results should be evaluated and interpreted with a good understanding of the issues surrounding the survey administration so as to accurately inform the health policy/program development.

Primary Funding Source: State

● **Health System Effects on the Use of Radiotherapy Following Surgery for Breast Cancer**

Jina Zhang-Salomons, Msc, Farshad Fourodi, M.B., Jenny Huang, M.D., M.Sc., William Mackillop, M.B.

Presented by: Jina Zhang-Salomons, Msc, senior biostatistician, Division of Cancer Care and Epidemiology, Cancer Research Institute, Queen's University and Kingston Regional Cancer Center, Apps level 4, Kingston General Hospital, Kingston, Ontario, Canada, OH K7L2V7; Tel: (613)549-6666x2218; Fax: (613)548-6150; E-mail: jina.zhang-salomons@krcc.on.ca

Research Objective: Since 1985, results from randomized clinical trials have repeatedly demonstrated that women who underwent breast conserving surgery (lumpectomy) without post-lumpectomy radiotherapy (PLRT) had a higher risk of local recurrence of cancer. The objectives of this study are: 1) to identify health system related factors that are associated with the use of PLRT; 2) to describe how these factors affected the adoption of new evidence and evidence-based guidelines regarding the use of PLRT under Ontario's semi-centralized cancer care system.

Study Design: This is a population study using the administrative data routinely collected by the hospitals and the regional cancer centers in the province of Ontario, Canada. The chance of receiving PLRT among the patients who had lumpectomy was correlated with various factors functioning at patient level, hospital level, and cancer-center level by a hierarchical logistic regression model.

Population Studied: 33,845 cases invasive female breast cancer that were treated with breast conserving surgery between May 1985 and April 1998 in Ontario.

Principal Findings: Use of PLRT increased significantly by 16%, 27%, and 9% per year during the period between 1985 and 1989, 1989 and 1992, 1992 and 1998 respectively. The chance of receiving PLRT for the patients who had lumpectomy in a hospital affiliated with a regional cancer center that provided radiotherapy was 32% higher than for those who had surgery in a community hospital. When waiting time in a cancer center increased by one week, the chance of receiving PLRT for the women aged 70 to 80 years decreased by 72% in comparison with those 35 to 49 years old. This decreasing trend was aggravated (by 16% per week) in the regions with longer waiting time. patients' socio-economic status, distance from patients' home to a cancer center, size of hospitals and size of cancer centers did not show any significant association with the use of PLRT after controlling for other factors.

The systematic variation (SV) in the use of PLRT among the individual hospitals was larger (SV=0.24) than that observed among the regions served by the regional radiotherapy centers (SV=0.04). After the publication of the Ontario Practice Guideline in 1997, use of PLRT was fairly uniform across the regions served by the regional radiotherapy centers. However, practice variation among the individual hospitals persisted.

Conclusions: Publication of randomized trials and evidence-based guidelines increased the use of PLRT in Ontario. However, the adoption of new knowledge was constrained by the limitation of radiotherapy resources, and by the fact that most of the local hospitals where the initial treatment was planned are separated from the radiotherapy treatment centers.

Implications for Policy, Delivery or Practice: To improve the use of PLRT among the patients who opted for breast conservation requires substantial increase in resource, and a comprehensive outreach program of the cancer centers that integrates radiotherapy treatment with all aspects of cancer care in Ontario.

Primary Funding Source: Cancer Care Ontario; Kingston General Hospital Clare Nelson Fund.