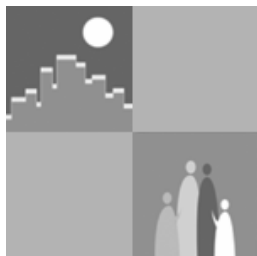


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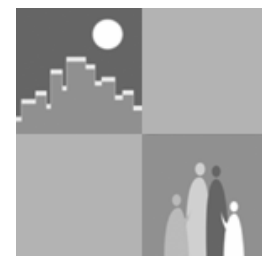
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## Poster Session I: The Urban Environment

Thursday, October 16, 2003

### The Physical and Social Environment (03)

03003

#### **The Bedford-Stuyvesant Healthy Homes Initiative: A comprehensive approach to residential hazard assessment and control**

Klitzman S, Caravanos J, Rothenberg L, Belanoff C, Deitcher D, Cohen L

**Background:** The home environment can be a significant source of childhood hazards, injuries and illnesses, especially among older, urban housing stock situated in low income neighborhoods. Currently, the vast majority of public health and housing programs focus on single issues. This presentation describes a comprehensive, low-cost approach to the assessment and control of home environmental hazards -- including safety, lead-based paint, vermin and mold hazards.

**Methods:** Baseline assessments (observation and environmental sampling) were conducted in 70 dwelling units. Hazard remediation consisted of: integrated pest management, lead hazard control, mold control and installation of safety devices. Remediation supplies averaged \$600 per unit. Participants were provided with high-efficiency particulate air (HEPA) vacuums, training and assistance in making repairs. Post-remediation assessments were conducted to verify completion and clean-up.

**Results:** At least one type of hazard existed in all units, including: safety hazards (97%); lead-based paint hazards (73%); cockroaches (47%) and/or elevated levels of cockroach allergens (26%); and visible mold (26%). Damaged lead-based paint and recent building repairs were significant predictors of elevated dust lead levels. Occupant and observer reports of cockroaches, water damage, cracks/gaps and clutter were significant predictors of cockroach allergens. Fifty-two units (74%) achieved EPA dust lead clearance levels following remediation; the remaining 18 units (26%) were re-cleaned, until clearance was achieved.

**Implications:** Among this sample of older, urban dwellings, multiple environmental hazards were prevalent (97%). Assessment and remediation were achieved at modest cost. These findings support a more comprehensive approach to the assessment and control of residential hazards.

03025

#### **Material and social inequalities in the Montreal metropolitan area: Associations with mental health outcomes**

Forster M, Zunzunegui MV, Gauvin L

**Background:** Area characteristics have been shown to be associated with mental health outcomes, above and beyond individual characteristics. This study aimed at increasing the understanding of the associations and pathways by which neighborhoods material and social characteristics influenced psychological distress of people 15-75 years living in the Montreal metropolitan area.

**Methods:** A random sample of 1053 individuals selected from the 1998 Santé Québec cross-sectional survey were nested within 49 different neighborhoods through matching of Census Tracts. Data pertaining to neighborhood material and social characteristics were obtained from the 1996 Statistics Canada Census Data Base and from municipal police records on violence, crime, and quality of life. Psychological distress was measured using a customized version of the Ilfeld Psychiatric Symptom Index (PSI). Multilevel random-intercept models were built in order to investigate individual effects, contextual effects, and cross-level interactions.

**Results:** A significant PSI intra-class correlation was found with neighborhoods accounting for 4.6% of total variance. At the individual level, psychological distress predictors included sex, age, social support, family type, ethnicity/place of birth, and food insufficiency. Individual predictors were moderated by area characteristics: social participation and rated quality of life potentiated the effects of social support among women.

**Implications:** Our findings suggest that even if PSI disparities between neighborhoods in the Montreal metropolitan area are small, individual susceptibilities to psychological distress may be influenced by area material and social characteristics.

03032

#### **Exposure to community violence and upper respiratory infections among urban adolescents**

Rosenthal BS

**Background:** The presence of social stressors has been shown by Cohen to increase susceptibility to upper respiratory infections (URI). The paper addresses three questions: 1) is exposure to community violence a stressor that is related to URI; 2) does the relationship between experiencing

stressful environmental events and URI found in adults also obtain in adolescents; and 3) does psychological distress mediate the impact of social stress on URI symptoms?

Methods: This cross-sectional correlational study of 769 urban minority adolescents, undertaken between 1999-2002, used three multi-item additive scales: exposure to community violence (18 items;  $\alpha = .89$ ); level of psychological distress (25 items;  $\alpha = .95$ ); presence of URI symptoms (10 items;  $\alpha = .83$ ). Data were analyzed by multiple regression procedures.

Results: There are positive correlations between reporting URI and both exposure to community violence ( $r = .19$ ) and psychological distress ( $r = .51$ ), and between exposure to community violence and psychological distress ( $r = .22$ ). When URI is regressed on exposure to violence and distress simultaneously, the beta for violence is not statistically significant. The impact of exposure to community violence on URI is mediated by psychological distress.

Implications: The impact of exposure to community violence on adolescents' health may be reduced by: reducing the amount of exposure, by buffering the impact of exposure, and by treating the mental health symptoms to reduce them and thereby reduce the mediated impact on physical health.

03043

### **The Yonkers Early Childhood Initiative: A practice-based urban health strategy**

Grob R, Vargas LA

Background: The Yonkers Early Childhood Initiative (ECI), a place-based family strengthening initiative, was born at the nexus of community need and compelling research findings. At ECI's inception in 1998, the importance of early childhood had just burst into public awareness with new force and vigor, propelled largely by neuroscience research demonstrating that experience during the first years of life actually physically structures and shapes children's brains. At the same time, social science research documenting the influence of "neighborhood effects" on childhood outcomes had recently burgeoned, providing empirical support for an ecological theory of human development which views the larger networks surrounding children as a key determinant in their developmental trajectory. Data linking poor neighborhoods with lower IQ, and higher rates of delinquency, child abuse and infant mortality, solidly illustrated the influence of urban environments on young children's short- and long-term health. Yonkers' own recent battles over school and housing desegregation, and its on-going struggle to differentiate itself from the wealthy county to which it belongs so as to more effectively build on strengths and address needs, created fertile ground for launching ECI.

Methods: The ECI is a collaborative effort that unifies public and private service providers, elected officials and community residents. It is founded on the premise that building a comprehensive community partnership is a sound strategy for improving health and developmental outcomes. Leadership for ECI has been consistently supplied by the Andrus Children's Center, a community-based organization serving children and families. Start-up funding was secured from the Surdna Foundation, and the initial process of mobilizing community leadership for ECI was facilitated by the simultaneous coalescence of a "Healthy Yonkers Initiative" in the city. ECI's first task was to develop the following joint vision statement: Children in Yonkers will be born healthy and, be supported by their families and communities so that they maintain good health, enter school ready to learn, and achieve their developmental potential.

Results & Implications: (1) Produced and disseminated an award-winning Yonkers Early Childhood Data Book. (2) Launched Neighborhood Circles that bring community members together through facilitated dialogue to build strong neighborhoods for families. (3) Produced the "Welcome to Yonkers, Dear Baby!" book, a resource manual for new parents disseminated at birth with infant thermometers. (4) Since 1999, organized an annual, award-winning Family Day, a fun-filled event that connects over 2,000 families to resources and services; 5) Secured more than \$1,000,000 in funding for the ECI itself, and was instrumental in obtaining more than \$3,000,000 in new service dollars for Yonkers. Aside from these specific results, a recent evaluation of ECI documents success at increasing community pride and improving cross-sector communication. For example, agencies that once competed for funding now work together on grant applications. The results are programs delivering better comprehensive services to a more extensive base of children and families in Yonkers. Furthermore, the ECI has brought community residents to the table to actively engage in all aspects of ECI's work, successfully bridging a critical gap between policy makers and residents. ECI is a replicable urban health strategy for effectively improving health and developmental outcomes.

03074

### **THRIVE (Tool for Health and Resilience in Vulnerable Environments): Project overview and pilot site implementation**

Davis R, Cohen L, Baxi S, Cook D, Hayes R

Low-income communities of color are disproportionately impacted by incidence of disease and injury. Often this is attributed to the prevalence of specific risk factors in those communities. It is just as important, however, to look at ways in which community factors might encourage health. Identifying and building on existing community resilience can temper financial, racial, and ethnic health disparities. Resilience is the ability to thrive despite risk factors, and studies show that resilience factors can counteract the negative impact of risk factors. The building blocks of healthy communities include safe parks, effective education, available healthy foods, community gathering places, health and social services, and locally owned businesses. For instance, social cohesion corresponds with significant increases in physical and mental health, academic achievement, and local economic development, as well as lower rates of homicide, suicide, and alcohol abuse. Through synthesis of existing research that linked socio-environmental factors to Healthy People 2010 Leading Indicators, Prevention Institute with funding from the Federal Office of Minority Health, U.S. Department of Health and Human Services developed a community resilience assessment tool called THRIVE (Tool for Health and Resilience In Vulnerable Environments). The tool includes twenty factors and four clusters; built environment, social capital, services and institutions, and macro factors. The tool is being piloted in three communities. This presentation will present elements of the tool and how the approach can support community health, as well as how it is being implemented and supporting work of the East Harlem pilot site in New York City.

03092

### **The role of urban-rural structure in the cycle of diseases and health disparities in Sub-Saharan Africa**

Oirya JJ

Objective: This paper analyzes the role of social, structural, economical, political, and physical urban-rural design in the recurring cycle of prevalent diseases, their effects, and health disparities in Sub-Saharan Africa (SSA).

Methods: The study examines urban-rural health in 23 countries with leading cases of infectious, congenital, inflammatory, acute, chronic, metabolic, and neoplastic diseases in SSA. It compares the cause, transmission, spread, and subsequent social effects of these diseases in the region, in relation to urban-rural design, by analyzing current research findings in the region.

Results: With all other determinants of health such as education, employment, social environments, and personal health practices taken into consideration, the urban-rural design seems to provide a key opportunity for the spread and prevalence of diseases and their effects in SSA. While urban centers harbor and transmit diseases to the vulnerable rural areas, the social effects of these diseases return to affect urban areas, which results in a recurring cycle of Urban-Disease-Rural-Effects (UDRE). In areas where this cycle is disrupted through urban restructure, improved health is noted. Implications: Breaking the UDRE cycle requires a balanced redesign of the urban-rural structure through effective public health policies, fair distribution of public infrastructure and resources, delocalization of the employment industry, improved urban-rural social structure, and effective urban planning. While not yet widely recognized and applied, this strategy seems to play a significant role in the reduction of prevalent diseases, their social effects, and health disparities in urban-rural areas of SSA.

03094

#### **Urban design and health for an aging society**

Michael YL, Fisher J, Howe D, Cunningham G, Green M, Kellogg H

## **WITHDRAWN**

03095

#### **Cellular automaton modeling of tuberculosis spatial spread structured by neighborhood characteristics**

Rehkopf D, Furumoto-Dawson A

Background: Tuberculosis is a familiar infection plaguing cities. Yet tuberculosis is slow acting, dependent on close contact with active cases, making possible interventions that alter disease spread. However, social factors promoting disease spread and increasing probabilities of exposure to infective cases, and individual factors influencing probabilities of becoming a case and of treatment are not distributed homogeneously. Not only are factors correlated, in urban contexts they are spatially clustered by the housing density structure of neighborhoods. We developed cellular automaton-based simulations of TB spread in spatially segregated neighborhoods.

Methods: We modified an epidemic model based on the J Program (from T. Kiszewski) using approximations of mortality rates, susceptibilities, transmission and reactivation probabilities from reviewed literature. We introduced four levels of neighborhood densities using tiers of "neighbors" with steeply declining transmission probabilities. Small numbers of initial active cases and differing probabilities of susceptible individuals were randomly situated within neighborhoods. Outcomes were sequential spatial maps, epidemic curves, and numbers of infected and deaths over ten years.

Results: TB spreads explosively in dense neighborhoods, especially with prevalent active cases. But, there remains significant spread within all high density neighborhoods, regardless of starting conditions. Differing susceptibilities by neighborhood and initial location of cases have relatively less impact on outcomes than does differing structures of neighborhoods.

Implications: In urban contexts, spatial modeling provided by cellular automaton simulations may provide additional insights as to where resources would be best targeted, guiding resource distribution and policy.

03102

#### **HomeSick: Three stories from the history of urban environmental health, 1900-2003**

Warren C

## **WITHDRAWN**

03137

#### **Racial/ethnic segregation and self-reported health status in New York City**

White K, Borrell LN, Meyer I

Background: Studies have found that characteristics of an individual's neighborhood of residence could affect individual perceived health status. Such characteristics include social capital and socioeconomic conditions. Because racial/ethnic segregation could limit socioeconomic mobility by constraining educational and employment opportunities for subgroups of the population, it is possible that racial/ethnic segregation could influence individual self-perceived health status. We examined the role of racial/ethnic residential segregation upon self-reported health status of blacks, Hispanics, and Asians in NYC.

Methods: Individual's data from the 2001 Social Indicator Survey (n=1,501) were appended to neighborhood characteristics from the Year 2000 United States Census at the zip code level. Logistic regression was used to estimate the association between self-rated health status and race/ethnicity by levels of segregation controlling for individual's clustering within zip codes.

Results: Racial/ethnic segregation had a differential effect based on race/ethnic group membership. When compared to whites, blacks were less likely to report poor health regardless of the levels of segregation; Hispanics living in low and high segregated areas reported increased odds of reporting poor health, while Hispanics living in medium segregated neighborhoods were less likely to report poor health; and Asians exhibited decreased health status as the levels of segregation increased. Individual- and contextual-level variables had an independent effect on self-rated health regardless of racial/ethnic group membership.

Conclusions: These findings call attention to the investigation of neighborhood characteristics using a race/ethnic-specific approach. Future research should incorporate multilevel analyses, more precise definitions of neighborhood, and explore specific hypotheses such as the racial/ethnic density hypothesis.

03138

#### **The effect of neighborhood and network characteristics on frequency of drug injection**

Williams CT, Latkin CA

Background: Neighborhoods and networks are important dimensions of the social context of drug users. Characteristics of neighborhoods and personal networks help define the constellation of risks for increased drug use. This paper examines neighborhood and network factors related to frequency of drug injection among inner-city drug users.

Methods: Socioeconomic data from the 1990 US Census were linked to individual- and network-level survey data from the SHIELD Study, an experimental network-oriented HIV prevention intervention targeting drug users in Baltimore City. The sample consisted of 1457 street-recruited current and former drug users from 161 census tracts around Baltimore. Two-level ordinal multilevel regression was used to model the effects of neighborhood socioeconomic status (SES) indicators and personal network characteristics on risk of daily injection compared to less than daily or no injection.

Results: Adjusting for individual and network factors, higher median household income and greater percentage of high school graduates in one's neighborhood increased the cumulative probability of injecting daily versus less frequently or not at all. Network factors associated with more frequent injection included having a higher percentage of drug injectors and daily drug users in one's network.

Implications: Lending support to the relative deprivation hypothesis, results suggest that disadvantaged drug users who live in relatively higher SES neighborhoods may be worse off than those who live in neighborhoods with relatively lower SES. Further investigation into the relationships between drug users' social contexts and their own drug use behaviors is needed.

03155  
**When development proceeds outside of the planning process: The quality of life of urban low-income and informal settlement communities in Accra, Ghana**

Golembeski C, McSharry McGrath M

**WITHDRAWN**

03161  
**Children's health and the residential environment: An exploratory study**

Mroczek J

The physical environment can impact children's physical health problems. Children living in high-rise buildings or unsafe neighborhoods may have less access to the outdoors because of safety, inability of parents to monitor, or the lack of safe outdoor play opportunities. Sedentary habits and lifestyles may result from these factors, putting children's health at risk.

This study examined the relationship between children's physical health and the physical environment. Thirty-eight urban and suburban parents were interviewed regarding their children's physical environments and health. A structured questionnaire asked about housing type, transportation, child's play activities at home and school, walking to school, parental attitudes/knowledge about physical activity, children's physical health and eating habits, and parental health. A more detailed time/activity budget was also administered. Each activity was rated for physical rigorosity on a 0-10 scale. Children's heights and weights were obtained, and Body Mass index was calculated according to CDC standards.

Preliminary results indicated that the sample contained few overweight children (per BMI calculations), however nine children who did not officially meet the CDC standard for overweight were nonetheless at high percentiles, meaning they could be at risk. Most children in this sample did have access to outdoor space. Despite this access, less than half engaged in sufficient physical activity (AHA, 2002). While these children's mean weight did not indicate obesity, their low activity levels could create future health risks. Our research highlights the need for parental and child education. If parents and children understand the importance of regular physical activity, then perhaps children's physical health will improve.

03162  
**The impact of the social environment on child health in distressed cities**

Mijanovich T, Weitzman B

Background: Residents of less advantaged communities have worse health than those in more prosperous areas. Many aspects of this association remain unclear, especially determining which area characteristics influence health even when individual characteristics are controlled.

Methods: Using data from the Urban Health Initiative's Survey of Adults and Youth in five distressed cities, logit models were estimated for parent-rated health of youth.

Results: Measures of neighborhood physical environment (crime, abandoned buildings, poverty, et al.) were significantly associated with parent-rated health of children when considered alone, but not when family-level variables were controlled. However, measures of the social environment (viz., measures of collective efficacy and social cohesion) retained strong associations with parent-rated child health in the presence of family-level controls, in both cities and suburbs.

Implications: Although aspects of the neighborhood physical environment are strongly associated with health, more advantaged families appear to be able to select better physical environments in which to live, leaving open the question of whether physical neighborhood characteristics make an independent contribution to health over and above the influence of family variables. Social characteristics of neighborhoods, however, are less highly correlated with family advantage (perhaps because these characteristics are more difficult to discern by families making residential location decisions), and appear to be independently predictive of health status controlling for a variety of other family and area-level factors. This suggests that strategies that increase neighborhood-level social cohesion and informal social control may have significant independent effects on health.

03165  
**Neighborhood disorganization as a determinant of drug injection behaviors: A structural equation modeling approach**

Williams CT, Wang J, Latkin CA

Background: Neighborhood environment is increasingly recognized as a contextual determinant of health, behavior and disease; however, the pathways through which neighborhood characteristics impact health behaviors are poorly understood. This paper examines pathways to elucidate how neighborhood disorganization may lead to the transmission of HIV among urban injection drug users.

Methods: Data were from a baseline survey of 701 injection drug users from the SHIELD Study, an experimental HIV prevention intervention targeting behavior change among drug users in Baltimore, MD. Structural equation modeling was used to examine psychological distress as an intervening mechanism between neighborhood disorder and drug injection behaviors.

Results: The relationship between neighborhood disorganization and injection behaviors in all models tested suggest that psychological distress is higher in more disordered neighborhoods, that distress leads to greater injection frequency and equipment sharing, and that injection frequency also predicts equipment sharing.

Implications: These data suggest that neighborhood characteristics may lead to HIV transmission through psychological distress and suggest that HIV prevention interventions ought to consider structural neighborhood factors that may indirectly lead to drug use and HIV transmission.

03174

#### **Income inequality and mortality: The role of race and residential segregation**

Nuru-Jeter A.

Objective: To examine the role of race and residential segregation in the relationship between income inequality and all cause-mortality.

Study Sample: This is a cross-sectional ecological study of metropolitan areas in the United States (N=107). Metropolitan statistical areas were selected using two criteria: (1) a population of at least 100,000, and (2) at least 10% African-American.

Research Methods: Data for this study come from the US Census Bureau for the 1990 and 2000 Decennial Censuses and the National Center for Health Statistics Multiple Cause of Death public use data files for the time period 1990-1999. Ordinary least squares regression was used to conduct race-specific analysis to assess both the direct and indirect effects of race on the income inequality/mortality relationship. Structural equation modeling techniques (i.e., cross-lagged causal modeling, path analysis, and latent variable SEM) were used to examine residential segregation and concentrated poverty as mediators in the pathway through which income inequality affects all-cause mortality.

Results: Study results show that income inequality is protective of mortality rates for both the total sample and for whites ( $p < .05$ ). Among African-Americans, income inequality is a positive predictor of mortality rates. These effects are not sustained after adjusting for residential segregation, suggesting that residential segregation confounds the income inequality/mortality relationship. Racial concentration moderates the effect of income inequality on mortality such that mortality rates increase with increasing income inequality for metropolitan areas with a high percentage of African-Americans compared to metropolitan areas with a lower percentage of African-Americans ( $p < .05$ ). Residential segregation also moderates the income inequality/mortality relationship. Mortality rates decrease with increasing income inequality for metropolitan areas with high levels of residential segregation compared to metropolitan areas with lower levels of residential segregation ( $p < .05$ ). Structural equation modeling results indicate that residential segregation mediates the income inequality/mortality relationship; and that the pathway through which income inequality effects population health varies by racial group.

Conclusions: The experience of income inequality and residential segregation is not the same across racial groups. Race and racial residential segregation confound the income inequality/mortality relationship. Future studies seeking to explore the effects of income inequality on population health should specifically account for the confounding role of race and residential segregation; and should consider that income inequality may be an indicator for other social processes such as racial residential segregation.

03181

#### **Clinical and environmental interventions improved asthma outcomes in minority children from Community/Migrant Health Centers (C/MHCs)**

Catz DS, Tobin JN

Background: The goal of this project was to evaluate clinical-based and environmental/home-based interventions in a population of minority asthmatic children aged 12 to 19 with mild persistent to severe persistent asthma treated in C/MHC.

Methods: Patients were randomized to either the experimental group (home visits with asthma education and products) or a control group. Clinical-based interventions included provider education and medication review. Analyses included: (1) cross-sectional (N=759), (2) intent-to-treat (N=220) and (3) overall effects of the intervention.

Results: (1) Medical records reviews showed regional differences in asthma medication use and health care utilization. (2) The interventions increased significantly the use of mattress and pillow covers, changed significantly some cleaning habits, such as dusting in the presence of an asthmatic child, and reduced significantly the problem of cockroaches in the Experimental group. Peak flow meter use and patients with a written asthma management plan were significantly increased in both groups. (3) No overall differences were found in ER visits, urgent visits or adverse events between the Experimental and Control groups. We observed significant improvements over time in all children. Pests and bedroom problems at baseline were associated with increased ER visits and adverse events at follow-up. Children receiving dust mites control products at baseline increased symptom-free days at follow up. Children receiving pest control products at baseline decrease ER visits at follow-up.

Implications: Assessing and mitigating environmental problems in the homes effectively improved asthma outcomes in minority children treated in Community/Migrant Health Centers, and should be added to routine asthma care.

03188

#### **Perceptions of neighborhood and health in Hamilton, Ontario, Canada**

Wilson K, Elliott S, Eyles J, Jerrett M, Law M, Olaman S

Background: There is growing recognition in both research and policy spheres that neighborhoods play a prominent role in shaping health. To date, much of the research on neighborhood and health measures neighborhood effects vis-à-vis area-based indicators of deprivation. In this paper, we seek to extend current knowledge by examining the links between perceptions of physical and social neighborhood environments and health.

Methods: Data for the analysis are taken from a cross-sectional telephone survey, designed to assess determinants of health at the local level, conducted between November 2001 and April 2002. The survey (n=1504) was administered to randomly selected households within four distinct neighborhoods in Hamilton, Ontario. Logistic regression analysis is used to examine relationships between three health outcomes (i.e., self-assessed health status, GHQ, and chronic conditions) and perceptions of physical and social neighborhood environments.

Results: The findings show significant differences in health status and neighborhood perceptions among the four neighborhoods. Almost 20% of respondents in the Downtown Core are dissatisfied with their neighborhood and 16% report that they do not like anything about their neighborhood compared to less than 5% in the suburban neighborhood. Results also show that perceptions of neighborhood environments are significant determinants of health status.



Implications: The research demonstrates the importance of neighborhood aspects for health beyond socioeconomic status. In fact, social and physical neighborhood environments appear to have both health promoting and health inhibiting effects on health status. This research therefore enhances our understanding of the links between neighborhoods and health but also emphasizes the need for local level health policies and planning.

03215

**Housing and health in the five boroughs: An assessment of the health effects of housing relative to neighborhood and individual socioeconomic status conditions in New York City**

Carpiano RM.

Background: Numerous social epidemiologic studies have explored how neighborhood factors influence health, but few (particularly in the US) have examined the role of housing conditions in relation to neighborhood and other socioeconomic status factors. This study seeks to better understand pathways through which individual socioeconomic status influences health by assessing the relative effects of housing, perceived neighborhood, and socioeconomic status conditions, testing direct mediating, and moderating effects.

Methods: This study used a cross-sectional sample of 827 adult residents of the 5 boroughs of New York City who were interviewed for the 1999 New York Social Indicators Survey.

Results: Logistic regression analyses indicate that among 3 indicators of housing conditions (ownership, perceived housing quality, and residency length), only housing quality was significantly associated with perceived health, net of perceived neighborhood conditions, family income, and other sociodemographics. With respect to neighborhood physical and social characteristics, respondents reporting neighborhood index scores the highest tertile were significantly more likely to report better health compared with those having scores in the lowest tertile. Housing and neighborhood quality were significantly associated with family income and partially mediated the association between family income and health. No significant interactions were found for housing and neighborhood conditions moderating the association of family income and health.

Implications: Further research is needed to explore housing conditions (physical, social, and psychological) that may influence the health of residents independently and in tandem with socioeconomic status and neighborhood conditions.

03216

**Mapping asthma hot spots: The geography of asthma and air pollution in the Bronx**

Maantay J, Strelnick H

Background: This study examines the spatial correspondence between the incidence of asthma hospitalization and the locations of environmentally-hazardous land uses and traffic. We propose that there is a spatial correspondence between areas having high rates of asthma hospitalization and high levels of air pollution, controlling for race/ethnicity and income. Reduced air quality and asthma have been associated with toxic air emissions from industrial processes, particulate matter, and increased levels of NOx and SO2 from diesel exhaust.

Methods: We are using Geographic Information Systems (GIS) to map and model the major mobile and stationary sources of air pollutants in the Bronx. Asthma hospitalizations for 1995-1999 from New York State's SPARCs database are geo-coded, mapped, and analyzed using ArcView spatial analysis and geostatistical software.

Results: Preliminary analyses suggest that there is a spatial correspondence between the rates for asthma hospitalization by census block groups and the locations of environmentally hazardous land uses and traffic in the Bronx. Our analyses suggest that hazardous land uses disproportionately located in minority and low-income communities.

Implications: The Bronx is an epicenter of the urban asthma epidemic, with an excessive environmental burden from solid waste transfer stations, Toxic Release Inventory facilities, traffic, and poverty. This is the first study in New York City. These analyses can be applied to other geographic locations, and the findings can be used to inform policy and planning decisions, especially regarding land use, zoning, environmental regulations and enforcement, and health care access.

03236

**Spatial distribution of the Human T-Lymphotropic virus types I and II (HTLV-I/II) infection among blood donors from a large urban area in Brazil**

Assuncao RM, Proietti FA

Background: Due to its large population, Brazil may have the highest absolute number of HTLV-I/II seropositive individuals, mainly in large urban areas. Screening blood donors for HTLV-I/II is mandatory in Brazil and the national public blood center network reflects about 80% of total blood collected in the country.

Methods: We conducted a cross-sectional study of the spatial distribution of HTLV-I/II infection among blood donors of Belo Horizonte branch of the public blood center network. The study population (1,022) was composed by 533 cases (positive Western Blot (WB), indeterminate WB and ELISA positive without WB result) and a random sample of 489 non-cases (HTLV-I/II serum negative). Cases and non-cases were georeferenced using the exact or an approximation of the household address reported at the blood donation interview.

Results and Implications: Using the difference between univariate K functions, we found no evidence that cases and non-cases differ in their spatial distribution. Also, we found no evidence that cases with and without WB result differ in the distance between their residence and the blood center. No donors without WB result were georeferenced by the exact address. These donors could not have received the letter inviting them to return to collect the second blood sample.

03237

**Geographical heterogeneous distribution of Human T Cell Lymphotropic Virus I and II (HTLV-I/II) serologic screening prevalence rates in blood donors from large urban areas in Brazil**

Catalan B, Proietti ABF, Proietti FA

Background: Brazil may have the highest absolute number of HTLV-I/II seropositive individuals mainly in large urban areas. Screening blood donors for HTLV-I/II is mandatory in Brazil and public blood center reflects about 80% of blood collected in the country.

Methods: An ecological study was conducted to assess the geographical distribution of HTLV-I/II serologic screening prevalence rates in blood donors from the 27 large urban areas in each state, from 1995 to 2000. Enzyme immunoassays (EIA) were used to test for HTLV-I/II.

Results: The mean prevalence rates were heterogeneous, ranging from 0.4/1000 in a city in the South to a rate 25 times higher, 10.0/1000 in the Northeast. Prevalence rates are lower in the main cities in the South increasing towards North/Northeast.

Implications: Three possibilities could be advanced to explain HTLV-I/II geographical variability in Brazil: population migration in ancient times, from Asia through North America, reaching first the North and Northeast area of Brazil; African slave trade during Portuguese colonization, for the most to the Southeast and Northeast and finally the significant Japanese immigration in the last century. Studies are needed to better understand the spatial heterogeneity of HTLV-I/II seroprevalence.

03240

#### **Spatial distribution of human and canine visceral leishmaniasis in Belo Horizonte, Minas Gerais State, Brazil**

Proietti FA, Olivera CDL, Assuncao RM, Reis IA

Background: Visceral Leishmaniasis (VL) has a worldwide distribution In Belo Horizonte (2,229,697 inhabitants), main city and capital of Minas Gerais State, only one human case was confirmed until 1993. In 1994, 35 human cases were notified. Since then, many cases are notified yearly. We analyzed the spatial association between VL in dogs and people, the space-time correlation of human cases, and suggest specific smaller areas to focus intervention.

Methods: We geocode 93.5% of 158 human cases and 11,048 (80.3%) of all seropositive dogs. We used linear regression to model the relationship between human incidence rates in a neighborhood and dogs' prevalence rates. We used Knox's test for human cases space-time interaction. The linear regression model for a given year is:  $Y_i = a + a X_{i-1} + e_i$  where  $Y_i$  is the logarithm of Bayesian incidence Rates of the neighborhood in year  $i$  for human, and  $X_{i-1}$  is the logarithm of dogs prevalence rates during the previous period (minus 3 months).

Results and Implications: Human and dog rates are ecologically correlated at the neighborhood level. VL spread quickly, but apart from the rates' magnitude, kept the same spatial pattern through time. It is possible to use this technique to pinpoint areas to implement control measures in a more efficient way.

03241

#### **Dengue seroprevalence in Belo Horizonte City**

Proietti FA, Caiaffa WT, Costa M, Morais MHF, Cunha MCM, DiLorenzo C, Kroon EG, Pessanha JEM, Bessa AMS

Background: In Belo Horizonte (2,229,697) inhabitants, main city and capital of Minas Gerais State, the first dengue case ever was notified in 1996. Since then, more than 80,000 cases were notified. We conducted a population based study to determine the magnitude of the epidemic in the city.

Methods: We obtained a two stage cluster random sample (house followed by house inhabitants), from 3 of the 9 BH City Health Department Districts, 322 in the East and 245 in the North District. Testing for Dengue 1 and 2 virus antibodies were conducted using neutralization reaction.

Results: 76.98% (495 individuals) were seronegative for both viruses, 0.78% (n=3) were positive for Den-2 and 4.67% (n=30) were positive for Den-1 only. The South District, the richest district of the city, had just 4 (5.26%) individuals positive for both viruses, compared to 66 (20.5%) and 43 (17.5%) in the less wealthy East and North Districts.

Implications: It is possible that environmental determinants increasing the risk of exposure to dengue virus are not homogenous throughout the city, indicating important inequality in the risk for Dengue infection.

03243

#### **Effects of neighborhood-level factors on infant health**

Reichman N, Teitler J

**WITHDRAWN**

03259

#### **Neighborhood context as a determinant of child health in Cairo, Egypt: The application of GIS and remote sensing to a study of intra-urban variability in health.**

Weeks JR, Fugate D

Background: It is well known that levels of health vary by overall levels of urbanization, but the literature is more limited on the issue of intra-urban variability in health levels. That variability is partly a function of the spatial clustering of people with characteristics that put them at a lower or higher risk of disease and disability, and is partly a function of neighborhood context-the characteristics of the built and social environment in which they live.

Methods: We illustrate a spatial approach to the study of urban health using data from Cairo, Egypt. Anthropometric measures of child health and its individual-level covariates are drawn from the Egypt Demographic and Health Surveys of 1995 and 2000. Neighborhood context data are derived by (1) classification of satellite data into land cover classes from which is a set of landscape metrics are calculated that summarize the built environment; and (2) development of measures of the social environment at the neighborhood level from the 1996 census. Spatial analytic and multi-level analytical statistical methods are then used to quantify and decompose the variability in child health into that which is accounted for by individual characteristics and that which is accounted for by the characteristics of the place in which those individuals are living.

Results: Preliminary results suggest that a significant fraction of the variability in child health levels is accounted for by neighborhood context factors, net of the individual-level covariates.

Implications: Health levels within cities are influenced in part by local environmental factors that may be identifiable through the measurement of neighborhood context from satellite data, in combination with census data.

03277

**The association between neighborhood factors and substance use and abuse: A hierarchical analysis in four low-income New York City neighborhoods**

Stuber J, Sisco S, Fuller C, Galea S

**Objective:** The purpose of this study is to examine the association between neighborhood-level factors and current individual substance use and abuse, controlling for levels of psychological distress, social stress, fatalism and social support. We are also interested in assessing if the relation between neighborhood characteristics and use of cigarettes, alcohol, and marijuana, are different.

**Methods:** The primary neighborhood factors of interest include: collective efficacy, signs of physical and social disorder, and deprivation. Neighborhood factors will be measured from two sources. In June 2003, we will administer a random digit dial telephone survey to approximately 1000 residents of four low-income New York City neighborhoods: the South Bronx, East Harlem, Central Harlem and Bedford-Stuyvesant. Through this method, we will collect information about neighborhood characteristics, substance use behavior and other individual level covariates of interest. These data will be complemented by data from archival sources that measure neighborhood characteristics, such as the New York City Department of City Planning, Department of Health and Mental Hygiene, the Police Department, and the 2000 US Census. Hierarchical models will be used to assess the association between neighborhood factors and substance use and abuse, and to take into account the potential correlated nature of nested data.

**Results:** Will be available for the International Conference on Urban Health.

**Conclusion:** Data from this study and others like it can inform both structural and individual interventions to minimize substance use and related negative health outcomes.

03280

**Recreational trails and community livability: An investigation of three urban trails**

Greer DL, Sharma M

**Background:** Physical inactivity and sedentary lifestyles remain a major challenge to the health of urban populations. Some public health researchers and practitioners have indicated the potential role that recreational trails may play in promoting physical activity in this subgroup. A limited body of previous empirical research has suggested that residents living along recreational trails generally perceive the presence of trails as beneficial to the value of their property. However the public health or safety issues directly linked to the trails have not been systematically studied. Past findings contrast somewhat with occasional anecdotal reports of concerned citizens who voice opposition to future trail development. Since the existing body of evidence is becoming dated, we sought to develop a more extensive body of evidence documenting the experiences of residents who actually live adjacent to urban and suburban trails.

**Methods:** A telephone survey (n=149) was used to contact residents living adjacent to three separate trail segments in the Omaha, Nebraska area. The trails were selected to highlight both differing trail conditions and demographic characteristics of the surrounding neighborhoods.

**Results:** In a high percentage of cases (85.2%) we found that a member of the responding household used their local trail at least occasionally. But trail usage varied considerably from one trail to another. Walking (90.6%) and bicycling (54.3%) were by far the most frequent types of trail use. Deterrents to trail use had more to do with the interests and orientations of the respondents themselves (i.e., time availability and interest), and rarely included trail-related issues such as safety, accessibility, or attractiveness. By-and-large, the trails seem to be viewed as desirable enhancements that, despite their occasional problems, make homes and property more desirable and improve the quality of neighborhood life. Even so, there were signs in our data that the use and acceptance of recreational trails may differ depending on the demographic characteristics of the surrounding neighborhood.

**Implications:** The results of our investigation provide clear support for the continued development of recreational trails as a means of enhancing the livability of urban and suburban communities, and suggest that trails may play an important role in developing a community ecology that encourages healthy physical activity. The trail differences we discovered may also have implications for those responsible for future trail development in urban and suburban areas.

03285

**Monitoring particulate pollution in urban areas: Limits of the current system, policy implications and recommendations**

Shemitz L.

**Background:** In cities across the United States, air monitors measure concentrations of coarse and fine particulate matter. These monitoring systems assume that air pollutants levels are consistent across urban areas. However, recent studies reveal significant spatial differences in particulate levels on a block-by-block basis. This paper explores the variability of airborne urban air pollutants and examines to what extent current regulatory practices capture the actual range of particulate matter concentrations in urban areas.

**Methods:** This paper examines data from federally mandated particulate monitors in one urban center – New Haven, CT – to determine how accurately such monitors capture concentration levels. Data is analyzed for temporal and spatial variability.

**Results:** Significant variability exists. There are marked, weekly patterns related to human activities. Daily levels can vary up to three-fold within one day and over five-fold between days within a single month-long period. Spatial variation ranges from 45 to 95 µg/m<sup>3</sup> between the two site-based city monitors.

**Implications:** The current monitoring system provides useful data on long term trends. However, critical, smaller-scale variability, across time and space, is not captured by the single site monitors. The monitors provide a sense of assurance that air quality is being measured but much critical detail is lost in the averaging, both temporal and spatial. The current monitoring system should be supplemented with data on a smaller-scale, using continuous monitors in many locations across a city. Given the prohibitive cost of such a system on a broad scale, a traffic count system can potentially be used as a proxy for continuous sampling, dependent upon further research into the correlation between traffic levels and particulate matter concentrations.

03297

**Effect of chelation therapy on the neuropsychological and behavioral development of lead-exposed children following school entry**

Dietrich, KN.

Background: It is unclear whether chelation therapy can help prevent or reverse the neurodevelopmental sequelae of lead toxicity. Our objective was to determine whether chelation therapy with succimer (dimercaptosuccinic acid) in urban children with blood lead levels between 20 and 44 ug/dL at age 12 to 33 months has neurodevelopmental benefits at age seven years.

Methods: The Treatment of Lead Exposed Children (TLC) study is a randomized, double-blind, placebo-controlled clinical trial conducted in four northeastern urban communities. After screening 1854 children, 780 were randomized to the active drug and placebo groups stratified by clinical center, body-surface area, blood lead level and language spoken at home. At seven years of age, 646 subjects remained in the study. Up to three courses of drug therapy were administered depending upon response to treatment. All participants received residential lead hazard control measures prior to and during treatment. Multivitamin supplements prior to and following treatment(s) were also provided. Main outcome measures were scores on standardized neuropsychological measures tapping cognition and behavior.

Results: Chelation therapy with succimer lowered average blood lead levels for about six months but resulted in no benefit in cognitive and behavioral endpoints.

Implications: Our previous finding that chelation therapy is not associated with neurodevelopmental benefits in urban children with blood lead levels below 45 ug/dL is confirmed. These results emphasize the importance of early screening and taking environmental measures to prevent exposure to lead. Chelation therapy cannot be recommended for children with blood lead levels in the range studied by TLC.

03298

#### **The geographic search engine: One way urban epidemics find susceptible populations and evade public health intervention**

Wallace R, Wallace R

Background: The HIV/AIDS epidemic in the United States has been recently marked by a demographic transition. What was a disease that primarily affected communities of gay whites now appears largely entrenched in minority communities. There are already several explanations for the transition. Introduced here is an additional hypothesis that details a spatial mechanism by which HIV and other urban epidemics search for susceptible populations.

Methods: A model by Wallace and Wallace (1995) for the characteristic area of the HIV/AIDS epidemic is modified to include a group selection algorithm by which the epidemic explores the epidemiological suitability of multiple populations.

Results: By expanding its characteristic area HIV encompasses a greater number of communities into the epidemic. The more groups affected, the more likely the epidemic will find populations that provide a good epidemiological fit. In such populations HIV appears to find refuge from subsequent contractions in the epidemic. The group selection process alleviates a central problem epidemics face: Successful epidemics must range farther to cover susceptible populations large enough to maintain infection rates. But the more intense the group selection, the more likely the epidemic will find suitable populations, and the less pressure on the epidemic to maintain its geographic momentum.

Implications: The spatial dynamics of urban epidemics may reflect more than just changes in epidemiological pattern. Such dynamics appear also to embody mechanisms by which epidemics search for susceptible populations. By shuffling through sociogeographic refugia epidemics can evade intervention. Public policies for short-circuiting the spatial mechanism will be discussed.

03305

#### **Growing up healthy in East Harlem: Exposure assessment of environmental factors in the urban built environment of East Harlem, New York**

Galvez M, Brenner B, Teitelbaum S, Britton J, Morland K, Moskowitz H, Forman J, Romero H, Trilla M

Childhood obesity has become epidemic in the United States, especially among African-American and Latino children. East Harlem, a predominantly minority community, has the highest prevalence of obesity of any neighborhood in New York City. East Harlem community leaders, who advise the Mount Sinai Children's Environmental Health Center, including members of the East Harlem Community Health Committee, Boriken Neighborhood Health Center and Settlement Health, have recommended that childhood obesity in East Harlem become a major Center priority. Environmental factors are increasingly acknowledged to influence development of overweight and obesity. Leaders in East Harlem have identified a series of environmental factors unique to the urban built environment that appear to be barriers to healthy lifestyles and promoters of childhood obesity. These include: paucity of play-spaces, concerns about safety, lack of fresh foods and limited opportunities for youth activities. To assess and characterize these factors, this proposed Community-Based Participatory Research (CBPR) project will study structural features of the urban built environment of East Harlem with particular attention to: (1) accessibility of parks and recreational areas (2) opportunities and spaces for physical activity (3) safety (4) neighborhood aesthetics and (5) accessibility to healthy foods. We plan additionally in East Harlem to examine children's exposures to contemporary-use synthetic endocrine disruptors (EDs), chemicals that may alter endocrine function, in the built environment – phthalates and bisphenol A - as well as phytoestrogens. Recent national surveys conducted by the Centers for Disease Control and Prevention (CDC) found that residues of EDs are present almost universally in Americans, but that there exist significant disparities in body burdens by age, sex, race and ethnicity with highest levels found in children and in minorities. Sources of ED exposure appear to include diet, personal care products and plastics. We plan to assess children's biological levels and environmental sources of ED exposure in the urban built environment of East Harlem, New York. This project will continue a tradition in our Center of strong partnership with the East Harlem community.

04323

#### **Outcomes of a social networking approach (SNA) to syphilis case finding in a street nurse program: Improved case finding and contact identification**

Knowles L, Ogilvie G, Taylor D, Rekart M

Background: Since July 1997, infectious syphilis cases have increased dramatically in Vancouver, British Columbia. Most cases occur in sex trade workers and their patrons in Vancouver's downtown east side. Because traditional contact tracing methods have produced minimal effectiveness in linking cases, a social networking approach (SNA) was adopted.

Methods: In February 2002, street nurses (SN) and peer outreach workers (PW) used a SNA, including interviewing cues and social networking questions to enhance contact tracing and to gather sexual, social and drug network information. SN obtained blood samples and provided treatment on the street. A syphilis working group met weekly to develop strategies and respond to emerging outbreak issues. Network data gathered by SN and PW was collected on a uniform data entry sheet and analyzed in Microsoft Excel. Preliminary social network maps were drawn using Microsoft PowerPoint, and provided to the SN. Physicians communicated positive results rapidly to SN, and SN used network maps to identify and test previously known contacts of cases. Results will be displayed at our poster session.

Implications: Incorporation of the SNA into an existing SN program improved identification of cases of syphilis and significantly increased the number of cases lined to other cases.

## Community-based Public Health (06)

06021

### **Delivering children's services in an urban center: The promise of partnerships**

Rogers G, Este D, Lawson A

Background: During the past decade executive directors of child serving organizations in many cities have formed several partnerships based on mostly good will and enthusiasm but with limited attention to the responsibilities, accountabilities and liabilities of each relationship. These creations go by names such as, strategic alliances, consortiums or networks. Nonprofit agencies are collaborating with each other as well with business and government. Sometimes they are encouraged but more recently they are demanded or artificially forced into existence. Funding is increasingly contingent on coming to the table with your 'partners'. As a result, countless complicated relationships are created. However, much time and potential is lost because of the lack of a firm conceptual foundation upon which to negotiate and build these partnership arrangements. Along with this trend towards partnering is the underlying assumption that partnering will contribute to providing seamless service delivery and operational efficiency, will ease fund development and demonstrate fiscal responsibility and lead to a reduction of program duplication. However, do we really know what we are doing? Do partnerships really improve service delivery and lead to more efficient operation and better outcomes of children and family in urban centers? As part of a two-year federally funded study of partnership-making activity in children's services in Calgary Canada, this paper presents the findings to date that contribute to making sense of partnerships in the delivery of children's services in an urban setting. Calgary is a large metropolitan center in western Canada of close to one million people.

Methods: Using a case study approach, the research is investigating partnership-making activities – how selected partnerships are created, maintained, and perceived by participants to better understand the practical experience of inter-organizational collaboration by child serving organizations and to conceptualize the partnership process. A case study approach is preferred because researchers, service providers, and funders are only just beginning to understand what is involved in the creation of partnerships and to determine if they actually result in improved service delivery to children in urban settings. A purposeful sampling method was used to identify the organizations to ensure a number and range of partnerships could be accessed across three levels of intervention in children's services. Lincoln and Guba's (1985) case study format outlining the problem, context, issues and lessons learned for each partnership-making activity is being applied. The qualitative software tool AtlasTI is being used to aid data analysis. The analysis is both aggregated and particular, searching for the common patterns within and across cases, as well as noting any unusual factors that affect practice.

Results: Even though working together is second nature, the creation of partnerships is difficult, sometimes unsuccessful and painful, and always complex. When it works, it is a wonder. The results reveal the struggles and challenges of making partnerships within the children's services in an urban setting as well as the reasons for success and sustainability. The results offer assistance to those who enter into partnerships by outlining the procedures best followed, the challenges that need to be negotiated carefully, and the pitfalls that should be avoided.

Implications: The study contributes to the limited existing empirical literature that analyzes the value and impact of partnerships in children's services.

06033

### **Community hospital mentoring collaboration for internationally trained professionals**

Silkowska-Masior B, Yardy G

Background: The international labor market has undergone enormous change over the last decade as technology and globalization have redefined the world of work. Today, in many countries, immigration is a key source of skilled labor and a vital tool for economic development. As such there is a recognized urgency to improve labor market entry of immigrants so that their skills can be fully utilized in the workplace.

Methods: Methods included the following: (1) Development and testing of the first of its kind mentoring program for internationally trained professionals in partnership with community service providers, (2) Engagement of the hospital in addressing of broad determinants of health (unemployment or underemployment of internationally trained professionals), (3) Formation of hospital and community advisory committees, and (4) Design and testing of training materials, matching, and evaluation.

Results: Participation of 8 community organizations hospital senior managers and directors occurred in roles as advisory teams. In addition, there was (1) Involvement of 22 hospital departments, (2) Creation of 60 mentoring partnerships with senior hospital management staff and internationally trained professionals, (3) Production of 2000 copies "How to" manual for implementation in a wide range of settings, and (4) Significant interest in adopting a model in other workplace settings including government, educational institutions and others

Implications: (1) Skills of internationally trained professionals are being fully utilized through employment in their trained profession. (2) Transferability of the model through the manual beyond the health sector. (3) Increased awareness of participating staff regarding employment of internationally trained professionals.

06037

### **The commonwealth in hard times: A community-university partnership to improve the life, health and social functioning of seven edge-communities in Baltimore City**

Leach ML.

The Baltimore City campus of the University of Maryland (UMB) includes the professional schools of medicine, dentistry, pharmacy, nursing, social work and law. Together with its affiliated hospitals and clinics UMB, which has been located in downtown Baltimore for nearly 200 years, is the second largest employer in Baltimore City. Nine years ago the university partnered with the city in Empower Baltimore, a \$100 million project funded by HUD to improve social and economic conditions in seven edge neighborhoods around the City, four of which border the UMB campus, and all of which suffer from high rates of poverty, crime, disease, illiteracy, sub-standard and/or abandoned housing and unemployment. The university's role in this partnership has been coordinated via the Community-University Partnership Council, (COPC) separately funded by HUD and based in the Office of the President of UMB. Through COPC's auspices, and in response to jointly identified needs and opportunities, UMB is currently providing extensive health-related, legal, social and community organizational assistance in a wide variety of areas, including, for example, training community health workers to meet basic

needs of residents suffering from diabetes and cardiovascular disease, identifying housing exploitation issues and training and supporting residents in dealing with these, and setting up and running a charter high school. Empower Baltimore funding will end in about 18 months, and budget challenges facing federal, state and local government, the university system and NGO's are raising questions about the medium- and long-term sustainability of COPC. With outside assistance, COPC has embarked on an extensive formative and summative evaluation of its achievements. This evaluation is in process. We would provide an interim report on progress, on what we have learned to date, and on how we anticipate going forward in the changed fiscal and political environment.

06061

#### **Community health workers and community voices: Promoting good health**

Ro M, Treadwell H, Kularatne P

**Background:** Health promotion and the delivery of health services is evolving as urban populations have become more diverse. Although minority populations have historically been overrepresented in urban areas, there remains a dearth of successful strategies used to address the high burden of disease and lack of access to health care among these groups. Engaging community health workers (CHWs) in health promotion and health service delivery is increasingly being shown to be successful in reaching communities of color. This paper examines how CHWs can address the problem of health disparities and poor access to care in urban communities of color as demonstrated through the W.K. Kellogg Community Voices: Health Care for the Underserved Initiative.

**Methods:** This paper relates the work of the Community Voices learning laboratories, initially funded in 1998. Models of CHW programs and results of the CHW work are provided. The findings of this paper have been reviewed by the Community Voices project directors and CHWs whose work is represented.

**Results:** CHWs have been instrumental in linking individuals from underserved communities to health providers. Over the course of this five-year initiative, CHW programs were developed or tailored to provide outreach, health education, and limited health services to communities of color. Models and key elements of CHW programs will be presented in detail. Preliminary measures of impact (e.g. enrollment data) and changes to existing health care infrastructure (e.g. hiring policies) will also be presented.

**Implications:** CHWs provide direct links to underserved communities. They offer a unique, economically sound service. Policy recommendations will be provided.

06072

#### **Developing a communication framework in informal sectors through which to send health messages**

Cole BL, Shackett K

**Background:** This proposal seeks to engage historically disenfranchised communities – especially culturally and linguistically isolated populations in the Bronx- in available HIV/AIDS services. Due to isolation and non-acculturation, available services are often underutilized or not accessed.

**Methods:** The primary method for this program utilizes outreach workers who engage these specific target populations in Spanish, French, and several languages indigenous to West Africa spoken by many immigrants in the Bronx. This outreach will engage immigrant communities in their daily behaviors including their commerce, social and religious activities. Informal media, street outreach in parks, churches, mosques, ESL classes, sweatshops and businesses will be targeted. This project is a bottom up approach to reach potential clients in need.

**Results:** This program will engage immigrant populations in established and underutilized HIV/AIDS services and will result in increased enrollment in the services of the agencies in the Bronx community. Process evaluation will be used to determine which methods of outreach are most effective.

**Implications:** This program seeks to facilitate in the acculturation process by helping isolated immigrant populations who are especially at risk for contracting the HIV virus and does so in a manner culturally sensitive to the various stakeholder groups. New enrollments would be surveyed and logged for a real time quality control loop – methods that reach clients will be increased in number while methods that do not will be abandoned or modified. There are broad reaching implications for streamlining health messages into hard to reach marginalized populations. This program investigates the informal communication flows that exist in isolated communities in order that formal institutions can more readily access these channels for effective and quick response and collaboration for communicating important health messages. From this information about communication flows, a model can be made for future interventions.

06077

#### **Working together, working for health**

Tomeldan D.

The Asian Society for the Intervention of AIDS (ASIA) has developed an HIV/AIDS education and prevention program using cultural, indigenous, and religious forms, for Asian migrant, prostituted, and trafficked women. Our goal is to do participatory-action research with this community in order to include the voices of marginalized women in the development of an outreach program. ASIA is also working with a non-governmental organization based in Manila, Philippines, the Women's Education, Development, Productivity, and Research Organization (WEDPRO, Inc.). We are developing an understanding of the landscape and range of experiences of Asian women engaged in the sex trade. Vancouver is a destination location for many women who are trafficked from Asia. In return we will support WEDPRO to integrate HIV/AIDS prevention and education into their preexisting programs, which support women targeted for trafficking. We will develop a best practices model to decrease the spread of HIV and gain understanding of the conditions of vulnerability that include poverty reduction, issues of gender exploitation, and other relevant concerns. This paper will provide information about the project in its current stage. It will include information about recruitment and training of peer educators/researchers, outreach to massage parlors, interviews with women who board ships to provide sex, outreach to the Asian transgender community, and other activities the peer educators/researchers are doing. We will also discuss challenges and strategies to address the needs of women engaged in sex work, the forces that drive women into sex work, and the factors that heighten sex workers' vulnerability to HIV infection.

06091

#### **Asthma Center on Community, Environment and Social Stress (ACCESS): Community-based participatory research in Boston's urban communities**

## WITHDRAWN

06101

### **Community-based research: Understanding a multidisciplinary approach to addressing urban health issues**

Travers R, Narciso L

Background: Community-based research (CBR) has become a recognized tool for addressing urban health issues. CBR is premised on the principles of capacity building for community and academic partners, empowerment of communities through all stages of the research process and action outcomes and social change. Another central principle of CBR is the development of multidisciplinary, collaborative partnerships between community members, service providers and academic researchers to ensure that research is not only relevant but ethical and methodologically sound.

Methods: To identify barriers to and facilitating factors for CBR, we sought input from multiple stakeholders in Toronto, Canada, one of the world's most culturally-complex cities. The results of two environmental scans with representatives from the community, community-based health organizations and the academy constitute the basis of our findings.

Results: Our environmental scans found that challenges to conducting CBR include power differentials between academics, community researchers and community-based organizations, a lack of acknowledgement of diverse skill sets, inequitable access to research funding, communication barriers and mismatched priorities. Strategies for facilitating successful CBR partnerships identified by participants included building an understanding of the value of community-based research, active sharing of research priorities, effective transfer and uptake of research findings and equitable participation and sharing of respective knowledge, expertise and resources.

Implications: Addressing urban health problems has increasingly required multidisciplinary approaches. Our findings suggest that community-based processes can greatly assist urban health research teams in attaining their goals.

06104

### **Reducing diabetes risk factors in Detroit: The community-level intervention of the REACH Detroit Partnership**

Kieffer E, Trice R, Guzman G, Spencer M, Palmisano G, Urban J, Burkett M

Background: Numerous barriers to healthy lifestyles exist in low-resource urban environments. The REACH Detroit Partnership is a multi-level intervention that addresses diabetes and its risk factors in African American and Latino Detroit communities. REACH community and social support interventions (CLI) are designed to reduce barriers by engaging community members in planning, implementing and sustaining resources that support healthy eating, regular exercise and diabetes self-management.

Methods: Community meetings, interest surveys, host site guidelines and asset mapping guide activity design. The CLI is evaluated with case studies that include interviews with REACH staff, host organizations, activity leaders and participants to document roles, planning steps, barriers and strategies for ensuring success and sustainability. Maps, planning and attendance forms complement the qualitative data.

Results: Salsa, hustle and armchair aerobics classes, walking groups, community gardens, healthy Latino and Soul food demonstrations, produce minimarkets and diabetes support groups are being conducted in both communities, with good attendance. Case studies reveal that participation and sustainability increase when host organizations implement community interest surveys, and participate actively in planning and promoting activities, and identifying future leaders.

Implications: Community residents will participate in group activities that increase opportunities for healthy eating, regular exercise and diabetes self management if they are held in accessible and welcoming locations, and are affordable, enjoyable and provide social support. REACH staff are developing a train-the-trainers model for working with host agencies and activity leaders so that current and future activities can be sustained when external support is reduced.

06107

### **Planning for the future of mental health: Challenges faced by Community Services Board**

Banks C, Houseman C

Background: Mental health is an important urban health issue. Approximately, one in five Americans experience a mental condition in the course of a year, and approximately 15 percent of all adults who have a mental condition also experience a co-occurring substance use disorder. Community Services Boards (CSB) are established in cities to oversee mental health services to vulnerable urban populations. With budget cuts continuing into the foreseeable future, accurate assessment, planning and evaluation of services are paramount to the quality of life in urban areas.

Methods: An assessment process was designed and utilized by an urban CSB to develop a strategic plan for the upcoming three years of service to their community. Data was gathered to determine if the CSB was fulfilling its mission to provide a system of mental health, mental retardation and substance abuse prevention, treatment, and rehabilitation services for the citizens of that city. The program was evaluated to determine if the services provided were meeting the needs of consumers, providers, CSB employees and the community. Qualitative and quantitative analysis was performed on data from surveys, face-to-face interviews and group forums.

Results: Information regarding gaps in services, barriers to services, and satisfaction levels were identified to inform the strategic plan.

Implications: The CSB is enabled to prioritize and reorganize areas for services to meet the needs of the community. Data is also available to support requests for increased CSB funding through both traditional and non-traditional approaches. Lessons learned can be applied to other urban CSBs.

06110

### **The REACH Detroit Project: Six-Month findings from the Family Intervention**

Two Feathers J, James S, Sinco B, Anderson M, Kieffer E

Background: The Family Intervention component of the REACH Detroit Project aims to improve blood glucose control of 175 individuals (100 Black, 75 Hispanic) with Type II diabetes by improving eating habits, daily physical activity, and diabetes self-management skills and behaviors.

Methods: Eight Family Health Advocates were recruited and trained to assist the 175 individuals, and their families, to integrate positive health habits into their daily lifestyles. Baseline questionnaire data were obtained on the following "client" variables: eating habits, physical activity, diabetes self-management, satisfaction with health care providers, etc. Clinical measures of hemoglobin A1C, body weight, blood pressure, cholesterol were also obtained. Follow-up questionnaires are administered at 6, 12, 18, and 24 months. Participants attended five healthy lifestyle curriculum meetings delivered by the Family Health Advocates. Qualitative data was collected to assess participant satisfaction and learning.

Results: The retention rate for the curriculum meetings was 80%. Participant feedback reflected high satisfaction with curriculum content, format and delivery of the meetings. At 6 months, there were statistically significant improvements in physical activity ( $p=.0002$ ), vegetable consumption ( $p=.0003$ ) and consumption of fruit flavored drinks ( $p<.0001$ ). Daily self-monitoring of blood sugar increased significantly ( $p=.0003$ ). No changes were observed in consumption of fried foods or whole grains/fiber.

Implications: A culturally tailored healthy lifestyle curriculum developed with community input may be important factors in participant satisfaction, behavioral change, and retention in diabetes lifestyle education programs.

06115

#### **Developing the role of community support worker for the Urban Emergency Department**

Gaunt K, O'Neill J, Cass D, Spence JM

Objective: To define user satisfaction with a Community Support Worker (CSW) role in the Emergency Department (ED). BACKGROUND: Conservatively 15% of ED patients at St. Michael's Hospital (SMH) are homeless or at high risk for homelessness. In response to our Hospital Community Advisory Panel (CAP) of the Homeless and Underhoused, the CSW role was created in March 2002. In collaboration with community partners (CP's) and the ED, the CSW mentors vulnerable populations through the Emergency Medical System, providing non-directive listening, food, community linkage, and advocacy. The CSW sees 3500 clients annually. The current CSW was homeless. He brings a unique perspective to the role and develops an excellent rapport with clients who traditionally mistrust the system.

Methods: The CSW role was evaluated using a qualitative telephone survey. Five key CP's who refer the majority of homeless clients to SMH ED for care were contacted to determine the level of satisfaction with care with and without the CSW. Patient and ED staff surveys are underway.

Preliminary results: All CP's described the level of satisfaction as "somewhat satisfied" with quality of care and communication without CSW involvement, and were "very satisfied" with CSW involvement. Increased compliance with the emergency discharge plans and a decrease in "left without being seen" rate was also noted. The CAP has also endorsed the role.

Implications: The CSW role has strong support from the community and improved quality of care and communication with CP's. Further evaluation is ongoing.

06120

#### **The development of an inner-city based community art and economic initiative for high risk and vulnerable populations: The Creative Works Studio**

Fryszberg I, Grondin, M

Background: Creative Works Studio is a community art program developed by St Michael's Hospital. Program clients have complex psycho-social and health needs such as: mental illnesses, homelessness, chronic diseases, social isolation and addictions. As a bridge to community integration it provides emotional support, counseling, and work opportunities. The Studio program uses art as a tool to develop a caring community, fostering economic development projects such as art exhibits that generate public awareness for mental health, social justice. Program goals include utilization of art to reduce stress, increase wellness, decrease hospitalizations and reduce isolation.

Method: Client intake assessment determines level of functioning and client centered goals.

Program design is an open ended group for approximately 12-15 participants. The sessions include visual and breathing meditation techniques, as well as regular focused art instruction. Various artistic "mixed" modalities are utilized and adapted to each individual's needs.

Results: Anecdotal feedback from clients as well as referring agencies indicate that program participants have increased self-esteem, decreased chronic pain, have returned to meaningful employment and educational programs, and exhibited an overall decrease in hospital psychiatric readmissions. A formal program evaluation will provide outcome data promoting additional funding opportunities to secure and further expand programming.

Implications: Mental Health Reform and deinstitutionalization created an unrecognized need for innovative services and supports related to mental health and chronic health issues. The Creative Works Studio is an excellent example of an innovative program that supports and promotes wellness to this population.

06121

#### **Health professional students launch "I Speak" Campaign with local community**

Tam A, Shahid-Salles S, Laborico A, Van Isschot I

Background: Title VI of the Civil Rights Act of 1964 requires medical providers who receive Federal funds to provide language assistance to limited English proficient (LEP) individuals in order to ensure equal access to services. This law affects an estimated 38,000 LEP residents in the District of Columbia. LEP individuals, especially recent immigrants, are unlikely to be familiar with Title VI and an assessment of local providers suggested low understanding and compliance. A team of health professional students collaborated with a Latino community clinic and a regional interpreters association to develop and implement the "I Speak" campaign.

Methods: Strategies to educate both patients and providers about Title VI were formulated. A bilingual Spanish/English "I Speak" card was developed as a tool for LEP persons to 1) know their rights and 2) communicate their language needs. Presentation and resource materials were developed for providers.

Results: 170 of the 5000 "I Speak" cards produced were distributed at a community clinic and health fair. 45 community members were given education about Title VI. Community feedback indicates that the card is informative and useful. Provider feedback is pending.

Implications: Inadequate interpretation services can have serious health care consequences – delayed care, misunderstandings, and decreased patient satisfaction and compliance. The provision of language assistance in accordance with Title VI can minimize these consequences and diminish the disadvantages that LEP persons encounter. Provider presentations, assessments of patient utilization, and expansion of the campaign to include other languages are planned for the future.



06135

**Identifying the community problem solving capacity for addressing youth violence**

Yonas MA, Burke JG, O'Campo P, Thomas A, Gielen AC, McDonnell KA

**Introduction:** Youth violence in America has been called a public health epidemic – more destructive than motor vehicle crashes, polio, and AIDS. Despite widespread prevention efforts youth violence persists, particularly in urban settings. This analysis used qualitative research methods to explore how community leaders and young people characterize and collectively address youth violence.

**Methods:** Principle components analysis was used to identify high and low violence, low wealth neighborhoods and target neighborhood clusters that varied substantially in their experiences of violence. Qualitative interview techniques were used with community leaders to elicit meaningful and insightful information regarding community capacity and the influence of neighborhood level factors. Open-ended questions focused on exploring risk and protective neighborhood level and social dynamics. Focus group sessions with neighborhood youth further explored the problem solving capacity and the role of structural level factors.

**Results:** These results support the premise that neighborhoods with increased presence of community capacity productively addressed neighborhood violence through direct and indirect efforts. Additionally, community leaders and young people provided key insight into the dynamics and impact of neighborhood level factors such as vacant housing, illicit drug use and distribution, municipal services and religious centers.

**Conclusion:** The results of this investigation further highlight the significance of working closely and respectfully with neighborhood residents in identifying, understanding, and addressing collectively community public health issues such as youth violence.

06217

**"Get out here and see what's going on:" Participator research bridges the gap between program design and implementation.**

Kaufman L.

**Background:** Health promotion program developers design interventions intended to improve health in our urban communities. But, when programs they design come to life – when nurses, caseworkers, and outreach staff implement them – a gap emerges. Even the best plans struggle when faced with community realities. Social, political, and cultural complexities hinder smooth project implementation. This paper argues that participatory research can address that gap between program design and implementation by representing programs against the backdrop of local realities, and developing collaborative solutions to improve them. Healthy Start Brooklyn (HSB), a federally-funded program to improve perinatal and family health, has successfully employed participatory research to promote program sustainability.

**Methods:** The HSB research employs conventional methodologies of quantitative data collection and analysis. Researchers also use participatory and ethnographic methods to understand how the program actually unfolds. These methods attend to issues regarding work practices, client experiences, and community participation – issues that account for the disjuncture between program planning and implementation.

**Results:** HSB staff are at the front line of the program. Staff mediate program design and implementation, define the program to the community, and recruit and work with clients. Research reveals that staff also creatively interpret program guidelines: they provide services to participants for whom they do not collect data; they unilaterally expand the range of services offered to participants; and they make outreach and ongoing recruitment process. Initially, management perceived their actions as contrary to program goals. Yet, researchers found that staff use those strategies to help navigate a vulnerable population in underserved urban neighborhoods. Research also shows that many staff consider men outside the program's purview, because they perceive that men neither understand nor fully participate in pregnancy, childbirth, and child rearing. Those perceptions represent commonly held notions in the community, but they also prevent the program from reaching its entire audience and goals.

**Implications:** Participatory research with HSB staff has led to innovative understandings that help bridge program design and implementation, and ensure program sustainability. It involves activities that are more demanding – and more politicized – than conventional evaluation methods. But, staff involvement in the HSB research and evaluation has encouraged a greater stake in program goals and expanded expertise and understanding among management, staff, and researchers alike.

06218

**Gestational diabetes participatory research project**

Walsh E, Graham H

**Objectives:** To create opportunities for Tamil speaking women to identify and explore issues related to gestational diabetes (GD) and preventive postpartum care, and to support the development of an action plan to address these issues.

**Background:** According to the WHO, women of Southeast Asian ancestry have a high incidence of GD and it increases when persons move from their developing country to a developed country. In 2001, 34% of The Scarborough Hospital's (TSH) GD patients were from Sri Lanka. Almost 50% of women who have GD go on to develop diabetes within 5 to 10 years.

**Methods:** Using a participatory research process, Community Researchers, all Tamil women, carried out the project with TSH providing research coordination, facilitation and structural supports.

**Results:** There is a high degree of anxiety related to the lack of GD information. Women reported that the best information they received was the Tamil pamphlets developed for the Project – Gestational Diabetes Questions and Answers Part 1 and Part 2. They also prefer to receive information through informal peer supporting groups. The Tamil Eelam Society in partnership with some of the research participants, the Self-Help Resource Centre, the Diabetes Education Community Network of East Toronto and the Canadian Diabetes Association have agreed to develop peer support groups for Tamil speaking women who have / had gestational diabetes.

**Implications:** Current information networks (e.g. family physicians and diabetes education centers) do not work for this community. Tamil women prefer informal community led support networks. Hospital's role includes community building as well as direct service.

06221

**Realizing community-based public health through committed partnership: The Harlem Children's Zone Asthma Initiative**

Ortiz B, Northridge M, Vaughan RD, Shoemaker K, Jean-Louis B, Hutchinson VE, Nicholas SW

Background: Central Harlem has one of the highest burdens of pediatric asthma in the United States, and has the third highest pediatric hospitalization rate in New York City. In response to this crisis, The Harlem Children's Zone, Inc. (HCZ, Inc.), the Department of Pediatrics at Harlem Hospital Center, and their partners, received core funding from the Robin Hood Foundation to implement the Harlem Children's Zone Asthma Initiative (HCZAI), a population based intervention designed to improve the health of children with asthma enhanced primary care.

Methods: With the foundation laid by the Harlem Children's Zone Project-a multiyear, comprehensive community building strategy of HCZ, Inc., a more comprehensive approach to asthma care is possible. A host of educational, social, and environmental programs were bolstered through additional partnership with Columbia University, the New York City Department of Health and Mental Hygiene, and the Brazelton Touchpoints Center.

Results: To date, 1304 children ages 0-12 years have been screened via a written questionnaire, 26% of which have asthma. Of the 328 children with asthma, 31% have a family member who smokes in their homes, 56% have been to an emergency room in the past year, and 25% have missed school in the last 14 days due to their asthma.

Implications: To ensure quality health care services to poor children with asthma, the HCZAI is dedicated to long-term interventions that supplement the private and public resources now available in Central Harlem to improve the health and lives of enrolled children and their families.

06231

#### **Outreach: Targeting high risk women through community partnerships**

Barry K, Britt DW

Background: The problem of involving the most impoverished layer of minority women in the participation and maintenance of their own health has frustrated the medical community. Screening of cervical and breast cancer has been "underused" for more than ten years by those women at greatest risk. Despite efforts by community outreach professionals to create viable access to medical care, approximately 4,800 women die needlessly each year in the United States of cervical cancer:

Methods: To effectively involve impoverished minority women in their own health care, an essential first step is isolating those areas within a community at highest risk and mapping the structural characteristics that may impede health maintenance. Mapping creates essential data for the purpose of analyzing institutions and resources in order to build a portfolio of strategies. Risk mapping provides compelling graphic distributions of problems that must be analyzed to create viable mechanisms for outreach.

Results: Methodological model for the purpose of community health planning.

Implications: The article presents a financial profile for seven patients diagnosed with invasive cervical cancer. The total hospital cost for these seven patients exceeded \$ 1,000,000.00 dollars. The average cost per patient was \$152,630.00. Using methodologies of mapping, institutional/ structural analysis, and developing highly personalized trust building interaction within communities, the problem of involving high risk women in their own health maintenance is more likely to occur saving health care resources and lives.

06250

#### **A model for partnership in health promotion**

Groves SL, Maguire MC, Kushto-Reese K

Communities, health parishioners and universities working partnership hold promise for improving health and well being of urban populations. A goal of the Johns Hopkins University School of Nursing is to prepare nurses ready to meet the challenge of the twenty-first century. The program requires partnerships where students can learn and practice primary prevention and health promotion. A board member for the faith-based services was appointed for the newly opened school. However, they were unable to supply care as they had extremely limited funds. Since the university wanted clinical sites and the church-school needed health care, they formed a partnership to meet both needs in an inexpensive way. Together, they developed goals to provide a healthful school environment, identify and solve health problems, monitor immunization status, provide comprehensive age-appropriate health education, and improve access to primary care, particularly for children with chronic health problems and frequent absences. Nursing students and faculty from several different courses give care at the school, making progress in meeting the initial goals. Prevention strategies that target the entire community to meet new public health challenges like violence, substance abuse, and chronic disease have been implemented. The partnership utilizing shared resources has been highly successful and other communities might benefit from this type of partnership.

06268

#### **Benefits of a church-sponsored community health fair in an urban setting**

Goodman J, Parker D, Hilton K, Beard H, Plichta SB, Jones JE

Purpose: Minority populations often lack trust in traditional information sources and may have difficulty communicating with healthcare providers. Many minority community churches have assumed a primary role in promoting healthy behaviors. Community Health Fairs that provide free health screenings can identify pre-existing conditions and make referrals for follow-up care. This study examined the health care needs of participants in a church-sponsored health fair, and the extent to which a community health fair can address those needs.

Method: A church-sponsored health fair consisting of booths providing information on a variety of topics and screening stations for blood pressure, glucose, cholesterol, sickle cell anemia, prostate cancer, and dental examinations was conducted at a rural church in Southern Virginia.

Results: 67 people attended the health fair with 59 completing the survey. Participants were predominately female (57%) and African-American (88%). Ages ranged from 18-84, and most possessed greater than a high school education. Of those screened, 64% had high blood pressure, 11% high blood glucose, 18% high cholesterol, and more than half were in need of urgent dental care. Over 20% of participants had a screening result that made them aware of a possible chronic health condition and were advised to seek follow-up care. A third of the participants witnessed that the fair provided health information they did not previously possess.

Conclusions: Findings support church-sponsored health fairs as a viable strategy to reach the medically underserved, especially communities that depend on the church to provide guidance in, among other things, their health information.

06291

#### **Learning from our mistakes: Challenges to community based environment and health intervention**

Estrella-Luna N, Luna M

In Winter 2002, the authors were invited to participate in a collaborative environment and health outreach initiative in Wilmington, Delaware. The collaborators were a local social service agency, a federally-qualified health center, and a research center at a nearby university. The goals reflected the interests of the collaborators and included determining the health status of residents in two low-income neighborhoods, increasing utilization of the health center, and increasing the awareness of health and environmental issues among the residents in these neighborhoods. The collaboration exhibited problematic qualities from the very beginning, which carried through the life of the project. These problems included lack of trust among the partners, lack of clear direction in goals and objectives, and absence of leadership. Personnel problems, insufficient institutional capacity, and an incomplete understanding of the communities complicated the implementation of the initiative. Based on an informal process evaluation, previous experience, and a review of literature, we find that there are a number of lessons to be learned. These lessons include: know the target communities, determine the community budget, perform a capacity assessment on all collaborators, have clearly defined and delegated roles, and do not misrepresent or oversell the initiative to the community. While far from a failure, this initiative was not as effective as it could have been in its initial implementation. The experience of this project underscores the need for planning, capacity building, trust building, and a time-allowance for a learning curve in community-based outreach initiatives.

06302

#### **Implementing health strategies at the community level using a partnership approach**

Agarwal S

The paper focuses on developing partnership models for improving key child health indicators in the slums of a mid-sized Indian city, the consultative learning process; and lessons learned.

The program is presented with a multiplicity of stakeholders working independently, with little co-ordination, sometimes duplicating services and in most cases not serving the neediest. Slum visits and a series of 6 workshops with primary and secondary stakeholders were held over 2 months.

Results: The vulnerable populations were identified and geographically mapped. It was noted that increased utilization of existing health service delivery channels could be achieved by using grassroots organizations, who emerged as important stakeholders. A complement of skills, knowledge, experience, and reach between various service providers was also noted. The idea of partnering and alliances emerged. Possible models include, e.g. NGO-CBO partnerships; a Ward level core group model; and a city-level alliance of partners.

Implications: The process helped in understanding the capabilities and potential of organizations, as well as identifying champions for the program. The process facilitated: evolution of partnering arrangement; building ownership of program objectives; filtering-out of opportunistic organizations more interested in funding that program objectives; a collective ownership among public and NGO sectors about the importance of targeting vulnerable slums and thus helped target resources optimally; both the program team and stakeholders to understand the issues from several viewpoints, and develop feasible and effective plans; capacity-building of primary and secondary stakeholders; establishment of a city-wide Urban Health Forum.

06320

#### **Healthy municipalities and communities: Lessons learned from experiences in the Americas**

Cerqueira MT.

Background: As the Healthy Municipalities and Communities (HMC) movement in the Americas matures, much of the country continues to strengthen its capacity for intersectional collaboration and for improvements to local governance. HMCs develop local action building plans by seeking consensus among the diverse stakeholders, such as community leaders, NGOs, private sector, health sector, education sector, food and agriculture sector, safety, and transport, among others. The planning process is both participatory and strategic, and includes a situation analysis beyond a straight forward needs assessment. The process also includes preparation of a monitoring and evaluation mechanism. This process contributes to enhanced capacity of local decision makers to establish healthy public policies, create healthy and supportive environments, and to improve quality of life.

Methods: A meta analysis of HMC experiences in Latin America and the Caribbean was carried out in 2002 using a questionnaire. The information is part of an electric data base that also tracks the use of the Mayor's Guide to Promote Health and Quality of Life. Results will assess the number of municipalities participating in each country, as well as local health issues and priorities determined by each HMC using the participatory planning process. Lessons learned from Brazil, Chile, Columbia, Costa Rica, Dominican Republic, Cuba, Ecuador, El Salvador, and Mexico will be highlighted in the presentation. Essential factors that commonly contribute to effective health promotion at the local level will be examined, such as (a) leadership issues and participation of the various sectors, (b) community participation issues, (c) information usage for public policy decision making, and (d) the building of partnerships and networks

## **Assessment and Measurement (07)**

07004

#### **Reliability and validity of self-reported measures of neighborhood characteristics**

Echeverría S, Diez-Roux A, Link B

The majority of studies examining the relation between neighborhood environments and health have generally used census-based indicators to characterize neighborhoods. These studies have shown that neighborhood attributes are associated with a range of health outcomes. More recently, self-reported measures of neighborhood characteristics have also been found to predict health. However, these studies have not systematically reviewed the reliability and validity of self-reported measures and few have explicitly linked these to theoretically meaningful constructs that relate neighborhood characteristics to health. The purpose of this study was to estimate the reliability and validity of a questionnaire measuring various self-reported neighborhood characteristics. The study consisted of a face-to-face and telephone interview, administered twice to 48 participants over a two-week period. Interviews lasted less than 15 minutes. Subjects were recruited from a large public hospital setting in New York City serving a largely Latino and African-American population. The questionnaire tested five domains tapping into an underlying construct (aesthetic quality, walking/ exercise environment, safety from crime, access to healthy foods, and social cohesion). Cronbach's alpha ranged from .77 to .88 for scales representing these domains, with test-retest correlations ranging from .89 to .93. Additionally, neighborhood indices of recreational facilities, problems, and social participation were examined, with test-retest measures ranging from .62 to .94. The results from this study suggest that self-reported measures of

neighborhood characteristics can be reliably measured. Moreover, this study provides researchers with a validated questionnaire that can aid in developing and testing hypotheses regarding the effect of neighborhood characteristics on the health of urban communities.

07034

**Neighborhood disorder and depression: Multi-level relationships at three levels of aggregation**

Curry AD, Latkin CA

Links between neighborhood disorder and depression have been demonstrated by several investigators. However, valid and reliable measurement of various aspects of neighborhood disorder, and the appropriate level of aggregation, e.g., census tracts or block groups, need to be studied in further detail. The present study aggregated individual-level responses to the Perception of Neighborhood Disorder Scale (Perkins, Meeks, & Taylor, 1992) at the census tract, census block group, and geographic cluster levels and used Generalizability Theory to assess reliability at each level of aggregation. Data were from 1,609 participants enrolled in the SHIELD study (Self-Help in Eliminating Life-Threatening Disease), a network-oriented HIV prevention study. Hierarchical linear models were used to assess the relationship between the clusters' mean and median perceptions of neighborhood disorder and individual depression, controlling for a range of social and demographic variables at the individual level. A geographic clustering procedure produced the highest aggregate reliability coefficient for neighborhood disorder, followed by block groups and census tracts. Neighborhood disorder was strongly related to depression using a hierarchical linear model at the geographic cluster and block group level of analysis, but not at the census tract level. With relatively large samples within a city, geographic clustering may provide neighborhood researchers with an alternative method of data aggregation for assessing "contextual" effects. This study provides further support for the notion that neighborhood disorder may impact mental health.

07067

**The effects of urban migration patterns on accuracy of administrative health data: A case study of Toronto, Canada**

Creatore MI, Glazier RH, Agha MM

Background: Urban centers experience high population mobility. If mobility occurs differentially according to risk factors associated with outcomes of interest, and if health-related databases are not regularly updated, this may result in biased risk estimates. We investigated whether mobility in Toronto, Canada resulted in differential denominator misclassification by age, sex and income.

Methods: We calculated the difference between 1996 population derived from the Canada Census and the Ontario health care registry, containing all Toronto residents eligible for universal health insurance coverage and compared these differences by age, sex and income quintile based on Canada Census mean household income.

Results: 19% of residents had moved within a year, and 51% within 5 years of the census. Mobility increased as neighborhood income decreased. Relative to the Census, the health care registry overestimated the population differentially by neighborhood income (52% in the lowest, and 32% in the highest income quintile). The largest discrepancy existed for low income males (57%), compared to low income females (46%) or high income males (38%). Those aged 0-19 were the most overestimated population in all income quintiles, although particularly striking in the lowest income group (113%).

Implications: Given high levels of urban mobility, population health databases should be updated regularly. When using census denominators, there is a risk of significantly inflating utilization rates, particularly in low income areas and among young males. This may hinder recognition of a population with relatively low health services utilization and may be a missed opportunity for outreach and targeted service provision.

07075

**Spatial approaches aiding analysis in urban health**

Gozdyra P, Boyle E, Creatore MI, Matheson FI, Steele LS, Glazier RH

Background: Geographical methods are increasingly being applied in health research. For example, many characteristics of urban residents' health demonstrate strong geographic patterns in both outcomes and socio-demographic characteristics. Geographic Information Systems (GIS) tools are well suited for investigating such problems. Their functionality includes gathering, storing, manipulating, analyzing and display of spatially-delineated data.

Methods: Spatial methods enable (1) data operations (transfers between geographic objects, spatial queries, weighting, smoothing, interpolation, overlays, modeling), (2) statistical analysis (spatial autocorrelations, spatial regressions) and (3) data display (thematic maps).

Results: Examples of applications of spatial methods to urban health research include the diffusion of infectious diseases such as tuberculosis or SARS, time-distance performance of emergency medical response services, the spatial distribution of exposure to harmful environmental factors such as air pollution and spatial patterns in physician visits and use of preventive services among urban minority groups. Spatial analyses can be used to examine different levels of aggregation (such as census geographical areas) and to calculate distances between locations (such as patients and clinics). Clustering effects in exposures and/or outcomes are often ignored in urban health research but can result in biased estimates of association if not recognized and controlled for. Mapping can help to identify areas of greatest need.

Implications: Application of spatial approaches to urban health research can lead to a better understanding of geographic determinants of disease exposures, availability of health services, and health outcomes. These methods can also strengthen statistical models, increase interpretability of results, and improve planning and delivery of health services.

07167

**Zip code-level characteristics related to individuals' testing for HIV**

Taylor SL, Leibowitz A, Simon P

**WITHDRAWN**

07187

## **Challenges of combining multiple data sources and analytic techniques to investigate integration of HIV and mental health care in a statewide methadone maintenance treatment system**

Yucelen A.G., Walkup J, Wade E, Pomerantz R, Moore K, Davis T, Watras L

Background: Prior work using New Jersey Medicaid claims has found that 5.7 percent of those with HIV/AIDS are diagnosed with schizophrenia, with cases concentrated in the Newark and Trenton areas. Surprisingly, patients with schizophrenia appear to achieve comparatively high rates of antiretroviral persistence. They may benefit from care-provision by several service systems, although the prevailing model predicts they should receive fragmented care. Since injection drug use implicated in the infection of 77.4 percent of those with schizophrenia, it is important to explore the methadone maintenance treatment (MMT) sector's contribution to the care of patients with HIV/AIDS and severe mental illness.

Methods: Data gathering includes: a policy history based on documents and interviews, site visits to approximately two fifths of the agencies in the state, a focus group of agency directors, profiles of site ecology using census data, and a statewide survey of all treatment sites. Analytic techniques include: coding and development of a rating scale for qualitative data, qualitative comparative analysis, a non-statistical technique base on set theory (Ragin, 1987, 2001), and planned multivariate modeling of survey results.

Results: Integration of findings must combine (1) assessment of a given characteristic using more than one technique or source to assure findings are robust; (2) use of one technique or source to generate hypotheses testable only with another; (3) use of one technique or source to investigate areas not accessible to others.

Implications: Combination of multiple methods and sources is a viable, if challenging, option for the study of MMT response.

07213

## **Urban public housing quality and health symptom index scores**

Welker-Hood LK, Hynes HP

Asthma prevalence is increasing dramatically in low income, urban populations. This has spurred research exploring the relationship between health and environmental housing conditions common in deteriorating housing. Little of this research has been directed towards public housing residents who are among the most at risk for residing in unhealthy housing. Exposures that have been implicated in contributing to asthma exacerbation are cockroach and mouse infestation, dampness and mold, decreased ventilation and environmental tobacco smoke. This study employed a cross-sectional survey to assess the self-reported prevalence of respiratory and allergic diseases and symptoms and environmental conditions in two Boston public housing developments. Factor analysis identified exposures and symptoms that could be reduced into new composite indices. Symptom index scores for groups reporting presence or absence of pest infestation, poor ventilation and moisture and mold exposures were compared. Separate allergy and asthma symptom index scores were elevated from those reporting exposures to tobacco smoke, poor apartment ventilation and mice,  $p=0.05$ . Asthma symptom index scores were elevated among those exposed to mold and moisture in their apartment ( $p=0.05$ . and  $p<0.001$ ). Sick building symptom index scores were higher for those exposed to poor ventilation, mold and cockroaches in their apartment and mice in the building,  $p=0.05$ . This study is one of the few that documents the prevalence of asthma and housing exposures for public housing residents in the United States. Summarizing symptoms into indices, instead of looking at individual symptoms, improved the ability to detect physical determinants that can negatively impact health.

07242

## **Dengue seroprevalence in Belo Horizonte City: Detecting participation bias through spatial analysis methods for small-area studies**

Pessanha JEM, DiLorenzo C, Costa M, Morais MHF, Leite APN, Santos FJR, Paiva EG, Torta JR, Pena AAC, Soares MG, Bessa AMS, Cunha MCM, Veloso IF, Brandão ST, Kroon EG, Caiaffa WT, Proietti FA

Background: Non participation is a common problem in surveys. Epidemiologists usually compare participants and no participants in demographic and other characteristics available, without considering neighborhood or small-area features. We analyzed participants and no participants in a population based study to determine the magnitude of the dengue epidemic in Belo Horizonte City.

Methods: We obtained a two stage cluster random sample (house ( $n=1017$ ) followed by house inhabitants), from 3 of the 9 BH City Health Department District. We geocoded all houses and compared the spatial distribution using K function. We also compared the age of participants and no participants.

Results: The refuses percentages were differential among the 3 districts. Younger people under 19 were less likely to participate. We did not find significant difference comparing the participants and non participants houses spatial distribution.

Implications: We believe that population based surveys when conducted in spatially divers urban areas, should consider to compare the spatial distribution of the study population in order to detect clusters of non participants, that may introduce bias otherwise not detected.

07303

## **Health vulnerability assessment: A method for identifying vulnerable populations and targeting interventions**

Agarwal S, Taneja S

The paper describes a suggested approach to assessing health vulnerability among the urban poor in an Indian City.

Between 40%-60% of the Indian population is currently living in slums where they often lack even the most basic health and infrastructure services. Information on maternal and child health indicators among slum-dwellers reveals that their health is 2-3 times worse than "average" urban statistics indicate. It is estimates that agencies are only reaching about 30% of the urban poor, and those reached belong to the comparatively "better off" slums. All slums were identified and mapped; criteria were developed fore assessing vulnerability; a mechanism for ranking vulnerable slums on a scale of increasing deprivation emerged.

Results: Illness is one of the most powerful forces pushing low income households into poverty. Key factors which intensify health vulnerability include: economic conditions; social conditions; living environment; access and usage of public health services; health status and disease incidence; collective organized community effort. Of a total of 539 slum locations, 156 were assessed as vulnerable. These were often further categorized into three groups: extremely vulnerable, moderately vulnerable, and marginally vulnerable.

Implications: The assessment technique has emerged as a valuable tool for targeting efforts and resources. The extremely and moderately vulnerable slums will be the focus of EHP's interventions. The assessment process involved capacity-building of primary and secondary stakeholders; helped to identify champions; and built ownership of program objectives, which should impact positively on project sustainability.

## Infectious Diseases (08)

08006

### **Developing curriculum for HIV interventions in jail-based settings**

Daniels J, Casado J, Aledort N, Melly J

Background: Jails present an important opportunity to reach populations not reached through other public health programs. Health concerns in jail are public health concerns because most of those incarcerated return to their communities within a few weeks of arrest. Between 1993 and 1998, the number of adolescents being held in jail as adults doubled. Young men in jail have higher rates of STIs than comparable non-jailed populations and between adolescence and the early adult years both HIV infection and drug use increase significantly among the incarcerated, demonstrating the need for preventive intervention. Recent serosurveys show that an increasing number of men of color who report sex with other men have high rates of HIV infection and a significant number of the men who have HIV infection (42% of African-Americans and more than 30% of Hispanics) report a history of incarceration.

Methods: Men's Jail Health Awareness Project (MJHA) and Short-Term Adolescent Intervention (STAI) address the HIV epidemic in jail-based settings; they target specific populations within Rikers Island. MJHA focuses on men who have sex with men (MSM) and STAI on adolescents; both serve primarily African-American and Latino clients.

Results: HIV-prevention intervention curriculum for use in jail-based settings.

Implications: (1) the institutional barriers and benefits to interventions in jail settings; (2) the fluid process of piloting and revision, and (3) the implications for research design.

08008

### **The Canadian community-based response to HIV in urban settings**

Chapman A, Alexandrova A

Background: The Canadian AIDS Society (CAS) is a national coalition of more than 100 community-based AIDS organizations across Canada. Since 1986, CAS has served as the national voice for the community-based AIDS movement. CAS advocates on behalf of communities affected by HIV/AIDS, develops programs, services and resources for its member organizations, and provides a national framework for community-based participation in Canada's response to AIDS.

Methods/Results: The paper presents and discusses an evaluated and successful community-based model for HIV prevention, care and management in urban settings. The CAS model has conducted a variety of successful activities targeting affected populations in urban areas of Canada, including: putting housing issues on the public agenda as a health issue for people living with HIV; building a harm reduction approach to respond to barebacking and gay men's sexual health; building a Harm Reduction approach to substance use and exploring the feasibility of safe injection sites in Canadian cities. This model has also been successfully replicated in Minsk, Belarus.

Implications: By promoting a multisectoral approach, this model has facilitated networking, communication and collaboration between public and private sectors. The community and affected populations have had a strong voice in the issues affecting them. The model also ensures that successful models of urban health practices are shared and promoted between different urban centers across Canada and internationally.

08013

### **The new epidemic: The misconception of AIDS in Harlem**

Harris AC.

In the year 2000, blacks made up almost half of all reported AIDS cases in the U.S. and Hispanics made up almost one-fifth of all reported AIDS cases in the U.S. Although AIDS has taken its toll on communities of color, it is not the community's only health concern. Black men have the highest rates of cancer than any other group and blacks, both men and women, are more likely to die from cancer than any other racial/ethnic group. Thirteen percent of all blacks and 10% of all Hispanics in the U.S. have diabetes. Blacks also have the highest rates of infant mortality than any other racial/ethnic group in the country. However, it was hypothesized that due to the stigma surrounding AIDS, people who live in communities of color will believe that AIDS is just as serious, if not more so, than cancer, diabetes, and infant mortality. In addition, race, education, age, religiosity, and political views will influence this view. This paper uses a survey administered in 2002 around Harlem, a predominately black and Hispanic section of New York City. It was found that people did feel that AIDS was just as serious if not more so than cancer, diabetes, and infant mortality, however, race, education, age, religiosity, and political views did not play a statically significant role. The results show that more research needs to be conducted as to why respondents perceive AIDS to be just as serious if not more so than other serious diseases/incidents in their community.

08080

### **Elevated rates of antiretroviral treatment discontinuation among HIV-infected injection drug users: Implications for urban health**

Wood E, Montaner JSG, Braitstein P, Yip B, Schechter MT, O'Shaughnessy MV, Hogg RS

Background: The benefits of highly active antiretroviral therapy (HAART) for the treatment of HIV disease are well documented, although concerns regarding access to and adherence to HAART among injection drug users are of growing concern.

Methods: We evaluated all antiretroviral naïve HIV-infected men and women who initiated HAART between August 1, 1996 and July 31, 2000, and who were followed until March 31, 2002 in a province-wide HIV treatment program that delivers antiretroviral therapy and AIDS care free of charge. We evaluated time to the first HAART discontinuation greater than 3 months using Kaplan-Meier methods and Cox proportional hazards regression.

Results: Overall, 1422 patients initiated HAART among whom 359 (25.3%) were injection drug users (IDU). At 12 months after the initiation of HAART, 30.3% of non-IDU versus 42.5% of IDU had discontinued HAART ( $p < 0.001$ ). In Cox analyses, history of injection drug use was associated with more rapid discontinuation of therapy in univariate (Relative Hazard [RH]: 1.5 [95% CI: 1.3 – 1.8]) and adjusted (RH: 1.4 [95% CI: 1.2 – 1.7]) analyses.

Implications: Unless substantial changes are made to the HIV/AIDS care delivery systems, including a substantial increase in the provision of drug treatment programs and revision of drug policies that create barriers to healthcare, in urban areas of high HIV prevalence among IDU, healthcare services for persons with HIV may soon be overwhelmed by high levels of morbidity and mortality among patients infected with HIV through injection drug use.

08122  
**Tuberculosis (TB) exposure in a high-risk inner-city family practice setting: The development of policy and guidelines to address risk management and quality improvement**

Cornelson B, Grondin M, Chow K

Background: With a relatively large HIV, homeless, and immigrant populations, the Family Practice teaching clinics of St. Michael's Hospital see many clients who are at greater risk of acquiring TB or of activating latent TB infection. A client with undiagnosed active TB may inadvertently infect many other clients. The development and implementation of a Tuberculosis Management Policy, Procedure, and Guideline which is specific to Family Practice was established post assessment of an active tuberculosis index case.

Methods: Two hundred and two charts were reviewed of clients exposed to a TB index case. Seventy seven clients were identified to be higher risk based on risk stratification criteria utilizing the Canadian Tuberculosis Standards.

Results: All 77 clients were contacted and 66 were available for assessment. A large percentage did not have a baseline Tuberculin skin test documented. In response to further follow-up a Department wide quality improvement project was initiated and will take place over 3 months to re-evaluate tuberculosis management and follow-up.

Implications: Policies, procedures, and guidelines developed for Family Practice can enable ambulatory clinics to minimize the risk to their clients of TB infection at their work place and reduce the workload of contact tracing should such exposure occur.

08191  
**Early warning system for West Nile Virus activity**

Hartman JJ, Mostashari F, Kulldorff M

Background: An early warning system for West Nile (WN) virus outbreaks could provide a basis for targeted public education and surveillance activities, and timelier larval and/or adult mosquito control. We will present an adaptation of the spatial scan statistic (SaTScan) for prospective infectious disease outbreak detection using dead bird reports in real space and evaluate its effectiveness in detecting areas of human risk.

Methods: As part of an unparalleled arboviral surveillance program, the New York City Department of Health and Mental Hygiene (NYCDOHMH) has been collecting dead bird reports since 2000. We have utilized the SaTScan software program to detect small area clustering of dead bird reports in real space above expected levels, accounting for spatial variability in reporting attributable to the heterogeneous urban landscape (i.e. background bird population, human population density, and community propensity to report dead birds). Positive mosquitoes, positive dead birds, and prospective dead bird cluster analyses for three years are evaluated and their sensitivity, specificity, and timeliness in detecting areas of high human risk for WN virus compared using Receiver Operating Characteristic (ROC) and Activity Monitor Operating Characteristic (AMOC) curves.

Implications: Prospective geographical cluster analysis of dead bird reports may provide early warning of increasing viral activity among birds and mosquitoes, allowing jurisdictions to triage scarce bird and mosquito collection and laboratory resources and more effectively prevent human disease caused by the WN virus. This adaptation of the scan statistic could also have utility in other infectious disease surveillance systems, including bioterrorism.

08211  
**Measuring baseline tuberculosis knowledge in an at-risk population**

Ilongo I.

It is important for urban health professionals to be able to measure baseline tuberculosis (TB) knowledge of an at-risk population, both for TB infection and disease screening, in addition to investigating TB cases. However, baseline measurements cannot be conducted when TB researchers and clinicians do not have comprehensive, reliable and valid instruments for such endeavors, regardless of their settings. It is important to have a sound understanding regarding the general population, the at-risk population, and suspected TB cases, as well as full-blown TB cases' knowledge about Mycobacterium Tuberculosis infection and disease. This is necessary to effectively target health promotion efforts, health education, control measures, and prevention and treatment efforts throughout the community at large. The focus of this presentation is to describe a comprehensive survey instrument developed and piloted tested to measure TB knowledge in at least six domains, namely: TB transmission, characteristics of the person, signs and symptoms, causes, prevention, treatment, medical diagnosis, adherence, multi-drug resistance, and treatment. The aforementioned constructs' domains capture all key areas of tuberculosis infection and disease. The benefits of using this instrument will be explained as well as reliability coefficients obtain from the six constructs areas. Suggestions for refining the instrument will also be discussed. Finally, suggestions for using this research tool to promote urban health will be explored.

08230  
**Tearoom trade revisited: Ethical problems of research into HIV prevention outreach among men in the United States**

Johnson MD

## WITHDRAWN

08246  
**A comparison of the social economic factors of HIV/AIDS through urban centers of the Ukraine in Russia**

McKeenhan Campbell IV, Pozdinakov S, Gerasimenko T, Mogilevsky L, Boschenko Y, Filyuk V, Averbukh L, Gridasova I, Moskalenko I, Odinets V, Sherbinskaya A, Dobrov YP

**Background:** The HIV/AIDS epidemic started approximately between 1987-1994 in Russia and the Ukraine, at a time when Western Europe had more than 15 times the number of cases and sub-Saharan Africa over 400 times. This marked the nascent period of the epidemic. Since 1995, urban areas of the Ukraine and Russia have become the epicenter of the HIV infection. The rate of increase in HIV incidence in these cities has become among the highest in the world. Between 1995 and 2001, the prevalence of HIV among IDU increased from approximately 1.5% to 50% in Odessa and other cities, and increased an additional 30% more six months later. Ukraine and Russia have the greatest prevalence of HIV, with the male-female ratio increasing from 4:1 in the mid-1990s to 2:1 in 2001.

**Objectives:** This study examines the following: (1) the social and economic risk factors of urban areas in the Ukraine and Russia that have precipitated the increase of HIV; (2) the relationship of these risk factors to changes in the mode of transmission from adolescent and young adult IDUs to heterosexual contact in the general population; and (3) compares the crisis of Russian and Ukrainian cities in meeting the political, economic, and cultural demands placed on the health care delivery system by the HIV pandemic.

**Methods:** Russian cities of Kaliningrad and Moscow are compared to the Ukrainian cities of Odessa and Kiev by social, economic, and epidemiologic indicators. In each city, prevalence rates of HIV/AIDS are related to these risk factors through the application of sentinel surveys to both adolescents and adults. Sentinel surveillance was conducted once annually in 2000 and 2001, in addition to laboratory testing. HIV/AIDS status was detected by the HIV-AB in standard ELISA and Rapid-DOT ELISA tests, and confirmed with final Western Blot.

**Results and implications:** HIV positive respondents were between 19 and 39 years of age, jobless (77%), and either single or divorced (61%). About one-fifth reported multiple sex partners in the past 3 months, frequently with unknown partners (37%). One third had extramarital contacts with group sex among 5% of the men and 7% of the women. Use of condoms was reported by 55% of men and 76% of women, as a measure for HIV/STDs prevention. Early age (14-16 years) of first sexual experience was marked among two-thirds of both genders. About one-half of men and one quarter of women reported drug abuse, including Intravenous Drugs Use (IDU). Nearly 1% of pregnant women were HIV positive. Results obtained with the use of the Sentinel Survey were at least twice as high than those obtained by official government methods. Social factors among pregnant respondents differed: 70% were married, 30% were "free" in their sexual contacts. Unprotected sex within marriages was present in one-third of sexually active women, including extramarital sex and multiple partners.

**Results:** The general social risk factors for HIV infection were similar in Russian and Ukrainian cities. These included unemployment and sexual trafficking, homelessness, alcohol and drug abuse, changing sexual mores among the urban young, migration from rural to urban areas, international migration for jobs, and growing regional and urban economic inequalities following social disorganization during the transition period. Adolescents and women in the general population are the possible "bridge" for the HIV transmission from HIV/AIDS risk groups (TB, IDU, prostitution, NSM) into wider society (heterosexual contact). The major tasks for addressing the HIV/AIDS pandemic in the Ukraine and Russia include: (1) a more accurate non-punitive surveillance system, insuring confidentiality of testing results, (2) developing and educational strategy directed at adolescents, and (3) increasing GNP allocations to provide pharmaceutical antiretroviral treatment and to develop HIV/AIDS health clinics.

08275

#### **Adult basic education with HIV patients in a New York City clinic**

Schubert S, Samuels D

**Background:** It is well known that individuals with HIV are living longer, healthier lives due to advances in medical care and treatment. As a result, lives are being re-evaluated and a return to the workforce is being emphasized. Meeting this demand, especially for poor urban HIV positive individuals, requires a comprehensive approach to Adult Basic Education (ABE) as a vehicle to improve skills, enhance communication, reduce risk and strengthen self-confidence.

**Method:** Adult Basic Education classes are offered in the clinic one day per week for four hours to a group of six committed HIV positive patients. Participants complete a standardized educational assessment that evaluates reading, math and language levels. Participants are tested on course work every three weeks and are reassessed using the standardized test biannually.

**Results:** The group comprises 3 men and 3 women, Hispanic, African American, average age 46 with unemployment and public housing as common denominators. Ninth grade is the average highest grade completed. The initial assessment scores indicate an average seventh grade reading level (7.3), third grade math level (3.9), and third grade language level (3.8). The first test revealed a mean score of 87.5% (B) for Math, English and Writing combined while the second test score average dropped by 23% to 65% (D). Qualitatively, students demonstrate an understanding of concepts and are able to apply them in class.

**Implications:** Despite the many physical and social barriers facing people with HIV, Adult Basic Education has instilled hope and empowered patients to better their lives.

08289

#### **Falling through the cracks of the big cities: Who is meeting the needs of young people with HIV?**

Flicker S, Goldberg E, Skinner H, McClelland A, Read S, Veinot T

**Background:** Half of all new HIV infections occur among young people. As of June 30, 2002, more than 13,000 youth and young adults were documented to be living with HIV in Canada. Most of these cases are concentrated in urban areas. Despite this alarming growth, there is a profound lack of resources for HIV-positive youth in Canadian urban centers.

**Methods:** The Positive Youth Project uses a community-based participatory research model to address the needs of positive youth in Canada. A stakeholder group of HIV+ youth and supporting professionals collaboratively developed the research design, instruments and protocol. Forty key informant interviews were conducted with a broad spectrum of HIV+ youth in Ontario. Interviews were taped and transcribed. A grounded theory interpretive approach guided analyses. Data were coded using Nudist qualitative software. The stakeholder group met regularly to go over themes emerging from the data and discuss their meaning, relevance and implications.

**Results:** Youth identified feelings of isolation, loneliness and hopelessness. They described social and structural barriers to their full participation in society and had difficulty accessing appropriate support services. Young people interviewed had very mixed feelings about both youth- and AIDS-serving organizations.

**Implications:** New models of collaboration between youth and AIDS serving organizations in urban areas are desperately needed. Better supporting the needs of HIV-positive young people may prove to be an effective model for preventing the further spread of HIV in the long run.



08321

**Increasing access to care for NYC taxi drivers**

Islam N.

**Background:** Taxi drivers, who comprise a workforce of over 100,000 in NYC, are largely uninsured and experience low access to health care. A partnership between a university health project and the NYTWA, a taxi workers rights group, was created to address health care access issues for NYC taxi drivers. A survey was developed in conjunction with NYTWA was administered at LaGuardia Airport, and found that 80% of drivers were uninsured, 25% had never had a routine check-up, and 20% had experienced a barrier to obtaining health care in the last year. The partnership then decided to initiate a health campaign to increase access to care for taxi drivers.

**Methods:** A three-pronged approach was initiated by the partnership to increase health care access: (i) to organize the first-ever health fair for taxi drivers; (ii) to enroll eligible drivers into government and community-sponsored health insurance programs; and (iii) to use survey data to advocate for health benefits for uninsured drivers.

**Results:** The health fair was held in July, 2000, at the JFK Airport holding lot. The fair served over 300 drivers and offered over 15 different preventive screenings, and included distribution of a resource list of low-cost clinics and hospitals. The partnership has begun mobilizing drivers to enroll into available health insurance programs, and survey data has been presented to the NYC Taxi and Limousine Commission in support of health benefits for uninsured drivers.

**Implications:** Future plans include bi-annual health fairs, further advocacy for an industry-owned health fund, and provision of health education materials to drivers. By using a direct serve and advocacy tactic, this successful partnership has increased health care access to a largely underserved community.

08324

**Incorporating a social networking approach (SNA) into a street nurse program (SNP) to enhance contact tracing in an outbreak of syphilis.**

Tigchelaar J, Brunt C, James L, Knowles L, Taylor D, Jones H, Rekart M, Ogilvie G

**Background:** Since 1997, Vancouver, British Columbia has had an outbreak of infectious syphilis that has been concentrated in sex trade workers (STW) and their customers. This abstract describes how the SNP of the British Columbia Centre for Disease Control incorporated a SNA to improve contact tracing in this marginalized population.

**Methods:** Street nurses (SN) attended a CDC course and in-services to develop skills for identifying social networks. Peer outreach workers (PW) were hired, a syphilis working group was convened, and the SN outreach bag was adapted to include syphilis educational material and testing devices.

**Results:** Traditional contact tracing methods were enhanced by SNA. Certain SNA interviewing cues were used, such as location, event, partner lists, and the question, "Who do you think should be tested for syphilis?" was asked to identify sexual partners of cases and other high risk individuals who needed testing. Observation at places of social aggregation for STW and drug use worked in identifying additional contacts, and information gathered from all sources was used to map social networks. PW helped access "hard core" individuals and define opportune moments for interviews. SN conducted blood tests and treatment on the street. Physicians communicated positive results immediately to SM to facilitate rapid treatment. SN used social network maps to rapidly identify and test case-linked individuals, often prior to contact being made with each case. Weekly SNA review permitted rapid change to accommodate developments in the outbreak. SNA increased number of cases and contacts identified, the results of which are presented elsewhere.

**Implications:** With appropriate training, use of PW and support from public health physicians, a SNA can be successfully incorporated into a SNP.

## Policy and Urban Health Frameworks (10)

10060

**Local level data informs public health policies and interventions**

Shah AM, Williams CL, Silva A, Whitman S

**Background:** The lack of local community level data hinders the development of effective strategies to enhance the health of vulnerable populations, particularly in racially/ethnically diverse urban settings. Current public health practices and planning are made based on existing data from vital statistics and birth and death certificates. Such data does not accurately reflect a community's health profile, nor does it provide information on risk factors and health behaviors that a locally designed health survey could.

**Methods:** we collaborated with several local agencies to develop a culturally sensitive and relevant community survey. This face-to-face health survey was conducted in 1700 randomly selected household of six racially/ethnically diverse communities in Chicago. The primary purpose was to inform and guide local efforts at improving health in some of Chicago's most marginalized communities.

**Results:** Results for the six highly segregated community areas demonstrate sharp disparities among Blacks, Whites, Mexicans, and Puerto Ricans on almost every indicator of health and well-being. Findings show large disparities exist within racial/ethnic groups. There are also substantial differences with national and even Chicago-specific data. For example, smoking rates in some of these six communities are almost twice Chicago values as are estimates of self-rated health, pediatric asthma, obesity, depression, etc.

**Implications:** Local level data suggest that national or even citywide figures may underestimate prevalence rates and disguise the health needs of some urban communities. When shared with communities and local agencies, such data will begin to foster community development; effective health planning; and resource allocations for overall health outcomes.

10078

**Political will: Implementing a policy advocacy strategy to remove barriers to re-entry for people returning to Harlem from jail and prison.**

Ritas C, and members of the Harlem Urban Research Center's Policy Work Group

Each year more than 80,000 people return from jail or prison to New York City communities, with Harlem receiving a disproportionately high share. Individuals returning to NYC after incarceration face numerous policy and institutional barriers to successful re-entry, including a lack of access to healthcare coupled with high rates of disease and substance abuse. In addition, due to the sheer volume of NYC residents involved in the criminal justice system, only a policy level intervention can create change on a scale that will significantly impact a whole community. Criminal justice policies are highly politicized and morally charged, requiring sophisticated change strategies.

We propose to: (1) Outline the impact of involvement in the criminal justice system on the health and well-being of Harlem. (2) Lay out several policy recommendations to improve success in re-entry. (3) Describe the policy change strategies implemented by the Harlem Urban Research Center. By engaging in a community-institutional partnership, we were able to develop strong scientific- and constituent-based arguments for change that are sensitive to the current political climate (i.e., increasing security, a weak economy, a strong executive branch, and an emerging criminal justice reform movement). While the effects of policy change strategies are often difficult to ascertain, we have seen a significant increase in interest and action on the part of city government on the issue of re-entry.

10123  
**The development and implementation of an infection control policy during a Severe Acute Respiratory Syndrome (SARS) Outbreak in an inner-city health family practice setting**

Chow K, Grondin M, Malone L

Background: Cases of Severe Acute Respiratory Syndrome (SARS) have been reported by the World Health Organization. In response we have developed a SARS Infection Control Management Guideline that is specific to our Inner-city family practice teaching clinics. During the initial outbreak, many hospitals were closed to new admissions. Our Family Practice sites remained open due to their community locations. All other Family Practice teaching units were closed in the inner-city.

Methods: Utilization of the Ontario SARS Provincial Operations Center (POC) Directives for Acute Care Hospitals and Community Health Centers was reviewed and modified specifically to the Family Practice environment. Telephone and ambulatory SARS screening algorithms and guidelines were developed and implemented with clinical and non-clinical staff through on-going communication and education. As the SARS outbreak evolved, changes regarding Infection Control practices were communicated and documented on a daily basis.

Results: The development of a SARS Infection Control Policy/Guideline that is specific to the Family Practice environment gave staff a sense of clarity and control with respect to SARS infectious disease management. To date no staff within the Department of Family and Community Medicine has been quarantined.

Implications: Infectious Disease Guidelines must be adaptive and dynamic depending on the environment and the course of the disease. The development of specific guidelines in a Family Practice setting can minimize the risk of contact, exposure, and transmission of SARS.

10131  
**Creating a trans-urban learning community: The US/UK dialogue on eliminating health inequities in post de-industrial regions**

Thompson KS

Background: Health inequities have long been a major concern in the UK and have become so, more recently, in the US. These inequities are particularly marked in post de-industrialized cities. Despite their differences, these cities are linked by a common history, by similarities in ecology and social organization and by an uncertain future. Assuming that there was something to share of value, a "US/UK Dialogue on Eliminating Health Inequities in Post De-industrial Regions" has been initiated. The goal is to create a trans-urban "learning community" linking local communities of practice to examine these inequities, translate social and public health policy and health service and community responses and develop joint actions. The role of university/community partnerships is a critical focus. The dialogue builds on trans-urban business, university and government networks already connecting Pittsburgh and post de-industrial cities in the UK.

Methods: Using University funds intended to foster international collaboration we were able to bring together local networks focused on health inequities from communities and universities in Pittsburgh, Glasgow, Edinburgh, and Newcastle-upon Tyne. Utilizing "high engagement" facilitation techniques we fostered active exchange, learning and on going connection. A website and an email list have facilitated continued interaction.

Results: Active dialogue has begun and principles to guide further action have been defined. Future exchanges are planned and joint writing, research and action projects are underway.

Implications: Post de-industrial cities around the world share the problem of health inequities. Building a trans-urban learning community to address the issue is both possible and worthwhile.

10183  
**Transposing urban health knowledge into decision-making: Conceptualizing, measuring and diagnosing for policy**

Levesque JF, Choinière R, Lessard R

Background: Urban health depends on various factors related to environments, populations and services infrastructures. Some of these respond to interventions aimed at achieving urban health. Transposing in a synthetic manner a vast amount of scientific knowledge to populations and decision-makers to influence urban planning can be a challenge.

Methods: Building on the creation of the new City of Montreal, the Public Health Department Annual Report 2002 aimed to guide policy directions in urban sectors and provide information and support to decision-makers. A profile of the health in Montreal was compiled using administrative data indicators, existing population surveys and research results.

The analytical strategy consisted in: (1) comparing Montreal to five other Canadian urban areas; (2) comparing six sub-regions and 29 Local Community Health Centre territories; (3) analyzing available information in light of income, temporal trends and relevant social and demographic characteristics. Indicators were selected by adopting as criteria the scope and severity of the problem, the possibility of intervening and its avoidable nature, the availability of comparative information, and relevance for urban environments.

Results: Montreal shows unfavorable results for most indicators compared to other cities. Adverse outcomes and indicators concentrate in 2 areas in Montreal, suggesting a cumulative burden on health. Lower income quintiles populations show worse results for most indicators. The report has been well received at many levels of decision-making and as received widespread media attention.

Implications: Taking excerpts from the reports results, this presentation will suggest ways to translate probing knowledge into an understandable format for urban decision-makers.

10193

**Long-term care in the urban environment: The continuum of care in four world cities**

Montero G, Gusmano MK, Rodwin VG

Background: As the result of population aging and urbanization, cities will need to develop strategies for providing long-term care for their older residents. We examine how four world cities, New York, London, Tokyo and Paris, are meeting this challenge. They have similar socio-economic disparities, but divergent social policies, so they provide a compelling natural experiment.

Methods: Using census, housing and other data, we compare the characteristics of older persons in each of these cities and the continuum of long-term care, from institutional care to home care.

Results: We find divergence with respect to nursing home capacity across these cities but we find a convergence among the four cities with respect to home care use. We also find some similarities with respect to assisted living options. Three of the cities rely on social services attached to apartments in existing housing more than congregate housing. Yet New York and Paris have greater public investment in assisted living than London and Tokyo.

Implications: City characteristics can be harnessed to provide long-term care. These cities tend to use existing housing stock and home care as opposed to institutional or congregate housing. Yet, there are some differences with regard to the role of the family that are reflected in long-term care policy. Differences in publicly funded assisted living are due to the fact that informal care is funded in London and the family plays a stronger role in Tokyo, while a larger percentage of older people live alone in New York and Paris.

10198

**Forging the martial and martyr health security city**

Bale A.

## WITHDRAWN

10286

**Health and road transport in Pakistan: Current linkage analysis and policy recommendations**

Sugerman D, Ghaffar A, Hyder A

Background: The 1998 Global Burden of Disease Study estimated that road traffic injuries (RTI) will become the third overall leading cause of DALYs lost, with two-thirds of the deaths occurring in least developed nations. Moreover, automobile based transport systems cause air pollution (with lead toxicity and asthma), noise disturbances, as well as physical inactivity and obesity. Pakistan, a developing country in South Asia, currently exhibits limited government regulations and research on transportation or its ill effects.

Methods: A methodological review of the literature on direct and indirect effects of transportation in Pakistan. This review includes government documents, memos, statements, and draft policies.

Results: A systematic review revealed no approved transport policy in Pakistan, despite three national health policy documents. The Health Chapter of the 9th Five Year Plan appreciates the grave threat of unchecked RTI, but fails to offer specific policy interventions. Despite ambitious plans by the Pakistan Environmental Protection Agency (Pak-EPA), actual projects and their implementation remain scarce, resulting in ever increasing air pollution (lead, ozone, SO<sub>2</sub>, NO, CO<sub>2</sub>). Lead toxicity and noise pollution remain high and obesity is on the rise.

Implications: The increasing health impact of transport on 140 million people is a call for immediate policy action. Government agencies must intervene effectively to establish monitoring and decentralized enforcement nationwide.

10316

**Economic change and mortality in New York City and Berlin**

Brenner MH.

Background: This research begins with a principal generalization of epidemiological research found in industrialized as well as in developing countries, namely, the inverse relationship between socio-economic status and both mortality and morbidity rates. The inference, however, for populations is that increases in real (i.e., inflation-adjusted) GDP (gross domestic product) per capita should be followed by mortality declines and increased unemployment should be followed by mortality rate increases.

Methods: The data on vital statistics and economic indices for 1965-2000 are extracted, respectively, from the New York State and New York City Departments of health and labour while the Berlin vital statistics and economic indices are taken from the Year Books of the Berlin City Government as well as German Ministry of Employment. These historical data are analyzed by standard time series multiple regression ("econometric") methods.

Findings: In both New York City and Berlin, the principal long-term trends in the decline in mortality rates are related to the beneficial effects of economic growth, cumulatively over 0-10 years. Similarly, much of the year to year fluctuations in mortality are related to changes in the unemployment rate also, cumulatively, over a 10 year period.

Conclusion: The statistical evidence, which can be seen graphically, is that economic changes have been the principal factors influencing changes in mortality in New York and Berlin since 1965. The major factors involve economic growth, unemployment and their interrelationship. The paper will discuss how social policies play major roles in the health and well-being of these two international cities.

## Maternal and Child Health (11)

11141

**Nutritional status of reproductive-aged women of low socioeconomic status in Ahmedabad, India: Analysis and public health strategies**

Trivedi K, Kiernan M

Poor prenatal health and nutrition is reflected in the high prevalence of maternal mortality. Little is known about the nutritional health of reproductive-aged women of low socioeconomic status in urban Indian centers. In collaboration with a community organization in Ahmedabad, India, we wanted to compare the nutritional status of women during different stages of the reproductive cycle and then develop public health strategies to target nutritional needs during these stages of reproductive life. We recruited 150 reproductive-aged community members who fell into one of three groups (n=50): pregnant; lactating; and non-pregnant, non-lactating. Nutritional status was assessed via hemoglobin and anthropometric measurements in addition to oral questionnaires. All three groups did not meet international standards for nutritional health. In addition, there were substantial differences among the groups. The pregnant participants had the lowest hemoglobin ( $9.3 \pm 1.5$  g/dL) compared to the lactating ( $10.4 \pm 1.8$  g/dL) and non-pregnant, non-lactating ( $10.8 \pm 1.6$  g/dL) groups ( $F(2,147) = 10.86$ ;  $p < 0.0001$ ). Ninety-two percent of the pregnant participants did not reach first trimester criteria for BMI during the course of their pregnancy ( $BMI > 20$ ). In addition, the majority of non-pregnant, non-lactating (68%) and lactating (52%) participants were underweight ( $BMI < 18.5$ ). Urban Indian women exhibit a poor nutritional status even prior to marriage, pregnancy and lactation, and therefore are at risk of even poorer nutritional health during the childbearing years. We developed nutrition guidelines for women to be encouraged by the community organization, emphasizing nutritional needs prior to periods of increased nutritional demand.

11169

**The burden of prenatal exposure to alcohol: Measurement of health-related quality of life**

Stade B, Stevens B, Ungar W, Beyene J, Koren G

Background: In Canada, the incidence of Fetal Alcohol Spectrum Disorder (FASD) has been estimated to be 1 to 6 in 1000 live births. Caused by prenatal exposure to alcohol, the syndrome is the leading cause of neuro-developmental disabilities among Canadian children.

Purpose: To measure the health-related quality of life (HRQL) of Canadian children diagnosed with FASD.

Methods: Design: Cross-sectional study design was used. Sample and Setting: One-hundred and twenty-six children diagnosed with FASD, ages 8 to 21 years, living in urban communities throughout Canada participated in the study. Procedure: Participants completed the Health Utilities Index Mark 3 (HUI3). HUI3 measures eight health attributes: vision, hearing, speech, ambulation, dexterity, emotion, cognition, and pain. Data Analysis: Utilities were used to measure a single cardinal value between 0 and 1.0 (0 = dead; 1 = perfect health) to reflect the global health-related quality of life (HRQL) for that child. Mean HRQL scores and range of scores of children with FASD were calculated. A one sample t-test was used to compare mean HRQL scores of children with FASD to those of children from the Canadian population.

Results: HRQL scores of children with FASD ranged from - 0.22 to 0.96 with a mean score of 0.47, and compared to a range of 0.91 to 0.95 with a mean score of 0.93 in children from the general Canadian population ( $p < 0.001$ ).

Implications: Implications for practice, policy development, and research are discussed.

11190

**The eclipsing of mothers within the discourse of fetal alcohol syndrome**

Northey TA.

Background: Many of the recommendations regarding the prevention and treatment of alcohol use during pregnancy have been written by and for professionals. Absent from these recommendations are the perspectives of those most closely impacted by them: biological mothers of children with FAS. Furthermore, the efficacy of treatment and prevention are often measured in terms of fetal outcome without consideration for the woman's health and well being.

Methods: In-depth interviews/life histories were conducted with eight women residing in the Greater Vancouver Area who have given birth to an alcohol affected baby. The mothers were asked what formal and informal supports and services were helpful and not helpful throughout their trajectories.

Results: In theorizing why mothers have been eclipsed from what is said and done about maternal alcohol consumption, it appears that doctors, teachers, social workers, and other professionals value science and medicine over what the mothers tell them. The mothers themselves buy into this, in the sense that they feel that their own knowledge needs to be validated by those in a position of authority. Mothers are further excluded due to their subordinate status as women within Canadian society, their shunned status as one of "those women," and their lack of power vis-à-vis their position as non-professionals/non-experts. Other influential texts and discourses, such as cultural mores tied to motherhood and to prenatal care continue to drive these processes.

Implications: The taboo against maternal alcohol consumption is taken as a scientifically verified truth, rather than something that has been constructed at a certain time and in a particular place in response to intersecting social and political agendas.

11194

**Perinatal depression: The untreated disease**

Combs H.

Background: In the United States, elevated infant mortality rates among certain ethnic groups have provoked an analysis of maternal and infant health care. Researchers have investigated mental health as a major factor of the well-being of mothers and their infants. The impact of stress and depression on the pregnant and postpartum mother is now widely acknowledged as deleterious to both the mother and her child. For the disadvantaged urban population, the perinatal period is an opportune time for examining mental health needs and prevention of long-term problems.

Methods: In March 2002, a Perinatal Depression Treatment Program was developed in partnership with Health Start Brooklyn, a federally funded program, at Kings Count Hospital Center in Brooklyn, NY. This is one of eight such programs developed nationwide. Patients are referred from clinics within the hospital and from community-based organizations. Women are screened using a demographic questionnaire and a self-administered rating scale, the Edinburgh Postpartum Depression Scale (EPDS). Treatment, individual therapy, and/or medication management, are offered to women who score significantly on the EPDS. The program is evaluated by patient report questionnaires, which focus on specific aspects of treatment.

Results: 465 women have been screened with 29% indicating they are experiencing depression. Of those who are depressed, 46% have enrolled in treatment. Women report and increased sense of well-being due to factors such as; improvement in interpersonal relations, increased ability to express themselves, and feeling heard by their therapist.

Implications: In the United States, mental health care is not integrated into the primary health care system. This results in a significant number of at-risk patients who over-utilize the health care system with chronic problems. Mental health prevention and treatment can have a great impact on pregnant and postpartum women as they routinely visit their physicians, and interventions impact not only themselves, but also their infants and children.

11200

### **Charting a course for perinatal health in Central Harlem**

Matseoane S.

Introduction: Despite improvements in statewide perinatal health, Central Harlem continues to fall behind when compared to other New York City health districts. The charting of a course for perinatal health in Central Harlem aims to broaden awareness of the need for a multidisciplinary framework, specifically, how to identify, plan and improve perinatal health in Central Harlem. Premature birth is defined as the birth of the baby before the 37 completed weeks of gestation, and it is a significant health problem in Central Harlem. A parallel trend has been seen in the increasing rates of low birth weight. The burden of both premature birth and low birth weight falls disproportionately on inhabitants of Central Harlem and are a major cause of black-white disparities in perinatal health. The etiology of premature births is not completely understood. The proposed pathophysiological pathways include: (1) Fetal-Maternal distress, (2) Intra-amniotic infection, (3) Decidual hemorrhage, and (4) Uterine distension. Prenatal care is one of the most frequently used primary and prenatal care health services with demonstrated health benefits, yet 11% of women in Central Harlem receive either late or no prenatal care. A number of studies have shown that prenatal care yields beneficial results, including reductions in low birth weight and premature birth rates. In Central Harlem, infants are twice as likely to die before the first birth date as infants in other health districts of Manhattan. The Health People's National objective is to reduce the infant mortality to 4.5 per 1,000 live births among all racial groups. Infant mortality in Central Harlem is 13 per 1,000 live births. The majority of these deaths occur in the first 28 days of life, and about one third occur between 29 days and one year. Prevention strategies must focus on reducing premature births and low birth weight rates in Central Harlem, and elimination of Black-White disparities by: (1) Reducing maternal distress – by encouraging greater participation of males in a broader maternal support system, including breast feeding; (2) Elimination of alcohol, smoking and drug use during pregnancy; (3) Improving nutrition/folic acid ingestion; (4) Improving access to comprehensive, culturally competent prenatal care and reproductive health services, and increasing the percentage of women who receive prenatal care in the first trimester; (5) Reducing teenage pregnancy rates; and (6) Establishing linkages with Comprehensive Prenatal-Perinatal Service networks in Central Harlem. Charting a course to improve perinatal health in Central Harlem requires an ongoing multidisciplinary collaboration of Central-Harlem-based health workers.

Methods: Demographic, socio-economic trends from the year 2000 census and the Bureau of Maternal-Infant and Reproductive Health Division of Disease Prevention data were analyzed. Assessments of perinatal and maternal indicators were carried out under guidelines from the American College of Obstetrics and Gynecology. Maternal and infant health indicators show a premature birth, low birth weight, late or no prenatal care and infant mortality rates for Central Harlem higher than those for the Borough of Manhattan.

We recommend three things: (1) an expansion of Medicaid availability that includes and increasing immigrant population, (2) an investment in collaborative community based perinatal health teams with models that expand primary preventive care and emphasis on wellness and disease prevention, and (3) implementing patient empowerment through health education.

11203

### **Testing of material and child health strategies in two urban medical centers in Egypt**

Hassanein N, Elshimi T

Background: Greater Cairo is a sprawling city of over 12 million people. Elevated fertility rates (3.23) and a constant influx of migrants from rural Egypt have generated extensive areas of underdeveloped urban settlement currently inhabited by 1.3 million people. Higher rates of poverty, illiteracy and disease thrive in these unplanned areas. Healthy Mother/Healthy Child (HM/HC) is a maternal and child health (MCH) services project implemented in Upper (southern) Egypt with great success. A miniature replica of HM/HC is now being extended as a pilot into 2 urban medical centers. If successful, it will be expanded into more of Egypt's approximately 832 underdeveloped urban areas. HM/HC is funded by the United States Agency for International Development (USAID) and the Egyptian Ministry of Health and Population (MOHP). John Snow, Inc., is contracted by USAID as the main provider of technical assistance to the project.

Results: HM/HC employs a strategy founded on the integration, customization and sustainability. Integration is achieved by delivering related MCH activities as a unified comprehensive package. Thus HM/HC defines clear standards of MCH service, and then pursues them through a coordinated combination of physical renovations, clinical training, management enhancements, quality assurance, information technology upgrades, community mobilization, health education, field research and the financial support of relevant non-government organizations. Customization of activities to meet local needs facilitates the adoption of changes introduced by the project. Finally, the HM/HC pilot strives to deliver its components through fundamental long-term MOHP programs, such as MCH, Family Medicine and the Integrated Management of Childhood Diseases, to promote sustainability.

11207

### **Urban Bangladesh: A tough challenge for immunization coverage**

Adhikari JM, Haque M

Background: The Expanded Program on Immunization (EPI) in Bangladesh was launched in 1979 and intensified after 1985. EPI provides one of the most cost-effective means available to prevent morbidity and mortality among women and children. The objective of the EPI is to prevent disease and death among infants and children from 6 common fatal childhood diseases. This is achieved by providing three doses of DPT, OPV and one dose of measles, BCG vaccines. Every child should be fully immunized by his/her first birthday. Four City Corporation and 91 municipalities are designated as 'urban areas' in Bangladesh. The health structure in urban areas is run by the Local Government Department (LGD), and not by the Ministry of Health, because LGD is not able to cover the entire area. As such, a large part of health care services in urban areas are provided by NGOs.

Methods: We drew examples from an analysis of different surveys conducted jointly with the government of Bangladesh, IOCH, WHO and UNICEF. Results: Accessibility to routine immunization services in Bangladesh remains high at the national level (98%) but this high access dropped to 54% for fully immunized children, largely due to high dropout rates of different antigens. When comparing, DPT1/OPV1 coverage in urban was lower than rural 89% vs. 93-94% (national 93%), whereas DPT3/OPV3 coverage was the same (70%). Measles coverage, however, was lower in urban areas than in

rural areas (59% vs. 64%). The number of fully immunized children was lower in urban areas than in rural areas (52% vs. 54%, with the national rate at 54%). Only 39% of children in urban slums are fully immunized by their first birthday. In urban areas, DPT1-3 drop out ranged from 10.6% - 6.9%, however, the drop out rates are about 21.8% - 30.3% from DPT1 to measles vaccine. A large number of invalid doses were provided before the minimum required age or before required interval between the doses. Missed opportunities for different antigens were also high. The high rates of dropouts, invalid doses and missed opportunities reflect the poor quality of services rendered. In addition, male children have more access to immunization than female children. Boys' access to DPT1 was 6% higher than that of the girls. The dropout rate for DPT1 to measles in the boys was higher, however, than that of the girls (29% for boys vs. 20% for girls), revealing lower full immunization coverage for boys for girls. Another finding showed that the mothers' knowledge levels of full immunization were poor. Most of the mothers did not know the number of times their children were required to be fully immunized. Also, mothers' education was found to be related to the immunization status of their children. Uneducated mothers were less likely to get their children fully immunized than those who were educated. It also revealed that certain level of education, such as SSC or higher, increased the mother's role in the decision making process for her child's immunization. Finally, lack of faith in immunization and lack of awareness of the need and importance of immunization were the main reasons for non-immunization (6% of the total children), which indicate that wrong perceptions about immunization persist in the community. There is also lack of proper information regarding the subsequent dosage. Fear of adverse reaction, sickness of the child, and mother's preoccupation with other work resulted in high dropout rates, which consequently contributed to low full immunization coverage.

Implications: High dropout rates imply that the EPI program is unable to follow-up and protect the cohort of children to whom they initially provided outreach. High rates of invalid dosage and missed immunization opportunities reflect service provider's inability to screen effectively.

Challenges: The challenges for sustainable coverage of achievement in urban areas are: (1) High density population with many slums, (2) Poor sanitation, (3) Large number of mobile/ floating population, (4) The Ministry of Health is not responsible for provision of basic health care-services, and (5) Multiple service providers exist, composed of both government organizations (GOs) and non-governmental organizations (NGOs), yet there exists little coordination among them.

Conclusions: To protect all children from the six killer diseases, the following areas need to be strengthened: Proper counseling should be provided at every contact, reminding clients of the EPI schedule, and scheduling time to return for subsequent doses in order to decrease dropout rates and to improve compliance for full immunizations. Emphasis should be on screening clients for immunization to avoid or reduce invalid doses and missed opportunities. BCC activities should be initiated to inform the community of the importance of immunization in general, and to motivate mothers to bring their children for full immunization. Special attention should be paid to "floating" and slum dwellers in urban areas. Providing a broader range of education, economic, and job opportunities for women of urban slum areas should also be undertaken by improving coordination among GOs and NGOs.

11212A

#### **Impoverished children and healthcare in Karachi, Pakistan: A medical student's observations**

Pirani Y, Cannon W, Verchere C, Boyle J

Background: Pediatric burn injuries world-wide share common etiologies such as house fires or scalding liquids, pr may be the result of child abuse or terrorism. Children innovations in global health care. For many poverty-stricken children, health care resources are simply inaccessible due to financial and geographic limitations. Some children never receive any medical treatment for their injuries. International efforts have increased to provide adequate health care for impoverished children living in urban communities with burn injuries. Improvements in health care can also help prevent common dismal outcomes in these children such as suicide, abandonment by shamed families, or a life on the street of begging or prostitution. Our purpose is to describe healthcare available to children sustaining burn injuries in Karachi, Pakistan and new international collaborative efforts to improve treatment and outcomes.

Result: Three children with severe burn injuries, functional limitations and complications are described and illustrate inadequate burn care in Karachi. Annually, a few children are selected to receive treatment in the USA, funded by The Healthcare and Social Welfare Association (HASWA).

Implications: Impoverished children living in Karachi, Pakistan are not presently offered adequate health care treatment for burn injuries. Conditions are slowly changing due to the efforts of collaborative international health care organizations. Medical students studying in developing countries will discover health care beyond the artificial borders of their country and appreciate the importance of international collaborative care for the future.

11261

#### **Experience of mothers and health care providers with preventative child health care services in an urban environment**

Amen MM.

Despite the fact that we have made great strides in improving health of the nation's children, there are still many children who suffer from devastating preventable health problems. Research indicates that access to quality health care is related to income level, possession of health insurance, and whether or not one has a regular primary care provider or other source of health care. This study used a qualitative approach to describe more fully the experiences of low-income mothers and health care providers with preventive child health care services in an urban environment. The major findings revealed two major themes. The first is organizational structure that acts as barriers that impede the mother's ability to effectively use preventive child health care services. The second is the differential value orientation of mothers and health care providers that lead to conflicts between the two different value systems. These findings are associated with poor patient compliance. The results point to the need for comprehensive, collaborative and accessible health care services in urban communities-that will promote accessibility which encourages the mother's use of preventive child health care services in urban communities. Moreover, the value orientations of the mothers should be recognized and ideally incorporated into the health care that is provided.

11282

#### **Prenatal lead exposure and schizophrenia spectrum disorder**

Opler M, Brown AS, Graziano J, Zheng W, Desai M, Factor-Litvak P, Susser ES

Background: Schizophrenia is a severe mental disorder of unknown etiology. Risk factors such as urban residence and socioeconomic status have been implicated. Recent studies suggest that environmental disruptions in prenatal development may be involved, including nutritional deprivation and infection. No studies of chemical exposure have been reported.

Methods: A cohort established in Oakland, CA enrolled 19,044 live births from 1959-1966. Maternal serum samples collected during pregnancy were stored at -20°C. Potential cases of schizophrenia spectrum disorder (SSD) were identified from computerized databases. Records were reviewed, abstracted, and rated for the presence or absence of psychosis. Potential cases that were not interviewed were diagnosed by chart review, according to DSM-IV criteria. 71 SSD cases were identified. Matched controls were selected on the basis of gender, number of sera samples, date of birth, and timing of blood draw. A biological marker of lead exposure, δ-aminolevulinic acid, was measured in 2nd trimester samples of 44 cases and 75 controls using High Pressure Liquid Chromatography with Fluorescence Detection. Data was converted into categories for exposed (>15 µg/dL) and unexposed (<15 µg/dL), yielding 66 exposed and 53 unexposed subjects.

Results: Unadjusted conditional logistic regression yields an OR=1.83 (95% CI: 0.87-3.87, p=0.1.) A model adjusted for Gravida's age at termination of pregnancy gives an OR=2.43 (95% CI: 0.99-5.96, p=0.5).

Implications: This finding implicates an early life chemical exposure to a neurodevelopmental disruptor as a risk factor for adult psychotic disorders. Further studies are underway.

11293

### **High pregnancy rates and reproductive health indicators among female injection drug users in Vancouver, Canada**

Weber AE, Tyndall W, Spittal PM, Li K, Coulter S, O'Shaughnessy MV, Schechter MT

## **WITHDRAWN**

11319

### **Improving women's health in urban India: need for capacity building of elected women representatives of urban local bodies**

Gupta N.

Women's health in India is inextricably bound with social, cultural and economic factors that create consequences both for women and for society as a whole. An Indian women's health has implications on her roles as a wife, mother, and wage earner. Health services should meet a woman's health needs throughout her life cycle. Women's health problems are not only related to the reproductive age group, but extend to all aspects of the body. Quite often, the health needs of mature and elderly women are neglected. Apart from general gynecological problems, menopause and its consequences, osteoporoses, precancerous conditions in female genitalia, female genital cancers, and other chronic diseases form a large bulk of women's problems that can have severe implications on entire families. The present level of infrastructure and the health services in Urban India are grossly inadequate to meet women's health needs throughout their life cycles. It must be understood that the efforts of government medical and health departments cannot succeed in taking care of a women's health. Large numbers of health issues are related to general hygiene and sanitation conditions in urban areas, particularly in urban slums. It must also be acknowledged that patriarchal Indian society holds a distinct gender bias that is propagated in its culture and traditions. Belief systems and many other socio-cultural dimensions affect the health of women in India. While some kind of social bonds in rural societies help to provide economic and social support to women, urban women are often helpless, especially those from economically and socially disadvantaged communities. There is a strong need to generate awareness about various health and hygiene issues, and bring about change in the traditional customs and social beliefs that propagate gender bias and unscientific practices that are detrimental to health of urban women in India. The root unit of focus should be the community. There is a need to establish a community-based approach to address health needs of women. In this context, the involvement of the elected women representatives of various urban local bodies and grassroots organizations can play a major role. Thus, capacity building of local institutions and the elected female representatives can be very useful tool improving women's health in urban areas. One-third of the seats of elected representatives of the urban local bodies in India are reserved for women, intending to reduce gender disparities and confront health issues of women in urban areas. Elected women representatives have a fairly good hold in the local community, and they are in a position to yield influence in the government systems, which makes them very effective in addressing all aspects of women's health. The first step, however, is to build their capacity and increase their levels of understanding about curative therapeutic and preventive aspects of women's health. Small efforts in training and awareness generation can yield big results in terms of improving urban women's health.

## **Food, Nutrition, and Physical Activity (13)**

13069

### **Assessing programs and policies that promote nutrition and physical activity at urban churches**

Mayer JP.

Background: Church policies and environments can contribute to healthy community norms and provide important cues-to-action for healthy behavior among congregants. Although studies describing policies and environments at worksites, medical practices, and other urban settings that influence health are common, similar information on churches is limited.

Methods: For 24 zip codes in the City of St. Louis, internet-based Yellow Pages were used to enumerate the population of churches. After three mailings, a phone follow-up, and a \$10 donation/incentive, surveys were gathered from 225 churches.

Results: Average congregation size was 400 with 23% of members less than 35 years of age and 11% with incomes below poverty. Seventeen percent of the churches offered nutrition education classes, 21% exercise classes, and 43% sponsored sports teams. Sixty-five percent included nutrition or physical activity messages in sermons, and 69% in bulletins. Ten percent reported church policies requiring serving healthy foods at church social functions. Nineteen percent of vending machines on church property included low-fat snack options. Multivariate analyses indicated that the healthfulness of the church environments varied with church size and age, and with congregation member characteristics. For example, larger churches were more likely to sponsor physical activity programs and organize sports teams.

Implications: Although many urban churches possess environments supportive of healthy behavior, opportunities to strengthen these environments are still apparent.

13158

**Promoting healthy food and activity environments in urban areas**

Cohen L, Samuels SE, Mikkelsen L

Chronic diseases including diabetes, heart disease, and some cancers are disproportionately high among low-income people and people of color. Many cases of these diseases can be prevented with attention to improving eating and activity habits. Efforts to improve these habits through education alone are rarely successful. In addition, it is critical to address community factors such as access to fresh nutritious foods and physical activity opportunities. Shifting community norms toward healthier behaviors requires a comprehensive approach that addresses not only individual knowledge, motivation, and skills, but also ensures the surrounding environment supports healthy behaviors. The Strategic Alliance for Healthy Food and Activity Environments was founded to promote environmental and policy changes to improve eating and activity patterns in California. The goal of the Alliance is to reframe the debate on nutrition and physical activity, from a matter of individual choice and lifestyle to an issue of environment and corporate and government responsibility. The Alliance currently consists of over 250 members. It has identified five arenas for action: Childrens' Environments, Government, Industry Practices, the Health Care System, and the Media. Early successes include establishing nutrition standards for competitive school foods and eliminating soda and junk food sales from some school districts.

This presentation will delineate the Strategic Alliance platform and strategy. It will describe key local, state, and institutional policy goals focused on improving the eating and activity environment in inner-city neighborhoods. Further it will describe the Alliances efforts to build a statewide network and share lessons learned.

13170

**Analyzing factors affecting physical activity and the impact on diabetes in an urban Latino community**

Amesty S, Juniu S, Boccher-Lattimore D

Decreased levels of physical activity, together with poor diet are leading causes of death in the U.S. Ample evidence shows that physical activity is important for maintaining good health, improving psychological well-being, and preventing premature death. The Latino community is disproportionately affected by diabetes, a disease that is closely related to diet and exercise habits. Studies show that Latinos in general, are more likely to be physically inactive than their white counterparts. The purpose of this study was to examine the relationship between barriers to physical activity and diabetes in the Latino immigrant community in Washington Heights in New York City. The Health and Physical Activity Questionnaire (HPAQ) is a 49-item questionnaire designed to assess levels of physical activity and the barriers to physical activity participation in the Latino community in a primary care recruited patient. We hypothesize that individual-level social factors (e.g., social support, leisure time, acculturation, literacy, poverty) and neighborhood-level factors (e.g., adequate housing, safe neighborhoods) may be particularly important in the Latino community in Washington Heights and are primary determinants of the burden of diabetes faced by Latinos in NYC. Correlational procedures were employed to investigate the relationship between individual-level social factors, neighborhood level factors, and diabetes/health in general in a group of Latino immigrants. The findings of this study will help understand the impact of urban social and physical environments upon health. Public health recommendations will be made in order to reduce identified barriers and improve health.

13205

**A model for integrating natural resources, community lifestyle, and health promotion**

Bruning N.

Americans are becoming less physically active even as our knowledge of health risks related to sedentary behavior is increasing. Of these, obesity is of urgent concern because its multiple associations with other illnesses have a detrimental impact on the quality and length of life of different populations, bringing about economic consequences to our society as a whole. A disturbing increase in obesity and "adult-type" diabetes is occurring in people of all ages but particularly among young people. In addition, Hispanics, African-Americans, low income individuals and women are disproportionately inactive and at higher-than-average risk for obesity and diabetes. In this paper, a model for integrating natural resources, community lifestyle and health promotion is developed through a phased, multi-level approach including outreach and education, and the formation of women's walking groups in public parks. Our primary goal is to reduce the incidence and complications due to sedentary lifestyle and obesity. Walking in public parkland is available to everyone, it is free, it is "natural" and thus may be more appealing and accessible to the aforementioned population groups than gyms and health clubs, which are costly, have limited hours, and seem "artificial." Following principles of the diffusion of innovation theory, walking becomes normative by making it a recreation, a social event, and a transportation means among community members. Walking is both an end in itself, and a gateway to a more active life that engages community members with their physical and social environment. This intervention model establishes a method for engaging populations at risk for obesity and related health problems in physical activity that is both free and fun. By putting physical activity within the reach of a larger population, the pain and suffering, the lost productivity, and the direct and indirect financial costs of obesity-related diseases could be dramatically reduced. In dire economic times, parks' funding is often the first to go because parks are not a life-and-death service. On the contrary, parks could make the difference between life and death for many people and this approach could suggest positive strategies for a broad range of policy and legislative decisions.

13249

**Health beliefs, lifestyle and prevalence of hypertension among older Korean-Americans in community**

Lee M, Fleury J

Background: Hypertension is a serious health problem being one of the most important risk factors for cardiovascular disease, and extremely common in older minority populations. Asian American and Pacific Islanders with hypertension were less likely to be aware of their hypertension, to be under treatment, and to control their blood pressure. The purposes of this study were: 1. To describe the prevalence, awareness and control rate of hypertension, 2. To describe lifestyles, health habits and health beliefs, and 3. To examine the correlations among health beliefs, lifestyles and hypertension among Korean-American older adults. The Health Belief Model was the theoretical base of study.



**Methods:** This study used a descriptive correlational approach. Target population was Korean-American older adults. The sample consisted of 156 subjects from 5 Korean organizations from Korean community directory of New York City. Data were obtained on health history, health practices and habits, and health beliefs regarding hypertension and lifestyle modification as well as related physiological measures. There were 60 males and 96 females with the mean age of 66 and 66% were married, 41% had no health insurance and mean years in USA were 16.2.

**Results:** Data analyses were done using Chi Square and ANOVA. Results revealed that 77% of participants were hypertensive, 46% overweight (BMI>25), and 35% had cholesterol level about 200. Hypertension awareness rate was 52% and 32.7% had their BP under control. Significant relationships were found among their beliefs, attitudes, awareness and actual hypertensive status, especially in susceptibility and benefit ( $p<0.01$ ), and seriousness and intention ( $p<0.05$ ) subscales and hypertensive status. Many hypertension and CVD risk factors were present among these older Korean-Americans. Some factors were more socioeconomic situations of immigrant and ethno cultural issues such as high salt content foods; and some are universal ones such as overweight, low physical activity, old age, family history of hypertension.

**Implications:** Given the high risks with potentially modifiable risk factors, community-based culturally relevant and appropriate research and effective educational and intervention strategies for Korean-American older adults are urgently needed for case findings, early diagnosis, and further prevention and control of blood pressure with the least intrusive means possible as much as than that of treating with established disease.

13301

### **Access to healthy foods in urban areas**

Vachon ME.

**Background:** The influence of environmental factors on individual health behaviors is necessary to access in planning public health interventions in urban areas. Increased risk of morbidity and mortality due to chronic diseases may be linked to environmental conditions such as availability of fresh fruits and vegetables.

**Methods:** The locations of supermarkets and neighborhood grocery stores in a 40-block radius of Central Harlem were mapped. Supermarkets, defined as stores selling fresh produce and meat with at least two checkout stands were surveyed for the presence of health education materials and healthy foods including low fat meat, wheat bread, and lean meat.

**Results:** Preliminary results indicate that within a 40-block radius of Central Harlem four stores meeting the criteria for supermarkets were located. Neighborhood grocery stores may be more accessible to Central Harlem residents. Further research will assess the conditions of Central Harlem supermarkets.

**Implications:** To reach the goals of Healthy People 2010, we must begin to create environments where people are able to make healthy choices. Urban areas, particularly where there is interest in reinvestment, offer opportunities to implement community level interventions that will increase access to healthy food options for residents.

13318

### **Daily cod liver oil and a multivitamin-mineral with selenium decreases upper respiratory pediatric visits by young, inner-city, Latino children**

Linday L, Shindledecker RD, Tapia-Mendoza J, Dolitsky JN

**Introduction:** We hypothesized that daily supplementation with lemon-flavored cod liver oil and a children's multivitamin-mineral supplement containing selenium would decrease young children's doctor visits for upper respiratory illnesses during the late fall, winter, and early spring.

**Methods:** *Setting:* Two private pediatric offices with similar demographics, located in upper Manhattan, New York City. Sites were randomized to a Supplementation Site and a Medical Records Control Site. *Subjects:* 47 children (age range 0.6-4.9 years) were enrolled at each site. Mean ages: Supplementation Group = 2.03 years ( $\pm 1.04$  SD); Control Group = 2.08 years ( $\pm 1.10$  SD). Participants were Latino children from low-income families; their mothers were predominantly Spanish-speaking, unmarried, immigrants from the Dominican Republic. *Duration:* Enrollment: 10/21/02-12/12/02; follow-up/supplementation: 12/13/02-5/01/03. *Dose of Supplements:* Children  $\geq 1$  year of age: 1 teaspoon of lemon-flavored cod liver oil/day and  $\frac{1}{2}$  tablet of children's multivitamin-mineral (MVM); starting dose halved for children  $<1$  year.

**Results:** The Supplementation Group had a statistically significant decrease in the mean number of upper respiratory visits over time ( $p=0.042$ ;  $r=0.893$ ;  $y=0.602-0.002x$ ); while the Medical Records Control Group had no change in this parameter ( $p=0.999$ ;  $r=0.0006$ ;  $y=0.259+1.43 \times 10^{-6}x$ ). Supplements were well-tolerated; 70% of children completed the 5-6 month course of cod liver oil.

**Implication:** Use of these nutritional supplements was acceptable to inner-city, Latino families and their young children, and was associated with a decrease in upper respiratory pediatric visits over time: this approach therefore deserves further research and attention.

## Various Topics (05)

05011

### **Training elementary school personnel to detect and prevent child sexual abuse: What do they want to know?**

Plichta S, Houseman C, Goodman J, Zhang Y

**Background:** School teachers play a critical role in the prevention and detection of child sexual abuse (CSA). 'Knock... Knock...Who's There?' a school-based CSA prevention program utilizing puppet theatre and teacher training, sought to elicit types of CSA training materials desired by elementary school personnel.

**Method:** Group interviews were held with 13 personnel from three elementary schools in the metropolitan Hampton Roads area. Through a semi-structured group interview, participants were guided in discussion of types of training materials they desired. The three interviews were audio-taped and transcribed. Content analysis was performed on the transcriptions to elicit common themes.

**Results:** The data yielded four major categories of training needs: how to intervene when CSA is suspected, prevention strategies, interacting with law enforcement, and interacting with parents. The most wanted resource was guidance on handling CSA when the teacher suspected it, but when there were no obvious signs or symptoms. The need for developing cooperation between schools and law enforcement was also expressed. Finally, personnel

wanted guidance on how to communicate with students about family life, sexuality, and sexual abuse. Personnel also commented on the need for training to be brief and focused.

Implications: Training needs to focus on issues of concern to school personnel. It also needs to be targeted to the specific information needs of the teachers. The next step is to design a training video and manual for teachers to accompany the puppet show. Future research will evaluate this manual and video for its effectiveness in training school personnel.

05014

#### **Counterfeit drugs in the city: A private physician's experience**

Alabi W, Okonkwo K, Labode O

Nigeria has lost approximately 2 billion dollars to counterfeit and substandard drugs in the last ten years. Despite the promulgation of laws intended to effectively combat this scourge, it has remained a major problem that has threatened the confidence of the health care system. Our study was carried out in Ibadan, Oyo state, one of the largest cities in West Africa. The study was done to ascertain the public health implications of counterfeit and substandard drugs. There are 912 physicians currently practicing in the private sector of Ibadan, Oyo state, each of whom responded to a questionnaire intended to ascertain their experiences with counterfeit drugs. Most confirmed that counterfeit drugs were commonly encountered in their practices. Antibiotics were most commonly encountered counterfeit drugs. Two thirds of the drugs were counterfeit and subsequently, substandard drugs had been manufactured in Asia. Indian-made drugs contributed to about half of the counterfeit drugs from Asia. One fifth of the drugs were manufactured in Nigeria and the rest from other parts of the world in negligible quantities. 48% of the respondents had encountered serious health consequences of counterfeit and substandard drugs. 13.4% of encounters were reported to have had fatal outcomes. Strategies adopted to curtail the purchase of counterfeit and substandard drugs resulted in increased cost of medicines. The physicians who responded to our questionnaire perceived that businessmen who dealt in drugs were responsible for drug counterfeiting. In addition, an overwhelming majority felt that the government's response to the problem was inadequate and preferred the solution of greater regulatory control as well as the enforcement of existing laws. The situation in which businessmen and non-professionals have been licensed to deal in pharmaceutical has resulted in massive importation and manufacturing of counterfeiting drugs in Nigeria. Based on results of our survey, it is recommended that strong regulatory control is reinforced, ceasing the import of fake drugs to Nigeria at the source (essentially, within countries of production), increasing public enlightenment campaigns, and beefing up surveillance at all ports of entry, including empowerment of the regulatory bodies (i.e. the National Agency for Food and Drug Administration and Control). In addition, more financial and logistic support would help in reducing negative health impact of counterfeit drugs in Nigeria.

05016

#### **Filling the tool box: What probation / parole personnel require to properly manage and treat convicted sex offenders**

Goodman J, Parker D, Plichta S

Background: Since the 1996 passing of Megan's Law requiring convicted sex offenders to register in the community where they live, the public's awareness has been heightened. 60% of all convicted sex offenders are receiving some form of community supervision in the US, thus an increasing interest in not only where these 140,000 offenders live and work, but are they receiving effective treatment. This study examined responses of probation / parole agency personnel to determine their perception of challenges in effective management and treatment of convicted sex offenders.

Methods: Data from the National Institute of Justice's 1994 study of the Management of Sex Offenders by Probation and Parole Agencies in the United States were analyzed. 732 respondents were administered a 38-item questionnaire by telephone. Factors that impact management and treatment of sex offenders were identified.

Results: The top three management problems cited were nature of the offender (26%), lack of adequate resources (23%), and lack of community treatment options (14%). Factors named as important for effective management included additional therapy (27%), well trained/educated staff (17%), and manageable caseloads (12%). The top three behaviors causing revocation of parole or probation were reported as violation of terms/conditions of parole (41%), committing new offense (37%), and non-participation in treatment (10%).

Conclusion: Probation and parole officers need adequate resources and effective treatment options to successfully prevent future violations of convicted sex offenders due to their inherent narcissistic nature. To lessen the vulnerability of our children, research into effective clinical treatment and management is necessary.

05019

#### **Workplace health concerns of inner city workers**

Holness DL, Gadeski J, Sinclair GM

Background: There is little known about occupational health and safety in inner city workplaces. Previous pilot work we have done in hospital and church workers in the inner city of Toronto demonstrated that infectious diseases and safety concerns related to violence were common issues. Workers felt that inner city workplaces were more hazardous than suburban sites.

Methods: A self administered questionnaire containing the same perception of hazard questions as used in our original survey of hospital and church workers was completed by individuals attending an educational workshop for workers involved with helping street people.

Results: The attendees included both paid and volunteer staff. 86% of the attendees completed the questionnaire. In response to the open ended question on key hazards, 68% identified violence and 46% infectious disease. On direct questions related to each type of hazard, 91% identified safety, 81% indoor air quality and 76% infectious diseases. Less than half reported receiving any occupational health and safety training in both current and previous jobs.

Implications: Infectious disease and violence are key perceived risks in workers, both paid and volunteer, in inner city agencies. We lack knowledge on the nature and significance of occupational health and safety in workplaces characterized by nonprofit organizational status, voluntary labor, human service work, and charitable orientation, often features of inner city workplaces. Additional research to address occupational health and safety issues in inner city workplaces is needed. Further, training programs to address risks of violence and infectious disease may be necessary.

05023

#### **Training communities in public health preparedness through religious organizations**

Villanti A

Background: Since the September 11, 2001 terrorist attack in New York City, the public has been called to a state of alert, lacking the skills to prepare itself for current threats of war, terrorism, disease and natural disaster. Research indicates that many Americans turned to religion to cope with September 11, 2001; since clergy are considered "gatekeepers" who serve as a first line of assistance to communities especially during times of crisis, I propose a project on public health preparedness education through religious organizations to prepare for future disasters.

Methods: In-depth interviews, surveys, and a focus group were conducted to identify community concerns about threats to personal safety, community perception of need, individuals' readiness to prepare for such threats, and preferred methods of learning and teaching.

Results: This paper presents the results of 12 in-depth interviews with religious and faith community leaders, 33 surveys in a seminary community, and a focus group meeting on the proposed content of such a preparedness curriculum. Participant comments suggest that individuals remain unprepared for future disasters and would attend training to become better prepared for the emergencies they fear; among study participants, terrorism/violence was the top concern. These results also reveal resistance to university involvement in New York City faith communities.

Implications: Following a discussion of the challenges in working with religious organizations for health promotion and ways to reduce resistance to university involvement, suggestions are made for partnerships which could strengthen the urban public health infrastructure and improve health delivery through religious organizations.

05029

### **Relationships between health and mental health in New York City: Data from the 2002 New York City Community Health Survey**

McVeigh KH, Mostashari F, Wunsch-Hitzig RA, Kuppin SA, King CG, Plapinger JD, Sederer LI

Background: Clinical studies have documented relationships between physical and mental health, but until now, these relationships have not been quantified in a representative sample of New York City residents. This study presents findings that document the prevalence of significant emotional distress and its relationship to physical health.

Methods: We examined data from the New York City Community Health Survey (NYCCHS), a random sample telephone survey of 9,674 non-institutionalized adults conducted from May-July 2002. Respondents were asked standardized, cognitively tested questions about their health status and risk factors. Respondents were classified as having experienced "significant emotional distress" during the prior 30 days if they scored above 12 on the K6 scale (Kessler, 2002). Multi-way frequency analyses were conducted in SUDAAN producing weighted, age-standardized estimates.

Results: More than 6% of respondents met criteria for significant emotional distress. New Yorkers who reported significant emotional distress also reported poorer overall health (54% vs. 17%), higher rates of chronic disease (asthma 22% vs. 11%), and more unhealthy behavior (no exercise 53% vs. 30%) compared with other New Yorkers. Higher levels of significant emotional distress were reported among women, Hispanics, people ages 45 and older, and those who live in poor neighborhoods.

Implications: Approximately 371,000 New Yorkers experience emotional distress of sufficient magnitude to warrant a mental health assessment. The strong correlation between emotional distress and physical health suggests that both mental health and physical health providers should be alert to recognize, and treat or make referrals for co-occurring conditions.

05048

### **Fostering collective recovery: Exploring the role of organizations in post disaster trauma recovery**

Hernández-Cordero LJ, Boutros MN, Fullilove MT

The World Trade Center was a crossroads for New York City: a global financial center, a transportation hub, a retail area, a city landmark and public space. Thus the human, economic, and social losses and the impacts to the physical and mental wellbeing of those affected by the WTC tragedy on 9/11/01 extended far beyond the 16 acres of land and 2,819 people who perished. In responding to the disaster, policymakers focused their efforts on restoring a sense of "normalcy," honoring those perished and compensating heroes and victims. Policymakers did not actively foster collective recovery. However NYC RECOVERS, a network of organizations formed in the wake of the disaster, proposed that organizations in NYC had a role in the process of collective recovery, and encouraged organizations to incorporate trauma recovery into their ongoing agendas. This qualitative study utilized participant observation and archival data to document the process of engagement of local organizations in recovery related activities, and the outreach and dissemination efforts of NYC RECOVERS. Findings suggest that organizations: make choices about how to respond to trauma in the face of disaster; can learn from each other how to foster recovery; and that even modest organizations have some capacity to integrate healing into their ongoing work. None of the work carried out in this study focused on individuals' PTSD symptoms, rather focused on the process of collective recovery. This study will contribute to the literature on disaster as it pertains to the role of organizations in the recovery process.

05049

### **Preparing for the anniversary of 9/11 with kids in mind**

Stevens Madoff J, Fullilove MT, Hernández-Cordero LJ

NYC RECOVERS and Columbia Center for Youth Violence Prevention utilized methods of community mobilization a role in promoting trauma recovery. Many individuals suffering from stress, anxiety and fear related to the attacks on the World Trade Center, have not sought individual counseling, but would be reached with a dose of therapy if organizations held events geared towards wellness and recovery. Surveys of youth in particular have indicated that many have been experiencing symptoms of post-traumatic stress over this past year. The activities developed by this project were simple to integrate into youth programs, school curricula and family time around the anniversary. After-school programs, community-based youth groups and family-strengthening programs were early adopters of the proposed wellness activities during the month of September 2002. Projects were tailored to the needs and populations of each organization. They created supportive environments for youth to express feelings and reflect creatively on this stressful year. The organizers of this initiative were featured on a local cable network as "New Yorkers of the Week."

05051

### **The experiences of community outreach workers in the Bronx after September 11th**

Moynihan P, Levine J, McCormick G

**Background:** Recent evidence shows that the mental health of New York City residents has improved since the terrorist attacks of September 11, 2001. However, mental health recovery has not been evenly distributed across city neighborhoods. This suggests, for instance, that the events of 9/11 may have had quite different psychological effects on residents of the Bronx who live with generally higher rates of background distress but who were, generally, more indirectly affected by the terrorist acts. To address this concern, this project seeks to gain qualitative information from Bronx-based mental health outreach workers about their experience of providing mental health services to local community residents. The aim of this study is to learn about the psychological and emotional concerns of outreach workers serving Bronx communities after 9/11, the stress on these care providers, their perceptions of the influence of cultural factors on psychological response and use of services, and their sense of the efficacy of present outreach strategies in addressing community needs.

**Methods:** The study is a qualitative research project using the focus group interview as the means of data collection. Participants will be outreach workers from four Project Liberty programs located within the Bronx (Urban Health Plan, University Consultation Center, Morris Heights Mental Health, and Bronx Lebanon Hospital). For comparative data on outreach within the local communities, we will interview members of an outreach unit independent of Project Liberty but working within the Bronx (Bronx Lebanon Hospital Mobile Crisis Unit). Transcripts from these five focus groups will be subject to a qualitative analysis of content themes.

**Results:** Preliminary analyses from the first Project Liberty focus group (Bronx Lebanon Hospital) are currently underway. The remaining focus group interviews will be conducted over the course of the summer with substantive conclusions prepared by the fall.

**Implications:** This project will enable us to generate impressions of programs and services provided by outreach workers in the Bronx and construct hypotheses that can be submitted for further research and testing within local communities. In light of our research, we intend to address some of the methodological and practical issues confronting mental health service delivery within inner-city communities.

05053

### **Establishing a liaison with health care**

Manuel A, Politinski L, Smith K, Mendonca K

**Background:** Seaton House Men's Shelter is a 670-bed facility for single homeless men located in the downtown core of Toronto, Canada. Operated directly by the municipal government, Seaton House provides service to over 4000 single homeless men a year. Less than 10% of this group has been in the shelter system for more than 365 days, a point where social decompensation becomes a prevalent characteristic. This target population has difficulty managing in health care settings, particularly as in-patients in the hospital. Discharges against medical advice (AMA) are common and have significant negative impacts on the mortality of the target group.

**Methods:** A work group was established that involved representatives from Seaton House Men's Shelter and St. Michael's Hospital. A new position was created for a shelter staff member to be at the hospital and involved with the in-patient care of the target group. This position was integrated into the hospital as a member of the in-patient care of the client. The position was created with no financial as the result of the reduced impact that AMA discharges would have on the shelter staffing model.

**Results:** There has been a significant reduction in AMA discharges from the partner hospital. In-patient care has been qualitatively assessed as being improved for single homeless men and

**Implications:** Transporting shelter staff into community settings alters the relationship between the shelter and other components of the social welfare system in ways that have a positive impact on the case plan outcomes of the target client group.

05068

### **Geographic methods for understanding and responding to disparities in mammography use by urban, vulnerable populations in Toronto, Canada**

Glazier RH, Creatore MI, Gozdyra P, Matheson FI, Moineddin R, Steele LS, Boyle E

**Background:** Even in the absence of financial barriers, access to health services can be problematic for disadvantaged populations. The purpose of this study was to examine disparities in mammography use among recent immigrants and those with low income in a concentrated urban setting and to use this information to formulate interventions aimed at increasing uptake of mammography among these groups.

**Methods:** Using spatial and epidemiological approaches, we compared mammography rates in four income-immigration groups representing relative 'advantage' constructed using 1996 Canada Census data. Mammography data were obtained from 2000 physician billing claims. Risk ratios, linear regression, multi-layer maps, and spatial analysis were used to examine utilization by area for women age 45-64 years.

**Results:** Among 113,762 women age 45-64, 27,435 (24%) had received a mammogram during 2000 and 91,542 (80%) had seen a physician. Only 21% of women had a mammogram in the least advantaged group (low income-high immigration), compared with 27% in the most advantaged group (high income-low immigration), risk ratio 0.79 (95% CI 0.75, 0.84). Multi-layer maps demonstrated a low income-high immigration band running through Toronto's inner city and low mammography rates within that band.

**Implications:** We found marked variation in mammography rates by area in the inner city, with the lowest rates associated with low income and high immigration. Spatial patterns identified areas with low mammography and low physician visit rates appropriate for outreach and public education interventions. We also identified areas with low mammography and high physician visit rates appropriate for interventions targeted at physicians.

05071

### **Building on history and existing social capital to create change in two urban communities**

Michael YL, SA Farquhar

**Background:** The role of social capital – more specifically, the role of community as change agent capable of identifying health concerns and creating solutions – has become increasingly prominent as a way to create healthier urban communities. Prior research suggests that inner-city communities of color may lack social capital, as well as access to political and social decision-making that affect their health. This study will discuss the preliminary results of a community-based participatory research project designed to increase social capital using the techniques of popular education and Community Health Workers [CHWs] in Portland, Oregon. Poder es Salud/Power for Health is a collaborative effort between the local health department, universities, and several community-based organizations and is funded by the Centers for Disease Control and Prevention.

Methods: Baseline measures of study variables are collected from 200 adults randomly selected from the African American and Latino communities. In addition, analysis of in-depth interviews and historical documents will contribute to a deeper understanding of the role of social capital in creating change at individual, community, and policy-levels.

Results: The analyzed surveys and interviews highlight the unique strengths of each community and demonstrate how their social and historical context is related to social capital. Study results will evaluate the extent to which CHWs using popular educations are able to build on existing social capital and how this process differs between racial/ethnic groups.

Implications: Enhanced understanding about how to involve community members in identifying and addressing social determinants of health will produce better interventions to create healthy urban communities.

05076

#### **Improving functioning of older psychosis patients: Results of a pilot intervention of the functional adaptation skills training (FAST) program**

Patterson TL, McKibbin CL, Goldman S, Davila W, Bucardo J, Jeste DV

Background: Developing behavioral interventions to improve functioning of older patients with chronic psychoses has the potential to significantly increase their independence and quality of life. While a number of studies of younger patients suggest that some therapies (e.g., cognitive-behavioral therapy) are effective in improving the quality of life of younger adults with schizophrenia, these treatments have shown no consistent effects on a variety of other outcomes such as positive and negative symptoms, overall social functioning, and overall social functioning. To our knowledge, no randomized controlled study has examined the efficacy of rehabilitation programs focused on improving everyday functioning in older outpatients with schizophrenia and other chronic psychotic disorders.

Purpose: To evaluate a psychosocial intervention designed to increase everyday living skills of middle-aged and elderly outpatients with chronic psychotic disorders.

Methods: Patients recruited from Board and Care facilities were randomly assigned to: (1) a 24-session FAST group therapy targeting six functional domains (e.g., using public transportation), (n=16); or (2) attention control (n=16). Assessments were conducted at baseline, at the end of the 12-week intervention, and at 3-month follow-up. The primary outcome was change in functional skills assessed using the UCSD Performance-based Skills Assessment (UPSA). We also assessed symptoms with the Positive And Negative Syndromes Scale (PANSS) and the Hamilton Rating Scale for Depression (HAM-D), as well as health-related quality of life with the Quality of Well-Being Scale (QWB).

Results: Ninety-percent of patients in the intervention condition attended all sessions; 100% participated in class discussion and exercise; 90% of patients found the material to be helpful; and 60% reported practicing newly learned skills outside of session. The overall mean UPSA scores improved significantly. A 3 x 2 (TRIALS x GROUP) repeated measures analysis of variance yielded a significant interaction ( $F[2,60] = 7.05, p = .002$ ). UPSA scores of the patients in the fast group improved from 31.7 (SD=11.8) at baseline to 41.5 (SD=9.5), and 42.7 (SD=9.7) in assessments conducted immediately post-intervention and 3-months later, respectively. In contrast, mean UPSA scores for patients in the control condition remained relatively flat: 1) 40.2 (SD=8.3); 2) 42.8 (SD=7.1); 3) 41.6 (SD=9.7). However, no significant changes in symptoms, and overall quality of life were detected.

Conclusions: Results suggest that older patients with long-standing psychotic disorders may benefit from participation in this skills training program.

05081

#### **Patients with diabetes are at risk of hypothermia: An analysis of New York City hospital data**

Lu X, Hajat A, Thorpe L, Karpati A, Mostashari F

Background: Clinical evidence shows that persons with diabetes are at higher risk for hypothermia mainly because of impaired thermoregulation; however, large population level manifestations of this phenomenon have not been well defined.

Methods: We examined hospitalization data from New York City to investigate whether hypothermia is more common in patients with diabetes compared to patients without diabetes. Data were combined from 1993 to 2001 for a total sample size of more than 10 million patients; 2,134 were admitted with hypothermia.

Results: Three out of four hypothermia admissions occurred between December and March. Four percent of hypothermia patients were also diagnosed with diabetes, significantly higher ( $p < 0.0002$ ) than the 1.6% of patients diagnosed with diabetes among non-hypothermia patients. Of all the 34 leading causes of death classified by the National Center of Health Statistics, based on the International Classification of Diseases 9th Revision, diabetes is the only significant risk factor for hypothermia based on logistic regression (OR=2.4;  $p < 0.01$ ).

Implication: Given that diabetes has doubled among adults in New York City in the past 8 years, educational materials and health alerts around prevention of hypothermia special during the winter months should be incorporated into any health messages targeting the city's estimated 450,000 diabetics.

05085

#### **6000 bites in the Big Apple: The characteristics of dog and cat bites in New York City, 2002**

Selenic D, Edward B, Li A, Crawford M, Mostashari F, Gibson J

Background: In New York City all animal bites are reportable by health care providers. Information collected includes: date bite occurred, gender and age of victim, both geographic and anatomic location of bite, rabies prophylaxis, and breed of animal.

Methods: To examine the characteristics of reported dog and cat bites we reviewed all reported dog and cat bites for 2002, using existing animal control surveillance data.

Results: Of 6434 reported bites, 5176 (80.4%) were by dogs and 1258 (19.6%) were by cats. The median age for persons bitten by dogs was 28 years, and 35 years for persons bitten by cats. The overall rate per 100,000 population of dog bites was 64.6, and 15.7 of cat bites. The dog bite rate was higher in males than females (73.1 vs. 52.5), and in boys aged 5-9 years (138.0; RR=3.9 compared to lowest age specific rate of 35.3 for male aged >65 years). In contrast, the cat bite rate was higher in women than men (18.1 vs. 11.9). Dog bite rates varied greatly among neighborhoods within the city, ranging from 26.1 to 176.6. The most common anatomic location of dog bites for adults aged 18-64 years was the arms/hands (48.1%), and for children <5 years of age head/face/neck (47%).

Implications: Dog bites are reported more frequently than cat bites and occur in patterns that may allow targeting interventions to specific neighborhoods and age groups.

Further investigation of risk and protective factors are needed, in addition to the implementation of the standard breed classification

05116

**Health promotion in middle school students: Obesity and Type II Diabetes Mellitus**

Patchett K, McGraw AL, LaBrec ML

Research has demonstrated that 14 percent of adolescents are overweight (Rubin, 2002). As a consequence of being overweight, more children are developing type II diabetes mellitus (Rubin, 2002; Amschler, 2002; Epstein & Myers, 1998). Health promotion and education can help address this problem. Middle school nurses recognize this is a vulnerable population and realize they can make a positive impression, yet an ill-defined role and time restraints may prevent them from implementing certain programs to benefit the middle school population. Based on our literature review, a health education program was implemented targeting middle school students at risk for obesity and type II diabetes mellitus. A pre and post-test was given to students measuring knowledge of health consequences associated with type II diabetes mellitus and obesity, proper portion sizes, healthy food choices, and the importance of exercise. The sample included 13 female students from an urban public middle school. Data analysis was conducted comparing pre and post-test results. Results showed an 11 percent increase in knowledge. Continued contact with these students to reinforce information would be beneficial. Ongoing research with middle school students is needed due to the overwhelming number of overweight adolescents, and to combat the associated health consequences.

05117

**The Girls' Sports and Well Being Initiative at the Brooklyn Muslim Youth Center**

Ahmad S.

**WITHDRAWN**

05119

**Minimizing excessive quarantine in a hypothetical outbreak of SARS in New York City during influenza season: An economic analysis**

Khan K, Muennig P, Gardam M, Creatore MI, Gozdyra P, Zivin JG

Background: As a result of globalization, large urban centers are becoming beacons for emerging infectious diseases like the Severe Acute Respiratory Syndrome (SARS). Given the inability to reliably discriminate early SARS symptoms from those of other influenza-like-illnesses (ILIs) and the current absence of a widely available diagnostic test for SARS, misclassification of ILIs during influenza season could result in the quarantining of a sizable segment of a city's population.

Methods: We constructed a decision analysis model aimed at minimizing avoidable quarantine-days for persons with ILIs of undetermined etiology in a hypothetical scenario in which non-traceable transmission of SARS occurs in New York City during the 2003-4 influenza season. We evaluated the economic implications of four competing strategies: quarantining all ILIs; testing all ILIs for influenza; testing all ILIs for SARS; mass vaccinating the city's population against influenza prior to flu season.

Results: If 10% of New York City's population were to develop an ILI, quarantining would result in \$0.5 billion in lost wages and medical costs. Mass influenza vaccination would avert approximately 750,000 avoidable quarantine-days, while an accurate SARS test could avert 2.6 million quarantine-days. Mass vaccination coupled with SARS testing was most effective, averting 3.4 million avoidable quarantine-days at an incremental cost of \$170 per quarantine-day averted.

Implications: A scenario of non-traceable SARS transmission during influenza season could have devastating economic consequences to a metropolitan center like New York City. If an accurate SARS test were available, SARS testing with or without mass influenza vaccination would be preferred strategies.

05126

**A multilevel investigation of forms of social capital and self-rated health in 40 US Communities**

Kim DJ, Subramanian SV, Kawachi I

Background: Although social capital indicators such as social trust have been shown to predict individual health, the simultaneous and combined health effects of these indicators, capturing bonding, bridging, and linking forms of social capital, have yet to be investigated.

Methods: We performed a multilevel logistic regression analysis of self-rated health among 24,835 individuals nested within 40 US communities, using data from the 2000 Social Capital Community Benchmark Survey. Sociodemographic and socioeconomic variables were included in models as predictors, along with combinations of six individual-aggregated social capital indicators. Correlational and factor analysis were applied to identify social capital indicator groupings. Each indicator was dichotomized using the cross-community median value. Indicator values were then summed to produce grouping scores.

Results: We determined two social capital indicator groupings, that were weakly correlated with one another: SC1 ("bonding") - social trust, formal group involvement, informal social interactions, giving/volunteering (Cronbach's alpha=0.78); and SC2 ("bridging/linking") - friendship diversity, political participation (Cronbach's alpha=0.82). Adjusting for compositional factors, the odds of reporting poor/fair health were significantly higher in communities low in SC1 (OR=1.20;95%CI=1.08-1.32), and in SC2 (OR=1.14;95%CI=1.01-1.27). With both groupings included, SC2 lost its significance, while SC1's effect remained relatively unchanged. No interaction between the effects of SC1 and SC2 was observed.

Implications: This study's results support contextual effects of social capital on health, over and above community composition. Social capital of the bonding form accounted for most of these favorable effects. Future studies should explore mechanisms by which social capital forms may act to improve one's health.

05127

**The Great Pestilence: Yellow fever in Portsmouth, Virginia, 1855**

Lundgren BS.

**Background:** In the summer of 1855, the town of Portsmouth, Virginia (as well as the city of Norfolk, its larger neighbor across the Elizabeth River) was devastated by a yellow fever epidemic. Although the town had coped with contained outbreaks of the disease before, the ferocity of this visitation destroyed the institutional fabric of the town. The government ceased to exist and was replaced by an extraordinary volunteer organization. The epidemic is examined in terms of the organization's activities. Additional areas of inquiry include differential treatment of ethnic, racial and gender groups.

**Methods:** The history of the area and the epidemic was culled from both secondary and primary sources. Among the latter were contemporary newspapers, government documents and personal memoirs. Works on organization theory were consulted to illuminate the work of the volunteer organization.

**Results:** The organization acted as a de facto government. All needs of the town during the epidemic period were supplied by the organization. Following the epidemic, the organization seamlessly ceded civil authority (as well as substantial monetary donations) to the Portsmouth Common Council. Blame and praise were apportioned to immigrants, African-Americans and women according to societal beliefs of the time.

**Significance:** Epidemics, which now threaten us again, are lived out in terms of contemporary beliefs. Cities that have survived can teach us about our own beliefs and offer instruction in coping behaviors.

05132

#### **Assessing the impact of research on disaster survivors**

Smalles E, Durrah T, Gershon R, Murphy B, Hogan E., Matzner F

**Background:** Survivors of disasters, including World Trade Center disaster survivors, are often recruited to participate in research related to the disaster. However, little is known about the impact of participation in such research on disaster survivors. We developed a study-specific protocol to minimize the potential adverse effects of study participation on survivors' mental health and well-being, as well as assess the extent of this occurrence.

**Methods:** After consultation with psychologists, psychiatrists, disaster researchers, researchers in PTSD, ethicists, and other specialists, a detailed protocol was developed for use when conducting in-depth interviews with 150 participants in the World Trade Center Evacuation Study. As part of this protocol, participants were asked to complete the Posttraumatic Stress Check List two weeks prior to participating in the in-depth interview, directly following the interview, and then two weeks after the interview.

**Outcome:** In this presentation the protocol that was developed to minimize the negative impact on participants from participation in disaster-related research studies will be reviewed. Results of the impact of an in-depth interview on post traumatic stress disorder symptoms of respondents will be presented.

**Implications:** Information on the impact of participation in research on the health and well-being of disaster event survivors is sparse. This presentation addresses this issue by discussing the utility of a protocol developed to minimize the negative impact of the research process in these situations, presenting study findings of the impact of the research process on the urban workers who survived the WTC terrorist attacks.

05136

#### **Multidisciplinary approach to affecting teenage risky behavior**

Berger E, Miguez M

**Background:** According to a recent CDC report, 900,000 teenagers become pregnant each year nationally. Inner-city youth comprise the majority of this statistic. As with many disparities in healthcare, access is believed to be a major contributing factor. For the most part, the New York City school system does not offer health education curricula until high school. We propose bringing comprehensive health education curricula into the middle school system of New York City so as to proactively affect risky teenage behavior before it begins.

**Method:** Existing community and school-based health programs for adolescents were researched. A multidisciplinary eight-week curriculum was then devised. The curriculum included some essential didactics but focused mainly on workshops for increasing healthy lifestyle attributes such as self-esteem, decision making and assertiveness. The participants were regularly removed from their native environment and exposed to alternative healthy lifestyles including educational field trips and potential careers. The participants were finally expected to complete a group community service project. This provided the teenagers with a sense of ownership, accomplishment and confidence in their ability to attain healthy and fruitful futures.

**Results:** The project was evaluated short term with pre- and post-test surveys, which assessed knowledge and perceptions of risky behaviors. The surveys were issued to both participants and controls. In addition, cohort studies are planned in order to assess the long term affect of such an intervention on the participants themselves, culture of the school and adolescent population of this New York City community.

**Implications:** Teen pregnancy is just one major issue affecting inner-city youth. Physicians can have an impact on this trend with regular anticipatory guidance as well as outreach programs in their communities. This eight-week program serves as a comprehensive model for such an intervention.

05139

#### **Shifting evacuation styles of survivors of the World Trade Center terrorist attacks**

Smalles E, Gershon R, Durrah T, Murphy B, Hogan E, Matzner F

**Background:** The World Trade Center (WTC) terrorist attacks highlighted the importance of evacuation training for urban workers in high rise buildings. Improvements in evacuation training can be achieved through understanding evacuation behavior. Early reports indicated that during the evacuation of WTC, evacuees were calm and cooperative. However, preliminary findings from in-depth interviews with WTC evacuees suggest that a wider range of evacuation responses and behaviors occurred.

**Method:** 150 in-depth interviews with WTC evacuees will be completed as part of "The World Trade Center Evacuation Study." This study was designed to assess the factors that facilitated and hindered timely and effective evacuation of the WTC.

**Results:** Initial findings suggest that evacuation behaviors fell into two dimensions: (1) autonomic flight response or rational, cognitive response, and (2) evacuating alone or with a group. Many evacuees reported shifting between two of the four categories: flight/alone, flight/in a group, rational/alone, and rational/in a group. For instance, some survivors remained mentally alert and were alone for a portion of their evacuation. A number of these evacuees reported that their own health limitations separated them from a group. Other evacuees experienced a flight response that was intense enough that they

were unaware of others around them. Some of these evacuees, however, reported a shift toward rational thought when faced with someone who needed assistance.

Implications: Study findings suggest that a typology of evacuation behaviors may exist and the formation of social attachments may help to regulate flight responses during evacuation.

05147

#### **Evaluation of the Rotary Club of Toronto Infirmiry: Client characteristics and clinic process indicators**

Jones KE, Chow K, Smith K, Kelly M, Svoboda T, Anstice S, Smith R

Background: Seaton House operates Canada's largest hostel for homeless men. In recognition of the impact of homelessness on client health, the Rotary Club of Toronto, Seaton House, St Michael's Hospital and the University of Toronto have developed a partnership that provides health care within the shelter. The Rotary Club of Toronto Infirmiry unit opened in November 2001 and provides multidisciplinary care. Clients admitted to the Infirmiry are recently discharged from hospital, or have increased health care needs related to acute and chronic illness. This project represents the first step in evaluating the Infirmiry process of care. The objective of this study is to collect data from the Infirmiry regarding specific and selected aspects of client needs, characteristics, and overall process of care.

Methods: A cross-section of approximately 68 Infirmiry clients' charts and associated clinic information has been reviewed between April 2002 and April 2003. Specific information regarding client characteristics and Infirmiry process of care has been obtained. These variables were examined based on criteria of feasibility of accurate collection, and usefulness for future Infirmiry planning.

Results: Data collection includes information on demographics, admission/discharge, client referral needs, and types of care interventions.

Implications: Baseline information collected within the Infirmiry unit on homelessness and health care provisioning will contribute significantly in the area of health and homelessness. The overall evaluation and substantiation of service may provide greater opportunity for multi-level funding for this disenfranchised population.

05150

#### **The role of EMS in the public health response to diseases of bioterrorism**

Qureshi K, Giordano L, Morse SS, Hogan E, Soto J, Contreras G

Background: The NYC metropolitan region, with its concentrated population and status as the financial capital of the nation, is deemed by most to be particularly vulnerable to a weapon of mass destruction (WMD) event. In the event of a bioterrorist (BT) incident, it is likely that many victims will be transported to a hospital by ambulance, thus pre-hospital providers will be among the first to encounter the victims.

Methods: The Columbia University Center for Public Health Preparedness, in concert with the NYS DOH, Bureau of EMS, HHC, and the NYC DOHMH, developed an educational program for pre-hospital care providers which focused class A agents and the role of EMS in the public health response to BT.

Results: This paper will present an overview of the program including a discussion of the important role that EMS plays in the public health response to BT, results of the program pre/post test and results from a survey of EMS providers' willingness to report to work during a WMD disaster. We found that the program served to improve attendees' knowledge about class-A agents and the survey results indicate that the vast majority of EMS workers are willing to respond to any type of disaster.

Implications: Assuring that pre-hospital care providers are well-informed regarding class A agents, enhances early suspicion or recognition of an event and can lead to rapid initiation of protective precautions, reporting, and treatment. Thus, the preparedness of the pre-hospital care providers will serve to protect not only the health of the provider, but the general public as well.

05151

#### **A system of academic centers for public health preparedness in the United States of America**

Morse SS, Qureshi K

Background: In the fall of 2000, the United States Centers for Disease Control and Prevention initiated the Academic Centers for Public Health Preparedness (the Centers) through a cooperative agreement with the Association of Schools of Public Health. The purpose of the Centers is to link public health practice with academe to develop the public health workforce and support the development of a public health emergency / disaster preparedness and response infrastructure in the United States for overall preparedness and EMD events.

Methods: The Centers collaborate with local, regional and state departments of health to develop and implement emergency preparedness plans, competency based training curricula, and conduct relevant preparedness research. In addition, bridging the gap between the hospital, pre-hospital and public health sectors are a concern which the Centers are helping to address.

Results: The presentation will describe this national network of Centers in detail, and illustrate how the partnering of the academic and practice sectors of public health can serve to build and strengthen the emergency response infrastructure of a nation. Activities by the Columbia University Center at the Mailman School of Public Health in response to 9/11 and the anthrax events of autumn 2001 will be discussed. Lessons learned and challenges to achieving efficient, productive partnering will also be discussed.

Implications: The partnership between academe and public health improves the overall preparedness of the health care system.

05152

#### **Hospital employee ability and willingness to report to duty during catastrophic disaster**

Qureshi K, Straub T, Gershon R, Gebbie, E

Background: One of the key components to effective disaster response for any agency is a well trained, competent workforce that is available and willing to report to duty when needed for response operations. During several meetings of the Greater New York Hospital Association (GNYHA) Emergency Preparedness Coordinating Council (EPCC) numerous hospital executives voiced concern that some essential employees might not respond during a major weapons of mass destruction (WMD) emergency. While there were no reported hospital staff shortages after the September 11 and anthrax events, these were not considered to be WMD events. Were a true WMD event to occur (i.e. large scale Smallpox outbreak or chemical attack with 100,000 victims), it is anticipated that hospitals may experience staffing problems. Similarly, this same concern was also been raised by the New York



City Department of Health. During an emergency preparedness pilot training program for School Health Nurses, 50 participants were queried, and 45 reported that they perceived some sort of barrier to reporting to work during a disaster situation. To date, little research has been done in this area. Methods: This paper will present the results of a large scale survey of hospital employees employed in facilities that are members of the GNYHA. The survey was designed to identify facilitators and barriers to employees' ability and willingness to report to duty during six different types of catastrophic disaster scenarios. Results: The most frequent barriers cited were: personal obligations for childcare, pet care, and elder care; fear for safety of self or family and transportation issues. Implications: Identification of facilitators and barriers for employees reporting to duty during a disaster provides information that can be used to address the issue.

05156  
**New York City restaurant inspections**

Rosenthal M.

Background: With a population of approximately 23,000 eating establishments in New York City, developing and maintaining a food service establishment inspection program that promotes and maintains sound public health practices in restaurants is an ongoing challenge. Methods: Data from New York City's restaurant inspection program from July 1, 2000 to June 30 2002 was used for the study. The data contained 19,728 mandatory first-time inspections and 36,035 necessary follow-up inspections. Government and non-profit affiliated eating establishments were not included in the analysis. Each inspection included information on such key areas as: name and location of the restaurant, type and length of each inspection conducted, and a breakdown of all violations issued during inspection. Results: Restaurants with staff on site that have attended the New York City Bureau of Food Safety and Community Sanitation mandated food handling instruction class have a greater chance of passing inspection and receiving a fewer number of violations. Public complaints resulting in ensuing restaurant inspections yield a low percentage of restaurant inspection failures. While the majority of restaurants are located in the borough of Manhattan, the Bronx, Brooklyn, and Queens have a higher rate of inspection failures. Implications: Insight into restaurants that fail health inspections will lead to improved program efficiency and performance. In addition, these enhancements will lessen the impact that mandatory inspections have on limited New York City government resources and those of restaurant owners and operators.

05172  
**An assessment of clinicians' knowledge, attitudes and behavioral intentions regarding bioterrorism**

Gershon R, Qureshi K, Gurtman A, Sepkowitz K, Morse S

Background: The anthrax attacks in 2001 underscored the importance of having a prepared clinical workforce. However, anecdotal reports indicated that many clinicians felt unprepared to recognize, diagnose and treat patients with suspected anthrax and other diseases of bioterrorism (BT). In order to address this issue, members of the Columbia Center for Public Health preparedness, along with their infectious disease colleagues from other medical institutions, developed and implemented a bioterrorism diseases training program designed specifically for community based clinicians. Methods: The 3 ½ hour program focused on the Category-A diseases and emphasized reporting mechanisms of suspected cases, as well as the clinical signs and symptoms. A pre/post test was administered to voluntary participants. Results: A total of 270 matched pre/post tests were analyzed. The mean age of 48.7yrs, and the most common specialty was internal medicine. The mean score for a set of knowledge questions was 6.4 (pre) and 7.2 (post) (p<.05). Younger clinicians had higher knowledge scores. Confidence in ability to recognize and treat BT infected patients significantly improved after the training. Post training, fewer clinicians were willing to be vaccinated with the smallpox vaccine, although still willing to recommend it to their patients. Implications: Gains in knowledge and confidence were observed after a targeted training program designed for clinicians. Training programs can be an effective mechanism to educate clinicians on diseases of BT, and are important in preparing the clinical workforce for diseases of BT.

05173  
**Ethical concerns related to disaster research**

Gershon R, Qureshi K, Gurtman A, Sepkowitz K, Morse S

There is a small but important body of literature examining the impact of research involving survivors of disasters, underscoring the potential harm to study participants through revisiting the disaster events. Yet, in order to make important policy and procedural changes that may help both current and future disasters victims, such research is vital. The difficulty is how to balance the research with those of the survivors. There is a concern that disaster survivors may need special protections because they may be especially vulnerable to harm related to the research process itself. This issue is of immediate concern to us as one of a several teams of investigators exploring various aspects of the New York City World Trade Center (WTC) disaster. In our case, we are examining the individual and organizational factors that may have served as barriers or facilitators to timely and effective evacuation of the WTC evacuation on 9/11/01. The difficulty of insuring that survivors are not overburdened by multiple requests for participation in numerous studies is an important consideration, as is the logistics of contacting survivors in order to recruit them into the various studies. This is especially difficult with the WTC example since the businesses formerly located in the towers have since relocated throughout the tri-state area, and many employees have moved on to other jobs and are no longer employed by the same firms. These and other ethical and logistical considerations of conducting disaster research will be addressed with practical solutions identified that may serve to help other researchers.

05180  
**Comparing consumer and service provider perspectives on critical ingredients in community support programs for people with severe mental illness (SMI) in urban settings**

Rush B, Tate E, Norman R, Kirsh B, Prosser M, Wild C, Lurie S

Background: While considerable research has focused on the effectiveness of different "models" of community support services for people with severe and persistent mental illness (SMI), there is increasing interest in identifying the service delivery processes, structures and content that are important predictors of program success, namely, "critical ingredients." In Toronto, Canada we are in the last year of a 5-year process of developing a package of "model-free" instruments for the assessment of program characteristics, which may ultimately be linked to consumer outcomes. We report findings about the most important elements of community support programs for people with an SMI for reducing hospitalization and improving quality of life, focusing on a subset of respondents living in urban settings.

Methods: Qualitative analysis of 14 interviews with consumers, service providers and family members and 200 selected articles resulted in the identification of domains and questionnaire items. Data from the pilot testing of the questionnaires (with 75 consumers and 30 staff from 3 urban programs) were analyzed to further compare perspectives.

Results: General patterns of domains and themes identified in analysis of the literature and interviews were found to converge in some instances and diverge in others. While service providers responding to the questionnaire reported frequently providing most services in the domains, consumers tended to report that they were rarely or never received.

Implications: Our findings suggest the need for researchers and program evaluators in this area to include measures from multiple perspectives, including both self-report and more objective measures of services received. The domains of service delivery derived from multiple perspectives also provide a template for assessing the comprehensiveness of services provided by individual programs and service delivery networks.

05192

#### **Potential uptake and coverage of a safe injection site in Vancouver's downtown Eastside**

Kerr T, Wood E, Small D, Palepu A, Tyndall MW

Background: A safe injection site (SIS) project will likely be initiated in Vancouver within the current year. The purpose of this study was to estimate the potential uptake of SISs in Vancouver's Downtown Eastside (DTES), as well as to evaluate the impact of newly established federal guidelines on uptake and coverage.

Methods: Four hundred and sixty-four active injection drug users (IDUs) were recruited using street-based recruitment and snowballing methods. Participants completed an interviewer-administered survey assessing demographic and drug use characteristics, as well as attitudes and expectations concerning the proposed SIS.

Results: Ninety-one percent of the respondents indicated a willingness to use SISs. However, willingness to use SISs decreased to 11% when federal guidelines (e.g. no sharing of drugs or assisted injection) were incorporated into the design. Considering local IDU population estimates, drug use characteristics, and the proposed SIS model, it is estimated that Vancouver's pilot SUS will cover only 4.5% of injections occurring in the DTES.

Implications: Safe injection sites have the potential to address public order and health problems associated with injection drug use. However, while a majority of IDU in Vancouver expressed a willingness to use a SIS, uptake by this population may be compromised significantly by the implementation of restrictive policies. In order to maximize benefit it is essential that an appropriate number of SIS be implemented simultaneously, and that they are designed with few restrictions on access and activities. As with other jurisdictions, it may be that several SIS are needed in Vancouver to provide adequate coverage.

05206

#### **The art of alchemy: Translating scientific data into practical messages**

Gibbons MC, RJ Freeman

Background: There has been considerable discussion recently about translating science into practice, and promoting evidence-based medicine, but with less emphasis on primary prevention or population-based health promotion. Also, clinical research findings are most commonly communicated via scientific venues. Thus they rarely make it back in an easily understood format, to the individuals from disadvantaged inner-city communities who are often the study subjects. In response, a joint project was implemented between Johns Hopkins Urban Health Institute College of Art and the community of East Baltimore.

Methods: Scientific messages from published research, addressing specific health issues were identified. Graphic arts students at the Maryland Institute College of Art were enlisted to develop and portray this data in a manner suitable for low-literacy populations. Community input and feedback were obtained via focus groups during all planning and developmental stages.

Results: The scientific data was translated into colorful and vivid; culturally appropriate messages that were eagerly accepted by the target population. Messages contrasted sharply with those previously developed by scientists without community involvement or artistic backgrounds.

Implications: This Preliminary pilot study demonstrates that scientific data can be communicated in a manner considered appealing and culturally appropriate to individuals from low literacy and culturally diverse backgrounds. The non-linear creativity of artists and community participants is complementary to the formal methodology of researchers, who are trained to present data in a technical format. Our collaboration is presented as a model pilot study that can be further developed and evaluated in diverse community settings.

05208

#### **The Amazing Grandmother's Project**

Edwards LA, Groves SL

The Amazing Grandmothers' Project is a comprehensive community-based urban initiative to partner with grandmothers in their efforts to keep families intact. The project supports grandmothers as they raise their grandchildren whose parents are absent due to substance abuse. Multidisciplinary services are provided to a cohort of 15 grandmothers and 40 children. Components of the interventions include home visits by community health nurses, an eight-week nurturing program, a reading program, monthly dinners focused on family building and health education, parish nursing, spiritual support, and a grandmothers' urban gardening project. Families are identified by a family services worker at a partnership school, Tench Tilghman Elementary School, in collaboration with the Julie Community Center. Programs are run in a local church, Amazing Grace Lutheran Church, in partnership with the minister, parish nurse, and parishioners. The project is a model program for community-academic partnerships. The need was identified by the community partners who then sought the academic assistance of the Johns Hopkins University School of Nursing to develop, implement, and evaluate the program. The project is funded by the Johns Hopkins Urban Health Institute, focused on neighborhoods of urban East Baltimore. Census 2000 data show that more than 4.5 million grandchildren are living in 2.4 million grandparent-headed households in the U.S. These amazing grandmothers are addressing this significant public health issue by their efforts to keep families intact.

05219

**G.I.R.L.T.A.L.K—Girls in Real Life Tackling a Lived Killer: Minority girls talk back to HIV/AIDS**

Onyejekwe JN, Amesty SC

Background: Americans between ages of 13 and 25 acquire HIV infection at a rate of approximately two persons per hour. Nearly 50% of all new HIV infections are believed to occur in people under the age of 25. Young women of color are disproportionately affected by this epidemic. The Office of National AIDS Policy reports that of the 25,000+ cases of AIDS reported in people between the ages of 20 and 24, racial and ethnic minorities represent 65%. In addition, young women of color represent 78% of the AIDS cases among young women.

Methods: GIRLTALK utilizes physicians to train minority adolescent females to become Peer Leaders in HIV/AIDS prevention, through a six-session education and training course. At the beginning of the course, the students complete an anonymous survey, the M-GAHRAP (Minority Girls Assessment of HIV Risk And Prevention), to assess their pre-GIRLTALK HIV knowledge, attitudes, perceptions and behaviors. The survey will also be administered at the end of the course and six months after the course to determine the effectiveness of the GIRLTALK program as an intervention for individual and community change.

Results: The initial group of students completed their training in January 2003 as a part of the pilot study. We will analyze data from subsequent groups after obtaining IRB approval.

Implications: GIRLTALK takes AIDS prevention and awareness to the "grassroots" of the epidemic by involving its victims. The findings of this project will determine the nature of interventions that are effective in encouraging healthy sexual behaviors in this population.

05224

**"Bridge and Tunnel": The role of suburban youth in the urban health equation**

Kelly, BC.

Background: The problem of what exactly constitutes 'Urban Health' has come to the fore in recent years. Not only must we contend with what issues are particular to the urban health area, but also who exactly comprises populations of interest within an Urban Health framework.

Methodology: Drawing upon anthropological theory and public health models, the author utilizes data from NIH-funded ethnographic research in New York. The data comes from, three distinct phases of interviewing as well as field notes from extended participant-observation amongst Bridge and Tunnel youth in a range of venues extending throughout Manhattan to the surrounding suburbs of New York City.

Results: The author looks at the issue of "Bridge and Tunnel" youth, that is, youth from surrounding suburbs who came to Manhattan to socialize, party, and engage the city's nightlife. More specifically, the author examines how these youth fit into frameworks of "Urban Health". He provides descriptive evidence of how this phenomenon operates in practice within the context of global and local structural forces, as well as the manner in which it influences the health behaviors of these youth.

Implications: The role of nightlife in the city remains an important area of inquiry precisely because it brings a range of people together. The 'Bridge and Tunnel' youth population potential acts as an epidemiological bridge population in both traditional and nontraditional ways. This paper begins to answer questions such as 'What role does the city play in the health of suburban youth?' and 'What role do these youth play in the health of the city?'

05226

**Urban fishing: An under-recognized risk**

Roberts JD, Silbergeld EK, Gracyk T, Schwab K, Price L

Background: The health of urban populations is influenced by social, cultural, economic, dietary, and environmental factors. This project involved all of these factors by evaluating how these factors can influence dietary choices and options.

Subsistence fishing is a source of dietary protein for several groups of inner city residents in Baltimore, Maryland due to social, cultural and economical conditions. Although there are data indicating that fish caught from the Inner Harbor of the Chesapeake Bay and per-urban rivers can be contaminated by microbiological and chemical hazards, there has been no study of fishing practices, caught fish consumption, or potential health impacts in Baltimore.

Methods: The specific methods of this project include the administration of structured on-site streamline interviews of urban anglers in Baltimore City. The main objectives of this project are as follows: (1) To identify the urban angler population; (2) To evaluate subsistence fishing activities and fish-catch consumption among inner city residents of Baltimore; (3) To evaluate the awareness of fish consumption advisories among the urban anglers.

Results: Demographics: We interviewed 43 anglers at sites representing urban rivers, reservoirs and the Inner Harbor of Baltimore. Of these participants, 81% were male, 56% were white, 33% were African-American, 35% reported completing high school or higher, and 62% resided in Baltimore City. The majority (34%) of participants were between 40-49 years of age.

Fishing Practices: The most frequently reported locations for fishing were Canton (28%), Back River (28%), Patapsco River (23%) and Middle River (18%). Among the participants, it was found that the anglers reported fishing an average of 11 times per month at several urban waterways.

Fish Consumption Behaviors: Approximately 47% of the participants reported that they or someone in their household consumed the fish. It was also reported that nearly 50% reported they always cooked as a form of preparation.

Advisory Awareness: Only 60% reported awareness of any Maryland fish advisories. Results of logistic regression analysis found that Blacks were 74% (OR=.26, p=0.13) less likely to be aware of advisories in comparison to Whites, although this finding was not statistically significant.

Implications: These findings have enormous environmental justice implications, such as a gap in the risk communication to this population of urban anglers. This population of Baltimore urban anglers typifies the behaviors of subsistence fishing. However, the Maryland fish consumption advisories are based on recreational anglers and they do not consider the consumption behaviors or cooking practices in diverse populations. This lack of awareness of fish consumption advisories places this population and other small populations at a greater risk of exposure to environmental hazards due to consuming fish over the allowable size and number of meals as recommended by the state advisories.

05227

**The reintegration of the severely mentally ill from the inpatient unit to the urban community**

Reyes A, Naval A

Background: The inpatient mental health unit of the Saint Michael's Hospital faces an increasing readmission rate and length of hospital stay of the homeless, multicultural, and severely mentally ill urban population. In 2002, the unit developed two positions of the Patient Transition Facilitator (PTF) role to address the unique and diverse needs of its clients.

Method: The PTF is a unique nursing role which innovatively utilizes a comprehensive and outcome-based plan for the patient's continuing care in the community. The PTFs also facilitate appropriate admissions from the medical floors and crisis and outpatient departments to the inpatient mental health unit. They participate in quality and research initiatives that address social and multicultural needs to improve patient and program outcomes. They also actively partner with community service providers to improve pathways to continuing care. This role uses King's (1981) Systems Framework as its operational approach, which allows the client to exercise his right to participate in decisions that influence his life, health, and community services. The framework also provides constructs that facilitate the maintenance and change of the client's social system.

Results: After one year of the development of the PTF role, the unit has already received commendable community feedback, increased its community linkages, and improved its patient and program outcomes.

Implications: The complex reintegration process of the severely mentally ill from the inpatient unit to the urban community requires the integral roles of the PTF as a competent clinician of the interdisciplinary team and as an active community partner.

05235

#### **Knowledge, attitude and practices regarding hazard awareness and risk reduction among workers at garment factory and electronics factory in Montego Bay, Jamaica**

Kambron M, Jolly P, Forrester S

Purpose: To assess knowledge, attitudes and practices regarding hazard awareness and risk reduction among workers at a garment/apparel factory and electronics factory in Montego Bay, Jamaica.

Methods: Qualitative data were collected in two phases for this study. Phase I included two focus groups for garment factory and electronics factory population. The focus groups were conducted with 12 individuals at each company, a total of 24 employed workers on both worksites. The discussion questions covered the following content areas: knowledge of occupational health and safety issues, use of personal protective equipment during working hours, history for respiratory problems, and company responsibility of occupational health and safety risks in the workplace. Audiotapes and notes from the groups were transcribed to identify major themes. Phase II involved administration of questionnaire to the employees. There were a total of 76 employees at the electronics factory and approximately 200 employees at the garment factory. The questionnaire focused on the use of personal protective equipment in the workplace and the prevalence of respiratory problems. Content analysis and Fisher's Exact Test were utilized in the data analysis.

Results: Major themes that emerged from the focus group sessions were: personal protective equipment is somewhat important; personal protective equipment is worn because it is mandatory; the tropical climate and heat may contribute to recognized respiratory problems; and company management is primarily responsible for health and safety of employees at the workplace. The questionnaire analysis found that the association to be significant with difference in the use of protective wear between workers in both Free Zone factories (OR=0.085, CL=0.031, 0.229). No significant association was found between the use of personal protective equipment and respiratory problems amongst the employees.

Conclusion: Content analysis from the group sessions showcased that occupational safety and health procedures can be properly followed with the proper training, education, and enforcement by facility management to the employees. The questionnaire results were not significant in confirming the use of personal protective equipment may influence the prevalence of respiratory problems. In general, with proper training and education implemented by facility management and with involvement from employees, the factory worksites can increase workplace safety and health initiatives. Further investigation may be needed to determine the association in the use of personal protective equipment and the prevalence of respiratory problems.

05255

#### **Prevalence of allergies in asthmatics attending a family health clinic in east Harlem, New York**

Rubin M, Shah L

Background: Asthma is a leading cause of morbidity and mortality. New York's East Harlem community has one of the highest prevalence rates of asthma in the nation. This study was conducted at La Clinica del Barrio, a medical clinic that provides over 16,000 annual visits. The patients are predominately Hispanic (Dominican, Puerto Rican and Mexican), and reside in the immediate community. Among the 4580 active patients, 19% have been diagnosed with asthma, 14% allergic rhinitis and 8% atopic dermatitis. Of note, the clinic's 19% asthma rate is higher than national population-based rates, but lower than the recently reported 24% population-based rate for Central Harlem (New York Times, April 20, 2003). The objective of this study was to document the prevalence of allergic rhinitis and atopic dermatitis among asthmatics attending a community based healthcare clinic in East Harlem, and to look at the degree to which these conditions occur together.

Methods: All children and adults who were diagnosed with asthma, and who obtain their healthcare at La Clinica del Barrio, were eligible for the study. Data were collected using chart review and patient interviews on 111 patients to ascertain if allergic rhinitis and atopic dermatitis were diagnosed as comorbid condition(s).

Results: Among this population with asthma, allergic rhinitis was nearly universal (92%) [95% CI 87%-97%] and atopic dermatitis was found in almost one third of these patients (30%) [95% CI 21.5%-38.5%].

Implications: Results indicate a high prevalence of concomitant allergic conditions in our asthmatic population. Possible causative effects of these comorbid conditions, as well as the impact of allergic states in asthmatics, deserve further study.

05258

#### **The impact of the World Trade Center Collapse on the asthma of Medicaid Managed Care enrollees residing in New York City: Results from a post-disaster survey**

Wagner V, Radigan M, Lannon P, Anarella J, Roohan P, Gesten F

WITHDRAWN

05263

**Providing acupuncture in a public health setting**

Sommers E, Porter K

**WITHDRAWN**

05265

**"Bloodology": An innovative, interactive, educational program about blood**

Johnson C, Dudkewic K, Bertman M, Murphy R, Ratner R, Merritt B, Reid M, Smith R, Baxter M

Background: The New York metropolitan area has a need for greater awareness of the importance of blood donations. For that purpose we devised an interactive program about blood, blood transfusion and blood donation in a fun and innovative format that was stimulating to children and encouraged blood donations from adults accompanying them.

Method: New York Blood Center representatives presented three different sessions at the Brooklyn Children's Museum to children ranging in age from 3 to 12 and their parents or guardians. Each independent session focused on: Circulation and what blood is; what blood does; and why we should donate. Activities included squeezing rubber hearts to sense how hard the heart works; listening to the heart beat; pulling red yarn from a box and wrapping it around a globe more than twice to demonstrate the length of the circulatory system; enacting body parts, lungs and heart to learn how red cells exchange CO<sub>2</sub> and oxygen; using tubing to represent veins, arteries, and capillaries to show how red cells squeeze, platelets plug a cut, and white cells attack invaders, and finally, using songs, jigsaw puzzles of blood cells, donation requirements, and distributing "Bloodology" booklets.

Results: Over 800 attended the sessions. Their answers to true/false questions revealed comprehension.

Implications: The program employed low cost materials, and is an easy way to raise awareness of blood and blood donation. It was enthusiastically received and can be adapted to any age group.

05268

**Benefits of a church-sponsored community health fair in an urban setting**

Goodman J, Parker D, Hilton K, Beard H, Plichta SB, Jones JE

Purpose: Minority populations often lack trust in traditional information sources and may have difficulty communicating with healthcare providers. Many minority community churches have assumed a primary role in promoting healthy behaviors. Community Health Fairs that provide free health screenings can identify pre-existing conditions and make referrals for follow-up care. This study examined the health care needs of participants in a church-sponsored health fair, and the extent to which a community health fair can address those needs.

Method: A church-sponsored health fair consisting of booths providing information on a variety of topics and screening stations for blood pressure, glucose, cholesterol, sickle cell anemia, prostate cancer, and dental examinations was conducted at a rural church in Southern Virginia.

Results: 67 people attended the health fair with 59 completing the survey. Participants were predominately female (57%) and African-American (88%). Ages ranged from 18-84, and most possessed greater than a high school education. Of those screened, 64% had high blood pressure, 11% high blood glucose, 18% high cholesterol, and more than half were in need of urgent dental care. Over 20% of participants had a screening result that made them aware of a possible chronic health condition and were advised to seek follow-up care. A third of the participants witnessed that the fair provided health information they did not previously possess.

Conclusions: Findings support church-sponsored health fairs as a viable strategy to reach the medically underserved, especially communities that depend on the church to provide guidance in, among other things, their health information.

05281

**Disordered eating and gender socialization practices in adolescent females attending single sex and coeducational independent school environments**

Mensingher J

This study addresses an adolescent population not generally considered in research on urban health issues. While they are at-risk individuals, many of the study's participants come from privileged, well-educated, urban families. They have the means to be sent to New York City's most academically prestigious independent preparatory schools, and accordingly, nearly 100% of them are college bound. Despite abundant opportunities to thrive, eating pathologies plague these young women. In efforts to understand the social processes occurring within independent schools that might be contributing to the rising incidences of eating disorders, the present research quantitatively assessed the perceived gender socialization practices of female students attending eleven different single sex and coeducational schools. Through the use of multilevel modeling, results indicated that individual schools embody a distinct and measurable culture regarding female gender role socialization. Numerous significant findings are discussed, among the most interesting being that after controlling for the negative impact (i.e., with respect to eating problems) of dating and appearance concerns among peers – which were reported to a greater degree in coeducational contexts, and the positive impact of peers engaging in nontraditional gender role behaviors – which were reported to a greater degree in all-female contexts, girls attending the single sex schools still tended to report more eating disturbances than their coeducational peers. These counterintuitive results warrant further qualitative investigation of the social dynamics particularly occurring within all-female school environments. The research suggests the need for participatory school-based intervention and prevention programs targeting the adolescent daughters of residents living in upwardly mobile urban communities.

05288

**Youth voices: Urban health promotion using interactive technologies**

Skinner H, Lombardo C, Poland B

Background: The rapid growth of technology creates innovative opportunities for health promotion and collective action. Since 1995, TeenNet based at the University of Toronto has been studying processes for engaging youth in health promotion using interactive technologies. TeenNet's Youth Voices project aims to create youth-driven processes for social action and community health promotion. A special focus is on inner city youth.

Methods: Using low-end technologies (art, video, photography) and high-end Internet-based technologies, youth document the strengths and weaknesses of their communities and take action on selected issues of importance. In particular, we have used a documentary photography technique called Photovoice, which allows young people to explore and define the broad determinants of health in their own communities. Youth Voices is guided by a five-phase model, EIPAS: (1) Engagement (2) Issue Identification (3) Planning (4) Action and (5) Sustainability.

Results: The EIPAS model is being implemented and tested with inner city youth in Toronto through collaboration with three community organizations. Project findings indicate that low and high-end technologies are powerful tools for promoting dialogue, critical reflection, and community connection, thereby creating a strong foundation for capacity building and collective action.

Implications: When youth use technology to record and reflect their lives and experiences, they identify significant personal and community health issues and are motivated to take action. This approach has also been successful on a global scale, in our study linking street-involved youth in Nairobi (Kenya) with youth in Toronto (Canada): <http://www.globalyouthvoices.org>.

05308

#### **Improving communication between public health and emergency responder practitioners**

Fiedelholz G, Gursky E

Threats of bioterrorism and mass casualty events have become an acknowledged concern of public health practitioners. As a result of the 2001 anthrax attacks, public health has improved its capabilities to understand and respond to threats of deliberately deployed pathogens against populations. Bioterrorism will remain a focus of concern for the next decades of the twenty-first century for both public health and traditional emergency responders. Although their role in the identification and containment of deliberately engendered epidemics is crucial, public health's ability to protect populations will depend on successful efforts to coordinate with the traditional responder community. Conversely, it is important for emergency responders to be educated in the principles of public health practice and epidemiology to reduce and contain disease spread. The community infrastructure supporting an urban environment faces specific challenges of threat mitigation and population protection. High population densities, diversities of languages and cultures, and finite social services would place extreme demands on the responder communities to disseminate risk communication; meter the flow of the truly ill and the worried well to available health services; house, shelter and canteen displaced persons; and so forth. The successful interface of capabilities and skills across the responder sectors (especially public health and traditional emergency management personnel) will have ramifications on the numbers of persons who are exposed and, quite possibly, have direct impact on mortality levels. This session will provide a crosswalk of capabilities, jargon and basic precepts to improve the foundation through which public health and traditional emergency responders can plan and operationalize coordinated response activities.

05310

#### **Epidemiology of human visceral leishmaniasis in Brazil with emphasis in its urbanization**

Oliveira DLC, Assunção RM, Proietti, FA

Background: Human Visceral Leishmaniasis (HVL) has a worldwide distribution in 2000, 4,492 new cases were notified in Brazil. In Belo Horizonte (2,229,697 inhabitants), main city and capital of Minas Gerais State, only one human case was confirmed until 1993. In 1994, 35 human cases were reported. Since then, many cases are notified yearly.

Methods: In this paper we review the epidemiology of HVL, with emphasis on the urbanization of the disease in Brazil. Our review is based on the scenarios proposed by Mott in 1996. We consider the 1970's as a turning point in the urbanization of the disease in the country. Cases reported from the northeast coast were followed by outbreaks occurring in several major cities in the northeast region represents a landmark in the disease urbanization.

Results and Implications: Until the middle 70's, HVL was typically rural. We believe that the expansion of HVL from rural areas to large urban centers was the result of a complex interdependence of new causes/determinants possible distal (including changes in climate and the environment, the adaptation of the vector to new areas, inequalities, migration and an increase in population density in urban areas), of the incidence in the urban environment and the proximal and necessary causes/determinants of cases.

05328

#### **Achieving excellence in food safety certification of culinary students**

Magnant PF, Frola NA, Plichta SB

This study examines the effectiveness of using a graphic organizer to teach food safety to culinary students. Americans consume 54 million meals outside the home each year that are prepared and served by professional foodservice workers. Each year 76 million people are affected by a food borne illness, 325,000 are hospitalized and 5,000 people die. Culinary students are able to demonstrate tactile and visual skills in a culinary laboratory setting but may be lacking traditional academic (class room) skills. Therefore, it is important to find effective teaching methods for teaching food safety. This study employed a retrospective case-comparisons design. Excellence was defined as a score of 90 or above. Overall 39% of the students achieved excellence on the certification examination. Those using the graphic organizer were 16 times more likely to achieve excellence than others, after controlling for SES, absences from class, previous college, and time of day the class was offered. These results strongly support the use of graphic organizers in teaching food safety to professional food handlers.



## Poster Session II: Themes in Urban Health

Friday, October 17, 2003

### Homelessness and Housing (01)

01002

#### **Risk factors for cardiovascular disease among homeless people in Toronto**

Lee TC, Hanlon J, Ben-David J, Booth, G, Cantor W, Hwang S

**Background:** Cardiovascular disease is the leading cause of death among older homeless men. The objective of this study was to examine cardiovascular risk factors in a representative sample of homeless people and determine potential need for preventive interventions.

**Methods:** Adults age 18 and over were selected at random at shelters in Toronto, Canada. Recruitment occurred at the city's 14 largest shelters and a probability sample of 6 smaller shelters. Each subject gave informed consent and provided information on demographics, cardiovascular risk factors, and medications. Blood pressure, lipid levels, and hs-CRP levels were measured.

**Results:** We studied 202 individuals. Mean age was 42 years, and 89% were men. Cardiovascular risk factors included cigarette smoking in 78% and diabetes in 7%. By JNC7 definitions, 49% of subjects had stage I or II hypertension, but only 29% were aware of having hypertension, and only 15% reported taking antihypertensive medication. Based on ATP III guidelines, lifestyle changes to lower LDL would be recommended in 34% of subjects and drug therapy in 15%. In 21% of subjects, hs-CRP levels were consistent with high cardiovascular risk. A history of CAD was reported by 14% of subjects, but only 32% of these individuals reported taking aspirin. Using Framingham equations, 8% of subjects without CAD were at high or very high risk ( $\geq 20\%$ ) risk of developing CAD within 10 years, and 16% were at moderate risk (10-19%).

**Implications:** Despite Canada's system of universal health insurance, cardiovascular risk factor modification is sub-optimal among homeless adults in Toronto.

01018

#### **Increasing the reliability of self-reports of receiving primary health care for homeless people living with HIV/AIDS**

McCoy K, Cunningham C, Sohler N, Heller D

**Background:** In an evaluation of an outreach program in the Bronx, NY to engage HIV-infected homeless people into HIV care and non-medical support services, preliminary results indicated that 86% of our sample (total N=57) reported having a regular doctor for HIV care. Rigorous attempts to collect medical charts were successful, however, for only 39% of the sample. Prior clinical and research experiences also cast doubt on the reported rate of receiving regular HIV care.

**Methods:** We examined data from chart reviews and face-to-face interviews to obtain a full picture of participants' HIV primary care experiences. Using these data, we developed an algorithm of self-report data that could classify individuals as meeting current clinical standard of care of "having a regular doctor."

**Results:** After application of an algorithm based on 4 self-report items (recent CD4, number of visits with provider in last 6 months, usual place of care, and HIV care status), the percentage of subjects classified as having regular HIV doctors decreased from 86% to 45%.

Implications: Despite previous research indicating that patient self-reports of health care utilization are sufficiently accurate, it appears that our population of homeless people with HIV infection substantially overreported having a regular doctor for HIV care. Homeless HIV-infected individuals likely have a perception of regular HIV primary care that differs from the national guidelines and recommendations. We suspect that a better understanding of these differences may provide important insights into treatment needs and expectations for this population. Future qualitative investigations in this area are needed.

01020

**Spiritual care for the homeless; identifying the need**

Sinclair GM, Mastandrea JJ, Holness DL

Background: One dimension of health is spiritual. Among the homeless, basic needs including food, housing and medical care take precedence. Information in the literature related to spiritual health in the homeless is sparse. One study demonstrated that inner city homeless women with spiritual beliefs and practices had improved psychological health. Metropolitan United Church, in the inner city of Toronto, Canada provides community services and is currently addressing spiritual care needs of its clients.

Methods: Our work is in two phases. Two sets of interviews, exploring spirituality in the homeless, and their spiritual needs are being conducted with between 6 and 9 clients interviewed by two ministers, expert in spiritual development. A structured set of probes is used and the interviews are recorded and transcribed. This information is being used to develop a spiritual needs questionnaire, for administration to clients of a community lunch program and a drop in center.

Results: Results from the first set of completed interviews demonstrated that each client had a sense of a higher power guiding them on their journey; that spirituality made a positive difference in their lives, providing protection and advocacy; and that churches were generally helpful with social programs. Some noted, however, that they had to unlearn harmful teachings of the church. The results of the second set of interviews and survey questionnaire will be presented.

Implications: Findings of the needs assessment will inform program development to include spiritual care, sensitive to the clients' needs and wants.

01027

**Applied social work research with oppressed populations: A doctoral student's journey with a 100 homeless youth and counting...**

Chau SB.

The purpose of this presentation is to share my experience as a doctoral student during the early stages of my dissertation on Canadian homeless youth and their exposure to violence while on the streets. The presentation is intended for doctoral students and other 'new' researchers considering research with socially oppressed groups (e.g., homeless people) within social and environmental contexts often not covered in classic and contemporary research methods texts. Through a discussion of my experience as a novice researcher, the presentation will highlight ethical and social dilemmas encountered during the planning and data collection phases of the research. I will focus on practical tips and suggestions for dealing with the trials and tribulations in getting the study started, and how unforeseen issues, such as the SARS outbreak, affected data collection. Furthermore, I will also highlight the need and importance of incorporating strategies for self-care and safety while in the field, and how these planned strategies are critical to the process of knowledge building. Last, I will discuss the implications for conducting applied research with socially oppressed populations and the struggles inherent in maintaining a balance between the academic and the lived-reality of doing research.

01031

**Minimizing the impact of HIV/AIDS on the homeless in Ottawa**

Binch J, Arseneault R, Cowen H, Francis Marshall MF, Muckle W, Nanticoke M

Background: Homeless individuals have a decreased rate of HIV treatment adherence, less reported HIV test results, and participate in higher risk behaviors. Ottawa's population living with HIV/AIDS has doubled over the last 10 years. The Ottawa Inner City Health Project (OICHP) is a shelter-based project designed to improve health care delivery to homeless adults. The purpose of this study was to survey homeless HIV-positive clients and their health care providers to evaluate successful strategies used in the project to decrease and document barriers to HIV testing, treatment adherence and risk reduction behaviors.

Methods: A survey tool was developed to assess HIV testing, treatment initiation, treatment adherence, appointment attendance, shelter conditions, risk behavior, mental health and substance use for HIV-positive homeless clients. A similar survey tool was developed for the care providers (nurses, physicians, client care workers, social workers, pharmacists, HIV specialists). Surveys were administered by a nurse researcher and trained peers. Peers were utilized to improve internal validity.

Results: Surveys are ongoing. Interviews with a minimum of 20 clients and 15 service providers are anticipated. Ethics approval for client interviews is pending. 12 service providers were interviewed: 5 nurses, 3 physicians, 2 social workers, 1 client care worker and 1 pharmacist. 10 service providers noted improved medication adherence with supervised dispensing and dosette programs. Appointment attendance improves with minimal waiting time and flexible scheduling. Treatment adherence improves with side effect management by shelter workers who have been educated by medical personnel.

Implications: Health care delivery to HIV positive homeless adults requires unique strategies. By identifying successful strategies used by the OICHP to assist homeless clients at risk or living with HIV, a best practice model can be developed.

01036

**The faith-based homeless shelter: Questions concerning hyper-institutionalization**

Mulder M

**WITHDRAWN**

01042



## **Characteristics of adolescent street youth with a history of pregnancy**

Haley N, Roy E, Leclerc P, Boivin JF

**Background:** Thousands of youth live on the streets of urban centers. This precarious milieu leads to risk behaviors that may seriously jeopardize their sexual health.

**Methods:** In a prospective cohort study, adolescent (14-19 years) female street youth ever pregnant (AEP) were compared with adolescents never pregnant (ANP) using data from baseline questionnaires.

**Results:** Ninety-four (41.8%) of the 225 participants were ever pregnant. Both groups were similar with respect to age (mean: 17.8 years), family socio-economic status and delinquency history. However, AEP were more likely to have been kicked out of home (62.8% vs 47.3%,  $p=0.022$ ) and have run away (78.7% vs 64.9%,  $p=0.025$ ) and were homeless younger (mean age: 13.9 vs 14.7 years,  $p=0.011$ ). More AEP reported an illegal (prostitution, drug selling or stealing) principal source of income (23.4% vs 13.0%,  $p=0.042$ ).

Both groups had problematic alcohol and drug use: CAGE>2: 31.3%; DAST>6: 72.2%; and 44.0% ever injected drugs. More AEP binged before age 13 (40.4% vs 26.2%,  $p=0.10$ ) and, among injectors, more AEP initiated injection before age 14 (25.6% vs 5.8%,  $p=0.007$ ).

More AEP had experienced intra-familial abuse (39.4% vs 24.4%,  $p=0.017$ ); among those abused, more reported vaginal/anal penetration (64.9% vs 25.0%,  $p=0.001$ ) and abuse occurred earlier (mean age: 7.4 vs 8.9 years,  $p=0.09$ ). More AEP also reported a history of extra-familial abuse (61.7% vs 42.3%,  $p=0.004$ ).

**Implications:** Intra-familial sexual abuse and early substance use are extremely frequent in ever pregnant street adolescents. Interventions addressing these factors need to be included when planning pregnancy prevention programs for this vulnerable population.

01047

## **Qualitative study identifying criteria for the development of curriculum for health professionals working with homeless women**

Yardy G, Steele L, Stade B

**Background:** Providing health care to women who are homeless or living in poverty is challenging and understudied. This project was designed to inform the creation and delivery of a core curriculum for health care professionals who provide care to this diverse population. The goal of the curriculum is to enhance providers' knowledge and break down barriers to health care facing these women.

**Methods:** There were four separate research and collaborative processes: (1) Literature review documented existing information regarding development of curricula for health care providers; (2) Environmental scan gathered existing curricula from a variety of sources; (3) Key informant interviews and focus groups involved providers in health, social service agencies, homeless women and women that have experienced homelessness; (4) Round table discussion involved educators and service providers.

**Results:** Required elements and core content for effective curriculum development and delivery were identified. Key recommendations for implementation were articulated including strategies for addressing core competencies, ensuring flexibility and accessibility, respect and dignity in service provision, highlighting the delivery of critical messages and evaluating effectiveness of curriculum.

**Implications:** Study is the first to outlines critical elements for a collaborative, community-based process to develop, implement and evaluate curriculum necessary to improve the providers' competency in the provision of health services to homeless women and women living in poverty. The curriculum links service delivery approaches to health issues, experiences and barriers experienced by this vulnerable population.

01052

## **Community Watch: A partnership between a municipal shelter and police to reduce negative community interactions with intoxicated single homeless men**

Rosolak B, Kelly T

**Background:** Seaton House Men's Shelter is a 670-bed facility for single homeless men located in the downtown core of Toronto, Canada. Operated directly by the municipal government, Seaton House provides social work, property, and dietary service to over 4000 single homeless men a year. Less than 10% of this group has been in the shelter system for more than 365 days which marks a point where social decompensation becomes a prevalent characteristic.

**Methods:** 51 Division of the Toronto Police Service (TPS) did an internal analysis of community complaints in the area of Seaton House. Public intoxication was deemed to be the most frequent request for police intervention on a non-emergency basis. The Community Response Unit (CRU) of the TPS established a liaison position with shelter staff to engage these individuals and attempt to provide alternative dispute resolution. The goal was to reduce the number of arrests made for public intoxication and the number of community complaints called in to police.

The shelter-police liaison rides along with the CRU and the team makes every effort to involve the person in the shelter's moderated drinking program that provides the person with a safe place in which to drink, with attendant care if required.

**Results:** This study is ongoing and will have completed its trial period in July 2003

**Implications:** Establishing a pro-active partnership with law enforcement provides positive outcomes for community residents, the target client group, and the two partner organizations.

01054

## **Fusion of Care**

Svoboda T, Manuel A

**Background:** Seaton House Men's Shelter is a 670-bed facility for single homeless men located in the downtown core of Toronto, Canada. The Fusion of Care model developed out of the Annex Harm Reduction Program in response to disconnects between health care and social work provision to chronically homeless men. The Fusion of Care model provides for a single charting system that is accessed by all care providers from multiple institutions.

**Methods:** The model was developed through collaboration with shelter staff at Seaton House's Annex Harm Reduction Program and St. Michael's Hospital staff. A review of the existing privacy laws governing the two institutions, the several regulated professions involved, and the Provincial and Municipal regulations was carried out. Based on this, agreements were drawn up with all organizations who were involved in delivering client care to use a single chart to record all information about the client.

Results: The Fusion of Care model is effective in managing the complex flow of information generated through interventions with chronically homeless men. Unifying the charting system saved duplication of services and reduced the clients' frustration in trying to govern a complex system. Initial concerns over privacy infringements have not been born out by the actual practice, and increasing numbers of organizations have expressed interest in adopting the model.

Implications: The reduction of barriers to coordinating care for vulnerable and socially isolated individuals is of increasing importance as fiscal constraints and political priorities reduce available services.

01055

### **Nutritional needs of chronically homeless, addicted, single men**

Svoboda T, Ross J, Aguilar R

Background: Seaton House Men's Shelter is a 670-bed facility for single homeless men located in the downtown core of Toronto, Canada. Operated directly by the municipal government, Seaton House provides social work, property, and dietary services to over 4000 single homeless men a year. Less than 10% of this group has been in the shelter system for more than 365 days which marks a point where social decompensation becomes a prevalent characteristic. While every attempt to make meals served in the shelter meet or exceed Canada's Food Guide, little is known about the nutritional health of the target population.

Methods: A literature review was undertaken focused on existing published research that addressed the nutritional needs of people who were homeless and addicted.

Results: The research established that there was a physiological link between addictions such as alcohol and cocaine, and nutrition. For example, cocaine addicts have unique eating patterns that compromise their nutritional status.

More research is needed in the provision of dietary services to addicted single men within homeless shelters.

Implications: To develop a set of recommendations on the possible way of delivering food services to homeless addicted men in order to fulfill their nutritional needs while maintaining quality assurance and cost control.

By matching nutritional needs of addicts to the patterns of their drug use we are able to improve the baseline health of the target population. This can significantly increase the chances that the client will survive long enough to engage in a long-term treatment process.

01073

### **Improving the sexual health of street youth: What do outreach workers suggest?**

Morantz-Ornstein G, Haley N, Roy E

Background: In Montreal, between 4,000 and 6,000 youth live or work on the streets putting them at-risk for health problems including sexually transmitted infections (STIs) and unplanned pregnancies. Studies among Montreal street youth aged 14-25 found that 41% of girls and 22% of boys have had an STI and 47% of girls have ever been pregnant. Despite free, universal healthcare, these youth are not accessing adequate sexual health services.

Methods: Outreach health workers working with street youth in five different community organizations completed semi-structured interviews on the sexual health risks of youth, perceived barriers to care and proposed solutions to improve access.

Results: Participants described street youth as very vulnerable with high-risk sexual behaviors, including survival sex; rampant alcohol/drug misuse and drug injection; sexual and conjugal violence histories; and often undiagnosed psychiatric problems. Individual barriers to self-protection include youths' cognitive-developmental level, psychological distress, intoxication and poor understanding of health consequences of risky behaviors. Institutional barriers limiting street youths' access to sexual healthcare include missing identity papers and discrimination by healthcare workers. Solutions proposed by the participants include: interactive sexual education, on-site STI and pregnancy testing in organizations where youth seek other basic needs, delegation of diagnostic and treatment responsibilities to outreach nurses, and sensitivity training for healthcare professionals.

Implications: Sexual health promotion for street youth needs to address individual barriers such as mental health problems, substance misuse and violence during risk reduction education. More community-based therapeutic interventions by outreach nurses could minimize institutional barriers and improve healthcare access for these vulnerable youth.

01103

### **The impact of supportive housing on health care utilization among homeless persons**

Kessell E, Kushel M

Background: Supportive housing (SH) couples subsidized housing with supportive services for chronically homeless persons. Uncontrolled studies show decreases in acute health care use following SH placement. We evaluated a San Francisco Department of Public Health SH program to examine housing retention rates and whether SH was associated with changes in healthcare utilization among those who received it (intervention) compared with those who applied but were not enrolled (comparison).

Methods: We compared changes in public-delivery system services use two years pre- and post- intervention. We assigned a unique identifier linking subjects to administrative data from public-delivery health care, mental health, and substance abuse treatment programs. We analyzed subjects by the group to which they were initially assigned.

Results: We studied 115 intervention and 136 comparison subjects; 71 (62%) of intervention subjects remained in SH for the duration of the study and 14 (12%) found other housing. We found no differences in within-person changes in emergency department use (intervention: +0.173, control: +0.133 visits/year), hospitalizations (-0.20, -0.11 visits/year), or mental health care (+4.6, +8.1 outpatient visits) between the two groups. There were non-statistically significant trends towards increased primary care and substance abuse treatment in the intervention group.

Implications: SH maintained housing in chronically homeless person but did not decrease acute healthcare utilization. Non-random group assignment and the possibility that the comparison group successfully attained housing may have biased results towards the null. Further research that clarifies determinants of acute healthcare utilization in this population may help refine future interventions.

01112

### **Are homeless patients satisfied with care received in the emergency department?**

Ilk LA, Cass D, Gaunt K, Spence JM

**Introduction:** A survey, comparing patient satisfaction of homeless and underhoused patients (H-UH) to housed patients (H), was conducted in a university affiliated emergency department (ED) which services 40% of the lowest income census tracts and is situated in the highest concentration of homeless people in Canada.

**Methods:** A 12-question patient satisfaction survey was administered over a 4-week period in July and August 2000. Domains of interest included: participants' sense of health, satisfaction with care, perceived quality of care, attention of medical staff, and discharge planning. A retrospective chart review was conducted to compare the H-UH to H patients with respect to demographics, waiting times, number of tests and procedures, and follow-up care.

**Results:** 305 surveys were completed, 113 by H-UH patients. There was no difference in the mean age of the groups. More H-UH patients were male ( $p=0.008$ ). Urgency, waiting times, time to see an MD, and number of tests and procedures were not significantly different. H-UH patients rated their usual health to be poorer and their presenting complaints to be more serious. Homeless patients perceived a greater difficulty in following discharge instructions. Both groups would return to the ED for future care, however H-UH patients were generally less satisfied with the care received.

**Implications:** H-UH patients perceive their health to be poorer and presenting complaints to be more acute. They tended to be less satisfied with ED care. Staff working in inner city ED's may require a greater awareness of both social and medical needs in order to better serve this population.

01113

#### **Attitudes towards homelessness in Canadian Emergency Departments**

Ilk LA, Cass D, Gaunt K, Spence JM

**Background:** Little is known about the attitudes of Health Care Workers (HCWs) in the emergency departments (EDs) towards homelessness, although many homeless people use it as a primary source of care.

**Methods:** The Attitudes toward Homelessness Inventory (ATHI) was distributed to 9 EDs in Canada. The survey includes 11 statements in the domains: personal causation, societal causation, affiliation, and solutions. Demographic data and housing status of survey respondents was also collected. **RESULTS:** The survey was conducted from October 2000 until March 2001. 222 surveys were collected. 165 (74%) were from urban EDs. 57% of respondents were RN's and 23% MD's. The mean age was 38.5 years and 73% were female. The average time working in health care was 15 years, 9 years in the ED. Most respondents disagreed with statements relating homelessness to childhood problems, but less strongly disagreed with an association of homelessness and substance abuse. Most respondents felt that government cutbacks have worsened homelessness. Respondents tended to feel comfortable affiliating with the homeless, although those working in suburban EDs showed less comfort. Most felt that rehabilitation programs were expensive to run, but disagreed that there was little to be done, or that the homeless could not adopt a normal lifestyle. Non-MD's were more supportive of programs for rehabilitation.

**Implications:** This pilot study has shown that HCWs in the ED are comfortable dealing with the homeless population, and feel that government cutbacks have contributed to problems. A wider survey should be conducted to determine changes in trends.

01130

#### **HIV risk in street youth: Lessons from Toronto's Shout Clinic**

Grossman DW, Glazier RH, Yuan L, Millson M, Jhirad R

## **WITHDRAWN**

01142

#### **Development of a triage protocol for a Homeless Men's Shelter**

Anstice S, Svoboda T

**Background:** We describe the design of a triage process at Seaton House, an emergency shelter for homeless men in Toronto. Seaton House comprises 7 specialty programs, including the Annex Harm Reduction program, the first wet shelter established in North America and the Rotary Club of Toronto Infirmary which cares for clients with acute health-care needs. The objective of the triage process was to improve clients' access to appropriate programs within Seaton House.

**Methods:** Informal one-on-one interviews and focus groups were conducted with staff and clients. The purpose of the interviews was to understand the issues involved in triaging clients whose severe mental illness, substance use and behavior problems pose barriers to care.

**Results:** Among the challenges encountered in the triage design was the need to identify not only clients with acute needs but also those whose chronic and/or complex health and social problems present barriers to needed care.

A 3-stage intake process was developed to triage high-risk homeless men by: 1) acuity of physical and mental health need, substance use and social vulnerability; and 2) duration of stay in the shelter. At each stage, screening and assessment outcomes are used to set triage priorities, match clients with appropriate programs, and formulate client care plans. The process is designed to increase in intensity as screening and assessment outcomes identify a client with high health or social needs.

**Implications:** The next stage of this project is to consider expanding the triage model to incorporate outreach to agencies in the local housing/shelter sector.

01146

#### **Client satisfaction with care at the Rotary Club of Toronto Infirmary at Seaton House Men's Homeless Shelter**

Svoboda T, Smith K, Kelly M, Chow K, Jones K, Anstice S, Kwasnicka A

## **WITHDRAWN**

01148

**Evaluation of a family and community medicine resident's learning experience in the Rotary Club of Toronto Infirmity at Seaton House Men's Homeless Shelter**

Watson W, Kelly M, Svoboda T, Smith K, Iglar K, Chow K, Jones K, Anstice S

Background: Family Practice Residents in the Department of Family and Community Medicine participated in a "harm reduction" model of care provided to homeless clients at the Rotary Club of Toronto Infirmity. Seaton House Canada's largest men's hostel provides health services on site. The 36 bed Infirmity is utilized as a training site for family practice residents. The Infirmity cares for clients who have been recently discharged from hospital, and have increased health care needs due to acute and chronic illness. The objective of this study is to evaluate the learning experiences of family medicine residents at the Rotary Club of Toronto Infirmity at Seaton House.

Methods: A total of 13 family practice residents will be surveyed between July and August 2003. The analysis will determine if their learning has increased within each practice domain.

Results: It is hypothesized that residents who had previous experiences with similar patients will have a pre-existing interest in the care of the marginalized. Recommendations based on responses with suggestions for improvement will be made to strengthen the learning experiences for the next year's resident group.

Implications: The learning opportunity for Family Physician Residents provided within a model of care that integrates Harm Reduction within a shelter environment will become an invaluable skill as the rate of homelessness continues to rise. Baseline information will be utilized to modify the teaching rotation and recommend further improvement strategies targeted at academic and systems programming.

01154

**St. Michael's Hospital and Seaton House Men's Homeless Shelter Continuum of Care/Integration Initiative**

Svoboda T, Kurji R

Background: Seaton House, Canada's largest men's shelter and St. Michael's, a large academic Inner-City hospital share a partnership caring for homeless. We recognize that many clients at Seaton House and St. Michael's do not receive coordinated care planning between the two agencies due to the many complex barriers they experience. Supported by a community partnership grant, this joint initiative attempts to improve coordination and integration of services to increase health outcomes of homeless men and stop the "revolving door" cycle of shelter, hospital, and street. The goals of the project are to improve referral and discharge planning, improve harm reduction strategies, and to provide supports for clients admitted to Emergency Department, Internal Medicine, and other "highly utilized" areas.

Methods: Strategies utilized to improve integration of services over a 6 - 9 month period are identification of barriers and strategies by staff at both agencies; implementation of a Seaton House Liaison position at St. Michael's; development of Emergency Department and In-patient protocols that support coordination of care, as well as processes, guidelines, and information pathways that will guide referral and discharge processes of both Seaton House and St. Michael's staff.

Results: Projected outcomes include regular client care summaries from shelter to hospital, discharge plans forwarded from hospital to shelter care teams, and complete program descriptions, guidelines, and summaries for shelter, hospital, and community.

Implications: The success of this joint initiative can provide an "Integration Model of Care" template that can be replicated and adapted to other organizations.

01160

**Housing quality indicators as related to the prevalence of asthma: The Harlem Children's Zone Asthma Initiative**

Golembeski C, Spielman S, Jean-Louis B, Shoemaker K, Rome M, Northridge M, Vaughan RD, Nicholas SW

## WITHDRAWN

01164

**Housing, health risks, access to care, and health outcomes**

Aidala A, Howard JM, Cross J, Caban M

Background: The correlation between poor housing or homelessness and poor health outcomes is well established. However, the processes and mechanisms by which housing affects the health of individuals and communities are poorly understood. This paper presents a research based discussion of the relationship between housing (or lack of housing) as it affects health risk behaviors, health service utilization, and health outcomes among HIV positive people.

Methods: Two separate data sets were used. Interview data were pooled from over 3000 HIV infected clients of agencies participating in a national, multi-site evaluation study. In addition, some analyses draw upon an ongoing longitudinal study of a representative sample of 968 persons living with HIV/ AIDS in New York City.

Results: Homelessness or unstable housing is associated with exposure to violence and unhealthy environments. Lack of housing is a major barrier to obtaining medical care for HIV and remaining in care, regardless of other client characteristics or insurance status. Sex and drug risk behaviors are associated with housing status and change in positive directions with improvement in housing. The role of housing and "home" for anchoring social relationships of intimacy, trust, and social support as well as connection to community and place, are hypothesized as important mechanisms through which housing affects health outcomes. Implications: Provision of housing is a promising structural intervention to improve the health of individuals and urban communities.

01185

**Social circumstances associated with early homelessness among adult drug users in New York City**

Durrah TL, Fuller CM

**Background:** Homelessness experienced early on in life may contribute to a number of high risk social circumstances. Understanding which social circumstances are influenced by early homelessness may help to identify an earlier point of intervention and help in designing prevention strategies.

**Methods:** A cross-sectional survey examining early high-risk social circumstances associated with young age of first homelessness (<18 years of age) among a homeless population of injecting (IDUs) and non-injection drug-using adults (heroin, crack or cocaine) in New York City was conducted.

**Results:** Of 2,191 drug-using adults, 43% were IDUs, 72% male, 53% Hispanic, 37% black, and mean age was 35 years. Bivariate analysis revealed that those who were homeless <18 years of age were less likely to be older (at study entry), and currently receiving public assistance; more likely to report school dropout, juvenile arrest, and to have been in foster care compared with those who reported adult homelessness. In the final logistic regression model, those who were homeless <18 years old were younger (Adjusted Odds Ratio [AOR]=0.92; 95% Confidence [CI]=0.90-0.93), female (AOR=1.46; 95% CI=1.13-1.88), to report school dropout (AOR=1.49; 95% CI=1.13-1.97), juvenile arrest (AOR=2.12; 95% CI=1.67-2.69), and history of foster care (AOR=2.71; 95% CI=2.12-3.45).

**Implications:** Drug-involved adults who report homelessness <18 years old were more likely to have experienced challenging life circumstances during adolescence such as school dropout, foster care and juvenile arrest. Further research examining how each of these services institutions may lead to adolescent homelessness will help the design and implementation of drug use prevention strategies.

01195

#### **An international comparison of psychiatric symptoms in inner city street youth**

Cleverly K, Semogas D, Byrne C, Szatmari P

**Purpose:** To examine the prevalence of psychiatric symptoms in homeless street youth in Hamilton.

**Content:** During the past decade an increased amount of attention has been directed toward investigating homeless youth. In particular, several recent studies have reported rates of psychiatric disorders in homeless youth that not only are more than double that of their domiciled peers but that are reported to go largely untreated.

**Methods:** This poster will report preliminary findings of a longitudinal cohort study utilizing the DPS-4. This questionnaire has 82 yes/no questions related to six diagnostic sections in the DSM-IV and ICD-10. This reliable and valid instrument has been found to accurately predict youth with and without mental health disorders. The sampling methods included recruiting a group of 52 youth (mean age, 18.46; standard deviation 2.2 years) from both an innovative program (the MAC Door) and various drop-in centers throughout the city.

**Results:** The preliminary results of this study show that homeless street youth in Hamilton have extremely high rates of psychiatric symptoms. These rates were compared to other developed countries and to a population of housed youths from Ontario.

**Implications:** These results have implications for ensuring that primary health care and mental health services are youth-friendly and accessible to this vulnerable population. In the future it will be necessary to investigate the presence of pre-existing psychiatric and substance abuse disorders and the influence of length of time living on the streets to determine the impact of the street environment on mental health.

01196

#### **Utilization of primary health care, mental health and social services by homeless street youth**

Semogas D, Cleverly K, Thomas CF, Sanford D, North T, Byrne C

**Background:** In the past several years, numerous studies have reported on the adverse health status of street youth and their concomitant low rates of health service utilization. Specific comparisons on the utilization of primary health care, mental health and social services by street youth have not been as widely discussed. The purpose of this paper is to describe the utilization of primary healthcare, mental health, and social services by a sample of Hamilton street youth.

**Methods:** Beginning in April 2002, fifty two street youth ages 16 to 25 years were recruited (from the M.A.C. Door and from community youth services) to participate in a study examining readiness to change health behaviors. The interviewer-administered questionnaires looked at a number of themes including mental health, substance abuse, and self esteem. Items related to health and social service utilization explored the number of recent visits to primary health care, mental health and social services. Primary health and mental health care included number of visits with family physicians, community nurses, psychologists/counselors, emergency rooms and counseling agencies while categories pertaining to social services included number of visits with social workers, social service agencies for youth.

**Results:** Results indicate that street youth make far greater use of social services than health services in spite of the fact that they have significant health problems. This is particularly noteworthy for mental health services.

**Implications:** The fragmentation of primary health care, mental health services and social service delivery has important implications for the health of homeless youth.

01202

#### **Does hospital discharge to a homeless medical respite unit avert re-admission?**

Kertesz SG, Swain S, Posner M, Shwartz M, O'Connell J, Ash A

**Background:** A novel subacute care facility, the medical respite unit, offers homeless patients recuperative care while addressing psychosocial and other homeless specific needs. Such units exist nationally, but their effectiveness is unstudied and they are unrecognized by the Centers for Medicare and Medicaid Services. We used data from the largest such program in the U.S. to test whether discharge to a medical respite was associated with delayed hospital readmission or death (R/D) for the hospitalized homeless.

**Methods:** we examined time to first R/D for 784 homeless adults discharged from a medical/surgical hospitalization 7/98-6/01, with the follow-up to 6/02. The predictor of interest was discharge destination, in 4 categories: Respite, Own Care (shelters/streets), Other Care (e.g. nursing home), and Left Against Medical Advice (AMA). We used survival curves and proportional hazards models to quantify the effect of discharge destination on the hazard for R/D, controlling for comorbidity using Diagnostic Cost Groups, index hospitalization length of stay (LOS), number of prior hospitalizations, substance abuse & sociodemographics. Data came from crosslinking 7 administrative sources.

**Results:** raw survival curves for the outcome of R/D did not differ by discharge destination (p=.71). Predictors of R/D included index LOS, comorbidity and alcohol abuse (all p<.01). After statistical adjustment, Respite patients had a non-significant reduced risk of R/D (HR 0.86, 95%CI .65, 1.13).

**Implications:** For the hospitalized homeless, respite placement may protect against readmission, but these findings are limited by sample size and possible residual confounding. Alcohol abuse, prior hospitalizations, and comorbidity identify a homeless subgroup at increased readmission risk.

01214

**The role of housing in the socioeconomic production of health: Towards a conceptual framework**

Dunn JR

**WITHDRAWN**

01232

**Chronic homelessness, addiction and health-related quality of life**

Kertesz SG, Horton NJ, Larson MJ, Samet JH

Background: The "chronically homeless" have been proposed for special federal housing assistance, but this group's distinct character has received limited study. Using prospective cohort data, we tested the hypothesis that chronically homeless persons have uniquely poor health-related quality of life (HRQOL) over time, and tested whether substance use accounted for observed differences.

Methods: Subjects (N=470) were recruited at detoxification for alcohol or drugs, and followed for 2 years. Subjects available for 3 assessments (N=289) were classified as Chronically Homeless (CH), Residentially Stable (RS), and Transitional (TR) based on reported nights homeless. At each follow-up we measured HRQOL with the SF-36 Mental Component Score (MCS) and Physical Component Score (PCS). We tested whether housing status was associated with MCS & PCS by fitting general linear regression models for correlated data that account for multiple observations per subject, controlling for sociodemographics, time & and the interaction of housing status & time.

Results: At baseline, CH subject had very low MCS scores (mean 30.7), as did RS (32.2) and TR subjects (30.6), values lower than scores found in depression. While RS MCS scores improved 13.5 points, CH showed less improvement (+5.6,  $p=.01$  for Time-by-Housing interaction, see Figure). Adjustment for ongoing substance use did not explain the impact of CH on MCS. A model for PCs showed moderate improvement over time for all three groups.

Implications: Among persons entering publicly funded detoxification, the chronically homeless had especially poor mental HRQOL, and less improvement than others over 2 years. This uniquely vulnerable subgroup warrants targeted interventions.

01270

**Internet-based medical record keeping of the Ottawa homeless**

Tadic V, Muckle W, Turnbull J

Background: Medical record keeping for the homeless is often not available at point of care and incomplete due to episodic, crisis-driven healthcare delivery by multiple caregivers at many sites. The Ottawa Inner City Health Project is a pilot project started in July 2001 to address the complex health needs of the chronically homeless using a case management approach. This project has included the development of a web-based sharable medical record, the Electronic Health Record (E.H.R.).

Methods: This information system is an internet-based application that can be accessed remotely by any appropriately configured system in Ottawa. The completed record includes demographics, client contacts, medications, medical and mental health history, substance use and client encounters. Project nurses, support workers and physicians chart for each episode of care that is provided to a client. Relevant medical information can be printed and sent with the client to hospitals and appointments. Client consent is obtained and security is addressed by utilizing Secure Socket Layer 128-bit encryption, which most financial institutions currently employ for their web banking services.

Implications: Modernizing health record keeping of the chronically homeless in Ottawa with the use of this technology, has made accurate and up to date client information accessible to multiple health care providers in an efficient and timely manner. The development of the E.H.R has gained international recognition as a needed direction for health care services and patient care. Despite its unique challenges, it has been successfully introduced in the setting of homeless adults. Future directions include extending internet-based access to the hospitals in Ottawa.

01272

**A Shelter-based palliative care hospice for the terminally ill homeless**

Podymow T, Tadic V, Muckle W, Turnbull J

Background: Homeless persons have high rates of mortality from AIDS, cancer and hepatic disease, but live in environments not conducive to terminal care. Hospices may be reluctant to accept such clients, due to behavior or lifestyle concerns. The Ottawa Inner City Health Project was designed to improve health care delivery to homeless adults. We describe the Palliative Care Hospice, a 15 bed shelter-based unit created to house and treat terminally ill homeless individuals.

Methods: Clients are referred through hospitals, shelters or community workers. Staffing includes nursing 7 hours/day, care workers 24 hours/day, physicians, mental health team, chiropody, volunteers, occupational and physical therapy, and spiritual care. Demographics, diagnoses at admission and therapies are described for 41 clients. An expert panel (nurse, social worker and 3 physicians), was convened to identify probable alternate care locations for these clients, and these were compared to the average bed-day cost of the hospice as a cost benefit study.

Results: We describe 41 (35 men, 2 women and 1 transgender) hospice admissions July 2000-April 2003, mean age 55.5 years, average length of stay 169.5 days. Diagnoses at admission: AIDS (12), end-stage liver disease (12), malignancy (9) and other (8). 98% suffered addictions to drugs or alcohol. On admission, Karnofsky Performance Scale was 38. Symptoms included pain (37), shortness of breath (19), nausea (21) and confusion/coma (19). Palliative care consults were obtained in 28. Pain management included opiate infusion/patch in 25. Thirty-two clients were treated for mental illness. Thirty were reunited with family. Compared with probable alternate care locations, the hospice program saved an estimated \$1.3 million for the clients described.

Conclusion: A shelter-based palliative care unit can provide effective end-of-life care to terminally ill homeless individual at substantial cost savings.

01273

**Shelter-based convalescence for homeless adults: The Special Care Unit**

Podymow T, Tadic V, Muckle W, Turnbull J

Background: Homelessness is associated with increased hospital costs and length of stay, and medical illness typically complicated by secondary diagnoses of substance abuse or mental illness. The Ottawa Inner City Health Project is a pilot project designed to improve health care delivery to homeless adults. This includes a convalescence unit.

Methods: The Special Care convalescence unit (SCU) is a 24-bed shelter-based unit. It provides up to 3 months stay post hospital discharge for treatment of addictions, or for those too ill to remain in the general shelter. Staffing includes a client care worker 16 hours/day, nursing 4 hours/day, a physician, mental health services, chiropody, physiotherapy and occupational therapy. Project staff dispense medication, and clients are assisted with transportation to appointments, obtaining health cards, and other entitlements. Demographics, reasons for admission to SCU, and outcomes are described.

Results: 119 men admitted to the SCU July 2000-April 2003 are described. The mean age was 46.5 years, and 29 were admitted post hospital discharge, 27 for addiction treatment, and 103 for stabilization of a medical or surgical condition. Average length of stay was 46.7 days and during this time clients received treatment for diabetes (19%), wound care (37%), alcohol detoxification (22%) and psychiatric disease (82%). Medication compliance was excellent in the majority. In addition, 45 obtained health/drug cards, 110 received transportation to appointments, 70 applied for housing and 22 obtained housing upon discharge.

Conclusion: A shelter-based convalescence unit can provide effective health care to homeless persons and stabilize medical and mental illness, ensure compliance to treatment regimes, decrease substance abuse, and assist in housing.

01290

**Addressing psychiatric disease in homeless individuals with chronic alcoholism**

Haney C, Podymow T, Muckle W, Turnbull J

Background: The burden of mental illness in homeless chronic alcoholics is thought to be large and under recognized. The Management of Alcohol Program (MAP) is a harm reduction program stabilizing alcohol intake in chronic homeless alcoholics. The purpose of this study is to describe the mental health of chronic alcoholics admitted to the MAP, and the utility of harm reduction in stabilizing mental illness in this population.

Method: A survey was developed to describe the behavior, level of function and mental health characteristics of individuals in the MAP from June 2001-April 4, 2003. This included a modified Brief Psychiatric Rating Scale (BPRS). A panel of MAP staff (shelter care workers, program nurse and doctor) caring for the clients was convened and a survey was completed for each client. A psychiatric nurse practitioner also caring for program clients reviewed select surveys for internal validity.

Results: Forty-one individuals (38 male, 3 female, mean age 51 years) were admitted to the MAP for an average of 215 days. Prior to the program, 20 individuals were living on the street, and 18 were in the shelter system. Subjects were rated on the BPRS as having severe symptoms of self-neglect (59%), depression (44%), anxiety (41%) and guilt (39%). 31% of subjects had diagnosed mental illness at MAP entry. 71% of clients received psychiatric assessment and treatment while in the MAP. Improvements were noted in binge drinking (83%), alcohol seeking behavior (79%) and hygiene (66%).

Conclusions: The MAP provided a stable environment in which many clients decreased alcohol consumption and showed improved personal care. Harm reduction provides a novel approach to psychiatric diagnosis and treatment in chronic homeless alcoholics.

01292

**Predictors of initiation into prostitution among female street youth**

Weber AE, Boivin JF, Blais L, Haley N, Roy E

**WITHDRAWN**

**Alcohol, Tobacco and other Drugs (02)**

02005

**Optimizing adherence to antiretroviral therapy among injection drug users in Vancouver**

Tyndall M, Sussman F, Bright V, Palepu A, Hogg R, Montaner J

Background: The use of injection drugs within large urban communities has resulted in high rates of HIV infection in many North America cities. The provision of HIV care and antiretroviral therapy (ARVs) to this population is challenging and requires novel approaches to increase uptake and optimize adherence.

Methods: The MAT Program consists of a multi-disciplinary team who provide supervision, monitoring and support for individuals on ARVs. In addition to the daily dispensing of ARVs, the program provides assistance with housing, finances, health concerns, and addiction treatment.

Results: Between Nov 1999 and Dec 2002, 101 participants (73 males, 28 females) were enrolled in the program. The average age is 42.7 years, all are active or recent IDUs, and all are co-infected with Hepatitis C. Sixty-one (60%) remain on ARVs. Reasons for stopping therapy include toxicity and adherence problems (14), loss to follow-up (11), death (8), planned treatment interruptions (4), and imprisonment (3). At initiation, 50% had a CD4 < 200 cells/ml, 52% had a plasma Viral Load (pVL) >100,000 copies/ml. Overall, 79% achieved an undetectable pVL at some time during follow-up and 43% remain undetectable. CD4 counts are maintained above 200 cells/ml in 62%. Treatment interruptions (> 1 month) occurred in 73% and at least one change in ARV regime was required by 69%.

Conclusions: The MAT Program demonstrates that people who are drug-dependent can be successfully engaged in ARV treatment. However, ongoing drug use may jeopardize longer-term sustainability due to treatment interruptions and frequent therapeutic changes.

02017

### **Drug treatment is not just for quitters: Shedding light on treatment failure**

McCoy K, Curtis R, Weiss L

Background: Failure rates for abstinence-based drug treatment programs typically range from 70 to 90 percent (Goode 1999). Most people enter treatment programs repeatedly over their drug-using careers (Hubbard et al. 1989). This study investigates one possible explanation for these trends; not everyone who enters drug treatment intends to “quit.”

Methods: Data on people’s experiences with abstinence-based treatment were compiled and analyzed from qualitative interviews with subsamples from an ethnographic study of heroin users (n=35 of 500) and from a qualitative interview study of health care access and utilization among heroin and cocaine users (n=39 of 71), both conducted in New York City.

Results: Many people sought drug treatment without the intention of stopping drug use. Rather, they were seeking food and shelter, hoping to cut down use, or “to take a break.” These alternative reasons for enrollment in treatment were generally concealed from providers. When people did want to quit, however, they often felt insulted and discouraged by what they perceived as dehumanizing practices on the part of treatment professionals. Harm reduction programs that they felt valued them and honored their goals were perceived as helpful.

Implications: The assumption that most or all drug users entering abstinence-based drug treatment are aiming to quit using drugs is inaccurate. What is counted as treatment failure may actually reflect the fact that programs are often used to meet other needs. Programs that value people’s goals and needs may be more effective in building the self-efficacy needed to better manage and/or cease drug use.

02022

### **Aging to perfection: Substance abuse prevention in older adults**

Shafer KC.

In the last decade scholarly research and publication in the United States have dramatically increased in addressing older persons in the areas of trauma and substance abuse. How substance abuse and trauma are defined and assessed in the international research literature remains quite controversial. This presentation will discuss innovative prevention, practice, and teaching in this global problem. While an overwhelming majority of older adults (age 55 and older) see physicians and other professionals often, the literature reports that those at risk for substance abuse (alcohol, prescription misuse, and other drugs) are unlikely to be identified despite frequency of contact. Additionally, symptoms of substance abuse problems exhibited by older adults are often dismissed by clinicians and family members as signs of “old age”.

Challenges in identifying the “hidden alcohol abuser” are important for those working with or caring for older people. According the literature, there is debate as to which screening instruments accurately detect alcohol and drug abuse in the elderly. The prevailing issue is questioning how clinicians have refined screening protocols in older adults for alcohol and prescription medication problems, quantity and frequency of use, and responses to negative emotional states and isolation. Our poster will recommend research, education, training, and clinical interventions for international social work educators who provide a wide range of services for the older adult at risk for substance abuse problems. Future education efforts would include infusing trauma, substance abuse, and older adult content into the social work curriculum, and examining instruments used with this population.

02024

### **Drug use and health care utilization in HIV-infected single room occupancy hotel residents**

Cunningham C, Sohler N, Berg KM, Shapiro S

Background: Despite a growing body of literature demonstrating that HIV-infected substance users have poorer health outcomes than other risk groups, few studies have examined the impact of specific drug use on health care. This study investigated associations between specific drug and alcohol use and health care utilization.

Methods: HIV-infected individuals residing in single room occupancy hotels in the Bronx, NY were interviewed regarding demographics, HIV disease and treatment, health care perceptions, and patterns of drug and alcohol use.

Results: Of the 270 participants (96% response rate), mean age was 41 years; the majority were male (58%), Black or Hispanic (93%), and recent drug users (within the past two months) (61%). Individuals reporting any drug or crack/cocaine use were less likely to have a regular doctor than those reporting no drug or no crack/cocaine use (adjusted odds ratio [AOR]=0.50, p=0.05; AOR=0.39, p=0.006 respectively). Individuals reporting any drug or crack/cocaine use were also less likely to perceive quality of health care positively (AOR=0.50, p=0.02; AOR=0.41, p=0.003 respectively). Heroin use, injection drug use, and problem alcohol use were not associated with these outcomes. When the sample was limited to recent drug users, similar patterns were found.

Implications: Although substance use in general is associated with negative health outcomes, in our sample of HIV-infected SRO hotel residents, poorer utilization of health care among drug users was associated predominantly with crack/cocaine use. It is important that clinicians and researchers working with drug-using populations understand how specific drug use patterns differentially impact on health care.

02028

### **Symptoms of substance dependence after the September 11 attacks: Results from a population survey of New York City residents conducted in January 2002**

Nandi AK, Galea S, Ahern J, Vlahov D

A substantial burden of post-traumatic stress disorder (PTSD), depression, and increased substance use has been reported in New York City following the September 11 attacks. The results of prior studies on the relation between disaster exposure and substance-related disorders have been conflicting. Using random-digit dialing to contact a representative sample of adults living in New York City, we assessed the prevalence of symptoms of alcohol and smoking dependence after September 11, 2001. In the four months after September 11, 1.6% of the 2001 respondents reported symptoms consistent with alcohol dependence and 10.4% reported symptoms of smoking dependence. Respondents with symptoms of alcohol dependence were more likely



to have probable PTSD and depression than respondents without symptoms of alcohol dependence (15.1% vs. 7.1% for PTSD; 42.2% vs. 7.5% for depression). Respondents with symptoms of smoking dependence were also more likely to have probable PTSD and depression than those without (18.1% vs. 5.7% for PTSD; 23.6% vs. 6.0% for depression). This study showed the co-occurrence of symptoms of substance dependence with probable PTSD and depression after the September 11 attacks and suggests a potential association between traumatic event exposure, substance dependence, and psychopathology after a massive disaster.

02039

### **Social contexts leading to risky use of injection equipment among young street-involved IDUs**

Roy E, Nonn E, Haley N, Morissette C

## **WITHDRAWN**

02041

### **Variations in heroin and cocaine use in new injectors**

Roy E, Haley N, Leclerc P, Boivin JF

Background: From 1995/01 to 2000/09, 1,013 street youth (14-25 years) were recruited in a prospective cohort with semiannual follow-ups.

Methods: To describe drug use patterns of new injectors, subjects having initiated injection during follow-up were selected from the database. Three time periods were examined: lifetime before initiation (P1); from initiation to the first questionnaire following initiation (P2); and from this questionnaire to the next one (P3).

Results: By 2000/09, 81 of the 542 non-IDU at entry had initiated injection during follow-up. Sixty-six initiates provided information on P1: 95.5% had used acid/PCP, 89.4% cocaine/crack/freebase, and 28.8% heroin. Among subjects first injecting with cocaine, 88.6% (31/35) had used cocaine before; 48.3% (14/29) of heroin initiates had used heroin before ( $p=0.0004$ ). During P2 ( $n=64$ ), 59.4% most often injected cocaine, 39.1% heroin and 1.6% PCP. Participants continued injecting mostly their first-injected drug (cocaine initiates: 88.6%; heroin initiates: 77.8%).

During P3 ( $n=60$ ), 48.3% reported no injections since last questionnaire; 11 had injected only once during P2. Among subjects previously injecting mostly with cocaine ( $n=33$ ): 60.6% reported no injections (half still used cocaine), 30.3% mostly injected with cocaine, and 9.1% had switched to heroin. Among those previously injecting mostly with heroin ( $n=24$ ): 25.0% reported no injections (none still used heroin), 66.7% mostly injected with heroin and 8.3% had switched to cocaine.

Implications: Certain youth may only experiment with injection. Many youth initiate heroin use by injection and heroin injectors are more likely to continue injection than cocaine injectors. Reasons for these different patterns merit further study.

02044

### **Examining the impact of psychiatric services in a Canadian harm reduction program**

Farrell S, Wood B, Muckle W, Loughheed D

Background: The Ottawa Inner City Health Project provides a management of alcohol program for persons with chronic alcohol use, complex health problems and histories of homelessness. Previous research has confirmed high incidence of psychiatric symptoms in this population, but to date, no Canadian studies have examined the impact of providing a flexible model of community-based psychiatric services to clients' mental health, substance use and quality of life.

Methods: Using a repeated measures case comparison design, all residents of this harm reduction program were assessed at admission, 1, 3, 6, 9 and 12 months into the program. Assessment was conducted by the Psychiatric Nurse Practitioner and consulting Psychiatrist providing services. Assessment measures included the Brief Psychiatric Rating Scale, Mini-Mental Status Examination, and Wisconsin Quality of Life Questionnaire (Client and Provider). Case comparison between clients who did and did not receive psychiatric services and those receiving different levels of service are made to examine the impact of psychiatric services on client well being.

Results: Preliminary findings to date suggest that the introduction of flexible, community-based psychiatric services provides improvement in clients' symptom level and quality of life.

Implications: Persons in harm reduction programs in Canada have not systematically received psychiatric services to address their concurrent mental illness. Therefore, it was important to determine the impact of this flexible model of service to assist with developing an effective intervention to improve the health of this vulnerable urban population. Implications for the delivery of psychiatric services within harm reductions will be discussed.

02058

### **Circumstances surrounding the first injection episode and association with future needle sharing among young injection drug users**

Novelli LA, Sherman SG, Havens JR, Sapun M, Fuller CM, Strathdee SA

Objective: We hypothesized that circumstances surrounding the first injection episode ("first hit") may be associated with future needle sharing among young injection drug users (IDUs). Such findings may be important for informing preventive interventions for this vulnerable population.

Methods: Participants ( $n=431$ ) were IDUs in Baltimore, MD, aged 15-30, who had first injected <5 years ago. Survey data were collected on sociodemographics, circumstances surrounding the first hit, and current drug use. Chi-square tests and logistic regression were used to determine associations between these factors and needle sharing within the last six months.

Results: Participants were primarily white (70.3%), male (59.4%), and initiated drug injection at a median age of 22 years; 23.2% used a used needle for their first hit. IDUs using a used needle for their first hit were more likely than those using a sterile needle to report recent needle sharing (60.6% vs. 32.3%,  $p<0.001$ ). Factors independently associated with current needle sharing, adjusting for age, gender, and race, included: using an unclean needle at injection initiation (AOR=3.30; 95% CI: 2.01-5.40) and having heard of a needle exchange program (NEP) prior to initiation (AOR=0.59, 95% CI: 0.37-0.92).

Implications: Injection-related risks may be established at the onset of injection initiation, supporting the need to educate young non-IDUs about the harms associated with unsafe injection practices. The protective effect of the awareness of NEPs prior to injection initiation suggests that these programs have an important role in disseminating educational messages to drug users, in addition to providing free, sterile injecting equipment.

02059

#### **Sexually transmitted infections (STIs) among young injection drug users**

Plitt SS, Strathdee SA, Sherman SG, Gaydos CA, Hobelmann K, Taha TE

Background: Young injection drug users (IDUs) have consistently shown higher sexual risk behaviors than older IDUs. The advent of nucleic acid amplification tests (NAATS) has facilitated the identification of STIs among these high-risk populations. This study examines the prevalence of common STIs and associated sexual risk behaviors among young IDUs.

Methods: IDUs aged 18-30 years completed a questionnaire assessing sexual risk behaviors and were tested for chlamydia, gonorrhea and trichomonas infection by NAAT in urine (males) or self-administered vaginal swabs (females). Females were also screened for bacterial vaginosis (BV) using Nugent's criteria. Risk behaviors of infected and non-infected participants were compared using contingency table analysis.

Results: Of 330 participants, 65% were male, 77% were white, and median age was 24 years (Inter-Quartile Range: 22-27). In the three-months prior to baseline, 33% had traded sex for money or drugs, 68% had  $\geq 2$  sex partners, and only 14% of those with steady sex partners and 41% of those with casual partners reported consistent condom use. STI prevalence rates were consistently higher among females than males, respectively: chlamydia: 5.2% vs. 3.3% ( $p=0.39$ ); gonorrhea: 3.5% vs. 0% ( $p=0.02$ ); and trichomonas: 8.6% vs. 1.9% ( $p=0.008$ ). BV prevalence was 67% and was highly associated with douching (OR=3.2, 95% CI: 1.4-7.5).

Implications: High levels of sexual risk were exhibited among young IDUs, however STI prevalence rates were similar to those reported from non-IDU populations. The clinical significance of the high BV prevalence warrants further investigation given the high levels of HIV risk-taking behavior in this population.

02079

#### **HIV-infection in the community and history of incarceration among injection drug users (IDUs)**

Wood E, Small W, Spittal P, Miller CL, Tyndall MW, O'Shaughnessy MV, Schechter MT

Background: Several recent Canadian studies have reported elevated rates of HIV infection among incarcerated injection drug users (IDU). We evaluated if elevated rates of syringe sharing were associated with periods of incarceration among a cohort of IDU.

Methods: We performed analyses of: (1) syringe lending by baseline HIV-infected IDU and (2) syringe borrowing by HIV-negative IDU among participants enrolled in the Vancouver Injecting Drug Users Study (VIDUS) a prospective cohort of IDU. Since serial measures for each individual were available, variables potentially associated with the outcome in each case (lending or borrowing) were evaluated using generalized estimating equations with logit link for binary outcomes.

Results: Overall, 1475 IDU were enrolled into the cohort between May 1996 and May 2002. Among the 318 IDU who were HIV-infected at baseline, having been incarcerated in the six months prior to the interview remained independently associated with syringe lending during this period (Adjusted Odds Ratio: 1.33 [95% CI: 1.06 – 1.69];  $p = 0.015$ ). In addition, among the 1157 individuals who were HIV-negative at baseline, having been incarcerated in the six months prior to the interview remained independently associated with reporting syringe borrowing during this period (Adjusted Odds Ratio: 1.26 [95% CI: 1.12 – 1.44];  $p < 0.001$ ).

Implications: Among IDU in the community, periods of incarceration are strongly associated with HIV transmission behavior even after adjustment for risk behavior occurring within the community. These data support recent Canadian studies indicating HIV transmission in prison, and have public health implications for the communities after inmates release from prison.

02083

#### **Hepatitis B vaccination among urban drug users in Harlem and the South Bronx**

Ompad DC, Galea S, Wu Y, Fuller CM, Latka M, Vlahov D

Background: Two decades after widespread introduction of recombinant vaccine, Hepatitis B (HBV) vaccination prevalence remains low among drug users (DUs). We examined correlates of previous HBV vaccination among young injection and non-injection heroin, crack, and cocaine users in Harlem and the South Bronx, and the correlates of vaccine uptake and completion.

Methods: Urban injecting and non-injecting DUs were recruited between 2000 and 2002. Participants completed a demographic and risk behavior questionnaire and were tested for HBV. Logistic regression was used to determine demographic and behavioral correlates of HBV vaccination history, uptake of currently-offered vaccine and completion of the three-part HBV vaccination protocol. Participants were nominally compensated for returning vaccination documentation.

Results: Among 654 DUs enrolled (mean age 28.5, 72.5% male, 54.1% Hispanic, 34.0% Black, 20.2% injecting), 26.6% self-reported previous HBV vaccination, 16.8% demonstrated serological evidence of previous vaccination, 23.1% had been previously infected and 60.1% were susceptible to HBV at baseline. Correlates of previous HBV vaccination included younger age, <daily alcohol use and ever having a hepatitis infected sex partner. Among susceptibles, 53.4% received at least one dose of the vaccine. Correlates of current vaccine uptake included older age, <daily crack smoking, having public assistance as main income source, and being recruited from the South Bronx vs. Harlem.

Conclusions: HBV vaccination uptake among urban DUs is relatively high if the services are convenient and individuals are nominally compensated. Older DUs those who may not have previously come in contact with HBV may benefit from being targeted by public health efforts.

02084

#### **Recent hallucinogen use among urban drug users in Harlem and the South Bronx**

Ompad DC, Galea S, Fuller CM, Vlahov D

Background: Surveillance data indicates that hallucinogen use (HU) occurs primarily among white adolescents. We aim to HU among black and Hispanic drug users in New York City.

Methods: Heroin, crack and cocaine users, aged 15-20, who had never injected (n=490) or initiated injection drug use  $\leq 5$  years prior (n=134) were recruited between 2000 and 2002. HU (defined as LSD, ecstasy, mushrooms, peyote and/or mescaline use) was assessed through interviewer-administered questionnaires.

Results: The sample was predominantly Hispanic (52.4%), followed by black (27.4%) and white/other race (10.2%). There were more males than females (68.9 vs. 31.2%, respectively). The median age was 29. 44.7% had a lifetime history of HU, of which 59% initiated HU since 1990 and 34.8% reported HU in the last 6 months. Prevalence of HU among Hispanics and blacks was high (43.6% and 39.7%, respectively). Correlates of lifetime HU included male gender, white/other race, and lifetime cocaine use. Those recent (since 1990) HU initiators were younger and more likely to be an IDU [Odds Ratio (OR)=2.0,  $p=0.02$ ], less likely to be Black (OR=0.4,  $p<0.01$ ), and were less likely to have used heroin or crack (OR=0.5,  $p=0.02$  and OR=0.1,  $p<0.01$ , respectively). IDUs who initiated HU use since 1990 initiated injection at a younger age compared to those who initiated HU before 1990 (20.6 vs. 28.7 years, respectively).

Conclusions: HU is not uncommon among black and Hispanic drug users in this urban setting. Further research is needed to investigate HU among racial minorities, who may be overlooked by national surveillance studies.

02093

#### **A randomized double-blind comparison of lorazepam versus diazepam for acute alcohol withdrawal**

Gray S, Steinhart B, Bayoumi A

Background: Benzodiazepines are the standard of care for treatment of acute alcohol withdrawal, however there is little data regarding which drug or dose to use. This study examines whether lorazepam or diazepam is more efficacious in the efficient discharge of acute alcohol withdrawal patients from the Emergency Department (ED).

Methods: 97 patients were randomly assigned to lorazepam or diazepam. Clinical Institute Withdrawal Assessment of Alcohol, Revised (CIWA-Ar) was used hourly to quantify the extent of withdrawal and to guide therapy. Physicians were blinded to the study drug, but chose the route (IV or oral) and dose of the study drug (lorazepam 2 or 4mg, diazepam 10 or 20mg). Discharge was based on both CIWA-Ar score and clinical judgment. The primary end points were time to ED discharge, and time to CIWA-Ar score less than ten.

Results: There was no difference between the groups in their time to discharge from the ED ( $p=0.99$ , relative hazard 1.00, CI 0.62-1.61). Also, initial drug assignment was not significantly associated with time to CIWA-Ar less than ten ( $p=0.33$ , relative hazard 1.26, CI 0.79-1.99). Additional analysis demonstrated significantly shorter stays in the ED if the initial study drug was administered intravenously (hazard ratio 0.63, CI 0.39-1.03) or in high dose (hazard ratio 0.55, CI 0.34-0.90).

Implications: This study suggests that there may be no difference between lorazepam and diazepam in the timely discharge of alcohol withdrawal patients. The dose or route of benzodiazepine administration may be important and warrants further study.

02097

#### **A Comparison of the CES-D versus the BDI as a screening tool for depression among HCV-infected injection drug users**

Golub ET, Latka M, Hagan H, Havens JR, Hudson SM, Kapadia F, Campbell JV, Richard S, Garfein RS, Thomas DL, Strathdee SA

Background: Since interferon can exacerbate mood disorders, NIH recommends evaluation and treatment of depression before initiating interferon therapy for hepatitis C virus (HCV). It is important to identify an appropriate screening tool for depression among injection drug users (IDUs), among whom HCV and depression are prevalent, so that depression can be treated. We evaluated the utility of the Center for Epidemiologic Studies Depression Scale (CES-D), typically used in research settings to detect depressive symptoms, versus the Beck Depression Inventory (BDI), designed to identify clinical depression.

Methods: Subjects participated in a behavioral intervention trial for HCV-infected IDUs, were aged 18-35, HIV-negative, and injected drugs  $<6$  months ago. Moderate/severe depressive symptoms were measured using cutoff scores of 19 for the BDI and 22 for the CES-D. Measures were compared using sensitivity, specificity and the kappa coefficient.

Results: Of 265 participants enrolled, depression data were available for 218, who were 77.1% male, 58.7% Caucasian, and median age was 25. The BDI and CES-D classified 48.2% and 44.5% of participants as moderately/severely depressed, respectively. Compared to the BDI, sensitivity of the CES-D was 78.4% and specificity was 76.0%; Kappa was 0.54.

Implications: Both instruments identified moderately/severely depressive symptoms in nearly half of HCV-infected IDUs, indicating that medical monitoring and treatment of depression should accompany HCV therapy in many cases. Although the 2 scales identified depression comparably, the BDI may be a better screening tool for this population, given its ability to assess depression severity. Further study of depression screening among HCV-infected persons is warranted.

02098

#### **Factors associated with willingness for Hepatitis C Virus (HCV) therapy among young HCV-infected injection drug users**

Strathdee SA, Latka M, Golub ET, Campbell J, Kapadia F, Pollini R, O'Driscoll P, Garfein RS, Thomas D, Hagan H

Background: Injection drug users (IDUs) comprise  $>60\%$  of new hepatitis C virus (HCV) cases, with annual incidence up to 30%. Therapeutic guidelines stress the need to identify factors impeding or promoting HCV therapy among IDUs. We determined factors associated with willingness to undergo HCV therapy among young IDUs.

Methods: Eligible subjects were IDUs aged 18-35 testing HCV-positive and HIV-negative who injected drugs in the past 6 months in Baltimore, New York and Seattle. Baseline surveys collected data on behaviors, attitudes, depression (CES-D score  $\geq 16$ ) and readiness for drug use cessation based on Prochaska and DiClemente's stages of change (e.g., "determination" reflecting acknowledgement of problem drug use and intention to quit). Factors associated with willingness for HCV therapy were identified by logistic regression.

Results: Of 265 IDUs studied to date, 77% were male, 59% White, 39% uninsured; median age was 26. Most (74%) indicated willingness to initiate HCV therapy; 78% thought HCV treatment was safe. Of 75 persons who visited a provider after testing HCV-positive, 31 (41%) were offered HCV therapy, but only 20 (27%) initiated therapy. Adjusting for gender, age and perceived safety of HCV treatment, odds of HCV treatment willingness was higher among those in the contemplation stage (AdjOR=4.5, 95% CI: 1.5-13.8) or determination stage for drug use cessation (AdjOR= 7.5, 95% CI: 2.2-26.1).

Implications: Barriers to HCV therapy among IDUs persist. Treatment of HCV infection should incorporate treatment for drug abuse since individuals ready to quit drug use appear more willing to initiate HCV therapy.

02099

**Eligibility for treatment of hepatitis C virus (HCV) infection among injection drug users (IDUs) in a multisite study**

Hagan H, Latka M, Campbell J, Golub ET, Garfein RS, Thomas DA, Kapadia F, Strathdee SA

Background: Although recent studies have demonstrated feasibility and effectiveness of interferon with ribavirin as treatment for HCV-infection in IDUs, treatment access has been low relative to other patient groups. We studied treatment eligibility according to the 2002 NIH Consensus Guidelines for Management of HCV.

Methods: Eligible subjects included HCV-antibody positive Baltimore, New York and Seattle IDUs aged 18-35 who injected illicit drugs during the prior 6 months. To estimate the proportion who may be ineligible for HCV-treatment, we assessed depression (Centers for Epidemiologic Studies Depression (CES-D) score >16 or 23), problem drinking (Alcohol Use Disorders Identification Test (AUDIT) score >8 or 10), recent drug injection and ALT levels.

Results: Of 265 subjects, 67% had CES-D scores >16, 51% had CES-D scores >23. Forty one percent scored >8 on AUDIT, 32% scored >10. Fifty-three percent had ALT values above the upper limit of normal. Mean number of days since last injection was 7.8; 93% injected during the previous month. Of those with elevated ALTs, 63% may not be candidates for HCV-treatment because of depression (CES-D >23) or problem drinking (AUDIT >10); using more restrictive criteria (CES-D >16, AUDIT >8, injection in past 30 days), the proportion rises to 89%.

Implications: Increasing access to HCV-therapy in this population will require concurrently addressing drug use, depression and alcohol use, which are all treatable conditions. Applying recent drug injection as an exclusion criterion would eliminate access to treatment for a majority of young HCV-positive IDUs in our sample.

02100

**The STRIVE study: An evaluation of a secondary prevention intervention for young HCV+ IDUs in New York City, Seattle and Baltimore**

Latka M, Hagan H, Bonner S, Kapadia F, Hough E, Golub ET, Sherman S, Garfein RS, Strathdee SA

Background: Injection drug users (IDUs) account for up to 60% of new hepatitis C virus (HCV) cases. High HCV prevalence among IDUs is a serious health problem, and represents a hazard to uninfected peers due to the high transmissibility of HCV through blood.

Methods: A randomized trial is being used to test a small-group, six-session secondary prevention intervention to reduce HCV-transmission risk behavior by infected IDUs to their peers. Eligible subjects are HCV+/HIV- IDUs ages 18-35 who have recently injected drugs. Intervention content is delivered in the context of training participants to mentor peers about safer injection, which we hypothesize will reduce distributive injection equipment sharing among participants themselves. Classroom-based sessions cover HCV prevention information; communication skills-building; setting safe injecting examples; role play; guided practice and feedback. This cognitive-behavioral intervention includes a single, structured community activity where participants conduct HCV-prevention outreach to their peers, thereby stimulating social pressures on index participants to avoid lending used injection equipment.

Results: To date 265 subjects (mean age 26; 59% white; 77% male) have been enrolled. Session attendance is high (80% in the treatment, 77% in the attention-control arm). Recruitment continues; preliminary results are expected in 2004. This paper, a companion to analytic submissions, will detail intervention theory and content.

Implications: This is the first prevention trial for HCV+ IDUs, and one of a handful to supplement cognitive-behavioral methods with a structured activity to harness social influences for reducing risk behavior. If effective, this approach holds promise for reducing the disproportionate burden of HCV among IDUs and may translate to lower HIV incidence.

02105

**HIV harm reduction practice: A framework for health care delivery, substance use management, and infectious disease prevention.**

Murphy N, DeFilippis J

Background: Individuals who struggle with substance use and HIV infection in New York City have been traditionally underserved or not appropriately served by common approaches to HIV care. Harm reduction is a well-established and valuable framework in treating individuals who experience the negative consequences of substance use. Despite the fact that harm reduction came into prominence as a public health approach and a clinical approach largely in response to the AIDS epidemic, in general, harm reduction is standing on its own in syringe exchanges and some community-based programs. This paper identifies harm reduction interventions and strategies that can be integrated within HIV primary care, and offers recommendations for how they can be integrated.

Methods: A variety of harm reduction approaches that can be integrated in the HIV primary care setting are identified. The methodological approach advocated in this paper draws heavily on critical reflective practices within the field of education and the practice of mental health clinicians as well as the interdisciplinary harm reduction work of McCoy, Heller, and Cunningham.

Implications: Implementing HIV harm reduction practice impacts the organization of service delivery, practitioners and patients. The role of the health care provider is more collaborative and less authoritative, and the role of the patient is more participatory and less dependent than in traditional models. The implications for quality and effectiveness of care under the proposed approach need to be further mapped and evaluated.

02114

**Factors that affect patient drop-out in a substance abuse withdrawal management service**

Chan B, Pratt J, Spence JM

BACKGROUND: St. Michael's Withdrawal Management Service (SMWMS) is a non-medical detoxification center for men that serves the southeastern district of Toronto. However, in 2001, approximately 87% of clients failed to complete full treatment.

OBJECTIVES: To determine factors that may influence clients to drop out of treatment.

METHODS: Clients were invited to complete a survey regarding their current and past experience. Demographic data, type of substance abuse, route of referral, therapy, and social supports were documented.

RESULTS: Preliminary results are available for the first 24 clients who were surveyed at SMWMS. 10 clients "dropped-out" (DO) and 14 completed the program (C). The mean age for each group was 41. The majority had a Grade 12 education (64%), was self-referred (67%), and was homeless (85%).

On average, DO clients previously accessed the center 13 times compared with 2.5 in the C group ( $p < 0.001$ ). There was a trend toward a lower average income in the DO group (DO \$24,500, C \$42,667). Alcohol (25%) and cocaine (21%) were the most abused substances. Reasons for leaving the program included drug cravings (43%), family problems (29%), and lack of desire to continue (29%). Indicators of social support did not indicate any differences between the groups, although there was a strong trend toward fewer family supports in the DO group.

**IMPLICATIONS:** Detoxification programs serving Inner City populations have unique challenges. Increased services and supports may be needed to help address issues of homelessness and isolation. Focus groups may help meet the needs of specific groups seen.

02124

#### **Injection prevalence and risks among male hilltribe drug users in northern Thailand**

Wiewel EW, Go VF, Kawichai S, Beyrer C, Vongchak T, Srirak N, Jittiwutitakarn J, Suriyanon V, Razak MH, Celentano DD

**Background:** Thailand's rates of HIV due to drug use are increasing, and incidence among male drug users is ten times higher for injectors than non-injectors. Nearly one-half of clients at a drug treatment center in the north are from marginalized ethnic minorities called hill tribes, who are increasingly urbanizing and having contact with majority Thais. Understanding the context of hilltribe injection drug use is critical to illuminate patterns of HIV risk.

**Methods:** A prospective study was conducted at the Northern Drug Dependence Treatment Center, Mae Rim, between February 1999 and January 2000. Trained interviewers administered a baseline questionnaire to 1865 people admitted to the center. Males from hill tribes with at least 50 participants (Karen, Akha, Hmong, Lisu, Lahu) were included for analysis ( $n=629$ ). Sociodemographics, drug use, and sexual practices were compared across hill tribes and assessed for association with injection.

**Results:** Between 7% and 28% of each hill tribe had ever injected drugs ( $p = 0.002$ ). Younger age, speaking Thai language, having a job with higher contact with Thais, and having had prior drug detoxification were statistically significantly associated with injection in multivariate analysis, while Hmong and Lisu ethnicity were statistically significantly protective.

**Implications:** Using occupation and language as proxies, contact with Thais and concomitant acculturation may be a risk for injection in male hilltribe drug users. Harm reduction is imperative in hilltribe settings and in areas of ethnic mixing, as is the need to address the inadvertent consequences of acculturation and urbanization in hill tribes and other migrants.

02125

#### **Integrating medical providers in harm reduction outreach: An analysis of service utilization data to evaluate program theory**

Shepard B, Heller D

**Background:** Since 1999, CitiWide Harm Reduction and Montefiore Medical Center have collaborated to engage homeless People Living with HIV/AIDS through harm reduction outreach at 'welfare hotels' in New York City. This model's key features include: Integrated staffing (medical providers and peers); Evening outreach hours; Useful tools (e.g. syringe exchange, self-care kits); Tailored service options; Consistent services, and; Supported transportation provision. Client-level service utilization data has been collected since 1998. Program theory is grounded in the belief that this model increases access to and engagement in care for this marginalized population.

**Methods:** Service utilization patterns among participants engaged through outreach versus those engaged through walk-ins at CitiWideHR's drop-in center are examined. Analysis measures differences in engagement in care and related services for each group.

**Results:** Preliminary findings confirm that among those contacted through integrated harm reduction outreach, 97% accessed medical care, while only 50% of those engaged as walk-ins accessed medical care. Further, among participants receiving harm reduction services, 93.8% also accessed medical care, while only 73.3% of those not receiving harm reduction services accessed medical care. Significant relationships are found for outreach engagement, and between healthcare access, harm reduction, and housing placement variables.

**Implications:** Program theory is accurate in assuming the integrated harm reduction-medical outreach model increases access to and engagement in healthcare for this population. Reducing barriers to care by providing such consistent, tailored service options promotes effective engagement for marginalized populations.

02128

#### **Double jeopardy: Intimate partner violence in chemically-dependent women**

Kunins H, White A, Terlikbayeva A, Gilbert L, Matzdorf M, Sturkey D

**Background:** Despite mounting evidence indicating that intimate partner violence (IPV) is a key proximal factor associated with drug abuse and poor treatment outcomes among women, most drug treatment programs do not adequately address IPV among female clients. This study elicited attitudinal, structural and systematic factors that could facilitate or impede the implementation of a structural systems intervention, including conduction of routine screening and assessment of IPV, safety planning and effective referrals.

**Methods:** Seven focus groups with 41 staff members from 40 substance abuse treatment programs in New York City were conducted from August 2002 through December 2002. Participants represented different treatment modalities, populations and positions in programs. Five focus groups were audiotaped and transcribed. Transcripts were coded independently by two investigators using themes developed in an iterative analytic process.

**Results:** Preliminary analysis of themes suggests that the large majority of substance abuse treatment staff acknowledged that IPV was a common problem among their female clients negatively affecting their recovery. Participants across focus groups indicated a fear of "opening the box" of IPV due to their lack of training in handling IPV, concerns about detraction from focusing on recovery, and lack of referrals for shelters serving women with drug problems. Several participants raised problems of confidentiality and safety when batterer is a client in the same drug treatment program as the woman.

**Implications:** The study findings underscore the need to develop and test IPV-specific protocols that may be implemented by providers in different substance abuse treatment settings.

02133

#### **Low threshold methadone programs at two Ontario needle exchanges: Sustained reduction in HIV risk behaviors twelve months after enrollment**

Millson P, Challacombe L, Strike C, Villeneuve P, Myers T, Fischer B, Shore R, Hopkins S, Pearson M, Raftis S

Objective: To determine whether reductions in drug use and HIV risk behaviors seen six months after enrolment in low threshold methadone programs are sustained at 12 months.

Method: All new enrollees entering two low threshold methadone programs in Ontario are invited to participate in a prospective cohort study, completing interviewer administered questionnaires at baseline and at six monthly follow-ups, whether continuing in the program or not. Programs accept clients' treatment goal choices, whether abstinence or continued drug use. Mean number of days using each drug in the past month at baseline and follow-up are compared using paired t-tests. McNemar's test is used to compare proportions using each drug and sharing needles at baseline and follow-up.

Results: By Dec. 2002, 78 participants completed 12 months follow-up (81%); 61% male, 39% female; injected a mean of 14 years at entry; 59% injected at least once a day; 12% shared needles, 26% shared drug paraphernalia and 36% injected in a shooting gallery. Significant declines in risk behaviors were maintained at 12 months, with further significant decreases in use of heroin, other opiates, and more than one substance per day.

Implications: Significant drops in HIV risk behaviors and use of heroin and other opiates seen in this cohort six months after enrolment in low threshold methadone have been sustained in those followed to 12 months. Low threshold methadone should be made more widely available to reduce harm from opiate use for drug users who are not ready to discontinue their use of illicit drugs.

02140

#### **Women injection drug users who engage in sex trade work are at increased risk of death**

Hogg RS, Li K, Laliberte N, Miller CL, Spittal P, Wood E, Craib KJP, Montaner JSG, O'Shaughnessy MV, Schechter MT

Objective: To characterize patterns of mortality among women who inject drugs in Vancouver.

Methods: The Vancouver Injection Drug Users Study (VIDUS) is a prospective open cohort study of injection drug users. Since May 1996, over 1400 participants have been recruited from the Vancouver area. This study is restricted to women who at baseline had injected in the previous month and were aged 13 years and older. Sociodemographic variables were measured at baseline and risk behaviors were measured at the last study visit. Cumulative mortality rates were estimated using Kaplan-Meier methods. Cox regression was used to calculate univariate and adjusted relative hazards.

Results: Of the 1,437 participants enrolled in VIDUS, 520 were women. Of these women over two-thirds or 375 (72%) have worked as sex trade workers. At baseline sex trade workers were more likely to be HIV and HCV-positive, not married, and living in unstable housing. They were also more likely to have been in jail in the previous six months, to have used a needle exchange on a weekly basis, and to have ever used coke, speed and crack. A total of 54 sex trade workers had died, giving an overall crude mortality rate of 14.4%. Among women, older age ( $p < 0.001$ ), HIV-positive status ( $p < 0.001$ ), lending needles ( $p < 0.001$ ), needing help injecting ( $p = 0.029$ ), frequent coke use ( $p = 0.003$ ), not being on methadone ( $p = 0.016$ ), and working in the sex trade ( $p = 0.020$ ) were independent predictors of mortality. In this final Cox model, women who were sex trade workers were over two times (AHR = 2.27; 95% CI: 1.11, 4.68) more likely to die than women who did not report this risk behavior.

Conclusion: In Vancouver, women injection drug users who engage in sex trade work are twice as likely to die as those who do not. A public policy response safeguarding women sex trade workers is urgently required to ensure these women are not continually placed at risk for violence and death.

02143

#### **Low threshold MMT programs & client employment struggles**

Strike C, Millson M, Fischer B, Myers T, Villeneuve P

Background: Low threshold methadone programs (i.e., programs with few rules) have shown promising results to reduce the risks associated with opiate use (e.g., HIV and HCV transmission) and also assist in social reintegration (e.g., employment). Employment improves MMT program retention; however, the impact of low threshold programs on employment retention and prospects has not been established. The impact of operational policies and routines on employment acquisition and retention among low threshold MMT clients are examined below.

Methods: Qualitative, ethnographic study using site observations, documents and personal, semi-structured interviews ( $n=96$ ) were used to collect data at four programs in Ontario, Canada. Clients, staff and physicians participated.

Results: For some clients, MMT is seen as a means of getting back into the workforce. However, for these clients, clinic expectations (e.g., attendance and dispensing) and policies interfere with attempts to accept employment. For others, lack of job skills and lack of job training/employment counseling at the clinic, frustrate their efforts to make a change in this area of their lives. For those currently employed, clinic expectations (e.g., attendance and dispensing) and policies can jeopardize their employment. These clients fear the consequences of co-workers and supervisors learning that they are receiving MMT.

Implications: Organization, policy and delivery of low threshold methadone programs can interfere with clients' attempts to reintegrate into paid employment. Frustrations may lead to program drops-outs, relapse and re-introduce clients to the harmful effects of substance use.

02145

#### **Religiosity among injection drug users seeking substance abuse treatment**

Dubey P, Latkin C, Pilibosian E, Cornelius L, Huettner S, Strathdee S

Objectives: The relationship between religiosity/spirituality and recovery from addiction is under-studied. We described religiosity and its association with addiction severity in injection drug users (IDUs) seeking drug treatment at a needle exchange program (NEP).

Methods: IDUs who requested and received a referral for a dedicated drug treatment slot at the Baltimore NEP underwent a baseline survey, including the composite drug score (CDS) of the addiction severity index (ASI). Religiosity was defined as having attended a religious institution more than once per month. Contingency table analysis and logistic regression were used to assess the relationship between religiosity and addiction severity (i.e., upper tertile of CDS score).

Results: To date, of 130 IDUs, median age was 41 years, 66% were male, and 76% were African American. The majority (78%) reported a Christian affiliation, 9% Muslim, 7% other religions and 7% none. Most (94%) reported being religious/spiritual but only 29% reported attending a religious institution  $\geq$  once/month. 9% reported religion as a motivator where as 2% cited it as a motivator for entering treatment, respectively. IDUs attending religious institutions  $>$  month were less likely to have CDS in the upper tertile compared to those attending less frequently (19% vs. 39%,  $p=0.03$ ). Adjusting for age, race, and gender, frequently attending religious institutions was associated with lower CDS (OR: 0.34, 95% CI: 0.09-0.74).

Conclusions: These preliminary data suggest that religious communities may be an important source of support for IDUs entering drug abuse treatment. The role of religiosity in recovery from addiction requires further study.

02153

**Towards an intervention: Reducing HIV-related risk behaviors among new migrant Puerto Rican injecting drug users in East Harlem, New York**

Mino ME, Oliver-Velez D, Deren S, Andia J, Kang SY

Background: While drug treatment and related services for injecting drug users (IDUs) in New York are often insufficient, in Puerto Rico, they are much scarcer. Studies have shown that some IDUs come from P.R. to N.Y. to obtain drug treatment and medical services and that these new migrants often practice riskier HIV-related drug injection behaviors than their N.Y. counterparts. This study examines the availability of HIV and related services for new migrant Puerto Rican IDUs in East Harlem, N.Y. and the kinds of obstacles that they face when seeking services.

Methods: Qualitative interviews were conducted with service providers at East Harlem needle exchange programs, methadone clinics, drug treatment centers and other social service agencies about the availability of services for migrant Puerto Rican IDUs. Focus group and individual qualitative interviews were also conducted with new migrant IDUs about the types of obstacles they face when seeking services.

Results: Interviews with service providers show that few programs targeted migrant Puerto Rican IDUs for services and that some HIV/AIDS services were unavailable in Spanish. Interviews with migrant IDUs show that while many came to N.Y. for drug treatment, they had trouble accessing services, often because they did not speak English or know where to find the services.

Implications: Culturally appropriate interventions are needed for new migrant Puerto Rican IDUs. This presentation will discuss the plans to develop an intervention that will train peer leaders to conduct HIV risk reduction with new migrants and sensitize service agencies about the needs of this group.

02168

**Describing characteristics typical to adults with fetal alcohol spectrum disorder (FASD)**

Barwell J, Watson W, Stade B

Background: Caused by prenatal exposure to alcohol, Fetal Alcohol Spectrum Disorder (FASD) is a serious neuro-developmental disorder. Individuals with FASD often demonstrate poor impulse control, problems in social perception, poor capacity for abstraction, problems in memory, attention and judgment. While the research describes the typical profile of the child and adolescent with FASD, there is a paucity of literature that describes characteristics specific to adults with FASD. It is anticipated that the study results will lead to more effective interventions for adults with FASD.

Purpose: The purpose of this study, currently in progress, is to describe the typical characteristics of FASD that present in adults.

Methodology: Sample and Setting: Adults 19 to 46 years old, referred to the St. Michael's Hospital (SMH), FASD diagnostic clinic since November 2002 (n=15). SMH is located in the inner city of Toronto, Canada.

Data Collection: A 13 page intake and diagnostic form, and a detailed physical examination were used to collect data on prenatal alcohol history, school and work history, behavioral problems, neuro-psychological profile, FASD facial features, physical health, and growth of each of the participants.

Data Analysis: Content analysis of the data obtained in the intake form and the written physical examination is currently being conducted.

Results: The results of the study will present typical behavioral problems, mental health problems, work history, physical characteristics, and health problems specific to adults with FASD.

Implications: Implications for practice and research will be discussed.

02171

**Discrimination and self-reported mental health among Latino and African-American drug users in New York City**

Young MA, Galea S, Stuber J, Ahern J

Experience of discrimination has been shown to affect both physical and mental health. Few studies have assessed the role discrimination may play in shaping the health of highly marginalized groups, such as minority drug users. We assessed the relation between discrimination due to drug use and mental and physical health of minority substance users in New York City. We recruited 1,008 adults ( $\geq 18$  years), who were currently (last 2 months) using cocaine, crack, or heroin. Participants were asked about their experiences of discrimination due to a variety of characteristics (e.g., drug use, race, gender), and about their current state of health. The majority of participants were male (63.9%) and single (62.3%); 41.7% were Latino, 49.7% were African-American, with a mean age of 40.4 (SD=8.2). Discrimination due to drug use, poverty, and race were the most frequently reported forms of discrimination experienced (75.3%; 32.7%; 31.1% respectively), and were associated with lower mental health status ( $p < .0001$ ;  $p < 0.001$ ;  $p = 0.04$  respectively), and higher number of self-reported diagnoses ( $p = .007$ ;  $p = 0.009$ ;  $p = 0.0002$  respectively) in separate multivariable models adjusted for age, income, education, gender, race, social support, social networks, and drug use history. These observations suggest that discrimination experienced by illicit drug users is negatively associated with self-reported health, even when adjusting for drug use behaviors. Policies that reduce discrimination due to drug use behavior, poverty, and race may decrease the burden of illness experienced by this vulnerable group.

02175

**Community attitudes and perceptions associated with support for pharmacy non-prescription syringe sales to injection drug users in New York City**

Fuller CM, Galea S, Blaney S, Sisco S, Dorris S, Boyer A, Canales E, Fontenez E, Love G, Lasenberg L, Vlahov D

Objective: January 1, 2001, pharmacy sale of non-prescription syringes was legalized in New York State through the Expanded Syringe Access Demonstration Program (ESAP). ESAP Evaluation results have indicated differential use by injection drug users across New York City (NYC) communities. To identify possible social structural barriers due to community opinions, a random-digit dial telephone survey was conducted among East and Central Harlem, Bedford Stuyvesant, and South Bronx residents.

Methods: Logistic regression was used to determine factors significantly associated with ESAP-support.

Results: Of 980 community residents surveyed, 45% were male, 48% African-American, 43% Hispanic, 8% white or other race. Average age was 42, and 77% were high school graduates. Of the ESAP-supporting-residents, a higher proportion were white (68.5%) compared with African-American (26.5%), Hispanic (26.3%), and other race (40%;  $p < 0.001$ ). Of ESAP-supporting-residents, a lower proportion favored severe drug-user-penalties (20.3%) vs. those opposed (41.0%;  $p < 0.001$ ); a higher proportion had knowledge of syringe exchange programs (SEPs) (47.6%) vs. those who did not (26.6%;  $p < 0.001$ ), and lifetime drug use (39.5%) vs. never (26.8%;  $p < 0.001$ ). ESAP-supporters tended to have higher education, income, and live in high social cohesion-scored neighborhoods. After adjustment, ESAP-supporters were less likely to be Hispanics who ever experienced racism (AOR=0.07)

compared with non-supporters. SEP knowledge (AOR=2.7) and opposing severe drug-user-penalties (AOR=0.4) were also associated with ESAP-support.

Conclusion: Hispanics who have experienced race discrimination may perceive ESAP to further stigmatize their community; however SEP knowledge translates into support among all NYC residents. Similar race-sensitive community-wide educational efforts as with SEP should be duplicated with ESAP.

02177

#### **HIV vulnerability among young female injection drug users: Sex differences in risk**

Miller CL, Spittal PM, Li K, Laliberté N, O'Shaughnessy MV, Schechter MT

Background: Among young adolescents in North America, females represent approximately half of all new HIV infections and unlike other populations, this trend appears to be increasing. We undertook this study to determine HIV prevalence and to characterize HIV related vulnerabilities among young female IDU.

Objectives: To determine gender differences in HIV status between young (aged <30) female and male IDU and to characterize associated risk factors within an ongoing cohort of IDU.

Methods: IDU were recruited starting in May 1996 through a street level study site and outreach. Participants were administered questionnaires covering socio-demographic characteristics, risk factors, health status and service utilization and underwent serologic testing for HIV and HCV at baseline and semi-annually thereafter. This analysis was restricted to young injectors (age 30 or less).

Results: There were 520 participants who met the age criterion, of those 232 (45%) were female and 288 (55%) were male. Young female IDU were more likely to be HIV positive (25% vs. 14%;  $p=0.001$ ); Aboriginal (36% vs. 19%;  $p<0.001$ ); engage in sex trade work (71% vs. 19%;  $p<0.001$ ); require help to inject (59% vs. 35%;  $p<0.001$ ); use crack daily (19% vs. 11%;  $p=0.023$ ) and inject heroin (59% vs. 45%;  $p=0.002$ ), cocaine (50% vs. 38%;  $p=0.009$ ), and speedballs (25 vs. 16%;  $p=0.048$ ) at least daily. Young female IDU were younger (24 years [IQR: 20 – 27] vs. 25 years [IQR: 22 – 28];  $p=0.001$ ), however there was no difference with respect to number of years injecting (4 [IQR:2 – 9] vs. 4 [IQR: 1 – 8]).

Conclusions: Despite younger age and similar number of years injecting, young female IDU were more likely to be HIV positive. There were a number of HIV drug and sexual vulnerabilities associated with being female suggesting that for young IDU, a gendered response to the epidemic is required.

02178

#### **Prevalence and incidence of HIV and Hepatitis C co-infection among young injection drug users**

Miller CL, Li K, Braitstein P, Spittal PM, Frankish JC, Shoveller J, Wood E, Laliberté N, Montaner JSG, Schechter MT

Objectives: To determine the prevalence and incidence of HIV and Hepatitis C co-infection among young (aged 29 and under) injection drug users (IDUs) and to compare socio-demographic and risk characteristics between co-infected, mono-infected or negative youth.

Methods: Data were collected through the Vancouver Injection Drug Users Study (VIDUS). To date, over 1400 IDU have been enrolled and followed, 479 were aged 29 years and younger. Semi-annually, participants have completed an interviewer-administered questionnaire and have undergone serologic testing for HIV and HCV. Univariate and multivariate logistic regression analyses were undertaken to investigate predictors of baseline co-infection. Cox regression models with time dependant covariates were used to identify predictors of seroconversion for a secondary infection. A Cochran-Armitage Trend Test was used to determine risk associations across three categories; no infection, mono-infection and co-infection.

Results: Of the 479 young injectors, 78 (16%) were co-infected with HIV and HCV at baseline and a further 45 (15%) with follow-up data became co-infected during the study period. Baseline positivity was independently associated with being female, Aboriginal, older age, greater number of years injecting, and living in the IDU epi-centre. Factors independently associated with secondary infection seroconversion were borrowing needles, greater than once daily cocaine injection and accessing methadone maintenance therapy in the previous six months was protective. There were clear trends across the three categories for increasing proportions of females, Aboriginals, older age, greater number of years injecting, living in the IDU epi-centre, and daily cocaine use.

Interpretation: There were a shocking number of youth living with co-infection, particularly female and Aboriginal youth. The median number of years injecting for youth seroconverting to a secondary infection was 3 years suggesting that for high-risk youth the window of opportunity to prevent infection is exceedingly small.

02184

#### **Ethnic differences in sexual abuse, drug involvement and HIV/AIDS risk behavior among arrested women**

Durrah TL.

Background: Many studies recognize the relationship between sexual abuse, drug involvement and HIV/AIDS risk behavior, but few highlight or explore the ethnic differences which emerge. An understanding of these differences will contribute to the development of prevention and treatment programs likely to be effective among low-income women. This will also lead to longer lasting alternatives to arrest and incarceration.

Methods: This study sample includes 821 women interviewed about self-reported drug use in a New York City (Manhattan Only; 1996-1997) booking facility as part of the Drug Use Forecasting (DUF) Program. A DUF-Manhattan supplement obtained information about sexual abuse and HIV/AIDS risk behavior. Urine specimens were collected from DUF participants and tested using EMIT analysis for 10 drugs and for pregnancy.

Results: Eighty-three percent were urine positive for at least one illicit drug. Twenty-five percent of women in the study sample reported at least one lifetime experience of sexual abuse. Logistic regression revealed that white women who reported sexual abuse were more likely to report involvement in sex work and injection drug use, suggesting that white women have a unique pattern of risk behavior resulting from sexual abuse.

Implications: While many studies find that African Americans and Latinas are at the greatest risk for drug involvement and HIV/AIDS, the current study found that white women who reported adult sexual abuse were more likely to be involved in the high risk behaviors investigated. Understanding these differences can inform successful prevention, interventions and treatment programs for this ever growing population of women.

02186

#### **Increased pharmacy syringe access and syringe disposal options: IDU disease prevention in Seattle, Washington**

Deibert R, Goldbaum Hanrahan M, Marks R, Thied H, Wood RW



**Background:** In the Seattle area, HIV seroprevalence is less than 5% among injection drug users (IDU); Hepatitis C (HCV) prevalence is 80% with annual incidence near 20%. Lower frequency of unsafe injection practices and reduced risk of infections are associated with access to sterile injection equipment. Washington State amended drug paraphernalia laws in 2002, permitting pharmacy syringe sales and adult possession of sterile syringes.

**Methods:** In March 2001, public health workers began recruiting retail pharmacists to expand syringe access to IDU. Four 24-hour-access syringe drop boxes were installed at high-use sites. Researchers conducted: (1) test-buys in 60 randomly-selected retail pharmacies from 12/2002 – 01/2003; (2) street surveys of discarded syringes by walking five-block areas surrounding syringe drop-box sites before drop-box installation and quarterly thereafter; and (3) 227 phone surveys with Seattle area pharmacies to assess pharmacist attitudes and practices regarding syringe sales to IDU. Phone surveys and test-buys repeated a 1996 Seattle survey.

**Results:** Seattle pharmacies selling syringes in test-buys increased from 46.9% (N=64) in 1996 to 65.0% (N=60) in 2003 (Fischer Exact = 0.03). Pharmacists agreeing that syringes should be available to IDU through pharmacy purchase increased from 48.9% (N=137) in 1996 to 70.6% (N=100) in 2003 (Fischer Exact < 0.001). By June 2003: 80 pharmacies agreed to participate in access/sales partnerships; four syringe drop boxes collected approximately 23500 syringes; no discarded syringes were found in street surveys.

**Implications:** Policy changes and targeted pharmacy outreach efforts may increase pharmacy syringe access. Syringe drop-boxes are being used and do not increase discarded syringes on surrounding streets.

02204

### **Falling through the cracks: Evaluating the need for integrated mental health and harm reduction services**

Welsh S, Altenberg J, Balian R, Lunansky L, Magee W, Welsh S

**Background:** Services for substance use are typically provided by different agencies than services for mental health. These agencies usually demand that consumer's deal with the other issue before they receive services, e.g. consumers are told they must deal with their drug use before receiving mental health services. This leads to many drug users/consumers falling through the cracks of the service system and receiving inadequate health care services. Our research focuses on the health care service experiences and needs of urban dwellers with concurrent mental health and illicit drug use issues and examines the effect of integrating the philosophy of harm reduction into mental health services.

**Methods:** This community-academic partnership and participatory action research (PAR) project utilized four focus groups of service users and two focus groups of service providers. Each group was asked a range of questions about their experiences with mental health and drug services. Focus group transcripts were coded using a constant comparative analysis and were analyzed using NVivo.

**Results:** The following themes emerged from the focus groups with services users: the need for services that ensure safety, the desire that staff in service agencies possess a range of lived experience and knowledge as well as an attitude of respect, and the need for flexibility in services. Service users reported that most current services, in particular hospital-based services, have not met their needs. Service providers mention that a harm reduction approach is frequently undermined in a system that is governed by a medical model that requires "abstinence" before dealing with mental health problems.

**Implications:** Our recommendations include integrating harm reduction philosophy into mental health services. A shared care model where psychiatric and community medical services are provided together and that also assists in providing direct education to service users and providers is ideal. This type of model has the potential to have a higher rate of success than current services.

02222

### **Implications of funding problems for harm reduction outreach to injection drug users**

Friedman R, Keem M, Tempalski B, Friedman SR

**Background:** Street-level outreach tries to prevent HIV transmission and other complications that may arise from injection drug users (IDUs). Programs rely on both private and public funding.

**Methods:** Qualitative interviews concerning services for IDUs were conducted as part of research on local HIV epidemics in 96 large metropolitan areas (MSAs) in the United States. Fifty-eight in-depth telephone interviews with researchers, public health officials and service providers in 14 of the MSAs were examined for discussion of outreach.

**Results:** Harm reduction is the prevailing philosophy advocated for outreach services by those interviewed. While most MSAs offer some harm reduction outreach for IDUs, most respondents considered services inadequate. They explained the challenges of obtaining funding for these services, particularly during a time of general budget cuts. In several MSAs, funding has never been accessible because harm reduction is viewed as condoning drug use. In metropolitan areas facing less opposition to harm reduction, funding problems included reallocation of money to programs targeting other populations, decreased funds for small community-based programs, and grants awarded to interventions more easily "proven" successful. Harm reduction outreach has survived using partnership with other programs, providing services that require minimal funds, and building strong relationships with the community.

**Implications:** In the short run, these strategies can maintain harm reduction outreach services on small budget. Further research should study the ongoing impact of budget cuts on outreach viability and coverage and what strategies succeed in maintaining outreach services.

02251

### **Household smoking restrictions among a community sample of Korean Americans living in NYC**

Kwon SC, Islam N, Kathuri N, Gupta A, Senie R

**Background:** Recent Studies have highlighted the dangers of environmental tobacco smoke (ETS). Children who breathe comparable levels of ETS have higher relative levels of cotinine than adults. As the home is the major site of the ETS exposure, home smoking restrictions may greatly diminish exposure to children.

**Purpose:** As Korean Americans (KAs) have one of the highest rates of smoking, a study of household smoking restrictions was conducted.

**Methods:** A community convenience sample of KAs recruited from Korean-Specific community centers, religions institutions and cultural events (n=272) were surveyed with assistance as needed.

**Results:** 62% of KA men reported having smoked <100 cigarettes; 53% are current smokers. 7% of KA women reported smoking <100 cigarettes in their life; 3% are current smokers. 57% of KA women reported smoking is completely prohibited in the home, 22% reported some restriction, and 21% reported no restrictions. 52% of KA men reported smoking is completely prohibited; 33% reported some restriction, and 15% reported no restrictions.

Females <50 years, who have health insurance were more likely to have some smoking restriction (OR=3.4, CI: 1.2-10.0 and OR=0.3, 1.9). Males who had a check up < 2 years and a college education of more were more likely to live in smoke-free homes (OR=4.0, CI: 1.3-12.0 and OR=.2, CI: .05-.6)]. Conclusions: The high number of homes with some smoking restrictions indicates that culturally sensitive targeted tobacco control interventions to promote smoke-free homes may further decrease ETS exposure to children and may provide adults' incentives to quit.

02253

**Point-of-purchase tobacco advertising in Asian American communities in New York City and neighborhood characteristics**

Kwon SC, Kim S, Roh H

Background: Previous research in California has documented that tobacco advertising is more pervasive in Asian American (AA) neighborhoods than in other ethnic neighborhoods; no data exist for NYC.

Purpose: This study proposes to document the amount of point-of-purchase (POP) tobacco advertisements in AA communities in NYC and explore the relationship between neighborhood characteristics and the level of POP tobacco ads found.

Methods: 161 tobacco retailers in six predominately AA neighborhoods were surveyed by members of a Korean teen tobacco education program. Neighborhood socio economic factors were compared.

Results: 78% of the surveyed stores had some exterior tobacco advertising and/or promotional items clearly visible from the street; 87% of the stores had some interior tobacco advertisement. More tobacco displays were found than reported in national POP tobacco surveys. Of the interior ads, 21% were placed near candy displays, and 23% were located at 3 feet or below (eye-level with a child). 40% of the poorest surveyed neighborhoods had 1 or more Marlboro ads, the most heavily advertised brand, compared to 23% of the richest neighborhoods ( $P<.01$ ). 43% of the wealthier neighborhoods displayed cigarette products near candy compared to 54% of poorer areas ( $p<.001$ ). Other neighborhood effects such as number of foreign-born, English proficiency, and education attainment of residents were explored.

Implications: Virtually all surveyed stores in these predominately AA neighborhoods displayed some type of tobacco advertisement with stores in the poorest neighborhoods disproportionately represented. Study findings are being used to implement community education and intervention to address these issues.

02254

**Through the eye of a needle: Women injection drug users in Winnipeg**

Pindera C.

Background: Drug use is a critical risk behavior for women. Despite high rates of diverse and complex health needs, little is known regarding injection drug users' (IDUs) perceptions of or context for their health needs. This study's primary emphasis is to give 'voice' to the understandings and experiences of the everyday lives of women IDUs in Winnipeg.

Methods: A purposive sample of 8 women IDUs was selected for this study. A qualitative research design approach adapted from Carolyn Wang's Photovoice Methodology was used. This assisted with the identification of how, from the woman's perspective, her context and life experiences functioned to create meanings to explain her risk-related behaviors. Unstructured interview, participant's photographs and life narratives were the data collection methods used.

Results: Women's drug use was connected to the personal and social circumstances in which they lived. Their drug use was linked to the process of managing losses and to live with integrity under threatening life conditions. The women relied heavily on drugs as a means to escape the painful feelings resulting from childhood and on-going traumas. They took responsibility for their decision to use drugs; but also held a common perception that social and physical environments limited their ability to manage their drug use and find alternative coping strategies.

Conclusions: This study demonstrates that research sensitive to women's feelings about their social environment is required to provide effective and meaningful services for women who use drugs. Knowledge gained from this study can be used to assist in the development of appropriate health and social services strategies and interventions.

02256

**HIV-positive injection drug users who leave hospital against medical advice: The role of methadone and social support**

Chan ACH, Palepu A, Guh DP, Sun H, Schecter MT, O'Shaughnessy MV, Anis AH

Background: Leaving hospital against medical advice (AMA) signifies a major disruption in the patient-physician relationship and may result in increased morbidity and hospital readmission. We examined the clinical and social factors associated with leaving AMA from a specialized HIV/AIDS ward, among patients who reported a history of injection drug use.

Methods: All patients with a history of injection drug use admitted to the HIV/AIDS ward at St. Paul's Hospital, Vancouver, British Columbia (the largest specialized HIV/AIDS hospital ward in Canada) between April 1997 and October 2000 were reviewed. A multivariate logistic regression model utilizing a generalized estimating equation algorithm identified factors associated with leaving hospital AMA.

Results: Of the 1056 hospital admissions to the HIV/AIDS ward by patients with a history of injection drug use, 263 (24.9%) resulted in leaving hospital AMA. Independent positive predictors of leaving AMA included recent injection drug use (adjusted odds ratio [AOR] 2.08; 95% CI 1.41-3.07) and Aboriginal ethnicity (AOR 1.55; 95% CI 1.05-2.28). Factors independently associated with reduced odds of hospital discharge AMA included methadone use in hospital (AOR 0.49; 95% CI 0.32-0.76), social support (AOR 0.33; 95% CI 0.21-0.51) and older age (per 10 year increment, AOR 0.56; 95% CI 0.43-0.73).

Implications: Addictions treatment and interventions that enhance social supports in marginalized populations should be further explored since implementation of such programs may reduce the risk of hospital discharge AMA.

02257

**Researching a new hidden population: Ketamine injectors in New York City**

Lankenau SE, Clatts MC

Background: Injection drug users (IDUs), an enduring hidden population given the illegality and stigma associated with streets drugs and syringes, are an important population to reach from both epidemiological and harm reduction standpoints. Ketamine, a “club drug” popular among youth as an intranasal anesthetic, has been identified as a drug increasingly common among a new hidden population of IDUs.

Methods: We used participant observation and a semi-structured interview guide to recruit a sample of 40 young Ketamine injectors (18-25 years old) from two sites in the East Village – the “Cube” at Astor Place and Tompkins Square Park –located less than one mile apart. The interview guide focused on Ketamine injection and recent drug using events.

Results: Despite the close proximity of the two recruitment locations, an analysis of the narrative accounts and descriptive statistics are revealed important differences between the youth interviewed at each site. In particular, two distinct subpopulations were uncovered: The Tompkins Square Park recruits (n=13) were typically female, mobile, older, homeless IDUs who had fewer material resources and initiated ketamine injection outside of New York. In contrast, the Cube recruits (n=27) were more commonly youth of color, younger, less mobile, novice IDUs who were more resourced and initiated ketamine injection in New York.

Implications: These findings point to the emerging trend of ketamine injection among young injectors. Additionally, the results demonstrate that ethnography is an effective research methodology for uncovering hidden populations and describing risk behaviors among new and varied populations of IDUs.

02271

#### **Reduced emergency visits in chronic homeless alcoholics: The Managed Alcohol Program**

Podymow T, Turnbull J, Yetisir E

Background: Chronic homeless alcoholics suffer increased health problems and have high use of emergency services. There is a low likelihood of rehabilitating chronic public inebriates. Harm reduction is a policy to decrease the adverse consequences from substance use without requiring abstinence. The Ottawa Inner City Health Project (ICHHP) is a shelter-based project created to deliver health care and harm reduction to homeless adults. This includes a managed alcohol program (MAP).

Methods: Chronic public inebriates were referred by a community panel. MAP is shelter-based, used as stable housing, and alcohol is dispensed on an hourly basis. Hospital charts were retrospectively reviewed for all emergency visits and admissions for three years prior and two years of program enrollment and were statistically compared. Trends in bloodwork were analyzed. A questionnaire was administered to subjects and staff regarding patterns of alcohol use, health and activities of daily living prior to and while in the program. An economic evaluation is ongoing.

Results: Seventeen adults (15 males, 2 females), average age 50.7 years were enrolled in the MAP for a mean of 16 months. Mean duration of chronic alcoholism 35.2 years; ten subjects reported regular use of non-beverage alcohol. ER visits decreased from a mean total of 13.5 visits/month to 8 visits/month (P= .004) and bloodwork values did not change significantly while in the program. All subjects reported alcohol consumption was less than while on the streets, and the majority perceived improved hygiene and health. Client care staff noted improved hygiene, nutrition, compliance to medication and attendance to medical appointments in the majority.

Conclusions: A managed alcohol program as a harm reduction measure in chronic homeless alcoholics can stabilize alcohol intake, improve quality of life and significantly decrease ER visits.

02279

#### **The willingness to pay for successful drug rehabilitation: Evidence from a conjoint analysis in Baltimore**

Strathdee SA, Bishai D, Huettner S, Cornelius L, Latkin C

Objective: This study estimates the value that clients place on drug rehabilitation services at the time of intake and how this value varies with the probability of success and with the availability of social services.

Method: During intake we asked 114 drug rehabilitation clients to state a preference among three hypothetical methadone programs that varied across 3 domains: weekly fee paid by the client out of pocket (\$5 to \$100), presence/absence of social services, and time spent heroin free (3 to 24 months). Subsequently each subject was asked if they would enroll in their preferred choice. Each subject was asked to complete 18 orthogonal comparisons. We compute the median expected willingness to pay as the weighted average fee with weights being the probability of enrollment from both raw and adjusted multivariate logistic models.

Results: The median willingness to pay for a program that offered on average 10 months of heroin free time was \$9.50 per week, rising to \$15.33 per week for programs that offered 24 months of heroin free time. The availability of social services increased median willingness to pay by \$4.81 per week. The fee was the most important predictor of the probability of enrollment with a price elasticity of -0.57 (SE 0.62).

Conclusion: Clients median willingness to pay for drug rehabilitation falls short of the average program costs of \$60 per week, which reinforces the need for continued subsidization. Clients will pay more for higher rates of treatment success and for the presence of social services.

02294

#### **Validation of a brief screening instrument for identifying women in substance abuse treatment with co-occurring mental health problems and trauma history**

Lincoln A, Amaro H, Chernoff M

Background: Providing effective substance abuse treatment remains one of the major challenges of urban health. Women enter substance abuse treatment with a complex set of social and medical problems including increased rates of co-morbid mental health problems and traumatic exposures that have been associated with poor substance abuse treatment outcomes. However there are few resources available to front-line substance abuse providers to assess these problems. To address this need we conducted a study of the predictive validity of a brief screening instrument we designed for use by substance abuse treatment counselors.

Methods: 354 screens were administered to women entering substance abuse treatment and 80 received an independent DSM-IV diagnostic assessment. Analyses were conducted to assess the predictive validity of the screening questions for psychiatric diagnoses including major depression, bipolar disorder and PTSD. These included four one-sided, 2.5%-sized, stratified tests of the null hypotheses for the diagnoses of interest, and estimates of the 95% confidence intervals for the sensitivity and specificity of the screen for each condition.

Results: Participants reported significantly higher rates than the general population for mental health symptoms (88%) and exposure to violence (89% intimate partner violence, 71% sexual assault, 61% childhood abuse) with significant race/ethnic differences. Analysis of the screen validation will be presented.

Implications: The use of a brief, easy to administer, screening instrument may be an important tool for front-line substance abuse treatment staff to provide the best care for women in substance abuse treatment.

02300

#### **Estimated time to Hepatitis C virus (HCV) seroconversion in a cohort of Seattle injection drug users (IDUs)**

Hagan H, Thiede H, Des Jarlais D

Background: HCV infection in IDUs is an important urban health problem, with high prevalence of infectious carriers in most IDU-populations. In this study, time to hepatitis C virus (HCV) seroconversion was estimated in initially-seronegative injection drug users (IDUs), to assess the window of opportunity for prevention of HCV infection, and examine factors that affect timing of infection.

Methods: 484 HCV-antibody negative IDUs were followed a median of 2.1 years to observe HCV seroconversion. Time to seroconversion was examined in relation to subject characteristics, using the Kaplan-Meier method and Cox's proportional hazards regression. A weighted average time to HCV seroconversion was calculated among new injectors (injecting < 2 years) using seroprevalence and seroincidence data.

Results: There were 134 HCV seroconversions (11.6/100 person years at risk; the 25th percentile of time to seroconversion was 26.2 months). Daily injection (adjusted hazards ratio (AHR)=1.4), injection with a syringe used by another IDU (AHR=1.8) and sharing a cooker or cotton (AHR=1.7) were significantly associated with time to HCV seroconversion. Using the estimate of the mean time to seroconversion in new injectors (4.8 years), and the median duration of injection in new injectors who were HCV-positive at enrollment (1.2 years), the weighted average time to seroconversion after beginning to inject was estimated to be 3.4 years.

Conclusion: The period of susceptibility to HCV infection in the majority of IDUs appears to be sufficiently long to justify the allocation of substantial resources toward interventions that may reduce drug injection frequency and injection-related risk behavior in these individuals.

02326

#### **"Vipasyana" – An effective technique of treatment and rehabilitation**

Chhetri MB.

Introduction: Crime has created an uncivil society. As a result, peace, freedom and justice which are the basis of social harmony, are subjugated. All clusters of the society have been affected by crime. Therefore, effective treatment and rehabilitation programs for such clients are highly needed to calm the criminal mind and addicted body.

Objectives: "Vipasyana" is a special program based on theoretical learning, and "Yoga" (meditation) is a special kind of exercise based on the Hindu epic "Ved." The Vipasyana treatment and rehabilitation program was introduced in certain Nepalese prisons in the mid-1990s, to see its effects on prison inmates, especially drug abusers and also criminals. This program intended to re-socialize inmates and restore their hope and dignity to allow them to function productively after their release.

Methods: Theoretical learning, meditation and physical exercise were used as the training methods of the Vipasyana treatment and rehabilitation program where 25 clients were put together in one batch.

Results: Vipasyana treatment and rehabilitation program has been found to be a useful and cost effective tool to revitalize prison inmates by boosting up inner morale. It helps to attain the highest spiritual goals of liberation with full enlightenment. This program has been so popular and effective, that cases of relapse are quite rare.

Implications: Since incarceration has been found as an unwanted and expensive tool, programs like Vipasyana are required. Experience and the results of this program showed that it significantly contributes toward the creation of a safer society with no drug abuse and crime. Thus, this program needs wide advocacy, replication and application.

## **Disadvantaged and Marginalized Populations (04)**

04009

#### **Attitudes and perceptions toward available healthcare among marginalized urban populations**

Feldman B, Fowler H, Chin N

Background: Health disparities between racial populations in the United States are known to transcend financial access to medical care. It is widely accepted that these health disparities are in part facilitated by attitudes and beliefs among racial minority populations, yet there have been few studies characterizing racial minorities' attitudes and beliefs toward healthcare.

Methods: Minimally structured patient-centered interviews of thirty African American, Hispanic, and American Indian adults living in urban shelters or visiting urban soup kitchens. Interviews centered on attitudes and beliefs toward healthcare among these populations.

Results: Recurring perceptions were that providers are prejudiced and stereotype patients, are poor listeners, spend too little time with patients, and inappropriately use patients as teaching material for health care providers in training. Participants also expressed a wide range of beliefs about generic medications, organ donation, HIV/AIDS, and medical research. Participants described the characteristics of their ideal doctor and suggested ways in which current health care providers could improve their interactions with patients.

Implications: The attitudes and beliefs described by participants serve as significant barriers towards accessing medicine and contribute to healthcare disparities in the United States. Strategies to decrease health disparities should address both patient-provider interactions and community interactions that serve as the sources of negative perceptions among these populations. Continued research is needed to further characterize the views of marginalized populations that contribute to health disparities.

04015

#### **Listening to women: A topology of stressors facing mothers in a low-income, predominantly white neighborhood**

Baber Wallis, A.

**Background:** This is a qualitative, grounded theory study about the ways in which residence in a low-income, predominantly white, urban neighborhood affects the health and well-being of women. This research used formal qualitative research methods to explore how the urban environment influences parenting stress and shapes behaviors related to child health and development.

**Methods:** Data collection included in-depth interviews that incorporated standardized measures along with open-ended questions, journals, photographs, and neighborhood checklists, as well as analysis of Census and city data. Research focused on 10 mothers living in Pigtown, a low-income, predominantly white neighborhood in Baltimore, Maryland. Additional data were collected during individual and group interviews with community service providers, business owners and employees, and longtime residents.

**Results:** Findings clustered around three main themes: (1) that stressors are generally routine but also include confrontation with frequent and unpredictable crises and that this combination of routine stressors and crises are part of several overlapping domains, (2) that environment plays an important role in women's lives and that this environment includes not only the immediate neighborhood of residence but also the larger city and sociopolitical community, and (3) that women have few social supports or mechanisms for coping with stressors and crises.

**Implications:** Policy and programmatic recommendations focus on efforts to promote neighborhood stabilization and pride, improvements to core city services, improvements in community health, provision of affordable entertainment for families, and income support and asset development.

04030

#### **Increasing outreach and decreasing disparities in African Americans (IODA)**

Nagler EM.

**Background:** "Increasing Outreach and Decreasing Disparities in African Americans" (IODA) is a three-year demonstration project funded by the American Cancer Society (ACS) to reduce disparities due to colorectal cancer among African Americans in two urban settings: Bridgeport, CT and East Baltimore, MD.

**Methods:** The ACS hired and trained two community outreach specialists (COS) to implement a seven-step outreach process. After interviewing over 100 leaders identified through a key informant process, COS distributed a written summary and presented highlights at well-attended community forums. Community planning groups are implementing action plans appropriate to identified local needs and assets

**Results:** Community planning groups in the two sites have developed and implemented interventions that include community education, advocacy among policymakers and creation of affordable, accessible cancer screening services. Preliminary evaluation data indicates increased colorectal cancer screening in participating communities. Final data collection and analysis will be completed in 2004.

**Implications:** The IODA project has been effective in opening doors to two African American urban communities experiencing a disproportionate cancer burden. A trusting relationship has been built through outreach with community residents, and work is underway on locally appropriate cancer control initiatives. This process can be replicated in any community.

04045

#### **Perceptions of social support and mental health among Chinese immigrants in Toronto**

Simich L, Beiser M, Mawani F, Wu F

**Background:** This presentation will describe perceptions of health and social support among recent immigrants to Canadian cities from Hong Kong and Mainland China using data from the multi-site, qualitative research project, Multicultural Meanings of Social Support among Immigrants and Refugees. The presentation will focus on the role of culture and social context on shaping perceptions of social support and its impact on mental health among Chinese immigrants in Toronto.

**Methods:** Phase 1 consisted of in-depth interviews with 60 policy makers and service providers, Phase 2 of in-depth interviews with 120 Chinese immigrants and Somali refugees, and Phase 3 of focus groups with all stakeholders to generate policy and program recommendations.

**Results:** Chinese immigrants described challenges and frustrations, particularly in finding suitable employment, finding information, navigating the urban social environment and recreating supportive networks in Canada. They expressed impacts on mental health including stress, depression, low self-esteem, and need for emotional support. Distinct difference emerged between Hong and Mainland Chinese immigrants (as well as between immigrants and refugees) with respect to expectations of supports, coping strategies, and concepts of health.

**Implications:** Immigrants judge social support by its effectiveness in overcoming specific obstacles. Absence of social support is keenly felt in declining mental health and reduced potential for social integration. Analyzing the role of culture and social context in shaping perceptions of social support adds significant dimensions to our understanding of social support and social capital in immigrant communities and suggests ways to enhance supportive health and social services.

04062

#### **Advocacy education in medical school: Towards improvement in healthcare of marginalized populations**

Lai W, Uddin S, Brown JB, Nisker J

**Background:** Advocacy is one role that physicians are expected to fulfill. We sought to elucidate the practical meaning of advocacy in medicine and apply it to medical education, so that future physicians include advocacy in their daily practice.

**Methods:** This qualitative study used both in-depth interviews and focus groups with persons qua patients, community service providers, physicians, and medical students. To elucidate community needs, focus groups were recruited from local community agencies. The medical community was also consulted. A semi-structured interview guide was used to guide the discussion about the responsibility of the physician as advocate, motivations and barriers to advocacy, skills and knowledge required, and how to teach advocacy. Transcripts were coded independently by two investigators and analyzed iteratively for common themes.

**Results:** Emerging themes include three areas. First, communities expressed a need and an expectation that physicians be a voice for them when necessary. The second domain addressed the modes of advocacy, from individual patient care to public/political roles. It includes both motivations and barriers. Third, an integrative model of advocacy training was described. It includes multiple levels of advocacy education and promotion, starting at selection for medical school, continuing with patient-centered teaching, and reinforcement in clinical teaching and role-modeling. It is perpetuated in continuing medical education and faculty development.

Implications: Knowledge, skills, and positive attitude towards advocating for marginalized patients can be promoted by education, experience, and exposure at all levels of medical training. A multi-module curriculum on advocacy would prepare physicians to fulfill their advocacy roles.

04066

#### **Income disparity, immigration and mental health hospitalization in Toronto, Canada**

Creatore MI, Glazier RH, Agha MM, Moineddin R

Background: Income distribution and relative income differences may affect health independent of absolute income levels. There is inconsistent evidence, however, of such effects on mental health. We investigated whether income disparity between recent immigrants and other residents was associated with mental health hospitalizations.

Methods: Income disparity was defined as the percent difference between the mean individual income of recent immigrants and that of all other residents of each census tract in south-central Toronto, Canada. Sex-specific mental health hospitalization rates were generated using 1996 Canadian Census denominators for four groups representing different levels of relative and absolute income differences.

Results: Recent immigrants' income was 37% (range: 15-55%) less than other residents. Mental health hospitalization was highest for women (4.0 per 1000) in the least advantaged group (low income-high disparity), and for males equally in the least advantaged group and in the high income-high disparity group (both 3.1 per 1000), though neither finding was statistically significant.

Implications: Preliminary results suggest that males experience higher mental health hospitalization rates in areas with high income disparity regardless of the overall neighborhood income. In females, a combination of material disadvantage and relative disadvantage resulted in the highest rates. Due to the rarity of mental health hospitalizations in the study area, further analysis using a larger geography is necessary to confirm these results statistically. Significant income disparity exists for recent immigrants in Toronto and this may be related to mental health particularly in males and low income females.

04087

#### **The relationship between HIV/AIDS and gender-based violence: The case for building and strengthening legal advocacy services**

Silber IC.

Background: This presentation will explore the relationship between women living with HIV/AIDS and their experiences with gender-based violence with the goal of (1) identifying the characteristics of HIV-related violence and (2) promoting the appropriate legal intervention services of a local urban service provider. In doing so, this study engages a holistic and broadly defined notion of health.

Methods: A qualitative research methodology was employed consisting of eight in-depth audio-taped interviews with women participants totaling fifteen hours of tape. An interview guide was created and tested. The researcher also followed the narrative strategies of each participant. Six African-American and two Puerto Rican women ranging in age from 32 to 49 were interviewed. The participants were clients of a Bronx service provider.

Results: Important patterns of abuse were identified that provide a window into understanding the complexities of women's HIV-related violence. Seven areas of HIV-related violence were identified: (1) Housing (2) Substance Use (3) Sex and Pregnancy (4) Disclosing HIV Status (5) Access to Benefits (6) Orders of Protection (7) Custody

Implications: The study will suggest that there is a significant need for legal intervention in addressing HIV-related violence. Several steps could be taken. Training of both lawyers and case managers in identifying HIV-related violence and pursuing appropriate questions is a critical first step. Equally important is the need to encourage the creation of a range of referral services. Furthermore, coordinated efforts between program areas would greatly benefit HIV+ clients as would interagency efforts addressing the relationship between HIV/AIDS and gender-based violence. This could help close the gap between those providers that focus either on HIV or violence.

04088

#### **Vulnerability to heat-related mortality in U.S. cities: An evaluation of air conditioning prevalence, age and race**

O'Neill MS, Zanobetti A, Schwartz J

Background: Daily mortality is typically higher on hot days, and certain groups experience disproportionate risk. Air-conditioning has been recommended to mitigate heat-related health effects. We examined whether air conditioning (AC) prevalence in U.S. cities is associated with mortality on hot days and explains any disparities by age and race.

Methods: Poisson regressions were fit to daily mortality (1986-1993) in Chicago, Denver, Detroit, Minneapolis, New Haven, Pittsburgh, and Seattle. Predictors included natural splines of time, barometric pressure and day of week; and linear terms for particles and mean daily apparent temperature, lag 0. Separate models were fit to death counts stratified by age (>65 years, < 65 years) and race (Black or White) to derive the percent change in mortality at 29°C, relative to 15°C. City-wide AC prevalence was also evaluated for influence on this effect, and further stratified by race and age. Combined effect estimates across all cities were calculated using inverse variance weighted averages.

Results: Deaths among blacks were more strongly associated with hot temperatures than deaths among whites; age did not modify the effect. White households had over twice the AC prevalence than black households in most cities. AC prevalence differed little by age. Cities with higher AC prevalence experienced 40% lower heat-related mortality, and AC prevalence explained part of the differences in heat effects by race.

Implications: Improved access to air conditioning, in addition to efforts to reduce social isolation and address urban heat island effects, may reduce disparities in health responses to hot weather.

04090

#### **Confronting Asian youth gangs: Examining solutions from the community using a multidisciplinary approach**

Akiyama C

As the population of Asian/Pacific Islander Americans (APIA) continues to rise in the U.S, so do their healthcare needs. Unfortunately, not all APIA are as uniformly educated, acculturated, and financially stable, as the myth of the "model minority" would have us suggest. Although adults from many

nationality groups between APIA have adapted well to life in the U.S, serious problems have emerged among our youth. In particular, gang violence in the APIA community has increased dramatically nationwide. In Los Angeles County California alone, there are currently 155 Asian gangs (membership over 6,000). In neighboring Orange County, gang involvement has reached an all time high with over 65 documented gangs (membership over 2,000). Even more disturbing is the increase of Asian females involved in gangs. In Orange County, where the Asian gang population makes up 12%, there are 140 Asian female gang members, up 60% from last year. The author interviewed 400 gang members out in the streets, jails, and juvenile halls, using a target questionnaire; concomitantly went a step further disguised as a gang member. This study identified several distinct differences between the ideology and the "state of mind" between Asian male/female gang members. Moreover, the author identified six contributing factors, which lead to involvement in gangs (i.e.: lack of adult supervision, family breakdown, victimization due to racism, culture shock, need for survival, and monetary profit). The purpose of this study is to present timely data on APIA youth gangs; offer strategies for prevention/intervention to help control this rising problem.

04106

#### **Health perceptions and knowledge of preventive care in East African Women**

Crafton C, Ibrahim Q

**Background:** There exist differences in traditional attitudes towards medicine among the immigrant communities. The differences, though less dependent on religious views, are largely due to differences in economic and cultural traditions. Secondary migration of immigrant and refugee communities into urban areas with resettlement into extended clan and family groups makes these communities somewhat 'hidden' populations. It is essential for these populations to be related to with a needs-assessment based approach that focuses not only on community deficiencies, but also cultivates the resources and talents within the community. This pilot project was funded through the Minnesota Women's Foundation and written by Leadership, Development and Empowerment Group (LEAD). LEAD realizes that generating community system building efforts, both from within and from outside of the community and strengthening the existing community organizations are of paramount importance. Women are traditionally and have been the health care providers, as well as the brokers and protectors of their families. There are a large number of women who are first-time heads of their households, who cannot read or write, and do not know about navigation of the health care system. They are also in need of health care services and use them more frequently than men, particularly during their childbearing years. The goal of the study is to increase the access to health care services, particularly breast and pelvic cancer screening, develop relationships with targeted communities, and health care providers systems, and educate the providers about culturally competent health care for these communities. Metropolitan State University School of Nursing with support from the Metropolitan State University Community-Based Learning Center partnered with LEAD on all aspects of this project.

**Methods:** The seven focus groups with East African older women, over thirty-five years of age, met at their perspective community organization's centers. The participants were gathered by the facilitator/interpreters from these communities including the Eritrean Community Center of Minnesota, Confederated Somali Community of Minnesota, and the Oromo Community Center. The Sudanese community was contacted several times through community leaders but declined to participate in the project. The women participants were asked questions about health perceptions, knowledge, beliefs, barriers to care, and their interaction with preventive care and the health care system.

**Results:** The focus group findings inevitably reflect the experiences and views from the women themselves. However, these findings provide some insight into East African immigrant women's perceptions, barriers, and experiences of the health care system in Minneapolis-St. Paul. The majority of women stated that they seek health care only when they are sick. Women were not aware of needing screening or have knowledge about illness for screening. Many said they waited until symptoms persisted for several weeks or until they were very ill before seeking care. Many women expressed that good health is a strong value that is embedded in the cultural and religious traditions of their ethnic communities. A few women expressed distrust of the American health care system because they believed that as refugees they were not given the best care or that they were subjected to experimental treatments or unnecessary surgery. Older women speaking in a group of women in their own community center, gave these women, some of them community elders, an opportunity to speak in a safe setting.

**Implications:** This information will be incorporated into development of health promotion, and culturally competent interventions. Interventions will be focused on the provider as well as community for education on the importance of preventive health care practices and screening, and to encourage women to discuss practices that they use to maintain or improve their health that are consistent with their culture. Idioms, sayings and unintended outcomes will offer insights into women's health beliefs.

04108

#### **Targeting neighborhoods for cancer screening services could diminish the number of late-stage diagnoses for breast and cervical cancer care**

Barry J, Breen N

## **WITHDRAWN**

04157

#### **Explicit efficiency, equity, and justice considerations in resource allocation decisions**

Bayoumi AM, Hoch JS

**Background:** Advocates for disadvantaged populations have expressed concerns about how cost-utility analyses can incorporate concerns about fairness and equity. We examined how a decision maker's choice would vary depending on definitions of justice.

**Methods:** We imagined a decision maker with a fixed budget to be spent on one of three interventions: highly active antiretroviral therapy (HAART) for HIV, sildenafil for erectile dysfunction, or augmentation therapy for alpha-1-antitrypsin deficiency. The cost-effectiveness of these interventions was \$23,000, \$11,200 and \$207,800 per quality adjusted life year (QALY), respectively, based on published studies. We examined eight decision rules; four neglected efficiency considerations, but allocated resources according to health and demographic outcomes, two used only measures of efficiency, and two used "weighted QALYs" to incorporate equity concerns.

**Results:** Without considering efficiency, sildenafil was preferred when the decision maker's objective was to maximize QALYs, augmentation therapy was preferred when individuals with the worst quality of life were given first priority, and HAART was preferred when individuals with the lowest expected survival or those with the youngest mean age were given priority. Considering efficiency, sildenafil was preferred when outcomes were measured as QALYs, while HAART was preferred when outcomes were measured as life years. Results were generally unchanged when QALYs were weighted by patients' quality of life, but tended to favor HAART when QALYs were weighted by patients' baseline quality-adjusted survival.

Implications: Explicit definitions of justice, and examination of corresponding decision rules, may aid policy makers concerned about equity to use the results of cost-effectiveness studies appropriately.

04163

#### **Discrimination, social support and mental health among refugees**

Mawani FN, Simich L, Noor A, Wu F

Background: This presentation will explore the relationships between discrimination, social support and mental health among refugees, using data from the research project, Multicultural Meanings of Social Support Among Immigrants and Refugees.

Methods: The multi-site, qualitative project was based in Toronto, Edmonton and Vancouver and was conducted in 3 phases. Phase 1 consisted of in-depth interviews with 30 service providers and 30 policymakers, Phase 2 of in-depth interviews with 120 Chinese immigrants and Somali refugees, and Phase 3 of focus groups with all stakeholders to generate program and policy recommendations.

Findings: This presentation will focus on findings from Phase 2 interviews conducted with Somali refugees in Toronto. Somali refugees described the resettlement challenges they faced with housing, education and employment. They referred to personal and systemic discrimination as obstacles exacerbating those challenges as well as a lack of formal and informal support to assist them in meeting those needs. They described explicit links between their experience of discrimination, a lack of support and their mental health. They talked of the critical importance of emotional support in alleviating the mental health impacts of the challenges they face due to discrimination.

Implications: The experience of Somali refugees sheds some light on the relationships between discrimination, social support and mental health. For refugees, a key component of formal social support is the removal of barriers to enable them to be self-sufficient in meeting their resettlement needs. In addition, the provision of emotional support may protect refugees from the mental health impacts of discrimination.

04179

#### **What people of diverse cultures think about genetics: An urban experience towards community-based genetic education**

Catz DS, Tobin JN, Puryear M, Kyler P, Green N, Umemoto A, Cernoch J, Brown R, Wolman F

Background: The goal of the HRSA-funded Genetic Education and Needs Evaluation (GENE) project is to develop community-based, culturally, and linguistically appropriate participatory strategies to improve minority access to genetic information. We conducted a series of focus groups in order to understand attitudes and beliefs towards genetics among different cultures.

Methods: Five focus groups were conducted in English, two in Spanish and one in Mandarin. Participants included 27% African Americans, 36% Hispanics, 22% Caucasian and 15% Asian (Chinese).

Results: Participants' knowledge of genetics, genetic testing and newborn screening was limited. Minority participants' main source of health information came from pamphlets or booklets, the media and professional training. In contrast, white participants looked for health information from journals, the Internet and the media. Most participants indicated that they needed more information about genetics in general, and about genetic testing and newborn screening, specifically. To participants, the possibility of preventing diseases was the major advantage of genetic testing. The main concerns were: anxiety, insurance restrictions, financial burden, privacy and racial/ethnic discrimination. Most of the participants stated that they would agree to have carrier testing and newborn screening, but only half of them would be willing to undergo genetic testing without reservation.

Implications: Regardless of cultural background, participants had almost the same expectations and concerns and agreed on the need for genetic education. With the new genetic tools being developed, it will be necessary to provide culturally- and literacy-appropriate genetic education to ensure that underserved populations can make informed choices about their health.

04189

#### **Femicide in New York City: 1990 - 1999**

Frye V, Hosein V, Waltermauer E, Wilt S

Methods: Data were collected from death records of all women who died between 1990 and 1999 and whose deaths were classified as homicides by the Office of the Chief Medical Examiner of New York City. Femicides were categorized according to whether an intimate partner perpetrated the homicide and comparisons were made between intimate partner femicides and non-intimate partner femicides. Annual rates were calculated and time trends were plotted.

Results: Most femicide victims were young, Black and were killed in poor neighborhoods in New York City. Among cases with a known motive/perpetrator, forty percent were intimate partner femicides. While the rate of non-intimate partner femicide has decreased between 1990 and 1999, the rate of intimate partner femicide has remained stable.

Conclusions: Intimate partner femicide exhibits a unique epidemiology, as compared with homicide more generally, and represents a point of prevention of premature mortality among women in New York City. This study demonstrates that young, foreign-born, and ethnic minority women are over-represented among intimate partner femicide victims. In order to reduce deaths among these population subgroups, funding of intimate partner violence against women prevention and intervention activities must be increased. The New York City experience reveals that surveillance data can have such an impact on funding and program design decision-making.

04197

#### **Measuring quality of life among inner city street youth**

Semogas D, Cleverley K, Rice C, Roelofsen D, Jensen C, Hjartarson K, Thomas H, Szatmari P

Background: The M.A.C. Door (Making a Change) program is an academic and community collaboration that applies an incentive based approach to assist homeless street youth to successfully leave the street environment. However, what constitutes quality of life within the context of living on the street is not known. The purpose of this paper is to: 1) describe quality of life as perceived by youth as compared to housed youth and 2) examine variables associated with variations in quality of life (e.g., time on the streets, level of education, age, gender, and motivation to change as well as perceptions of physical and mental health)



Methods: Approximately 50 street youth are currently being surveyed using The Quality of Life Profile: Adolescent Version Questionnaire. The 54 item instrument covers nine areas of life under three major sections: Being (physical, psychological, spiritual); Belonging (physical, social, community) and becoming (practical, leisure, growth). Each of the 54 items is scored according to its importance to the adolescent and level of satisfaction with current status. Additionally, the nine areas of life are rated according to level of control of areas of life and available opportunities for change.

Results: Pilot data indicate that the tool is acceptable to youth and provides variation in scores. The poster will describe data on 50 homeless youth compared to controls.

Implications: Understanding how street youth perceive their quality of life and knowing whether certain factors affect their quality of life will assist with interventions to help those ready to exit the street.

04201

#### **Urban Asian-Americans and stigma beliefs for mental disorders**

Fogel J, DE Ford

Background: Stigma regarding mental disorders is quite prevalent. Recently, the Internet has been used for depression screening and we used the Internet to study mental disorder stigma beliefs among depressed Asian Americans (AA) and whites.

Methods: We placed the CES-D depression scale on the Intellihealth website. All scoring above the depression cutoff score, were asked about stigma relating to friends, family, and employer. Using ANOVA and ANCOVA, we compared AA to whites and we also stratified by AA category to compare AA stigma beliefs with regard to urban status and region of the US.

Results: Sample size was 1,839 AA and 66,820 whites. AA had higher mean stigma scores than whites in all three areas. Stratifying for AA, there was a trend ( $p=.055$ ) for urban AA to have higher mean stigma scores relating to family than non-urban AA. No differences were noted for stigma relating to friends or employer. Percentages for those indicating either "agree" or "strongly agree" for each stigma category were the following: family (urban=44.2%, non-urban=39.1%), friends (urban=54.3%, non-urban=51.7%), and employer (urban=72.0%, non-urban=67.4%). Also, no US regional differences were noted for all three stigma areas.

Implications: Urban AAs have greater stigma beliefs than non-urban AA. This may be because those in urban areas are less acculturated and have a higher AA ethnic density than those in non-urban areas. Culturally sensitive mental disorder screening by health care providers may help detect and improve the health of those urban AAs who may initially be hesitant to discuss their mental disorder.

04223

#### **Exploring elderly disparities in Central Harlem and Boro Park: A cultural and social perspective**

Lewis S, Cano I, Watkins BX

## **WITHDRAWN**

04225

#### **The silent demand for mental health services among Argentine immigrants in New York City**

Viladrich A

Background: Lack of health insurance, insufficient coverage, and underutilization of US health system are some of the main problems faced by immigrant populations in the US. The migratory experience is characterized by stressful circumstances (e.g., lack of English proficiency, undocumented status, etc.) that dually impact on immigrants' physical and mental health. Because of access barriers, many immigrants do not receive mental health treatment despite their needs.

Specific Aims: This paper aims to develop hypothesis in two areas: (1) immigrants' access barriers to mental health services; (2) identification of immigrants' perceptions of their mental health needs expressed via indirect ways, such as somatic susceptibility (e.g., abdominal pain caused by nervousness)

Methods: Data will be obtained from in-depth interviews (from an original sample of 50 immigrants in NYC) and fieldnotes from participant observation conducted in Argentine social enclaves.

Results and Implications: This paper will develop the notion of "silent demand" to refer to Argentine immigrants' awareness of their mental health needs that are not translated into an active request for, and access to, mental health services. Immigrants' uninsured status, lack of financial means, and their unfamiliarity with the US health system frequently discourage them from seeking mental treatments. However, immigrants' everyday difficult circumstances also make them wish for professional support that could help them cope with everyday stressors. These results could lead to the design of health interventions addressing immigrants' access barriers to mental health services, including the consideration of their own perception of symptoms and their unsatisfied demands.

04228

#### **Women migrant workers in urban areas and their health and well-being**

Hussain TM.

The economies of many (migrant) sending countries would have collapsed, and those of the migrant receiving countries would not have attained their impressive economic performances were it not for the presence of women migrant workers in urban areas. There is an increasing trend towards the feminization of migration in Asia's mega cities. The increase in the participation of women in the regional labor migration (from 15% in 1976 to 27% by 1987) revealed an upward trend in the 1990s, and is evidenced by the feminization of migrant work in Asia. For instance, overseas Filipino Workers increased from 61% in 1998 to 68% in 1999. The increasing number of women migrant workers engaged in the informal labor sector, both as domestic help and as sex workers, raises health issues. While the vulnerability of migrants to HIV and other infections is recognized, their lack of capacity to negotiate safe sex and their continuous denial of rights to make free choices regarding their bodies exacerbate their risk of contracting HIV. Access to health care is not considered a right of migrant workers in receiving countries. For undocumented migrant workers, their fear of arrest effectively restricts the use of medical facilities, especially that of state-run hospitals. Lack of poor access to health care by migrant workers precipitates their vulnerability to HIV. In essence, the right to health is the right to life, and of which no migrant worker or migrant family should be deprived. The UN convention on the

Protection of the Rights of All Migrant Workers and Members of Their Families provides a comprehensive guideline to the treatment to which migrants are entitled as guest workers in a host country. The paper will attempt to look deeply at the current situation by using various international sources and information, and to provide a forum for discussion and recommendations.

04229  
**Challenges to mental health and their connection to HIV/RISK behavior among new Central American, Mexican and Dominican immigrants to suburban and semi-rural New York**

Decena CU, Shedlin MG, Oliver-Vales D

Background: Research on immigrant populations can enhance our understanding of how self-reported mental health conditions such as stress and depression place these populations for HIV/AIDS. This paper describes these issues among newly arrive Guatemalan, Honduran, El Salvadorian, Dominican and Mexican immigrants to suburban (Westchester/Putnam Counties) and semi-rural (the North Fork section of Suffolk County in Long Island) areas of the New York Eligible Metropolitan area.

Methods: The study employs a qualitative approach and methods to identify and describe new Hispanic migrant and immigrant populations and factors affecting HIV risk. These methods include: observation, in-depth interviews and focus groups.

Results: Ongoing fieldwork and preliminary analysis reveal that self-reported stress and depression are related to the following issues among new immigrants; trauma of migration, social isolation, discrimination, unemployment (especially during the winter season), overcrowded living conditions, difficult learning English, and perceived powerlessness. The data gathered suggest that these mental health conditions may contribute to increased risk of HIV and other STIs. This includes alcohol use, risky sexual behaviors (especially with occasional partners and/or sex workers) and new drug use.

Implications: Preliminary analysis of the data gathered reveals the need to address the relationship of social factors, self-reported mental health conditions such as stress and depression, and an increase in behaviors that put new immigrants at risk for HIV/AIDS.

04233  
**Migrant landscapers**

Kosakow YB.

Background: Inhabitants of suburban Connecticut indirectly employ male migrant workers as landscapers. Such workers live in surrounding cities. Most are Hispanic and probably undocumented. This study focused on the health care needs of urban migrant workers serving one community, and the medical services available to them in an adjacent urban center.

The workers face substantial, additional occupational risks due to the rise of Lyme disease and other tick-borne illnesses, found to be present in as much as 54% of households in the area.

Methods: This was an exploratory study. Semi-structured interviews were conducted with migrants, providers, employers, immigrant advocates, health departments and community service organizations. Interview data was supplemented by area demographic, disease, and health service data.

Results: Workers avoid medical treatment unless illness interferes with work. Of the eight migrants interviewed, most were unaware of Lyme disease symptoms, none employed prevention methods, and all were unfamiliar with many free services available. Two had had Lyme disease.

Implications: The urban migrant labor population, while generally young and healthy, is at particular risk for occupational injury and Lyme disease. Lack of knowledge, coupled with delay in seeking treatment, puts them at high risk for chronic Lyme disease, since cure depends on prompt diagnosis. Education, prevention, diagnosis and treatment are necessary. Inadequate funding of health care facilities further complicates outreach and diagnosis. On the basis of this study, a larger survey of migrant workers is warranted to determine the best way to improve outreach, diagnosis and treatment of this at risk population.

04239  
**Poverty is associated with asthma hospitalization and re-hospitalization rates, 1997-2000: An ecological analysis in Belo Horizonte City, Brazil**

Dias MAS, Caiaffa WT, Coelho GLLM

Background: Children's hospital admissions and readmission for asthma are considered good proxies of health care access and utilization, especially for low socioeconomic populations. This ecological study evaluates the relationship between asthma clusters with socioeconomic variables.

Methods: All asthma cases in children aged 0-5, living in Belo Horizonte City, (2,229,697 inhabitants) the largest City of BH Metropolitan Area admitted and readmitted in public hospitals, were described according to hospitalization rates, temporal and geographical distribution from 1997 to 2000. All cases were geocoded according to address of residence. Data on population density, risk areas using household income levels from neighborhood block groups were obtained, respectively, in the 2000 census report and from the specific study carried out by the municipality. Time and space clustering were analyzed using the scan method of Kulldorf.

Results: High rates of hospital admissions (112.8) and readmission (25.0) per 100,000 children aged 0-5 were observed. Age and gender did not differ by hospitalization and re-hospitalization rates. A remarkable seasonal distribution was observed for admission but not for re-admission rates. Space clusters coincided with high risk areas for low socio-economical either for admissions or re-admissions; as well as a high correlation between the occurrences of both events with low socio-economic profile.

Implications: We found high rates of asthma admissions and readmissions especially for those living in critical areas of the city represented by low socio-economic populations at high risk of exposure related to symptoms triggering and exacerbations for asthma. These findings might be related to low health care access and utilization.

04245  
**Community-based screening for diabetes and cardiovascular disease in the Bronx using HbA1c: Identification of high risk subgroups**

Grant T, Soriano Y, Nelson I, Williams E, Ramirez D, Burg J, Marantz P, Nordin C

Background: Inner city immigrant and mixed ethnic communities are known to be a high risk for cardiovascular disease and diabetes. Such communities may also be underserved for preventive medical care. We hypothesized that (1) Community based screening, using partnerships between physicians

and community groups, can detect new cases of diabetes and persons at risk for diabetes and cardiovascular disease; (2) Hemoglobin A1c (HbA1c) can be used as screening test in this setting; and (3) The result can be used to identify subgroups at particular risk.

Methods: Screening took place in neighborhoods throughout the Bronx at five types of locations: shelters, group homes, street fairs, and outpatient clinics. Data were analyzed for number of cases of new diabetes (HbA1c>7%), persons at risk for diabetes (HbA1c 6%-6.99%), effect of ethnicity of participant, and type and location of screening.

Results: HbA1c and lipid profile were obtained on 539 persons at 23 screening, which formed the cohort for this analysis. Mean HbA1c for the cohort was 6.00%. 32% of cohort had HbA1c>6%, and 11.4%>7%. Excluding known diabetics (n=59), 24% had HbA1c>6% and 3.4%>7%. There was significant effect of location within the Bronx on the value of the HbA1c for the cohort as a whole (p=0.032). The mean HbA1c for persons living in the south Bronx (which has a higher poverty income ratio) was significantly greater than those living in the North Bronx (6.08±1.38% vs. 5.74±1.01%, p=0.013). When we analyzed the value of HbA1c as function of type of screening, we found a significant group effect (p<0.001). Post hoc analysis showed that persons screened in shelters had significantly lower HbA1c than those screened in all other locations (5.46±0.89%) (n=105) vs 6.13±1.39% (n=434, p<0.001). Persons who identified themselves as Hispanic had slightly higher HbA1c than Caucasians and Black, but the difference was not significant. Using the data, we found the highest yield for persons at risk for diabetes was from nonshelter screenings in the South Bronx: in this cohort (n=181), 32.9% (n=59) had HbA1c>6% and 5% (n=9) had a new diagnosis of diabetes.

Conclusion: Community based screening with HbA1c can be used as a method for identifying high percentages of patients at risk for diabetes or with undiagnosed diabetes in an inner city, immigrant, mixed ethnic population. Targeting specific populations by neighborhood and type of screening may increase yield for diabetes and cardiovascular risk.

04248

#### **Lifestyle modification in hypertension management among older Korean-Americans**

Lee M, Fleury J

Background: There is a high prevalence of hypertension with very low rate of awareness and inadequate control of blood pressure among Korean-Americans. Hypertension predisposes to all of the major cardiovascular disease outcomes including cardiac failure, stroke, coronary artery disease and peripheral artery disease. Without early intervention in the high normal or stage 1 hypertension, the costly cycle of managing hypertension and its complication will be continued. Therefore, there is a need to establish a systematic approach for community-based strategies to guide prevention, treatment, and control of hypertension with emphasis on differences in culture, heritage, and local influence in Korean-Americans.

Methods: The purpose of this two-group, repeated measures quasi-experimental pilot study was: to examine the effectiveness of a culturally relevant, theory-based lifestyle modification intervention in hypertension prevention and control for community dwelling older Korean-Americans from baseline and at 3 months after initiation of intervention. The sample was drawn from 5 community organizations serving Korean-Americans. Initially mini-health screening was done on 156 persons with aged 50 or over. Thirty-seven persons consented among 60 who met the inclusion criteria and evaluated the effects of intervention on knowledge, health beliefs and attitudes, diet pattern and physical activity level, and BP, BMI, and cholesterol and compare between intervention group and comparison group.

Result: T test and Multivariate Repeated Measure ANOVA for comparison of variables from Baseline (TB) to Evaluation Time (TE) between 2 groups were done. The results showed that there were significant differences in knowledge, diet pattern and physical activity level @ p <0.01, and more reduction of blood pressures in intervention groups. However, there were no significant changes in health beliefs and attitudes over time.

Implications: Even though the study being a pilot with very small sample size, the finding is significant in that the culturally relevant intervention plays an important role in modifying diet patterns and physical activity, which results in reducing BP levels. Knowledge seems to be important mediator in this process. Additional research is needed to strengthen implications for practice and further the design of culturally relevant interventions for hypertensive management in vulnerable populations.

04252

#### **Illness perception of breast cancer among a community sample of New York City Korean American Women**

Kwon SC, Siegel K, Senie, R

Objective: The purpose of this exploratory descriptive study was to elicit the illness representation of breast cancer from a community sample of Korean American (KA) women living in New York City.

Methods: Weinman's Illness Perception Questionnaire, based on Leventhal's model of illness representation, was modified and adopted to reflect the study population, and then pilot tested to ensure accuracy and comprehension of the instrument. The survey was administered with assistance as needed to a convenience sample of 150 Korean American women over the age of 18 who attended community health fairs, cultural events, religious institutions, and senior centers.

Results: Respondents under the age of 50 years were more likely to believe that treatment is effective in curing the cancer (OR=2.4, 95% CI 1.1-5.6). Individuals who engaged in breast screening were less likely to believe that there is little one can do to get well from a cancer diagnosis (OR=.1, 95% .0-.7) and less likely to believe that one gets breast cancer due to chance (mammography OR=.09, 95% CI .01-.9; self breast exam OR=.06, 95% CI .01-.5).

Conclusion: Preliminary analysis suggests that individuals with a negative view of cancer treatment and diagnosis are less likely to engage in breast cancer screening behavior. Creating interventions and health education also address how breast cancer is conceptualized and to specifically target held misconceptions on the illness may increase breast cancer screening practices among Korean American women.

04260

#### **Health risk disparities and acculturation in Chinese Americans**

Fahs M, Shelly M, Qu C, Burton D

Background: Little is known about health risks in Chinese Americans, the fastest growing immigrant group in the U.S. The discrepancy between adult male smoking rates in Mainland China (67%) and among Chinese Americans (33%) raises questions about the relationship between acculturation and health risk behaviors. This paper presents baseline data, from an NCI funded longitudinal study, on the impact of acculturation on health risk behaviors among Chinese Americans.

Methods: In-person interviews using a comprehensive household-based survey are conducted with 2500 adults ages 18-74, constituting the largest probability sample of Chinese in the United States. Interviews are conducted in English, Mandarin, Cantonese and other dialects. Two NYC communities,

with a 100% increase in their Chinese populations over the past decade, constitute the sample frame: Sunset Park, Brooklyn, a relatively recent immigrant community; and Flush Park, Queens, a more established immigrant community.

Results: Chinese male smoking prevalence is 50% higher than general population smoking prevalence in both communities (34% in Sunset Park, and 31% in Flushing Park). Preliminary data (n= 712) indicate that in 15.3% of households, English is the primary language spoken at home. Other acculturation measures include: years in U.S., use of Western versus Eastern medicine; and use of language-specific media. The paper presents results of descriptive and multivariate analyses of the relationship of acculturation to health indicators including smoking, physical activity, obesity, alcohol consumption, general health status (SF12), and health risk knowledge, controlling for socioeconomic and demographic characteristics.

Implications: This paper provides the first population based analysis of the relationship between acculturation and health risk disparities among Chinese Americans. Findings will inform public health practice targeting effective health initiatives among urban immigrant populations.

04262

#### **Low health literacy among Latinas in New York City: Reaching populations at risk**

Garbers S, Chiasson MA

Background: A project exploring health literacy and health behaviors is interviewing 200 Latinas age 40+ of varying nationalities in New York City.

Methods: Participants complete a survey administered in Spanish and the TOFHLA-S (Test of Functional Health Literacy in Adults, in Spanish).

Results: Of the 169 interviewed thus far, 51% had elementary education or less, 58% no health insurance, 38% no regular source of health care, and 7% were US-born. TOFHLA-S scores indicated a population with low health literacy: 27% had inadequate health literacy in Spanish, 20% marginal, and 53% adequate. Women with an elementary education or less an older women were significantly ( $p < .001$ ) more likely to have inadequate health literacy. Only one of the 15 women age 65+ had adequate health literacy. Characteristics not associated with health literacy included years in the US, nationality, insurance status, having a regular source of health care, and marital status. Women with inadequate health literacy were significantly ( $p < .01$ ) less likely to have heard of a Pap smear or to ever have a pelvic exam. No association was found between health literacy levels and the number of visits to a health care provider in the last year.

Implications: Almost half of the Latinas we studied will have difficulty interpreting medical materials, even if made available in Spanish. Therefore, providers who care for Latinas age 40 and up, regardless of their nationality or insurance status, need to be aware that relying on written materials, even in Spanish, may not be an effective way to deliver health messages.

04264

#### **An exploratory study of health benefits and practices of the Yoruba living in the Philadelphia, PA – Wilmington, DE metropolitan area (USA)**

Adepoju JA.

The issue of how immigrant populations combine traditional and Western health beliefs and practices has not been given due attention. Hence, this qualitative research study of Yoruba immigrants, an ethnic group from south-western Nigeria living in the Philadelphia, PA-Wilmington, DE metropolitan areas, sheds some light on the question of how best to serve such immigrant populations. The study found that there are three types of Yoruba immigrant groups: (1) those who use only Western medicine (though mostly for pragmatic reasons), (2) those who combine traditional Yoruba and Western beliefs, and (3) those who combine Western medicine and Christian beliefs.

04296

#### **Jordan's legacy: Reaching pregnant youth in the inner city**

Dzendoletas D, Copeland J, Gorman A, Little M

Background: Pregnant homeless women and their newborns are particularly susceptible to poor health outcomes. This vulnerability is compounded if the woman is an adolescent. The concern for this population was illuminated by the starvation death of a newborn living in a shelter with his young mother. St. Michael's Hospital (Toronto) together with the community group, Young Parents of No Fixed Address, has developed a comprehensive program to reach this population.

Purpose: To develop strategies to make obstetrical care more accessible and attractive to street youth thereby improving the health outcomes for mothers and their infants.

Methods: The St. Michael's designated team, including Social Workers, an Acute Care Nurse Practitioner, Family Physicians and Obstetricians work along with Public Health Nurses to facilitate obstetrical care. The team's collaboration with City Hostel Services has helped establish a priority shelter system for this population. The Rotary Centre, a haven located in the emergency department, provides short term respite until care is arranged.

Results: Process and outcome evaluations will report on numbers seen, birth outcomes and efficiency of service access. Action research using qualitative methodology will explore feedback from the women themselves.

Implications: Realistically a safe place to birth may be all that can be achieved. However, with the collaborative efforts of the hospital and community, it is hoped that the health of both the mother and newborn may be maximized and that they can go on to become a successful family.

04299

#### **Oral bronchodilator use among urban minority preschoolers**

Bonner S, Matte T, Rubin M, Fagan JK, Ahern J, Evans D

Background: Under use of inhaled corticosteroids and overuse of inhaled or nebulized bronchodilators has characterized the medical management of asthma among children in socially disadvantaged communities. The frequency of oral bronchodilator use has not been documented.

Methods: We interviewed 149 parents/guardians of children aged 2-5 years old enrolled at subsidized preschools in East and Central Harlem, NYC. The children were identified through a brief respiratory questionnaire as having asthma or probable asthma. We classified 76 (51%) as having current persistent asthma based on frequency of respiratory symptoms in the last 14 days and/or short-acting inhaled bronchodilator use in the last 4 weeks.

Results: Only 17 (22%) of children with current persistent asthma used controller medications regularly – of whom only 2 used inhaled corticosteroids. 44 (58%) used oral bronchodilators in the last 4 weeks, often (68%) in conjunction with short-acting inhaled or nebulized bronchodilators. Use of oral bronchodilator was associated with more severe symptoms.

Implications: This study is the first to document the prevalence of oral bronchodilator use for treatment of children with asthma. We found a reliance on oral bronchodilators in a pediatric population where the impact of asthma is great and appropriate asthma controllers (i.e., inhaled corticosteroids) are underutilized. Oral bronchodilators, with slower onset and more systemic side effects than short-acting inhaled bronchodilators, are not the recommended treatment for quick relief. The side effects of reliance on oral bronchodilators and their impact on asthma prevention and control deserve further study.

04322

**Assessing the basis of generalizations: HIV/AIDS among African American MSM in a government clinical trial**

Madison M, Norton G, Beauchamp G

Background: The National Institutes of Health EXPLORE study is the largest clinical trial to assess the efficiency of a behavioral intervention versus standard risk reduction counseling to prevent acquisition of HIV among men who have sex with men (MSM). Various recruitment strategies have reached MSM in six US cities. Serological testing identified HIV-positive volunteers, who were not eligible.

Methods: Recruitment occurred between January 1999 and February 2001. Of 4,848 volunteers screened, 390 (8%) were African American, of whom 27 (7%) were HIV-positive, compared with 1% of the 3420 white non-Hispanics. Screening data on substance use and sexual behaviors were collected using audio computer-assisted self-interview (A-CASI) to avoid perceived stigma with a human interviewer.

Results: AAMSM were least likely to report high-risk sexual behaviors. HIV-positive AAMSM were less likely to report high-risk sexual behaviors than HIV-negative AAMSM. AAMSM responded most to personalized recruitment (44%) and least to recruitment at medical offices (6%). Those recruited through personalized methods or community organizations were 10.9 and 8.9 times as likely to be HIV-Positive as white MSMs reached through these methods.

Implications: The screening results reinforce the difficulty of reaching a broad spectrum of AAMSM. The success of personalized recruitment may have yielded a smaller community of AAMSM known to each other. High-risk behavior may be under-reported by AAMSM. The higher prevalence of HIV increases the probability of exposure, however, per each act. Comparisons must be made with care: twice as many AAMSM report having sex with a woman in the past 6 months, but only 10% actually did so.

04327

**The effect of popular education on mental health: Going beyond the walls of a psychiatric hospital and illiteracy**

Reis Rosa AG

Background: The popular education of patients at an urban mental health institution occurred in the Psychiatric Hospital of São Pedro from 1999 to 2002 through the support of the State Secretariat of Health, the Secretariat of Education and the Association of the Employees and Servers of the Psychiatric Hospital. We sought to create an inclusive education program for hospital patients, accomplishing the Politics of Integral Attention to the Mental Health Urbana and the Psychiatric Reformation in the City of Porto Alegre, in Brazil.

Methods: Using qualitative methodology, we created a program of popular instruction in an urban mental health setting. The curriculum was developed by the team of four professionals: a teacher, an occupational therapist, a lecturer and a psychologist. The selected group was composed of 28 pupils, which included three community residents, two local workers, and 23 hospital patients. TO be eligible for school registration, participants had to be a minimum age of 15 years, and availability to participate in three-hour lessons from Monday to Thursday afternoons, between 14h and 17h.

Results: Six pupils began to study in a school of basic instruction for adults, which allowed them inclusion in the exercises and improved quality of life, with opportunities to exit the psychiatric hospital for classes, and the potential for improved behaviors for those who had lived in the hospital throughout their infancy, adolescence and adult lives.

Implications: The Popular Education program promoted mental health of those who participated, by providing a place where effective psychiatric reformation could occur. The effects went beyond the walls of the psychiatric hospital and the illiterate, creating a reciprocal knowledge between the health care team and their pupils.

## Violence, Injury and Injury Control (09)

09001

**Urban violence: A multidisciplinary theoretical perspective**

Houseman C.

## WITHDRAWN

09038

**Neighborhood income, income inequality and homicide rates in New York City during the 1990s**

Markham Piper T, Galea S, Ahern J, Tardiff KJ, Vlahov D

Homicide rates in New York City (NYC) have decreased dramatically in the past decade. We were interested in examining if changes in homicide rates are associated with urban neighborhood income and income inequality. We used homicide data from 1990-1996 from the Office of the Chief Medical

Examiner of New York City (OCME). We calculated median income and the Gini coefficient for 59 city neighborhoods from the 1990 US Census. Homicide rates were stratified by fourths of income and income disparity and compared over time. Overall, the highest homicide rates were in the poorest neighborhoods and in neighborhoods characterized by the greatest income inequality. However, over the 7-year period, the greatest decreases in homicide rates occurred in the poorest neighborhoods and in those with the greatest income inequality. In neighborhoods with the greatest income disparity, homicide rates decreased from 76.98 to 29.21 deaths per 100,000, a 62% decrease. In neighborhoods with the least income disparity, there was a reduction from 17.2 to 9.2 deaths per 100,000, a 47% decrease. In 1996, homicide rates remained 5.7 times higher in the poorest neighborhoods than in the wealthiest neighborhoods and 3.2 times higher in neighborhoods with high inequality compared to neighborhoods with low inequality. These findings suggest that there was differential reduction in homicide in urban neighborhoods with different incomes and income distribution; variable enforcement efforts or socio-demographic changes may partly these observations. Additional research is needed to explore mechanistic relations between urban neighborhood context and homicide.

09057

#### **Epidemiology of child homicide in Jefferson County, Alabama**

Lyman JM, McGwin G, Malone DE, Taylor AJ, Brissie RM, Davis G, Rue LW

## **WITHDRAWN**

09109

#### **Expressive writing in an urban trauma center: Designing support structures for families of patients with acute injuries**

Holtsclaw E, Avila S, Valencia Y, Williamson M

Background: Families in the Trauma Department suggest that there are few outlets to express emotions during a time of crisis. Research further indicates detrimental emotional and physiological effects of suppressing feelings. As a result, staff established a journaling program to address these concerns, improve the quality of services, and facilitate coping during times of acute stress. Cook County Trauma Department is a Level 1 urban trauma center. Patients typically are men from underserved neighborhoods. There is no program provide the acute emotional support of patients and their families.

Method: Family members consenting to participate in the journaling program were interviewed about coping mechanisms. The journal provided for expressive open-ended writing and recording thoughts and feelings. Follow-up interviews were conducted about the experiences journaling and impacts on the coping and grieving process. Data from the interviews was synthesized and themes were extracted.

Results: Six family members of trauma patients participated, three African American and three Latino women. The women find it difficult to talk about their problems and many used unhealthy means to cope, such as increased smoking, eating, or sleeping. During the program all of the women actively used journaling in individual ways. During the follow-up interview participants stated that the process aided in successful coping.

Implications: The Trauma Department aspired to gain insight into the coping skills of family members of urban trauma patients. Expressive writing has been documented to assist in coping with life stressors, however; little data is available for applying journaling in an urban trauma setting. The results from the project suggest that journaling improves coping for family members during acute life stressors. There are direct implications for the design of support systems in an urban trauma setting. Further research is needed to better understand the applicability of journaling in an urban trauma center.

09166

#### **Introducing intimate partner violence training into a comprehensive HIV care center: Lessons learned.**

Lobozzo J, Frye V, Nollen C, Berlin C, Xenarios S, Blank A, Hien D, Sharp V

Background: Intimate Partner Violence (IPV) is a significant source of psychological and physical injuries among persons infected with HIV (Cohen et al. 2000). The Center for Comprehensive Care (CCC) of St. Luke's-Roosevelt Hospital Center in New York City has developed a collaborative project to deliver culturally sensitive IPV services to HIV positive patients. The project seeks to improve CCC staff capacity to identify and respond to IPV. Collaborators include a community-based organization (CBO) for crime victims, a theater-based training program, and a program evaluation center.

Methods: An eight-hour training, which utilized didactic and interactive learning models, was developed for primary care and multidisciplinary staff of the CCC. Existing training manuals were adapted to create empowerment-based didactic portions. Interactive learning was accomplished through theater-based training.

Results: Integrating different orientations of a CBO with a hospital-based HIV center was challenging. The hospital "culture of medicine" values empiricism, while the CBO "culture of social work" emphasizes experiential learning. We learned it is critical to address provider resistance by "speaking their language", using the "evidence" to encourage adoption of skills being introduced, and enlisting "scientists" to present data that support the need for a new standard of care. We also learned that the theater-based method was a more effective learning tool for staff of particular disciplines.

Implications: Creating a culturally sensitive IPV program requires not only sensitivity to the cultures of our patients, but also the ability to examine the biases we bring from the various professional cultures to which we claim membership.

09176

#### **Evicting the batterer: Institutional and non-institutional strategies some battered women use**

Castelino-Pinto C

This exploratory project sought to study the post-eviction well-being and safety of women who "stay put" in their site of battering and evict their batterers. The findings are based on qualitative analysis of two-hour long interviews with 36 battered women in New York City, who responded to fliers posted in all the police precincts, victim service offices, and emergency rooms in New York City hospitals. Some participants were recruited from special pendant alarm programs (coordinated community interventions). Respondents included women who fled, as well as women who were still living with their batterers. Their narratives revealed that those who "stayed put" and evicted their batterers were motivated and fortified by their longstanding socio-environmental connections to their housing and neighborhoods. Post-eviction, some women solicited the vigilance of doormen even in the neighboring buildings, some estranged neighbors became the much needed eyes at the back, some building managements levied and enforced entry bans against the batterers, while some women in special programs were not extended that same level of support from the police/district attorney. The presentation will

address the transformation of site-of-abuse to home. It will also highlight the need for tailored neighborhood-level interventions directed at inculcating an intense, "not in my backyard" kind of intolerance and resistance to battering -- the kind faced by local governance when proposals of waste disposal facilities and homeless shelters are presented to neighborhood boards and block associations.

09182

#### **Firearm-related suicide in New York City, 1990-1998**

Markham Piper T, Galea S, Tracy M, Tardiff K, Marzuk P, Vlahov D

Background: Most studies suggest that firearms are used in approximately 60% of all suicide deaths in the US. However, relatively little research has assessed the role of firearms in suicide in major urban areas.

Methods: We collected suicide data from 1990-1998 from the Office of the Chief Medical Examiner (OCME) of New York City and assessed trends and determinants of firearm-related suicide deaths.

Results: Between 1990 and 1998, there were a total of 5171 suicides in New York City; 1074 of these deaths (20.8%) were firearm-related suicides. Firearms were the third leading cause of suicides, after hanging (1316 deaths or 25.5%) and long falls (1218 or 23.6%). Over time, total suicides decreased from 650 in 1990 to 491 in 1998 (a 24% decrease); total firearm-related suicides also decreased from 131 in 1990 to 102 in 1998 (a 22% decrease). The proportion of firearm-related suicides remained unchanged, however, (between 20.2-20.8%) in the period studied. In multivariable modeling, characteristics of suicide decedents that were associated with a greater likelihood of firearm suicide among all suicides were: male (OR=3.48), black (OR= 1.29 compared to white referent) and Latino (OR=1.24 compared to white referent), residing in the Bronx (OR=2.36 compared to Manhattan referent), Queens (OR=2.25 compared to Manhattan referent) and Brooklyn (OR=2.11 compared to Manhattan referent), using cannabis (OR=2.10), and using alcohol (OR=1.24).

Conclusions: These findings suggest that during the 1990s, firearms played a role in about one fifth of suicides in New York City, with a greater use among minorities and those living in the outer boroughs. Additional research is necessary to examine reasons for the low proportion of suicides caused by firearms in New York City compared to other parts of the US, including differential access to means of committing suicide and the varied importance of firearms between racial/ethnic groups.

09199

#### **A 10-year review of penetrating traumatic injuries (PTI) at an urban level trauma center**

Lawless B, Ahmed N

Background: The incidence of PTI's in urban areas is increasing and becoming a more prevalent problem in the inner city. There is no Canadian data to validate this hypothesis. The purpose of this study is to review and characterize the cases of PTI presenting to an inner city Level-1 trauma center over a 10-year period. Trends in incidence, types of PTI, and associated demographic information were recorded.

Methods: Patients with PTI who presented to our trauma center from January 01, 1992 until August 31, 2002 were identified using the trauma registry database. Charts for those identified were reviewed and the data collected. Data from the city police department was obtained to review the incidence and locations of inner city crimes involving PTI's. A clinical epidemiologist was consulted for statistical methods.

Results: PTI comprised 8% of all traumas in 1992 compared to 13.8% in 2001. PTI increased overall by 5.7% from 1992 to 2001.

Implications: There was a 6-fold increase in PTI from 1992-2002. Dynamics of inner city life contribute to this increase in violent behavior. Underlying social reasons must be examined and changes in community and health policies implemented.

09212

#### **Unprovoked attacks on children by wild coyotes in urban settings in British Columbia, Canada**

Boparai D, Cannon WG, Gotto G, Lee P, Cannon-Rodriguez JA, Verchere C, Carr NJ

Background: Coyotes (*Canis latrans*) inhabit most of North America and are one of the world's most adaptable predatory animals. Coyote's natural prey includes rats, mice, birds, rabbits, house cats or domestic dogs. In urban settings without their natural predators e.g. bears, cougars or wolves; the coyote becomes a real threat to humans -- especially children. In British Columbia, numbers of "urban coyotes" has increased, and young children are at risk from attack. Our purpose is to raise public awareness about the danger to children from wild coyotes living in urban settings.

Results: In September 2000 an eighteen-month old boy playing near a soccer field was attacked and bitten by a wild coyote. 7 stitches were required to close the wound above his eye. In December 2000 a coyote stalked and charged a 3-year-old boy near an elementary school. In July 2001, 6 year-old girl playing near a tennis court was attacked by a dog from the animal's grip and she received treatment for her puncture wounds and bruises. The same month, a coyote viciously attacked a 14month old girl playing in her own front yard. The child required stitches for facial wounds. Adults were nearby during all attacks.

Summary: Wild coyote's fear of man fades as the number of "urban coyotes" grows; attacks on children are increasing. Coyotes socialized by contact with humans (especially if fed) become bolder and a threat to our children's safety.

09247

#### **Prevention of injuries in high school students caused by motor vehicle collisions**

Boparai D, Cannon WG, Cannon-Rodriguez JA, Jacobsen K, Chu A, Fung A, Hallgren NK, Bristol S, Brown EE

Introduction: In British Columbia during 2000, nearly 90 youths (from 13-21 years of age) died as a result of motor vehicle collisions (MVC's) and over 10,000 were injured. Motor vehicle collisions are the Number 1 Killer and Number 1 health issue for young people in British Columbia. Youth represent 12% of the population and those over 16 years of age are eligible to drive. New inexperienced drivers are twice as likely to cause motor vehicle collisions as are more experienced drivers. The 3 leading causes of MVC's in our province are 1) Speeding 2) Impaired driving and 3) Risk-taking while driving. Youth Counterattack and Roadsense Society of British Columbia (C.A.R.S BC) is a provincially registered society dedicated to reducing injury and death of youth resulting from MVC's. The mission of the society is to create a vibrant network of students and adults across the province working together to prevent car crashes.

The Purpose of this project is to reduce injuries and death in the youth in British Columbia due to motor vehicle collisions.

Methods: Joining the C.A.R.S BC network, four grade 11 students have formed a team to begin a 2-Year MVC prevention strategy in their high school. Focus will start with 4 main road safety issues: speeding, aggressive driving, distracting loud music and cell phone use. With help of an adult supervisor and support from their school, the teen team will plan events, design and produce posters and brochures, book guest speakers and organize fund-raising activities. These students will also participate in the annual C.A.R.S. BC provincial youth conference further developing networks and generating enthusiasm about Road Safety initiatives.

Summary: Implementation of an injury prevention program in high schools which involves teens of eligible driving age will help reduce injuries and death in British Columbia caused by motor vehicle collisions.

09304

#### **Voluntary support groups, an alternative to traditional batterers' interventions**

Torres SP.

Background: Most batterers' programs are based on the Duluth Model (Pence & Paymar, 1993), which is built on the premise of a universal culture that teaches men to dominate (Everingham & Schenk, 1995). The model has been criticized for omitting the importance of substance abuse and its contribution to violent behaviors (Young, 1999). The model also fails to adapt batterers' programs to the cultural environment of the intended population. Miami-based PAirS, a federally funded program to devise prevention strategies for domestic violence, established the first culturally designed voluntary men's group as a primary and secondary intervention.

Methods: The participants are inner city African American men. The 12-week curriculum evolves around inter-personal skills. A satisfaction survey is used to assess intervention effectiveness.

Results: Eight out of the eighteen males registered for the group complete all sessions (44.4% retention rate). Participants reported to apply skills learned in various aspects of life. They also expressed that the programs' cultural design and the co-facilitators' non-judgmental attitude increased their level of trust.

Implications: The voluntary support groups indicate a good initial response and a nontraditional intervention that could potentially decrease the level of domestic violence. The voluntary aspect of the program yields more participation and better learning predisposition. The absence of negative connotations increases openness and trust among participants. By self analyzing behaviors, men are more likely to make more consistent changes.

## Medical Care Access and Utilization (12)

12035

#### **The relationship between a sudden reduction in welfare benefits and neighborhood rates of mental health service use in an inner city setting**

Steele LS, Glazier RH, Lin E, Austin PC, Moineddin R, Mustard CA

Background: In 1996, the government of Ontario instituted a 21.6% reduction in welfare benefits to most recipients. We sought to examine the relationship between the benefit reduction and rates of mental health service use in the inner city of Toronto, 1992-1998.

Methods: This study was an ecologic time-series analysis using generalized estimating equations to explore neighborhood quarterly rates of mental health service use by deciles of welfare dependency. Data sources included a municipal public assistance database (1996), census data (1996) and a provincial health insurance claims database (1992-1998). The setting included 1220 census enumeration areas comprising the inner city of Toronto, Canada. We measured 1) visits to psychiatrists per 1000 claimants 2) individuals with a visit to a psychiatrist per 1000 claimants 3) mental health visits to general practitioners per 1000 claimants and 4) individuals with a visit to a general practitioner per 1000 claimants.

Results: There were no significant relative SES differences in rates of mental health service use before the policy change compared with rates of mental health service use after the policy change. Rates of psychiatric service use were higher in neighborhoods with the lowest levels of welfare dependency {Rate Ratio: women=3.21 (95% C.I.: 2.64 to 3.89); men=2.81 (2.24 to 3.54)}.

Implications: No increases in neighborhood rates of mental health service use were demonstrated after a large reduction to welfare benefits. Individual level data would be helpful to determine if the benefit reduction was related to service use or psychiatric morbidity at the individual level.

12040

#### **Uninsured adults in New York City: Data from the 2002 Community Health Survey**

Crawford M, Mostashari F

Background: The Institute of Medicine estimates that 18,000 American adults 25-64 die each year because they lack health insurance coverage. Not having ready access to needed medical care and the resulting discontinuity makes being uninsured potentially the sixth leading cause of death among people under age 65. This analysis characterizes the uninsured adult population in New York City (NYC) and investigates the extent of the health care access challenges they face.

Methods: We examined data from the New York City Community Health Survey (NYCCHS), a random sample telephone survey of 9,674 non-institutionalized adults conducted from May-July 2002.

Results: Overall, nearly 700,000 (14%) New Yorkers between 18 and 64 reported having no health insurance. Particularly high proportions of individuals were uninsured in foreign-born populations (28%), the Asian-American community (24%), low-income households (22%), and among the unemployed (24%). Most of the uninsured (62%), however, were employed. Neighborhoods in NYC ranged from a low of having a 4% uninsured rate (Gramercy/Upper East Side, Manhattan) to a high of 24% (Greenpoint, Brooklyn). A high proportion of the uninsured had an unmet healthcare need in the past year (31%) compared to others (7%). In terms of preventive services, the uninsured received less care; for example, fewer had their blood pressure checked (68% vs. 91%), or were taking medications if diagnosed with high blood pressure (27% vs. 59%).

Implications: Identification of groups most at risk to having large numbers of uninsured people can inform and focus effective interventions.

12050



## Access and use of health care by publicly insured and uninsured children in low-income areas of New York City

Fairbrother G, Scheinmann R, Ostheimer B

Background: We examine how access and use varies among the publicly insured and the uninsured in low income areas of New York City.

Methods: A cross-sectional random-digit dial survey of parents of publicly insured or uninsured children was conducted in New York City in 2002/2003. Questions about access to and use of medical care were asked about a focal child (n=1254).

Results: Overall, over 90% of the children were insured. The insured were more likely to have a regular source of care than the uninsured (94% vs. 80%; p=.00). Over 90% of the insured and the uninsured go to their regular source of care for preventive care and for sick care. Of those who did not have a regular source of care, 60% of the insured and 66% of the uninsured went to an ER or community health center for care. In the year before the survey, the insured were more likely to have had a preventive visit (77% vs. 64%; p=.02); dental care (72% vs. 60%; p=.01), prescription (61% vs. 39%; p=.00), and vision care (39% vs. 30%, p=.05). The insured and the uninsured had similar use of illness care (28% vs. 26%) and mental health care (9% vs. 12%). The uninsured reported more unmet need for care than the insured.

Implications: In this sample, presence or absence of insurance predicted access and utilization. It is important that gains made due to expansion of public insurance programs in the late 1990's not be rolled back during more difficult economic times.

12064

## Social disadvantage and ambulatory care sensitive hospital admissions: The role of access to care and use of health services

Glazier RH, Badley EM, Gilbert JE, Agha MM, Creatore MI, Moineddin R

Background: Excess ambulatory care sensitive (ACS) admissions occur among disadvantaged populations. ACS conditions are those for which hospitalization can be avoided through ambulatory care. Our objective was to determine the relationship between social disadvantage, ACS admissions, access to care and use of health services.

Methods: We used retrospective cohort, case-control and case-crossover analyses of physician visits prior to ACS admission by income quintile. Our subjects were 14,604 adults age 20+ hospitalized for ACS or marker conditions between 1998 and 2001 among 610,880 adult residents of south-central Toronto, Canada. Outcome measures included age-adjusted rates of ACS and marker admissions, mean number and proportion with a physician visit in the year prior to admission, proportion with a physician visit 14 days prior to admission and 14 days one year before admission.

Results: Age-sex adjusted ACS admission rates were considerably higher in the lowest income quintile than in the highest (rate ratio = 1.7, 95% CI 1.6, 1.8), yet income differences were not found in annual physician visits (17.3), percent with a visit (96.2) or usual source of care (84.9%). Relatively fewer in the lowest income group had a visit prior to ACS compared with marker admission (Q1:Q5 ratio 0.86, 95% CI 0.64 – 1.08) and compared with one year before admission (Q1:Q5 ratio 0.78, 95% CI 0.61-0.93).

Implications: We found a large excess in ACS admissions with social disadvantage despite good access to care. Lack of timely care prior to admission may be an important cause of excess ACS admission among disadvantaged groups.

12070

## Physician distribution in urban areas in the United States

Kiesel R, Markham Piper T, Galea S

Access to health care has been shown to affect the health of urban populations. This paper provides a systematic review of the issue of physician distribution in urban areas in the United States. We conducted a thorough search of the peer-reviewed and grey literature regarding the issue of intra-urban physician distribution. Although the evidence for physician distribution is limited, most published work suggests that physician maldistribution exists in urban areas and that the reasons for this maldistribution are complex. Physicians cluster close to academic training centers, preferentially practice in higher income areas, and tend to work in areas where persons of similar racial/ethnic backgrounds work and live. Many interventions have been implemented in order to address physician distribution in urban areas. Policy changes such as financial incentives for physicians locating to underserved urban areas, increase in inner-city medical school funding, and the use of foreign medical graduates have all generated mixed results. There are several methodological and logistical issues that make the study of physician distribution in urban areas challenging. The variations in the definition of "urban" in different national and international contexts make cross-study comparisons difficult. Determining the optimal number of physicians for particular urban areas is also difficult due to intra-urban differences in morbidity and the mobility of both physicians and urban residents. The projected increase in urban populations in the coming decades suggests that questions pertaining to access to equitable care for urban residents are timely and important. Additional research is needed to understand the factors and solutions related to physician maldistribution to improve the health of urban populations.

12086

## Does providing hospital-based legal aid improve access to critical medical and welfare services for high-risk infants? Results from the NICU Infant Outcomes Study (NIOS)

Hirschman JA, Fuller JF, Barnickol L, Srinivasan G, Singh J, Justicz J

Background: High-risk infants and their families frequently encounter barriers to important medical and welfare services and may often need legal intervention to access these services. Hospital-based legal aid programs could be effective in improving access to critical services for these infants. Yet, few such programs exist, and none have been rigorously evaluated. This presentation presents the results of a randomized controlled trial of a post-NICU case management and legal services (CM/LS) intervention at two large, inner city hospitals.

Methods: To date, 122 infants have been enrolled and randomly assigned to receive either CM/LS or routine care. Infants/families in the CM/LS group are screened by a case manager for their eligibility to receive health and welfare services. Referral to a lawyer (on-site in the clinic) is made if the family is unable to obtain a health/welfare service for which they were eligible. All infants are followed for 1-year corrected-age. Instruments are administered to measure: compliance with scheduled care, re-hospitalization and ED visits, growth and developmental outcomes, utilization of services, maternal quality of life and parental stress.

Results: Data analyses address the questions: (1) does providing CM/LS improve the high-risk infant's receipt of services after NICU discharge, and (2) does it improve outcomes for the high-risk infants and mother after NICU discharge?

Implications: Providing on-site legal aid may be one effective strategy in improving access to critical services for high-risk infants, but further research is needed to identify underlying cause(s) and to develop effective strategies to reduce the barriers in access to health and welfare services.

12089

#### **Health care utilization at inner city family practice clinics during the outbreak of Severe Acute Respiratory Syndrome (SARS)**

Boyle E, Chow K, Grondin M, Kelly M, Malone L Glazier RH

Background: During the outbreak of severe acute respiratory syndrome (SARS), St. Michael's Hospital, Toronto, Canada experienced closure of ambulatory services but three of four family practice clinics remained open. Objectives of this study were to determine if health care utilization changed at the open clinics and as well, to determine if there was a change in the case-mix.

Methods: Data from the Ontario physician billing database was used for the analysis. Visits during the SARS period were compared against the visits during the same period the year before. Additionally, two months before the SARS period was compared against the same two months in the previous year.

Results: Two months previous to the SARS period, 9,540 patients made 9,789 visits which was a 1.6% increase from the previous year. During the SARS period, 6,957 patients made 7,158 visits which was a 19.7% drop from the previous year. The rankings of the top five diagnoses (anxiety, hypertension, HIV, drugs addiction and common cold) changed slightly during the SARS period compared with the year before but were no different from previous months. There was a significant increase in the number of mental health disorders encounters during the SARS period (20.3% versus 17.2%). No major changes occurred in the number of annual physicals performed.

Implications: Utilization of health care services decreased during the SARS outbreak but there were only minor changes in the overall case-mix of the urban population. Patients did not appear to change their reasons for seeking medical care during the outbreak.

12111

#### **Rotary Transition Centre Outcomes Project: Do we improve access to follow-up care?**

Gaunt K, Cass D, O'Neill J, Spence J

Background: Approximately 15% of St. Michael's Hospital (SMH) Emergency Department (ED) patients are homeless or underhoused (H-UH). To better address the complex needs of this population, the Rotary Transition Centre (RTC) was opened in January 2000 to provide an area of respite for H-UH patients who are discharged from the ED. It sees approximately 800 patients annually.

Objectives: (1) To determine whether admission to RTC increased the proportion of patients who attended follow-up care arranged by the ED, and (2) To define the level of user satisfaction.

Methods: (1) Charts of H-UH patients who were admitted to the ED from November 2001 to March 31 2002, were reviewed and follow-up plans were extracted. Follow-up providers in both the hospital and community were contacted by telephone to determine whether patients had successfully completed planned care. (2) A patient satisfaction survey was completed by those admitted to the RC.

Results: During the study period 1178 H-UH patients were seen in the ED. 933 were directly discharged to the community and 245 to the RC. (1) 76% of RTC users completed follow-up compared with 31% who were discharged to the community ( $p < 0.0001$ ). There were significant improvements in follow-up to FP, SW/Psychiatry, ED, Detox/Shelter. There was no significant difference in follow-up for IV therapy or dressing changes. (2) The satisfaction survey was completed by 126 clients (51%), and 79% reported excellent care overall.

Implications: The RTC has improved compliance with follow-up care for H-UH. RTC users have a high level of satisfaction with the facility.

12134

#### **Developmental delay in poor urban children: High rates of Early Intervention (EI) referrals in a public health / primary care intervention study sample**

Huberman H, Tineo W, Rosenberg T, Sharif I, Mendelsohn A

Background: To address the problem of early childhood developmental delay, a randomized trial in NYC is evaluating a low intensity preventive intervention. Based on a public health / primary care partnership, this intervention combines parent-based (ASQ) screening, monthly Building Blocks parenting newsletters and toys (BB), and Reach Out and Read (ROR) clinic-based distribution of children's books.

Methods: Families of 4-7 month old children attending a South Bronx health center serving a poor (median income \$20,000) Black and Hispanic community are offered enrollment and randomized to a control, an ROR-only, or an ASQ/BB+ROR group. Outcome measures include the Bayley MDI, and the OWPVT language test. Preliminary data on EI referral rates are presented on a sample of 56 children with 15 month outcomes and 68 children with 24 month outcomes completed (irrespective of study group).

Results: Overall, 25% of the children had been referred to EI. Of these, 37% were based on health provider suspicion, 47% on scores less than 2SD on the Bayley or OWPVT, and 17% by parents themselves or outside sources. 6.7% of 15 month-olds, and 40% of 24 month-olds had been referred to EI. Significant predictors of EI referral included male gender and a baseline measure of family stress.

Implications: The remarkably high rates of EI referral resulting when standardized testing is combined with usual sources of identification suggests that in poor urban areas developmental delay may often go undetected, and underscores the importance of developing broad, low-cost public health approaches to prevent or reduce delay.

12149

#### **Predictors of satisfaction with primary care and improving homeless men's access to primary care: a randomized controlled trial**

Svoboda T, Bloch G, Knowles H, Hwang S, Glazier R, Kelly M, Chow K, Jones K, Tynan AM

Background: Many homeless men at Seaton House, Canada's largest shelter for homeless men in inner city Toronto, remain on the street due to lack of coordination between health and shelter care resulting in a cycle between shelter, hospital, and street. Barriers to care include difficulties in finding a physician, setting-up appointments, and reduced physician propensity to provide care to the homeless. A randomized controlled trial supported by the

City of Toronto Supportive Communities Partnership Initiative (SCPI) will be conducted to provide some understanding of the use of primary care resources in the homeless population.

Methods: A database of primary care physicians within close proximity of Seaton House will be created and a referral list of physicians/sites willing to accept new clients, developed. Seaton House clients who fit study criteria will be referred to a randomly selected primary care site for an appointment or to usual hostel care. Both groups will be followed-up with structured interviews at 4 weeks and 6 months.

Results: Groups will be compared to determine the propensity to use primary care vs. emergency department sites before and after the intervention. Data will be analyzed to determine if a primary care referral program impacts on client use of and satisfaction with primary care services.

Implications: The study will provide an understanding of the use of primary care resources in the homeless population and help identify client and physician specific barriers to the access of these services. This information can further impact policy development and programming for this vulnerable group.

12244

#### **GIS, access to care, and public policy: A strategy for expanding medically underserved area designation in urban areas**

Juarez PD.

Background: The Bush administration has proposed adding 1,200 new and expanded community health centers over the next five years, doubling the number of patients treated at them. About half the patients treated at the community health centers have no insurance coverage, while many other have limited or inadequate coverage. The purpose of this paper is to describe how Geographic Information Systems (GIS) can be used to maximize eligibility for federal Medically Underserved Area (MUA) designation.

Methods: GIS was used to maximize areas that are eligible for federal MUA designation. The process included: obtaining a "clean" list of primary care providers by specialty and census tract, identifying the practice sites and calculating the number of full-time equivalent practicing physicians, identifying the poverty rate, percent of population over 65, and infant mortality rates, computing Primary Care Physician-to-Population Rate, and re-drawing Rational Service Areas.

Results: Approximately 24 Rational Service areas in Los Angeles County, ranging in population from 75,000 to 150,000 each, were identified using GIS that have an Index of Medical Underservice score of 62.0 or less, making them eligible for federal MUA designation and receive federal funds to establish or expand community health centers. Use of GIS increased the number of persons residing in areas eligible for federal MUA designation from 1 million to over 2.5 million.

Implications: GIS provides a process for maximizing geographic areas populations that are eligible for federal MUA designation and opportunity to access federal resources to increase access to care for medically underserved populations.

12266

#### **The changing shape of hospital care in U.S. Cities, 1936-2003**

Sager A.

## **WITHDRAWN**

12267

#### **Comparison of the financial performance of urban and rural hospitals**

Younis MZ

Background: This study examines the performance of hospitals based on location (geographical region, rural, urban). In this study, recent data has been used to better understand the hospitals performance after the introduction of Prospective Payment System (PPS). The data set used by the study is much comprehensive in its coverage and information on a number of relevant variables.

Methods: Piecewise regression model to capture the effect of changes within range of the hospital size.

We have included a number of new economic and financial variables in the analysis and examined the effects of conversion of hospitals from not-for-profit to for-profit on hospital performance.

Results and Implications: Our empirical findings suggest that the size of hospitals, occupancy rate of hospital beds, ownership status, degree of competition faced in the market, teaching status, and measure of financial indebtedness of hospitals are significant determinants of hospital performance holding location constant. The empirical model also suggests that the relationship between hospital efficiency measure and its various determinants is actually non-linear in nature and therefore, it is important to adopt appropriate non-linear econometric models for empirical estimation of the performance function. Finally, our findings show that large urban hospitals face significant factors that hinder its performance in comparison to rural hospitals such as the lack of (DSH) payments and the cease of the benefits of the economy of scale. The findings should be taken within the study limitations, however, it results show that further support to the urban hospitals by the state and federal legislatures is essential for its survival and the continuation of its mission to serve the indigent population.

12284

#### **Providing primary care to a homebound urban population**

Muller M, Ornstein K, Boal J

Homebound status is a final common pathway for a variety of medical conditions, including dementia, advanced cardiopulmonary disease, cancer, neuromuscular disorders, and depression. Men and women who are homebound are frequently unable to access traditional healthcare services. Urban settings can exacerbate this already enormous problem by introducing variables such as inadequate housing, fragmented families, cultural and language barriers between patients and physicians, and unsafe environments. Finally, strong community and social support is often lacking in many urban areas and this growing population can suffer from isolation, depression, high degrees of symptom burden, and caregiver burnout. The Mount Sinai Visiting Doctors program cares for 600 patients annually and delivers primary medical care to homebound persons in Manhattan through the use of physician and nurse practitioner home visits. Services include primary medical care, urgent visits, social work services (counseling, entitlements, caregiver

support), and Spanish language translation. Reasons for referral include dementia (34%), refusal to go to a doctor or inability to get out of a walk-up apartment (20%), end-stage neuromuscular or cardiovascular disease (15%), and terminal illness (5%). Patient demographics include: average age 79 years, 78% female, 30% Latino, 30% African American, 65% have Medicaid, 34% live in public housing, and 28% report Spanish as their primary language. The annual mortality is 25% and, in stark contrast to rates of at-home death reported around the country (24%), 60% of our patients die at home. We have designed and implemented a clinically successful and financially viable model of care that is replicable in other urban settings.



## Abstracts Selected for Oral Presentation

Friday, October 17, 2003

### Submitted Abstracts Session I

22046  
**Intergenerational prevalence of substance use, criminal justice involvement, and HIV/AIDS in families of ex-offenders on the Lower East Side of New York City**

Barreras RE, Drucker EM, Rosenthal D, Shapiro C

Background: Substance use (SU), criminal justice involvement, (CJI) and HIV/AIDS co-occur in many urban families, but little is known about neither their intergenerational prevalence nor the impact on these families. We determined lifetime prevalence of SU, CJI, and HIV/AIDS in 62 families with a member (the index case) on parole or probation for a drug offense and currently enrolled in La Bodega de La Familia, a community program in NY's Lower East Side.

Method: Record review of open cases at La Bodega to analyze family "genograms," to identify all significant members with histories of SU, CJI, and HIV/AIDS, coding for age, sex, and relationship to the index, reviewed with case managers to maximize accuracy and completeness.

Results: Of the 62 families (592 individuals) 50 (82%) had at least one other member besides the index case with a history of SU, 37 (62%) with two or more, and 26 (40%) with three or more; 45 (72%) had one other member with a history of with CJI 28 (45%) with two or more and 16 (24%) with three or more. At least one member had HIV/AIDS in 49% of the families, 16% had two or more and 10% had three or more (range, 0 – 6). Among these families, index cases are 94% male, 97% Latino, and have a median age of 37.

Implications: The families of substance users involved in the criminal justice system carry a substantial burden of multiple members with SU, CJI and HIV/AIDS. To be effective, all support and case management programs serving this population should employ a family based model.

24010  
**Racial disparities in health status indicators for the largest cities in the United States: Which ones are widening and why?**

Benbow N, Whitman H, Margellos H, Silva A

## WITHDRAWN

22012  
**Mortality rates and causes of death in a cohort of urban injection drug users in Vancouver, Canada**

Craib K, Spittal P, Tyndall M, Palepu A, Johnston C, Li K, Laliberte N, O'Shaughnessy M, Schechter M

Background: The study objectives were to: (1) determine mortality rates and causes of death among VIDUS participants, (2) compare mortality rates with the general population in British Columbia, and (3) compare mortality rates by age at enrolment, gender, aboriginal ethnicity, and HIV status.

Methods: Analysis was based on 1,268 VIDUS participants recruited between 05/01/96 and 11/30/01, who completed at least one follow-up. Standardized Mortality Ratios (SMR) were calculated using the indirect method.

Results: As of 12/31/02, a total of 180 deaths were reported. All-cause cumulative mortality was 16% after 6.5 years of follow-up. Compared to the general population, mortality was 17.2 (95% CI: 25.0, 40.7) times higher among study participants. Crude mortality rates in males and females were similar. However, relative to the general population, the SMRs were 32.9 (95% CI: 25.0, 40.7) and 13.1 (95% CI: 10.7, 15.5) in female and male participants, respectively. The top four reported causes of death were: HIV-related (50, 28%); overdose (44, 24%); liver failure (20, 11%); and homicide (15, 8%). After adjustment for gender and enrolment period, mortality was significantly associated with HIV-positivity (RR=4.1, 95% CI: 3.0, 5.6) and age at enrolment (RR=1.06 per year, 95% CI: 1.04, 1.08). Aboriginal ethnicity was marginally significant (RR=1.3, 95% CI: 1.0, 1.8).

Implications: This study demonstrates alarming elevations in mortality among urban IDUs in Vancouver, especially women and aboriginal people. Interventions that reduce HIV, HCV and overdose risk such as supervised injection facilities, and methods to improve access and adherence to HAART are urgently required.

28276

### **Performance of DOTS in tuberculosis control program: Experience from urban Bangladesh**

Haque M, Adhikari JM

**Objective:** The aim is to discuss the use of DOTS strategy in Tuberculosis control program in the context of urban Bangladesh.

**Methods:** This paper draws examples from the analysis of different studies and surveys conducted by the Government of Bangladesh and the World Health Organization (WHO). It also includes the example from data analysis from the MIS of National Tuberculosis Program (NTP).

**Results:** Tuberculosis is a major public health problem in Bangladesh, which causes one person to fall ill every two minutes and the death of one person every 8 minutes. TB infects at least 300,000 new people, and is the cause of death of approximately 70,000 persons in the country every year. With its population of 140 million, Bangladesh is ranked fifth among the highest TB-burdened countries in the world. The successful collaboration between the Bangladesh government and NGOs in TB control is recognized internationally, and is proposed as example for other programs. In reality, however, NGOs are mostly working on TB control, with the government working primarily in the rural areas of Bangladesh. Various studies and surveys have found that use of DOTS strategy in TB control is very low in urban areas. In addition, it has been shown that the case detection rate of TB patients is low in urban areas. The national overall treatment success is above 80% (target 85%), which is steadily increases every year. Its case detection, however, is lower than 30% (the target is 70%). The NTP performances range widely, from the best results in rural areas (initiated by both the government and NGOs) to the lowest results in the municipality/metropolitan areas (for which the government is mainly responsible). This is reflected in the presence of other TB services (hospitals, private, corporate) alternate to the DOTS strategy. Analysis revealed that DOTS is still insufficiently known by many, insufficiently distributed in the territory, insufficiently friendly to women, their children, and the general population at large, in urban areas. On the other hand, most of the doctors working in the private sector and in the main referral and teaching hospitals of the country refuse to administer treatment regimens recommended by DOTS, prescribing unsupervised drugs that produce multi-drug resistance. The high-density population with many slums, the large number of floating/migrated populations, numerous over-the-counter drug purchases, little coordination of rich people and multiple service providers (government, private, corporate) are also the reasons of low-performing case detection rate in urban-based DOTS services.

**Conclusions:** The expansion of partnerships between all TB service providers and institutions was found to be the most consistent and important determinant for successful DOTS programs. This confirms the hypotheses that collaboration directly affects service provision and utilization by introducing the consensus of DOTS treatment regimens among different providers to avoid MDR-TB. Studies have underscored the importance of initiating proper monitoring and reporting systems under one service umbrella, which can ultimately strengthen implications for policy and law. Expanded BCC activities will increase the DOTS service users, as well as ensure community participation.

23065

### **Geographic and neighborhood patterns of police response to suicide incidents in a concentrated urban setting**

Matheson F, Creatore MI, Gozdyra P, Moineddin R, Rourke SB, Maywood SA, Rhodes AE, Links PS, Glazier RH

**Background:** The deinstitutionalization of mentally ill persons in large urban areas has important resource implications for agencies outside the health-care system. The police are often first contact for emotionally disturbed persons including those at risk of and committing suicide. This study examines neighborhood and geographic patterns in police response to suicide incidents in a large urban center.

**Methods:** Epidemiological and spatial techniques are used to investigate patterns of police response to suicidal behavior by patrol area over a five-year period.

**Results:** Police response to suicide incidents rose substantially over the period of study with a 17% increase for females and a 4% increase for males. Findings show that police responses have increased in specific age-sex groups (males age 16 to 20 and females age 46 to 55). Geographic patterns indicate a high concentration of suicide incidents in patrol areas within the central core of the city with clear geographic patterns of changes in police response to suicide incidents over time. Suicide incidents are highly correlated with neighborhood indicators of social disorganization including % lone-parent families ( $r = 0.30$ ) and % unemployed ( $r = 0.31$ ).

**Implications:** In this investigation, police are increasingly likely to find themselves responding to suicide incidents involving young men and older women. This necessitates improved law-enforcement strategies to equip officers with effective tools for intervention. The increased drain on police resources is an important issue for urban policy-planners; the mental health of responding officers is an important issue for police management.

24129

### **Women's perceptions of crime, neighborhood crime experience and physical environment, and their combined association with adverse birth outcomes in a Southern urban area**

Messer LC, Kaufman JS, Laraia BA, Savitz DA

**Background:** Literature suggests community-level factors, such as crime rates and neighborhood environment, influence pregnancy outcomes beyond individual effects. We evaluated the association of neighborhood attributes with block group level crime, women's crime perceptions with their neighborhood's crime experience and their combined associations with preterm birth in the study population.

**Methods:** Crime data for this project came from 1997 Raleigh, NC crime reports and were geocoded to block groups. Individual and neighborhood data came from the Pregnancy, Infection and Nutrition (PIN) study, a prospective cohort study of the determinants of adverse birth outcomes. We collected extensive data including pregnancy experiences, psychosocial factors and direct observation of participants' streets. Street data was aggregated to the block group level to represent neighborhood environment. Log-linear regression was performed.

**Results:** Neighborhood attributes differed by crime experience; e.g., block groups with more overall crime had significantly more commercial buildings (29 vs.20%) and graffiti (83 vs.76%) but fewer single-family houses (47 vs.56%) and new construction (3 vs. 5%). Women's perceptions of crime were highly correlated with their neighborhood crime levels. Across all types of crime, neighborhoods perceived as safe actually experienced fewer crime events than those reported as unsafe (i.e., 93 vs.72 violent crime events per block group). Crime, crime perceptions, and neighborhood attributes were weakly associated with adverse birth outcomes in this population. Distinct patterns emerged by race.

**Implications:** Understanding the association of the neighborhood physical environment and crime, and their combined influence on adverse birth outcomes, represents an important step in improving population health, particularly in urban areas.

29238

**Homicide mortality in Belo Horizonte: Inequality during lifetime and in death, 1998-2000**

Matos SG, Proietti FA,

Background: The increase in homicide rates in the past decade is growing public health concern in Belo Horizonte City, the main city and capital of Minas Gerais State, Brazil.

Methods: Belo Horizonte City, with about 2,000,000 inhabitants is the largest City of BH Metropolitan Area (about 4,500,000 inhabitants). We will describe the homicide mortality trend from 1990 to 2000 and test the association between living conditions in the residence area of the victims and the homicide rates. In the ecological study, living condition was estimated, using the indicators of access to the urban infrastructure, education, income, size of the family and two indicators, the social vulnerability indicator and a composite health risk indicator. For the analysis geo-processing techniques and simple linear regression was used.

Results: There was a rapid increase in homicide rates in the city from 1995, especially among young people, as well as mortality rates caused by firearms. We found statistically significant association between neighborhood higher homicide rates and lower access to education, lower income and worse health risk indicator.

Implications: We conclude for the necessity of approaching violence as a structural problem and for the urgency of adopting public policies capable of including young people living in socially unfavorable areas.

23269

**A proposal: Inclusion of medical geology and related topics under geomedicine**

Savage EL

"Medical Geology" deals with natural and technological environmental health effects of humans and animals including fossil diseases, health issues, and first occurrences of these in the fossil record. In addition, Medical Geography, Environmental Health, Environmental Medicine, Environmental Geochemistry, and related disciplines include Geographical Medicine, Ecotoxicology (Butler 1978), Environmental Toxicology, Environmental Epidemiology, Environmental Engineering, etc. The preceding, environment, geology, geography, geochemistry, etc., merges environmental sciences with medical and environmental sciences with medical and environmental distribution of disease and health patterns.

"Geomedicine" was defined by Dr. Jul Lag in his book "Geomedicine," as "the science dealing with the influence of ordinary environmental factors" (Lag 1990). He suggested that Geomedicine can be divided into sub-groups. (Lag 1990).

The term "Geomedicine" first used by Zeiss in 1931 as synonymous with Geographical Medicine, is included in geographical and mapping techniques used to illustrate medical research conclusions. He placed Medical Geography within the discipline of Geography. Zeiss encouraged collaboration between medical field researches including physicians, veterinarians, plant pathologists, entomologist with geographers, meteorologists, soil scientists, and geologists. (Zeiss 1931) For twenty years following Zeiss' paper, geomedical research limited to human medical health, was conducted only at the Heidelberg Scientific Academy. (Lag 1990) Today, health problems have burgeoned with increased pollution from: pharmaceuticals, air conditioning, and fossil fuels, etc. Research now includes environmental and medical effects from dental materials, radiation from cell phones, military weapons, electrical power lines, household wiring, microwave ovens, radioactive waste, etc. and engineers, dentists, veterinarians, geohydrologists, meteorologists, and so on. Dual study terms, e.g.: Geochemistry, Geophysics, Geostatistics, Geochronology, Geoengineering, etc. have long been accepted in the field of Geology. I therefore propose, in recognition of revived interest in this topic, that Geomedicine become the main "umbrella" which will include all sub-divisions of environmental/health disciplines including Medical Geology

## Submitted Abstracts Session II

22096

**Alcohol use among hepatitis C virus antibody positive injection drug users in three US cities**

Campbell JV, Hagan H, Latka M, Garfein RS, Golub ET, Kapadia F, Thomas DL, Strathdee SA

Background: Alcohol abuse is common among injection drug users (IDUs), accelerates liver disease among those infected with hepatitis C (HCV) and may be a contraindication for HCV treatment according to NIH guidelines. We measured problem alcohol use among anti-HCV-positive IDUs using the 10-item Alcohol Use Disorders Identification Test (AUDIT) and 4-item CAGE scales.

Methods: Anti-HCV-positive, HIV-negative IDUs aged 18-35 years in Baltimore, New York and Seattle who were enrolled in a behavioral intervention study underwent computerized self-interviews to assess alcohol use and dependence and medical history. Problem drinking was defined as scores  $\geq 8$  or  $\geq 10$  on AUDIT and  $>1$  on CAGE.

Results: Of 265 participants, median time since first anti-HCV diagnosis was 2.5 months (IQR: 10 days-2.2 years) and 80% recall counseling at diagnosis to reduce alcohol use. Eighty-five percent recognized as False: "It is safe for a person with HCV to drink alcohol." Problem drinking was identified in 41% using  $AUDIT \geq 8$ , 32% using  $AUDIT \geq 10$ , and 46% using  $CAGE \geq 1$ . CAGE questions related to the need to decrease consumption (38%) and feeling guilty (29%) were most commonly cited. Ten percent of participants reported diagnosis of alcoholism and 39% had received support or treatment for alcohol use in the last 6 months.

Implications: Although most anti-HCV-positive IDUs in our sample appear informed about their increased risk of liver disease from alcohol, over one-third reported problem alcohol use. These findings underscore the importance of referring anti-HCV-positive persons to effective alcohol treatment programs to reduce future liver damage and improve HCV treatment eligibility.

24082

## **Improving data quality and response rates among immigrants in a health survey: innovations from the New York City Department of Health and Mental Hygiene**

Hajat A, Mostashari F, Thorpe L, Karpati A, Crawford M, Frieden T

**Background:** The growth of the foreign-born population in New York City (NYC) presents new challenges for health surveys. Overcoming language and cultural barriers to ensure reliable data may require special efforts from survey practitioners.

**Methods:** The Community Health Survey (CHS), a random digit-dialed telephone survey of non-institutionalized adults, was conducted from May-July 2002 and again in March 2003. Four innovations for improving data quality and response rates among the foreign-born are presented here.

**Results:** (1) Nine percent of foreign-born respondents had missing data when asked their height compared with only 3% of US born respondents. By accepting responses in metric units, this item non-response could be reduced. (2) In 2002 the CHS was pre-translated into 8 languages; 9% of interviews were conducted in a foreign language. In contrast, live translations were used to conduct foreign language interviews in 2003. (3) Among foreign-born respondents with missing race data, 74% had data on place of birth or language of interview. Concordance with hot deck imputation using zip code, household size, sex and number of telephone lines in the household was only 44%. (4) In 2002, two neighborhoods with large foreign-born populations had sample completion targets that were difficult to fill. In the 2003 simple random sample, these neighborhoods were under-represented. Use of sample completion targets had the unexpected benefit of providing more adequate representation of difficult to reach populations.

**Implications:** Many of these innovations could be easily implemented in other health surveys. Further evaluation of these techniques is required to evaluate the potential gains among the foreign-born population.

21274

## **Housing improvement and school children's health: Evaluation of the health impact of the Habitat for Humanity Housing Improvement Program in South Africa**

Kelley JF, Schroeder DG

Poor housing quality has been associated with a greater burden of disease. For youth in developing countries, more frequent or severe disease results in higher absenteeism from school. This study hypothesized that the Habitat for Humanity South Africa housing improvement program would decrease the prevalence of diarrhea or respiratory illness and school days missed from these two illnesses in primary or secondary schoolchildren as measured through parental recall. A single survey was administered in three peri-urban townships during June and July 2002 and included data for analysis of 139 and 150 schoolchildren living in 81 Habitat and 71 traditional houses. The results show that living in a Habitat house is associated with a 47% reduced odds (OR = 0.53, 95% C.I. 0.30 to 0.92) of having either a gastrointestinal or respiratory illness, a 43% reduced odds (OR = 0.57, 95% C.I. 0.33 to 0.99) of having respiratory illness, and a 72% reduced odds (OR = 0.28, 95% C.I. 0.07 to 1.10) of having a gastrointestinal disorder among primary or secondary schoolchildren after controlling for confounding. Furthermore, schoolchildren living in a Habitat house have a 60% reduced odds (OR = 0.40, 95% C.I. 0.20 to 0.51) of missing school from a gastrointestinal or respiratory illness, a 56% reduced odds (OR = 0.44, 95% C.I. 0.22 to 0.91) of missing school from a respiratory illness, and a 68% reduced odds (OR = 0.32, 95% C.I. 0.06 to 1.82) of missing school from a gastrointestinal disorder after controlling for confounders.

23309

## **Activity-friendly communities: Environmental determinants of walking, physical activity and health**

Lee C, Vernez Moudon A

**Background:** Walking, as the most common type of physical activity and the most natural mode of transportation, is essential for active living and healthy life. Continued decrease in walking and physical activity is in great part due to the current development patterns, characterized by segregated land uses and extensive automobile infrastructure. Activity friendly communities that encourage walking and physical activities can help address multiple public policy challenges, including public health and urban transportation problems.

This paper examines how the land use and infrastructure facility factors influence levels of: (a) walking, (b) physical activity, and (c) perceived health status.

**Methods:** This study draws from a larger research effort, the Walkable and Bikable Communities project, funded by the Centers for Disease Control and Prevention. Behavioral and socio-demographic data from a 650-respondent survey and environmental data processed with a sophisticated Geographic Information System technology are used, to examine the impacts that land use- and facility- related environmental variables may have on walking, physical activity and health status.

**Results:** The data are currently being analyzed using factor analysis and ordinal logit models. Preliminary analyses show that both land use and facility factors influence walking, physical activity and, to a lesser degree, health status, after controlling for the socio-demographic factors. The final models will demonstrate the similarities and differences of individual environmental variables in predicting levels of walking, physical activity, and good health.

**Implications:** Policy implications of the findings are provided to facilitate policy decision-making processes to promote activity-friendly communities. The findings will also help develop effective community-based interventions to encourage walking and physical activities.

23317

## **Investigation of diarrheal illness detected through syndromic surveillance after a massive power outage, New York City, August 2003**

Marx M, Rodriguez C, Greenko J, Heffernan F, Mostashari F, Balter S, Layton M, Weiss D

**Background:** Two days after a massive power outage occurred in New York City on August 14, 2003, more adult patients than expected sought care for diarrhea-related complaints (107 observed vs. 63 expected,  $p < 0.01$ ) in emergency departments (EDs) participating in syndromic surveillance. The source of this apparent increase in diarrhea cases was unknown.

**Objective:** A case control study was conducted to determine whether an apparent increase in diarrheal illness was associated with consumption of food that had potentially spoiled after the power outage.

**Methods:** Subjects were selected for this study from patients who presented to participating EDs from August 16 through August 18, 2003. Cases patients were defined as patients presenting with chief complaints coded as "diarrhea" syndrome by New York City Department of Health and Mental Hygiene ED syndromic surveillance system coding algorithms. Control patients were selected by random sampling stratified by age from all patients presenting with chief complaints coded as "other" syndrome. Structured interviews were administered by telephone to adults and to guardians of children

under age 16. Questions addressed symptoms, food consumed and discarded, and awareness and source of prevention messages following the power outage. Patients were included in analyses if symptom onset occurred after the power outage. Analyses were conducted both overall and stratified by age. Associations were quantified using logistic regression modeling.

Results: Of the 759 subjects selected, 40% (N=301) were reached, were eligible for the study, and agreed to participate. Case patients and control patients did not differ by sex (proportion female = 53% vs. 60%, respectively;  $p=0.42$ ). Over 68% of all study participants reported having eaten chicken, meat, seafood, dairy or deli meat between the power outage and symptom onset. Case patients  $\geq 13$  years of age (N=50) were more likely than control patients  $\geq 13$  years of age (N=88) to have eaten seafood or meat before symptom onset (Odds Ratio (OR)= 4.8, 95% confidence interval (CI) = 1.6-14.1; OR= 2.7, 95% CI= 1.2-6.1, respectively). There were no differences in proportions eating meat or seafood in case and control patients  $< 13$  years of age (case patients: N=49; control patients: N=114). No differences were detected in the proportion of case and control patients who ate bread, vegetables and fruit, chicken, dairy or deli meats in either age group. Overall, 67% of respondents reported awareness of messages suggesting that people discard food after the power outage; the most common source for these messages was television (54%). There were no differences in the proportion of case and control patients who reported discarding food after the power outage in either age group.

Conclusions: These data indicate an association in adults between seeking care in an ED for diarrhea symptoms and eating meat and seafood following the power outage, an association that may be linked to consuming food spoiled after the power outage. In the context of specific potential exposures, syndromic surveillance systems can be used not only to detect citywide increases in illnesses of public health importance, but also to frame studies to investigate these increases.

23118

#### **Variability in age-standardized incidence rates of Acute Myocardial Infarction with area-based measures of socioeconomic position**

Tonne C, Schwartz J, Mittleman M, Melly S, Suh H, Goldberg R

Background: Heart disease mortality has been shown to vary across area-based socioeconomic measures, yet little is known about the variability in incidence rates of cardiovascular disease. As part of the Worcester Heart Attack Study, an ongoing community-wide study examining changes over time in the incidence and long-term case fatality rates of residents of Worcester hospitalized with confirmed acute myocardial infarction (AMI), we investigated the hypothesis that census tract level measures of socioeconomic position (SEP) are important determinants of the incidence of AMI among tracts. Methods: Cases of AMI were geocoded by address and age-standardized rates of AMI were calculated for each tract in the Worcester metropolitan area. Tract incidence rates were mapped by quintiles using ArcGIS to illustrate their variability. Poisson regression was used to estimate the effect of census tract level measures of SEP on the incidence rate of AMI.

Results: There were 4042 confirmed AMI cases in greater Worcester residents during 1995, 1997, 1999, and 2001. The variability in the age-adjusted incidence rate of AMI across census tracts was large: the mean rate in the tracts within the lowest 20% of rates was 2.20 per 1000 compared to 21.2 per 1000 in the highest 20%. The majority of tracts in the highest 20% of incidence rates were concentrated in the city center. Living in a census tract with median income in the lowest 20% (compared to wealthiest 20%) was significantly associated with incidence of AMI, adjusted for age: relative risk (RR) = 1.66 (95% CI 1.51, 1.82). Similarly, living in a tract within the 20% with the highest proportion of residents living under the poverty line (compared to the lowest 20%) was significantly associated with incidence of AMI, adjusting for age RR= 1.61 (95% CI 1.46, 1.77).

Implications: There is large variability in the age-standardized incidence rates of AMI among census tracts in the Worcester MSA, a medium sized U.S. city. Census tract level measures of SEP partially explain this variation.

23026

#### **Neighborhoods with greater proportions of African Americans in Detroit need better access to supermarkets**

Zenk SN, Israel B, Schulz A, James S, Wilson ML, Bao S

Background: Inadequate access to supermarkets may be a barrier to healthy eating in urban African American neighborhoods. We undertook spatially explicit analyses to test the hypothesis that supermarkets were less accessible to neighborhoods with higher proportions of African Americans.

Methods: We evaluated the geographic accessibility of large "chain" supermarkets for 869 neighborhoods (census tracts) in metropolitan Detroit. Using a Geographic Information System (GIS), Manhattan Block distance to the nearest supermarket, number of supermarkets within 3 miles (considered reachable by car), and potential accessibility of supermarkets were measured. We compared mean accessibility using one-way ANOVA tests and employed OLS and spatial regression to control for population density, as well as to test for a mediating effect of neighborhood socioeconomic position.

Results: Supermarket accessibility decreased as the proportion of African Americans in the neighborhood increased. The nearest supermarket averaged 0.8 miles further from neighborhoods in the highest compared to the lowest quartile for percent African American (2.08 vs. 1.26 miles). Neighborhoods in the highest quartile also had significantly fewer supermarkets within driving distance (2.78 vs. 7.08) and less supermarket potential accessibility than those in the lowest quartile. Preliminary OLS regression analyses showed neighborhood socioeconomic position explained much of the relationship. Adjustments for spatial autocorrelation attenuated these associations.

Implications: Because prior research has linked proximity to supermarkets to healthier diets, increasing the number of such retail markets in neighborhoods with higher proportions of African Americans could improve dietary patterns, particularly given less car ownership in these areas.

## Submitted Abstracts Session III

21295

#### **A comparative analysis of homelessness in Canada and Bangladesh**

Podymow T, Farrell S, Islam MA, Ahmed M, Yetisir E, Turnbull J

Background: A comparison of homelessness in a first world (Ottawa, Canada) and third world (Dhaka, Bangladesh) cities was conducted to examine the differences the root causes of homelessness, the associated physical illnesses and the appropriate interventions.



Methods: The Ottawa Homelessness survey (OHS) examined the demographics, health status and causes of homelessness in a random sample of 124 adults. A structured culturally-adjusted survey based on the OHS was conducted with 100 adults in the slums of Dhaka, Bangladesh.

Results: Demographic differences emerged between Canadian (C) and Bangladeshi (B) groups with C more likely to be single, educated and having fewer children (p values <0.0001). Many chronic health conditions were equally prevalent in both groups; however, differences in gastrointestinal and respiratory problems existed between groups. The C group reported better access to health care services, although subjective health ratings were similar. Higher rates of substance use in the C group were reported, with differences in type of substance between groups. The B group were more likely to be homeless for economic or poor sanitation reasons, whereas the C group were more likely to have chosen migration patterns. Rates of abuse and violence were similar between the females in both groups.

Implications: Individual illness vs. economic or sanitation-related reasons for homelessness differed between a first and third world city. This difference has implications for the type of intervention required in each urban area and the need for alternate models of health care and social service delivery to address the needs of the population.

23306

### **Towards healthier urban planning in western Sydney**

Capon A, Hort K

Background: Sydney faces a number of urban planning challenges, including suburban sprawl and car dependence. Contemporary public health epidemics have emerged with increasing suburbanization. The population of the city continues to grow by about 50,000 people each year. The State government is currently planning further large-scale land releases in western Sydney to address urban land shortages.

Methods: The government has proposed new planning processes to better integrate transport and services in new land releases and local government development planning. Public health workers have taken advantage of this opportunity to advocate for consideration of potential health impacts in planning processes. This has been achieved by linking health to other planning outcomes such as sustainability and environment protection, development of health frameworks and indicators, and preparation of a health profile.

Results: Early gains include improved understanding of potential linkages between urban development and health on the part of planners, and greater appreciation of planning needs among public health workers. There are proposals for health impact assessments to assist with political decision making about the large-scale land releases.

Implications: A partnership between the health and urban planning systems has enabled strengthened advocacy for health as an outcome of urban planning. It is clear that the hard work of effecting change in urban form is yet to be achieved. The challenge is to build on this developing partnership, to effectively engage with the influential urban development industry, and improve decision making.

27283

### **Cohorts of metropolitan areas as a resource for structural analysis and intervention in urban health**

Friedman SR, Tempalski B, Keem M, Friedman R, Flom PL, Cooper H, Des Jarlais DC

Background: A wide literature suggests (a) that many health outcomes vary by geographical area; (b) that socioeconomic or political characteristics of these areas are associated with these outcomes; and (c) that prevention and care programming shows similar variability.

Methods: We have studied 96 large metropolitan areas in the United States, with the metropolitan area as a whole being our unit of analysis. We have focused on population density of injection drug users (IDU), HIV and hepatitis C among IDU, and HIV prevention programs for IDU as dependent variables. Procedures include secondary data analysis and qualitative interviews with selected experts in each metropolitan area.

Results: These data show that socioeconomic characteristics such as percent of residents in poverty and residential racial segregation are related to population density of IDU in both 1993 and 1998; that IDU density, income inequality, racial segregation, and syringe policies are related to HIV prevalence among IDU in 1993; and that political variables, rather than indicators of need, are associated with having a syringe exchange.

Implications: This study has been primarily cross-sectional. We propose that research using ongoing cohorts of metropolitan areas can be a platform for studying, and for guiding interventions concerning, the structural predictors of increases and declines of local epidemics; for evaluating the community-level impacts of prevention and care programs; and for understanding patterns of interaction among economic, political, and public health factors.

29307

### **A framework for improving health in cities**

Glouberman S, Gemar M, Campsie P, Miller G, Armstrong J, Newman C, Siotis A

## **WITHDRAWN**

23325

### **An overview of Nepal's urban health scenario**

Karki TK.

Although urbanization is a recent phenomenon in Nepal, its growth rate is high. Today, the average annual urban growth rate is 6.65% and 3.28 million people or 14% of the national population lives in cities and towns. However, the growth and expansion of cities and towns in Nepal does not ensure a better environment for better health and well being of its urban citizens. The available but limited literatures on urban health reveal that sanitation has emerged as a severe problem in Nepal. Only about 50% of the urban population use toilets. Existing storm water drainage systems are inadequate and the towns located in the flat terrain face water logging problems due to less gradient. In Kathmandu Valley about 32 tons of waste goes uncollected every day. The municipal piped water supply exceeds 4800 coliform cell counts in 100 ml in all the towns of the Kathmandu Valley. The gasoline contributes 63% of the total emission of all pollutants. The health and quality of life of urban citizen has declined due to the lack of open spaces. The prevalence of diarrhea, gastro-enteritis, infectious hepatitis, typhoid, para-typhoid, cholera, bacillary dysentery, Amoebic dysentery, giardiasis, malaria and encephalitis in the towns of Nepal confirms the poor sanitation, drainage, waste management and the pathogen contamination of drinking water. Air pollution has started to affect urban citizens: a hospital-based study has shown that 37.8% of admissions were due to ARI and 32.1% of morbidity in

infant, less than one year of age, is due to Acute Respiratory Infections (ARI) in Kathmandu Valley. On average, 36 cases of asthma cases per month were registered in a Kathmandu teaching hospital in 1994. The quality of basic urban services such as water, drainage, sanitation, sewage health awareness, provision of community open spaces, traffic management, greenery and a planned city framework are the crucial elements of urban health enhancement plan for Nepal. Thus, integration of urban health and urban development policy is a must.

21007

#### **Improving housing conditions in Montréal: A public health priority**

King N.

**Background:** The World Health Organization has recently declared that health status is often determined more by the physical environment and social and economic conditions than by the provision of health care services. This theoretical consideration is backed up by scientific data showing that asthma prevalence in the developed world has increased over the past 20 years, and according to many authors, at least part of this increase can be attributed to poor indoor air quality in the residential setting.

**Methods:** The current paper will deal with public health strategies and community-based practice. The context particular to the Montréal region will be presented and the partnerships developed in order to work towards improving housing conditions will be discussed.

**Results:** The Board of public health in the Montréal region has assumed a leadership role in bringing the impact of poor housing conditions on health to the forefront. Different groups such as municipal inspectors, housing specialists and community groups who have formerly been working in parallel are now working together on this problem with many tangible results. For example, the revised housing code is now quite explicit about the necessity to eliminate specific conditions such as damp living conditions and mould growth that pose a health risk.

**Implications:** The improvement of poor housing conditions is a public health priority that lends itself well to a collaborative approach among professionals from different disciplines that can act together in order to attain the desired results.

27287

#### **Monitoring health conditions in Paris, France: Implications for community prevention programs**

Spira A, Granados D

**Background:** Paris, France is a 2.2millions population city with heterogeneous sociodemographic characteristics and more than ten different local and national public organizations involved in Public Health surveillance and interventions. Our aim is to develop a single common framework for health monitoring, allowing interventions and evaluations to be performed after gathering information concerning scientific expertise, population health problems perception and decision makers choices.

**Methods:** Available health statistics allow describing population health according to specific mortality statistics, as well as some incidence rates. Using 1999 causes of deaths certificates, we applied the Global Burden of Disease methodology to calculate Disability Adjusted Life Years, using morbidity/mortality ratios from WHO.

**Results:** Among the first 12 most important cause of disability, smoking, alcohol consumption and stress/ socio-economic status related conditions are of primary importance. These results highlight the burden of non-fatal conditions such as depression and arthritis; they also emphasize the importance of focusing health priorities on classical risk factors.

**Implications:** Collecting incidence rates for all conditions will precise DALYs estimates. The determination of attributable fraction for leading risk factors will permit to assess the potential gain from specific prevention actions.

Such data could be used to inform the population about its global health condition and to provide decision makers with global health indicators. Improving this methodology could be part of the activity of a Paris Health Workshop, promoting the importance placed on cross agency work, health inequalities and the role of evidence based policy making.

21056

#### **The black hole theory of homelessness**

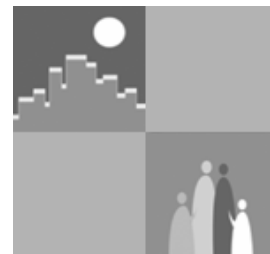
Druce T, Svoboda T, Rosolak B, Manuel A, Hamadi Q, Anstett D, Gibson C, Raghubeer V

**Background:** Seaton House Men's Shelter is a 670-bed facility for single homeless men located in the downtown core of Toronto, Canada. Operated directly by the municipal government, Seaton House provides social work, property, and dietary service to over 4000 single homeless men a year. Less than 10% of this group has been in the shelter system for more than 365 days which marks a point where social decompensation becomes a prevalent characteristic

**Methods:** Using the admission data of over 14,000 persons using the shelter from 1994 to 2003, a database was created to examine various aspects of the clients' length of stay in light of the Three Stage Model of Homelessness. Data on 149,000 admissions was analyzed and the data was cleaned to control for data entry errors. The results were analyzed using two sets of variables: (1) What was the length of stay in each program for each client over the review period and, (2) What was the total number of admissions for each client during the review period.

**Results:** The results of this review indicated a clear separation of the target group into three stages, using the criteria of the Three Stage Model of Homelessness.

**Implications:** By better understanding the length of stay that clients have in the shelter system, we can predict resource allocation needs with better accuracy, and target resources to identified needs in a more efficient way.



## Abstracts Pre-selected for Invited Panels

25234

### **Using occupational injury and illness surveillance data to guide investigation, policy and program development: New York City**

Cone J.

**Background:** The local health department in New York City (NYC) has reviewed the existing surveillance data to determine the pattern of occupational disease.

**Purpose:** To identify potential areas to focus prevention efforts.

**Methods:** We reviewed the CSTE Occupational Health Indicators and Healthy People 2010 Goals for indicators for which data was available and relevant to diverse urban population. Tracking data on fatal injuries from the Census of Fatal Occupational Injuries (CFOI), non-fatal injury and illness from Bureau of Labor Statistics (BLS) and the state workers' Compensation Board (WC), mesothelioma cases reported to the cancer registry, hospitalization where expected source of payment is workers' compensation, the NYC Adult Lead Poisoning Registry and the 2002 New York City Health Survey were analyzed using a public health model applied to occupational health and safety and policy recommendations developed.

**Results:** No NYC-specific data was available from BLS or WC. Overall the statewide rate of occupational disease and illness was 5.4%. There is a two-fold increased risk for public sector workers compared with private sector workers. Repetitive trauma disorders of the upper extremity and hearing loss were the two leading occupational illnesses reported to Workers Compensation Board. There was apparent reduction in violence related fatalities in NYC from 2000-2001, with the exception of the 2617 fatalities in the World Trade Center Disaster. Rates of reported on-the-job injury in NYC were 5.1% in our local health survey. Workers whose country of origin is in the Caribbean and Hispanic workers in general had higher rates. East Harlem residents were at greatest risk.

**Conclusion/Recommendations:** NYC is developing guidelines and identifying best practice methods to address upper extremity RSI's, hearing loss, and injuries to Hispanic workers. Preparedness planning for building evacuation is priority. Targeted of sources of adult lead poisoning in NYC to eliminate cases of blood Lead levels of 25 ug/dl greater by 2010 is underway. Surveillance data is an effective way for a local health department to prioritize the use of limited programmatic resources.

25210

### **Understanding the relationship between personal control in the workplace and health status**

Islam N.

**Background:** Several theoretical models have been developed in order to explain the association between socio-economic status (SES) and health, including the fundamental causes perspective and the hierarchy-stress perspective. Both of these models note that an individual's power or personal control may be related to health status. However, most studies have not addressed the effect of personal control on the SES-health relationship, and have measured personal control as a subjective, rather than objective measurement. In this study, we attempt to explore the effect of personal control in the workplace (as an objective measurement) on the SES-health relationship using the hierarchy-stress and the fundamental causes model. We anticipate that both SES and personal control will be independently associated with health, with a stronger association seen in the SES-health relationship. We also hypothesize that personal control will act as a mediator between SES and health outcomes we predict that this relationship will be stronger than the independent relationship between personal control and health and SES and health, as indicated by the fundamental causes model. We anticipate that stress will also be a mediating variable in the relationship between SES, personal control, and health as indicated by the hierarchy-stress model. However, we predict that the effect of personal control in the SES-health relationship will be just as strong or stronger when we do not include stress in the model. Thus, we hypothesize that the fundamental causes model will provide an adequate representation of the effect of personal control on the SES-health relationship.

**Methods:** The study uses data from a convenience sample of New York City taxi drivers (n=183). Using face-to-face survey methodology, drivers' experience with low levels of personal control in their occupations (measured by the rent or ownership status of their vehicle and license), high levels of stress (measured by perceived amount of stress), working conditions (measured by the number of hours worked per week and violence faced on the job), SES (education, income, ethnicity), and health status (measured by self-rank of health) were documented.

Results: The sample will be analyzed to determine the effect of income (SES) on health using an ordered-response logistic regression technique. The sample will then be analyzed to determine the effect of personal control on health, independent of the SES variable. Finally, a second and third equation will introduce the personal control and stress variables to the SES-health model. If the fundamental causes model is most appropriate (personal control mediates between SES and health), then the coefficient of the SES variable will be reduced in the equation where personal control is introduced as a variable. On the other hand, if the hierarchy-stress model is more appropriate (stress mediates the relationship between SES, personal control, and health), then the coefficients of both the SES and personal control variables will be reduced in the equation where stress is introduced as a variable. Results will be presented upon analysis.

Implications: This study will have important implications on the notion of urban workplace health promotion.

20220

#### **Health in cities: Challenges to health policy and practice**

Norquay A, Herrera M

Background: Health in cities is a subject of growing public concern, particularly in Ontario, Canada where over 84% of population lives in areas with population of 10,000 people or more. Considering both the protective impact that cities have on health and the well documented "Urban health penalty," there remains little consensus on how to define and conceptualize health in cities. The Ontario Public Health Association's (OPHA) Urban Health Work Group seeks to develop a comprehensive and integrated policy position that supports health in cities.

Methods and results: Through a literature review of English language articles and series of interviews with key stakeholders in Toronto, Ontario, a preliminary model that outlines the complex interaction of actors that support health in cities was developed. The model builds on theoretical framework developed by Sholom Glouberman and the Wellesley Central Health Corporation. An analysis of Ontario's current health, political, economic and social context in relation to health in cities was then conducted so as to inform the creation of relevant and effective framework for action.

Implications: The implementation of this framework for action will have wide-ranging implication for public health policy, practice and advocacy in Ontario.

23311

#### **Cultivating neighborhood open space to promote population health: A pilot study of community gardens in Denver, Colorado**

Litt J, Brett JS, Marshall JA, Buchenau M, Elliot J, Bardwell L

Background: Environment and lifestyle-related illnesses account for the majority of premature deaths in the United States. Physical inactivity and poor diet alone contribute to approximately 300,000 deaths per year in the U.S. Within the urban setting, residents, together with city planners, public health practitioners, economic developers, and others are working together to consider how the built environment can be enhanced to promote active lifestyles and improve public health.

Objective: We will examine a sample of Denver's 80 community gardens and garden-parks as examples of "health primitive" features of the urban environment. Specifically, we will examine how the social and physical environment around gardens and surrounding neighborhoods may impact physical activity and healthful eating.

Methods: We will employ neighborhood auditing and key informant interview techniques in approximately five Denver neighborhoods. Visual assessments and spatial analysis of neighborhood features will be included in our preliminary analysis.

Results: Community gardens may represent an untapped opportunity to enhance the health of urban dwellers, with a specific impact on diet and physical activity. An audit tool combined with semi-structured interviews can identify key features of gardens that can be manipulated to enhance physical activity opportunities and healthful eating. Use of the auditing tool as a part of a participatory research framework can facilitate community involvement in garden design changes.

Conclusion: Community gardens provide a point of entry into diverse urban populations. This project aims to uncover the potential for open space projects, such as community gardens, to promote community health and well-being, to legitimize the inclusion of open space projects in small area and city-wide master plans, and prevent endangerment of urban gardens.

The following abstracts were presented at  
The First International Conference on Inner City Health, Toronto, Ontario  
October 3-6, 2002

#### **Non-financial factors associated with decreased viral load testing in Ontario, Canada**

Raboud JM, Abdurrahman ZB, Major C, Bayoumi AM

Objective: Viral load (VL) testing is an essential component of the care of people living with HIV. In Ontario, VL testing is available without charge to all individuals who qualify for the universal public health insurance program. We examined whether individual characteristics were associated with differential use of VL testing.

Methods: We studied individuals enrolled in the HIV Ontario Observational Database, a voluntary longitudinal cohort, for whom we had complete medication records and health insurance numbers for linkage. We obtained demographic data from self-report at the time of enrolment into the cohort, clinical and medication data from semiannual medical chart review, and viral load data from both the medical chart and Ontario's Central Public Health Laboratory, the sole public provider for viral load testing. We classified individuals as having suboptimal viral load testing if they had a gap of 6 months or greater between subsequent tests. Results were examined with the method of Generalized Estimating Equations. We accounted for time-varying covariates including plasma viral load levels, CD4 counts, and antiretroviral regimen characteristics. In a supplementary analysis, we classified suboptimal outcome as an interval of 9 months or greater between tests. In another supplementary analysis, we examined the length of time between tests as the dependent variable.

Results: A total of 1691 individuals were included in the analysis with a median follow-up time of 3.5 years (inter-quartile range [IQR] 2.0 to 4.5 years) and a median of 14 VL tests (IQR 7 to 19). The median rate of testing was 4.2 VL tests per year (IQR 3.3 to 5.3). In multivariate analyses, those more

likely to have a clinically important gap in viral load measurement included women and heterosexual men (compared with gay men), odds ratio (OR)=1.3, p=0.02, injection drug users (OR=1.9, p<0.01), and residents of Toronto (OR=1.6, p<0.01). Tests were also done less frequently in more recent years (p<0.01) and for individuals not using antiretrovirals (OR=1.6, p<0.01), while tests were done more frequently for individuals using 4 or more antiretrovirals (OR=0.57, p<0.01). Analyzing the results using different cut-offs for an important gap in measurement or defining the delay between tests as a continuous variable did not change our results.

Conclusions: Injection drug users, women and heterosexual men, and residents of Toronto used fewer viral load tests than other individuals, even when financial barriers to testing were removed. Our results indicate the importance of appropriate care models for all HIV-infected persons.

### **The UNI-SOL Project: Universities in solitary for the health of the disadvantaged**

Turnbull J

Objectives: In 1999 UNESCO, WHO and the University of Arizona co-sponsored a global conference on "Universities and the Health of the Disadvantaged". This conference arose from the concern that Universities were not directly connected to their local communities and in fact; the concept of service to these communities was foreign. Arising from this conference, the Arizona Charter was developed and the UNI-SOL (Universities for Solidarity) project emerged with support from the WHO and UNESCO.

This project has the following objectives: (1) A network of collaborating universities committed to the principles of addressing the health of the underserved through community partnerships. (2) A collaboration between WHO and UNESCO to advance the role of universities in promoting the health of this population. (3) A mode of disseminating information and best practice approaches to engage universities and academic institutions in addressing the health of the disadvantaged through education, research, service and policy development. (4) A method of investigating benefits to the health of the disadvantaged through university projects that are both multidisciplinary and self-sustaining.

Methods: The disadvantaged were defined as persons or groups who lack reasonable access to opportunities for development, or who fail to benefit from support generally meant for everyone, or who are victims of unfavorable societal actions. Projects were selected using preset criteria which included; a university partnership addressing the specific needs of the disadvantaged population, multidisciplinary teams that would address: research, education and/or service, active university participation with the sustainable development of infrastructure and ongoing university support. Twelve demonstration projects were selected that represented different university partnerships to address the health of the disadvantaged. Projects were varied in terms of approach and geography however, all had the unifying partnership theme. An evaluation structure was set in place to evaluate the effectiveness of the different projects.

Results: We report on the results of all 12 pilot projects, which are underway and will be completed in 1 year. Interim progress reports will be utilized to describe the lessons learned to date and the challenges inherent in serving the health needs of the underserved through Community-University partnerships.

Conclusions: There are few examples of effective Community-University partnerships in addressing the health needs of underserved populations. The lessons learned from the UNI-SOL project will guide further initiatives.

### **The Inner City Health Project: A model of shelter-based health care delivery**

Podymow T, Muckle W, Tadic V, Turnbull J

Objectives: Arising from a regional initiative to address the problem of homelessness, The Inner City Health Project is a two-year shelter based pilot project designed to improve health care delivery to homeless underserved persons living in Ottawa. This project is a unique partnership between those who provide services to the homeless, the city of Ottawa and the University of Ottawa. This is a descriptive study.

Methods: The Ottawa Inner City Health Project is comprised of 3 programs: (1) Managed alcohol, a 16 bed shelter based program at the Shepherds of Good Hope, designed as a harm reduction measure to provide alcohol to chronic street alcoholics, and to provide personal care by Client Care Workers (CCW) nursing and physician care. (2) Palliative Care Hospice, a 15 bed home based unit at the Union Mission created for terminally ill homeless persons to provide 24 hour nursing and CCW support care and (3) The Special Care convalescence unit, a 24 bed unit based at the Salvation Army Center includes nursing and CCW support care for homeless persons with complicated health needs, such as post operative care, metabolic abnormalities, diabetes and infections. In addition, approximately 20 homeless clients are served in the community if they are not within one of the existing shelter programs, yet are in need of services from the program. The ongoing coordination of client services is through an internet-secure medical record created for the Inner City Health Project and linked to the Ottawa Hospital.

Results: The organization of the Inner City Health Project, the methods of health care delivery for each program and some preliminary outcomes will be described. Effectiveness and cost-effectiveness studies are ongoing. In the first of this two-year pilot project, the Ottawa Inner City Health Project has served a total of 192 people, and currently a total of 50 are enrolled in the three programs. Preliminary data suggest decreased substance abuse, stabilization of medical and mental illness, successful housing of clients and improved compliance to medication and treatment regimes.

Conclusions: Innovative shelter-based health care delivery and internet-based record keeping of homeless persons can provide ongoing effective health care.

### **Tuberculosis, adherence behavior and the inner city**

de Vos P, Cave A, Gibson N

Although tuberculosis is no longer considered to be a major threat to public health in Canada, it remains a problem for Aboriginal, immigrant and inner city populations. Non-adherence to TB treatment is a major obstacle to the control of TB. Treatment behavior is a complicated phenomenon, and successful strategies to enhance patient adherence must address the barriers to treatment encountered by patients. The association between homelessness and TB is widely acknowledged, but few studies have examined how socio-cultural factors impact adherence to TB treatment in homeless populations. Also conspicuously absent is any mention of the social conditions that localize TB to the poorest in society. The literature has consistently overlooked that those least likely to adhere to TB treatments *are those least able to adhere*. This study uses qualitative methods (including participant observation and ethnographic interviewing) to address this knowledge gap. Sixteen (16) homeless individuals in Edmonton were tracked over a period of 18 months. Working from a social ecological framework, the study shows how socio-political realities play out in the lives of homeless people—shaping not only their attitudes towards personal health but also their notions of individual agency.

### **Analysis of emergency department visits in a cohort of sheltered homeless adults**

Vitale G, Podymow T, Turnbull J

**Objectives:** Homeless persons have higher rates of alcohol and substance use, infectious disease and psychiatric illness, are known to be frequent users of the Emergency Department (ED) and may use the ED as a substitute for primary care. We undertook a retrospective chart review of ED visits and admissions to the Ottawa Hospital in a cohort of homeless adults to determine patterns of illness or injury in this population.

**Methods:** A retrospective chart review of the Emergency Department visits to the Ottawa Hospital General and Civic campuses was performed by data analyst enquiry for ED visits during the year 2000 from the postal codes corresponding to three Ottawa shelters: The Salvation Army, Shepherds of Good Hope, Union Mission and a code for "No Fixed Address." Analysis was performed for frequency of presenting diagnoses and admission rates for the year 2000.

**Results:** They were 436 visits to ED in the year 2000. Admission rate to hospital was 13%. The leading diagnoses were; alcohol intoxication/withdrawal 25% of visits, Lacerations and contusions 22%, infections 17%, psychiatric 10%.

**Results:** There were 436 visits by 147 patients to the ED in the year 2000. Admission rate to hospital was 13%. The most common diagnoses were; alcohol intoxication/withdrawal 25% of visits, lacerations and contusions 22%, infections 17%, psychiatric 10%. Forty-six percent of the visits occurred during regular office hours. Half of the visits occurred during the fall season. 25% of the patients had 3 or more visits in the year studied.

**Conclusions:** The majority of ED visits by homeless persons did not require admission. Alcohol intoxication/withdrawal and laceration/contusions accounted for almost half of the visits. Existing social services could be integrated into ED visits to help reduce the unnecessary high frequency of these visits.

### **An interactive web-based curriculum on health care delivery to the homeless**

Maser E, Petit L, McLaughlin C, Turnbull J

A web-based interactive curriculum was developed in response to a need for improved delivery of health care to the homeless. The program highlights health problems common to the homeless. It also emphasizes unique "adverse determinants of health" which require consideration to plan successful treatment. Examples of adverse determinants of health include difficulty securing basic needs, unstable parenting, addictions and mental illness. The "Health and Poverty Curriculum" (HPC) is a web-based resource designed to help medical students understand the diverse needs of the homeless. In this curriculum, first and second year medical students are presented with interactive problem based case studies. Hypertext links provide access to questions, videos and fact sheets that cover the following topics: alcoholism, drug abuse, trauma, infectious disease, cardiology, respiratory, gastroenterology, mental health, women's health, youth and international comparisons. The learning objectives are: (1) To identify health problems common to the homeless; (2) To recognize the unique factors in the lives of the homeless that complicate their access to the current health care system; (3) To adapt our health care practices to meet these unique needs; (4) To develop clinical decision-making skills and choose appropriate interventions relevant to the homeless; and (5) To participate in hypothetical hospital discharge planning and long-term management of homeless patients. Students receive audio and visual feedback as they answer questions in the case studies. Recently, HPC has been incorporated into the University of Ottawa's medical school curriculum. In the future, the curriculum will be available globally to other health care professionals through the worldwide web.