O-001 HEPATITIS C SCREENING AND TREATMENT AMONG DRUG USERS IN AMSTERDAM: INTERIM RESULTS OF THE DUTCH C PROJECT.

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Objective: Although IDU are at high risk for Hepatitis C Virus (HCV) infection, they are less likely to be treated than other populations. We offered HCV testing and treatment combined with methadone programs in a setting where active drug use is tolerated. Here, we evaluate the inclusion procedure 1.5 year after the start of our pilot project.

Methods: The study population comprises DU participating in the Amsterdam Cohort Studies (ACS) in 2005. Hepatologists, methadone specialists, cohort staff, the laboratory of clinical virology and a special project-nurse collaborate closely to provide optimal HCV care. DU chronically infected with HCV are offered additional medical and psychiatric screening. HCV treatment is directly observed and combined with methadone provision.

Results: 466 DU were offered HCV screening: 70% male, 8% homeless, and median age 43 years. HCV screening was refused by 110/466 (24%), 49/466 (10%) was willing but lacked medical insurance, leaving 307/466 (66%) to be tested. Those willing to be tested, compared with those refusing or uninsured, were more often on methadone treatment (74% versus 54%, $p<0.001$) and used alcohol less often (62% versus 42% non-alcohol users, $p<0.001$). HCV antibodies were found in 179/307 (58%) subjects, 125/179 (70%) were chronically infected. Of these, 110/125 (88%) returned to obtain their test result. Of 76 HIV-negative HCV-infected DU, 56/76 (74%) agreed to additional medical screening which was completed by 45/56 (80%). For 26/45 (58%) a final treatment decision has been made: 13/26 (50%) started treatment, 5/26 (19%) refused, and for 8/26 (31%) treatment was not indicated. For 19/45 (42%) HCV treatment initiation is pending due to alcohol, social, medical or psychiatric problems. Among 13 persons who started standard HCV treatment, 9/13 (70%) were active DU while 12/13 (92%) were on methadone. Six individuals completed treatment, all were HCV RNA negative at the end of treatment. Their compliance was 98%, 4/13 (31%) is still on treatment, and 3/13 (23%) stopped.

Conclusion: 66% of the participants of the ACS among DU is willing to undergo HCV screening. We observed a high return rate among screened DU and great willingness to undergo additional medical screening. Screening appears to be time-consuming, but once DU start HCV therapy they are fully compliant. These findings suggest that active DU can successfully undergo treatment for HCV in a multidisciplinary approach. However, for a substantial number of DU social, medical, psychiatric and abuse related problems postpone or interfere with HCV treatment initiation.

O-002 EDUCATIONAL ATTAINMENT AND CLINICAL OUTCOMES FOR RECIPIENTS OF HIGHLY ACTIVE ANTIRETROVIRAL THERAPY (HAART) IN ONTARIO

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Introduction: Educational status is closely linked to socioeconomic status, which is associated with decreased adherence and faster disease progression in people living with HIV. We examined the association between educational attainment and immunologic and virologic outcomes for patients receiving antiretroviral therapy in Ontario, Canada.

Methods: We used the Ontario HIV Treatment Network (OHTN) Cohort Study, in which trained abstracters collect data from consenting participants' medical charts at 6-month intervals. We supplemented viral load results with data from the Ontario Public Health Laboratory, which performs almost all tests in the province. We examined the time from initiation of the first HAART regimen to each of 3 clinically important outcomes: HIV viral load suppression to <500 copies/mL; virologic rebound to greater than 500 copies/mL after successful suppression; and an increase in the CD4 count of 100 cells/mm3 above baseline. We censored participants at the time of death or last data collection. We studied differences among groups using time-to-event-analysis and the Cox-proportional hazards method.

Results: Of 634 participants, 82% had completed high school or attained higher levels of education, 89% were male, 80% were white, 48% resided in Toronto, 12% reported a history of injection drug use, and

68% reported sex with men as a risk factor for acquiring HIV. The median age was 39 years. Most (585, 91%) participants experienced virologic suppression with a median time (interquartile range) of 75 days (40 to 210). Of these, 288 (49%) experienced virologic rebound at a median time of 1897 days (715 to 3114). A CD4 cell increase of 100 cells/mm3 or greater was experienced by 560 participants (88%) at a median time of 218 days (88 to 504). In univariate analysis, lower education was not associated with less rapid virologic suppression (p=0.254) or CD4 increases (p=0.536), but was associated with delayed virologic rebound (p=0.001). In multivariable analysis the relative hazard of early rebound was 1.47 (95% confidence interval 1.01-1.96) for participants with less than a high school education, 1.46 (1.04, 2.05) for participants with a history of injection drug use, and 1.22 (1.05, 1.41) for each decade decrease in age.
Conclusion: We found that lower educational attainment was associated with more rapid virologic rebound following initiation of HAART. Further research should explore possible reasons for this finding, including assessment of trends in adherence over time, and explore methods of addressing this disparity, such as targeted services for individuals with less education or literacy.

O-003 RISK FACTORS FOR SEXUALLY TRANSMITTED INFECTIONS (STIS) AND BLOOD-BORNE INFECTIONS (BBIS) IN CANADIAN STREET YOUTH

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Introduction: Street youth (SY) are a vulnerable group of young people with sexual behaviours that place them at risk for contracting and transmitting blood borne and sexually transmitted infections. They maybe more preoccupied with meeting their daily basic needs than they are concerned with health risks; for most, this is the risk they have to face just to survive.
Methods: The Enhanced Surveillance of Canadian Street Youth (E-SYS) is a repeated cross-sectional survey carried out in 1999, 2001 and 2003. SY aged 15-24 years inclusive, who had spent at least 3 consecutive nights away from home were recruited in 7 cities across Canada. Information was collected in a nurse-administered questionnaire, blood and/or urine samples were also collected for biological testing.
Results: 1656 SY were recruited in 2003. Rates of chlamydia and gonorrhoea in SY are more than 10 times the reported rate in the general youth population and 24% tested positive for at least one STI/BBI (out of chlamydia, gonorrhoea, syphilis, HIV and hepatitis C) . When compared to those testing negative, SY who tested positive for any STI/BBI were more likely to report ever trading sex (32.8% vs. 16.1% p= <.0001), a history of STIs (42.3% vs. 21.5% p= <.0001), sex partners that inject drugs (16.7% vs. 9.5% p= <.0004), partners with a recent history of STIs (20% vs. 14.7% p= <.04) and not using a condom at their last sexual encounter with a female partner (57.3% vs. 40.3% p= <.02). In multivariate analysis, they were more likely to be females (p=.05), older (20-24years) p<.0001 and were 2 times more likely to report ever trading sex (adjusted OR = 1.9 [95%CI 1.14, 3.19]).
Approximately 4.5% tested positive for hepatitis C (HCV). SY who reported injecting drugs had a higher rate of HCV at 19.4%. When compared to those testing negative, SY with HCV are older- mean age 22 years vs.19years (p<.0001), reported ever injecting drugs (91% vs. 18%, p<.0001), and injected 7 or more times/week (55% vs. 4%, p<.0001). The odds of HCV infection in females was 3 times greater than in males (adjusted OR= 2.8 [95%CI 1.1-7.5]).
Conclusions: High-risk behaviours such as unprotected sex and sex trade increase the risk of contracting STIs and BBIs. Knowing the factors that put SY at risk is imperative in identifying areas for intervention and implementing prevention measures.

O-004 MIGRANTS TRAVELLING TO THEIR COUNTRY OF ORIGIN: A BRIDGE POPULATION OR HIV TRANSMISSION?

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Introduction: In the Netherlands, persons who originate from Surinam and the Antilles are at increased risk for heterosexually acquired HIV infections. By having unprotected sex in the Netherlands and in the

country of origin, migrant travellers might form a bridge population for HIV/STI transmission.
Methods: To study the presence of a bridge population, from 2003-2005, 1523 persons of Surinamese and Antillean origin were recruited in market places and at festivals in Amsterdam and the Hague. Multivariate logistic regression identified determinants for having unprotected sex in both the country of origin and the Netherlands, separately for men and women.
Results: Of the participants, 886/1523 (58%) had travelled to their country of origin in the past 5 years. Unprotected sex with local partners and with sexual partners in the Netherlands was reported by 7.6% of the travellers (68/886). Half of them originated from Surinam, median age was 38 years, and 29 (43%) had partners of discordant ethnic origins in the Netherlands. For men (n=417), unprotected sex in both countries was associated with older age (OR 1.58 per 10 years; 95%CI 1.19-2.09), >1 visit to the country of origin in the past 5 years (OR 2.93; 95%CI 1.29-6.64) and >1 partner in the past 6 months (OR 4.00; 95%CI 1.93-8.30). For women (n=469), >1 partner in the past 6 months (OR 6.89; 95%CI 2.74-17.39), a previous HIV test (OR 5.34; 95%CI 1.71-16.68) and living in the Netherlands for <14 years (OR 2.83; 95%CI 0.95-8.42) were independent predictors.
Conclusion: Migrant travellers from Surinam and the Antilles, who have unprotected sex in the country of origin, often also report unprotected sex in the Netherlands. Especially those with multiple sex partners and regular male travellers are a potential bridge population for transmission of HIV/STIs, also to the general population. Therefore, they are important to target for sexual health education.

O-005 HEALTH- AND SOCIAL CARE IN PROSTITUTION

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Introduction: More than two-third of the estimated 8.ooo sex workers in Amsterdam come from foreign countries. To gain insight into their working conditions the Intermediary Project (IP) at the Municipal Health Service contacts these women via outreach work on regular basis. Since the new brothel law in 2000 is introduced, migrant sex workers who have no Dutch residence permit are not allowed to work in prostitution. Since then, many of these sex workers have gone ‘underground’. The consequences of the new brothel law in The Netherlands will be discussed with regard to the accessibility of sex workers and their risk for STI/HIV acquisition and unplanned pregnancies.
Methods: Interventions during outreach work are to increase the knowledge of safe sex and birth control for sex workers. Written information is handed out in relevant languages and with addresses of health and local services. In conversations with the women, it appeared that many are not aware of these services. To provide easier access to health care for the women, IP carries out free STI control and offers free hepatitis B vaccination in window brothels and in sex houses. In addition IP supports the women in reporting (sexual) abuse to the police. Moreover migrant sex workers are invited to attend IP’s Dutch lessons.
Results: From January 2004 till May 2006 we approached 1600 sex workers for first contact. One third was Dutch; other was from developing countries and Eastern Europe. 423 STI consultations were done among non-IV drugs using sex workers. Of these, 2% was diagnosed with syphilis, 2% with gonorrhea, and 8% with Chlamydia. Of the 268 women tested for HIV, only one was infected. Due to the high turnover among sex workers, most were tested only once. Among 1046 sex workers tested for HBV- of whom one third is Dutch ‘ 21% had antibodies for HBV, 18 were carrier of HBV, most of who come from HBV endemic areas. Since the start of the Dutch classes, an average of 10 migrant sex workers attended the lessons.
Conclusions: STI control and HBV vaccination in brothels is an important support in health care. Our findings suggest that sex workers do not play an important role in the transmission for STI. Many sex workers are highly mobile and often not aware of the existing health and social services. Continuous outreach work is important to remain in contact with this highly mobile population.

O-006 LINKING RARE ZOONOSIS WITH URBAN CENTERS: INCREASING RISK FOR EBOLA AND MARBURG VIRUS OUTBREAKS.

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Introduction: In the past decades outbreaks of Ebola and Marburg virus epidemics have increased in

number and spatial scale. In earlier times, outbreaks were usually limited to countryside and wildlife areas, because the viruses kill their human hosts too fast to spread the disease into cities. Once the epidemic reaches a human city, a control of the spread of Ebola or similar diseases will be much more difficult than in a sparsely populated countryside. Although the origin and main hosts are not yet known, there is the possibility of a relationship between the area of the hosts of these viruses and the spread of humans and their land-use activities.
This presentation applies the degree of coherence, one of the measures of connectivity in landscape ecology, to the problem of evaluating the relationship between population growth, increase in land-use, logging and deforestation, road construction and human cities on one side, and the risk of increased spread of Ebola and Marburg virus epidemics on the other side.
Methods: Application of the degree of coherence which is used in landscape ecology as a measure for connectivity / fragmentation. The degree of coherence is defined as the probability that two species placed in different areas somewhere in the region of investigation might find each other.
Results: Assuming, that the patch of the virus' main hosts remains the same, and also the total area is the same, the only area or patch significantly changing is the one of the human species, which is extending its area. Hence, the probability of contact between the virus and humans is increasing with the area the human species occupies.
Conclusion: As long as main hosts and origin of Ebola and Marburg virus are not known, and more specific actions for protection against these epidemics in the ecosystem of origin are not possible, the risk of Ebola and other outbreaks is increasing with those factors, that increase the area, where humans are living in the African tropical rain forest, such as population growth, increase in land-use, logging and deforestation, and road construction. The last factor puts a second pressure on the risk of Ebola outbreaks: the travelling speed of an outbreak will increase the better the transportation systems are, linking remote areas with a deadly virus with large human settlements.

O-007 WITNESSING VIOLENCE AT HOME AND ON THE STREET: HEALTH BEHAVIOR CORRELATES FOR URBAN AFRICAN-AMERICAN ADOLESCENTS IN THE UNITED STATES

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While adolescent risk behaviors have been studied a great deal by public health professionals, less is known about how urban youth react to witnessing street violence, and how different risk behaviors are affected. As part of a multi-year program evaluation, 8th and 11th grade students were surveyed in the spring of 2000. The 11th grade students (16-17 years of age, n=350) attended two Chicago Public High Schools; the 8th grade students (13-14 years of age, n=565) attended eight elementary schools that feed into the two high schools. The subjects reflect a homogenous racial and language group, with 98.4% of the students surveyed being African-American and 99.2% speaking English as their primary language. The anonymous survey included series of questions regarding witnessing violence, risk behaviors, safety at school, peer victimization, and the perception of social capital at school. Of all the students, 52.9% reporting having witnessed violence; 26.3% reported witnessing this at home and 90.5% report witnessing violence on the street (16.8% report both). We regressed witnessing violence at home and on the street against four leading risk behaviors: weapon carrying in the previous 30 days, substance use in the last 30 days, the use of negative conflict resolution tactics (such as hitting or throwing things when in a disagreement with a close friend), and being in a physical fight in the previous 30 days. We also included control variables to account for demographics (age, gender), general perceptions of one's social environment (social capital, seen a gun at school, beliefs about the acceptable level of aggression among peers), experiences of peer victimization, and the risk behaviors indicated above. Controlling for demographics, perceptions of the social environments, victimization, and other risk behaviors, witnessing violence at home was associated with using substances and with using negative conflict resolution tactics with close friends; witnessing violence on the street was associated with using substances and with being in a physical fight in the last 30 days. Neither variable was associated with weapon carrying. While further research is necessary, these data suggest that the behavioral effects of witnessing violence vary by the type of vio-

lence witnessed. Violence in the home appears to be more associated with effects related to relationship problems, especially in the association with negative conflict resolution tactics with close friends. Witnessing violence outside of the home is more associated with effects related to marginally illegal behavior, such as physical fighting and substance use.

O-008 URBAN NEIGHBOURHOOD INFLUENCE ON MENTAL WELL-BEING AMONG LOW AND NON-LOW INCOME ADULTS IN TORONTO, ONTARIO, CANADA

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In an attempt to better understand the effect of context on well-being, research on residential neighborhoods and health have exponentially increased over the past two decades. While dozens of studies have documented the association between residential neighborhoods and mental health, there remains a gap in knowledge about the specific pathways between the environment and mental well-being. Not only do many existing studies lack appropriate data to explore and document the mechanisms by which residential neighborhoods affect mental health, fewer yet have attempted to gain the perspective of the residents about pathways from the environment to mental well-being. Our team undertook methods of concept mapping to examine how residential neighborhoods affect positive and negative mental well-being. Concept mapping is an intensive structured conceptualization process that produces a framework for how a group views a particular topic. One of the strengths of the concept mapping process is that participants contribute to the generation and analyses of data, thus, ensuring that the final products represent their perspectives versus that of the researcher. We recruited 37 low and non-low income men and women to participate in three group sessions to undertake concept mapping of how residential neighborhoods affect good and poor mental well-being. We spent approximately seven hours with the participants over three group sessions to undertake this concept mapping process. Participants identified over one-hundred neighborhood characteristics that positively and negatively impact mental well-being. The characteristics labeled 'necessary human and social services', 'green area and natural environment' and 'neighborhood support for each other' were reported by participants to be most important for ensuring good mental well-being while 'negative community factors' were primarily important for poor mental well-being. Not surprisingly, residents of low income communities compared to those of non-low income communities, reported a different set of characteristics as being important for good mental well-being. Factors important for good mental well-being differed among men and women of non-low income communities. Participants worked in groups to draw diagrams of the pathways by which the important neighborhood characteristics were related to mental well-being. These diagrams are not only important for documenting the mechanisms by which neighborhoods affect mental health but also serve to provide testable hypotheses for future qualitative and quantitative, multi-level, research on this topic.

O-009 FACTORS ASSOCIATED WITH MIGRATION AMONG A COHORT OF INJECTION DRUG USERS IN VANCOUVER, CANADA

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Introduction: Migration is one of many social factors responsible for HIV transmission though little is known about the predictors and impacts of migration among injection drug users (IDU). We sought to determine factors associated with migration among IDU in Vancouver, Canada.
Methods: We examined migration patterns among participants in the Vancouver Injection Drug Users Study (VIDUS). Correlates of migration occurring between 1999 and 2005 were identified using generalized estimating equations (GEE).
Results: There were 1245 individuals included in this analysis, including 488 (39.2%) women and 367 (29.4%) self-identified Aboriginal participants. The mean age was 33.16 (IQ:14.69). The rate of migration for each study period ranged from 2.54% to 11.83%. In multivariate GEE analyses, factors positively associated with migration included: injection drug use within the past 6 months (AOR= 2.39, 95% CI: 1.74-3.27), crack use (AOR= 2.38, 95% CI: 1.99-2.84), current methadone use (AOR= 1.84, 95% CI: 1.46-2.33), speedball injection (AOR=1.49, 95% CI: 1.13-1.96), heroin injection (AOR =1.40, 95% CI:

1.09-1.80), unstable housing (AOR= 1.36, 95% CI: 1.13-1.63), sex trade involvement (AOR= 1.34, 95% CI: 1.03-1.74) and age (AOR= 0.68, 95% CI: 1.03-1.08). Factors negatively associated with migration included cocaine injection (AOR= 0.69, 95% CI: 0.54-0.89) and alcohol use (AOR= 0.68, 95% CI: 0.57-0.80).
Conclusions: We found migration rates to vary among local IDU. Migration was independently associated with various factors considered, but was most strongly associated with specific drug patterns including injection drug use and current methadone treatment. These results can be used to inform efforts aiming to reduce HIV risk and improve treatment utilization among mobile IDU.

O-010 CARE AND NUISANCE CENTRE. A COOPERATION MODEL ON CARE FOR THE VULNERABLE POPULATION

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In this study we evaluate the implementation of Care and Nuisance Centres in three city districts of Amsterdam. The reason for setting up a new type of support was the finding that the care and welfare organizations are insufficiently accessible for especially the vulnerable people in the city. Also there was need for better attunement and cooperation between care and welfare organizations. The Care and Nuisance Centres coordinate the care for indepent living people with problems related to alcohol or drugs abuse, psychosocial problems, debts or a combination of these. Therefore the centres cooperate with (mental health-, public health-, addiction-, and home)care organizations, welfare organizations and police. The Centres also provide the possibility for citizins to express their concern about residents in their neighborhood or in case of nuisance by neighbors. We trace facilitating and impeding factors in the successful implementation of Care and Nuisance Centres in three city districts of Amsterdam. We also evaluate the result of the implementation. Data were gathered by means of questionnaires among people that reported to the Centres (n=260). Data about the clients (n=669) were obtained through the registration system used in the Centres. Semi-structured interviews were conducted with key figures (n=45) involved in setting up and implementing the Centres. To guide the data collection and analyses of the interview data, a theoretical model was used that distinguishes different phases and levels of implementation. The interview data were coded and analyzed, using the computer programme MAXqda. Demonstrably favorable factors for setting up a Care and Nuisance Centre were: a type of support that is in line with the views of the organizations involved and the pro-active attitude by the local government. Several factors proved to play a facilitating role during the different phases of preparation and implementation, for example: motivated staff, effective cooperation between organizations, active PR-strategies especially to the organizations involved, and (structural) financial resources for implementation and continuation of the Centre. With regard to the result of the implementation, data so far indicate that the Centres are feasible and successful; the Centre is accessible to professionals as well as to citizens, the targeted population is reached, professionals of the organizations involved are enthusiastic about the cooperation, the attunement of care on clients and the knowledge shared by the different disciplines. Also, citizins reporting to the Centres are positive.

O-011 INCREASING RATES OF COMPULSORY ADMISSIONS IN AMSTERDAM; THE PATIENTS RISK FACTORS

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Introduction: The municipal health service coordinates the administration of all in preservation propositions (IBS) in Amsterdam. We have studied several issues based on these data, among which:
- The annual increase in the number of acute compulsory admissions from 1996 to 2004.
- The demographic patterns in relation to the psychiatric diagnoses and danger criteria.
- The influence of ethnicity on the risk of getting a compulsory admission.

Methods: We studied the 'medical declarations' of all granted in preservation propositions from 1996 to 2004.
Results: In total, 4976 acute compulsory admissions took place in Amsterdam from 1996 '2004, concerning 3657 different persons. The number of all compulsory admissions increased with almost 50% from

428 in 1996 tot 630 in 2004. About two thirds of the admitted persons were citizens of Amsterdam. Among the Amsterdam population, the incidence of first admissions was 4.3 per 10,000 person years and of all admissions 6.4 per 10,000 person years. There was no increase in the number of first admissions among citizens of Amsterdam, but a large increase of subsequent admissions. The incidence of first admissions was highest among persons born in South American ex-colonies. Of all first admissions, 67% were diagnosed as psychotic disorders, 23% as mood disorders and 7% as other disorders. Among admitted persons born in the Netherlands or other Western countries, a relatively low percentage was diagnosed as psychotic disorders and a high percentage as mood disorders. Of all first admissions, in 56% the most important danger was a danger for the patient himself, in 44% for others than the patient. The risk of being assessed a danger to someone else was higher for patients born outside the Netherlands.
Discussion: We would like to discuss different hypotheses based on these results with the audience.

- The increase in compulsory admissions can (partly) be explained by the increase in short-term care at the expense of long-term care.
- Migration is a risk factor for developing serious mental illnesses.
- The higher proportion of psychotic disorders and assessment of a danger to someone else among admitted persons born outside the Netherlands can only partly be explained by a lack of understanding between psychiatrist and patient. Other important factors might be poor social background and marginalization.
- In what respect do different migrants groups in other world cities deal with similar mental health problems?

O-012 HEALTH AND SOCIAL INEQUALITIES: A POPULATION COHORT STUDY IN PARIS AREA

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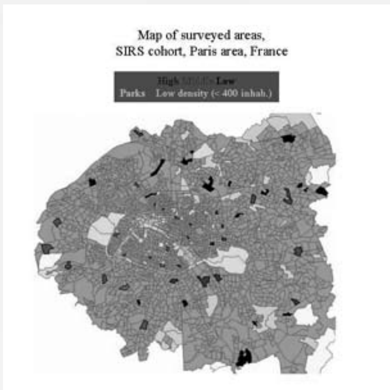
Introduction: The objectives of this socio-epidemiological cohort study are to examine the interrelations between individual social conditions, neighbourhood characteristics, health status and healthcare utilization. It is the first ad hoc population cohort to be set up in Paris area, which is representative of the whole urban core, over samples the poorest neighbourhoods, geocodes the studied people and investigates both objective and subjective social and health dimensions.
Methods: Health dimensions questioned mainly concern health behaviours, health beliefs, some chronic diseases and mental health indicators as well as the types and modes of health services used. The social questionnaire focuses on social support, social network, social capital, social isolation, lifecourse social ruptures. Neighbourhood characteristics are gathered through field observations, census data and existing geographical information systems.
Results: a 3-stage sample was used to include 3000 adults in the cohort: 50 census tracts were randomly selected with a stratified oversampling procedure; 60 households were randomly selected in each tracts and, finally, one adult randomly selected in each household. All participants were interviewed at home, using a 1.5 hour (and more than 450 questions) questionnaire. Language obstacles and health conditions led to the exclusion of less than 15% of the sample. Our preliminary results shows some strong associations between social isolation and mental health conditions and between social network and healthcare utilization. An annual follow-up is planned over (at least) the next 5 years; only such longitudinal data will allow us to disentangle causes and effects mechanisms to explain such associations.
Conclusion: For the first time in the French biggest urban area, precise social conditions and their impact on health are not only studied among excluded populations or poor neighbourhoods but among the whole Paris population, with the opportunity to compare social determinants of health and healthcare along the complete social continuum.



O-015 SOCIAL DETERMINANTS, SUBOPTIMAL HEALTH BEHAVIOUR AND MORBIDITY IN MULTICULTURAL URBAN SLUM POPULATION:AN INDIAN PERSPECTIVE

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Introduction: The benefits of urbanization have eluded burgeoning millions of urban poor living in slums. Urban slums are melting pots of different cultures. The health indicators of urban slum dwellers compare poorly with the rural and urban averages. Indian welfare policy till recently had excluded this vulnerable group. It is only recently that the National Urban Renewal Mission has talked about the plight of this community. Improving their health status requires a frontal, focused, and integrated strategy. Social factors are as important as physical determinants of health. The social environment is not inchoate, but the effect of specific social determinants identified by the International Centre for Health and Society namely social gradient, employment, stress, early life, social exclusion, work, social support, addiction, food and transport on health needs to be studied. This study focuses on social determinants and suboptimal health behavior of urban slums of Surat city that make them vulnerable to diseases and explains their effects on the morbidity status.
Methods: The sample of multifarious slum households (N=518) was randomly selected from seven administrative zones of Surat city of a total population of 2.5 millions. A pre-tested and semi-structured questionnaire was used for data collection. The paper relates to constructed indices on suboptimal health behaviour and social determinants by using the questions on household environment, health seeking behaviour, socio economic status (SES), food and personal habits, social life and physical activity. The data was analyzed using SAS software and a logistic regression analysis was used to predict the relative influences of these indices on the morbidity status across various subgroups of slum population.
Results: The indices on social exclusion, stress, social support, education, SES, employment and addiction to tobacco and alcohol, food habits are low, indicating poor status of the communities. These are also affected by covariates as education, ethnicity, religion, and socio economic status. Social exclusion, stress, addiction, and social support indices are significantly correlated ($p<0.01$) with the suboptimal health behaviour of slum population. Logistic regression analysis reveals that after controlling the socio economic status, and demographic variables along with all social determinant indices, suboptimal health behaviour of urban slums has a significant ($p < 0.01$) influence on the morbidity status.
Conclusions: The study demonstrates sub-optimal health behaviour and morbidity status of slum population; and identifies linked risk factors. The study supports the need for a strengthened public education campaign among disadvantaged urban communities.

O-016 SOCIO-ECONOMIC AND CULTURAL DETERMINANTS OF PHYSICAL INACTIVITY AND OVERWEIGHT AMONG NON-WESTERN MIGRANTS IN THE NETHERLANDS: DOES GENDER MATTER?

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Introduction: In Western European countries, physical inactivity and overweight are generally more preva-

lent among non-Western migrants than in the host population, in particular among migrant women. In order to develop health promotion programs aimed at specific ethnic groups, more information is needed on the determinants of these health related risk factors. In addition, information is needed about how these determinants might differ between men and women, considering the different social context and related gender roles among non-Western migrant men and women.
Methods: From a random sample from the Moroccan and Turkish population in Amsterdam, 359 men and 437 women (aged 15-30), participated in a structured interview including questions about behavioural risk factors, socio-economic position (education and employment status), cultural orientation, social contacts and religion. Physical inactivity was defined as 'not meeting the guidelines for physical activity' (Dutch norm). Overweight was defined as a Body Mass Index of 25 or higher.
Results: Among women, overweight was negatively associated with higher education (0.25, 0.12-0.53). In addition, employed women (0.47, 024-0.94) or women who were following education (0.17, 0.06-0.43) were less often overweight than unemployed women or housewives. Prevalence of physical inactivity was the lowest among women who were culturally orientated towards the host country (0.54, 0.34-0.87). The same was true for women with more 'social contacts with ethnic Dutch' (0.50, 0.31-0.81). Furthermore, women who indicated that religion was moderately important to them were less often physically inactive (0.47, 0.30-0.75) than women who indicated that religion was very important to them. In contrast, among men hardly any associations were found.
Conclusion: Overweight and physical inactivity in migrant women seem to be related more strongly to their socio-economic and cultural position than in men. For health promotion programs to be effective, gender differences in the role of socio-economic and cultural determinants should be taken into account. Among migrant women in particular, programs aimed at reducing overweight and/or stimulating physical activity, should focus on women with low socio-economic status and low orientation towards the culture of the host population, whereas among men, no specific risk groups could be defined.

O-017 ETHNIC DIFFERENCES IN PREVALENCES AND PSYCHOSOCIAL IMPACT OF OVERWEIGHT AMONG ADOLESCENTS IN AMSTERDAM

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Introduction: Overweight and obesity has become a worldwide epidemic. In Amsterdam about a quarter of the children is overweighted. Overweight and obesity can have mayor impact on the physical health of children and adolescents. There is however also some evidence that overweight has negative consequences for the mental health of children.In Amsterdam about 70% of the childen are from foreign decent. It is possible that differences in cultural background and eating habits among migrant groups, lead to differences in prevalences and impact of overweight. We examined the prevalence of overweight in relation to ethnic origin and other sociodemographic variables as well as the relation between overweight, bullying, psychosocial health problems, learning problems and satisfaction with appearance. We did so for boys and girls separately.
Methods: Data on bullying, psychosocial health problems (SDQ), learning problems, satisfaction with appearance and sociodemographic factors were collected by self-report questionnaires administered to 4323 students in the 2nd grade (aged 12-16) of secondary schools in Amsterdam, the Netherlands. Data on weight and length (BMI) were collected by schoolnurses during a periodic health exam. Analyses were conducted using multivariate logistic regression.
Results: The prevalences of overweight were far more higher in migrant adolescents children (30.9%) than in children from Dutch decent (14.4%). Furthermore overweight was related to educational level. Overweight prevalences were especially high for Turkish (44.0%; 41.3%) and Moroccan boys and girls (32.6; 37.0). Overweighted students from Dutch decent had more psychosocial problems, learning problems and were more often bullied than not overweighted adolescents from Dutch decent. Overweighted migrant adolescents had only more often problems with their appearance than not overweighted migrant adolescents.
Conclusion: Migrant adolescents are far more often overweighted than Dutch adolescents but do not seem to have as much problems with it than overweighted Dutch adolescents.

O-018 HIGH PREVALENCE OF AND PREVENTABLE RISK FACTORS FOR VITAMIN D DEFICIENCY IN NON-WESTERN IMMIGRANTS IN THE NETHERLANDS

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Introduction: Vitamin D deficiency leads to impaired bone mineralization, secondary hyperparathyroidism and bone loss, and muscle weakness. It may lead to type 1 and type 2 diabetes mellitus, multiple sclerosis, inflammatory bowel disease and various cancers. Low sunlight exposure, a darker skin, covering of the skin and a diet low in vitamin D and calcium may contribute to lower vitamin D concentrations in non-western immigrants. However, information is lacking concerning the prevalence in various ethnic groups living in the Netherlands, especially in male members of these groups, and on how to prevent this deficiency.
Methods: We performed a cross-sectional study in four large cities in the Netherlands. A random sample of 2397 patients was drawn from patient-files (18-64 years) of ten general practitioners, stratified by sex and ethnicity. Data collection took place from September 2003 till June 2005. General characteristics, sunlight exposure and dietary habits were assessed using questionnaires and blood was drawn to determine serum 25hydroxyvitamin D [s-25(OH)D].
Results: 629 persons (26%) participated in the study. Prevalence of vitamin D deficiency (s-25(OH)D < 25 nmol/l) in all non-western groups was significantly (P < 0.05) higher than in the indigenous Dutch (Turkish 41.3%; Moroccan 36.5%; Surinam South Asians 51.4%; Surinam Creoles 45.3%; sub-Sahara African 19.3%; indigenous Dutch 5.9%). Less men (30.3%) than women (36.8%) had vitamin D deficiency, although this difference was not significant. Ethnic group, age and season were related to vitamin D status, determinants that can not be influenced. After adjustment for these factors, fatty fish, margarine, use of vitamin D supplements, area of uncovered skin, use of tanning bed and use of sunscreen were positively associated with the vitamin D status, whereas dairy products, time spent outside, time of the day outside, holiday in a sunny country and the preference for sun instead of shadow did not. In stratified analyses, we found no effect of area of uncovered skin, fatty fish and margarine in skin type IV (Turkish, Moroccan) and no effect of sunscreen use and season in skin type V-VI (South Asians, Creoles, Africans). We only found a significant effect of gender in the group with skin type IV.
Conclusion: Prevalence of vitamin D deficiency is considerably higher in the non-western groups compared to the indigenous Dutch. For prevention purposes, we recommend more consumption of fatty fish, vitamin D supplements and a larger area of uncovered skin.

O-019 NUTRITIONAL FACTORS ASSOCIATED TO HYPERTENSION IN AN URBAN MIXED-RACE POPULATION IN BRAZIL

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Introduction: As a result of a large wage of migration of African Diaspora from XVI to XVIII century, Ouro Preto City, Brazil, has a high percentage of non-white population living in the urban area. This study aimed to investigate nutritional profile in this mixed-race population and its association with arterial hypertension (AH).
Methods: Out of 37,603, 768 inhabitants >15 years were randomly selected using two-stage sampling frame. Face-to-face interviews, physical, anthropometric and blood determinations were undertaken according to standards. Analyses included: 1. Mass Index (BMI) and Waist Circumference (WC) and their combination to define nutritional risk and to estimate prevalence of overweight and obesity; 2. Validity test and discriminatory power for obesity using: body mass index (BMI), waist circumference (WC), body fat percentage (%BF) (the reference method), and leg-to-leg bioelectrical impedance; 3. Prevalence rate of AH and associated factors using the calculated cutoff points; 4. Comparisons of proportions and areas under the receiver operating characteristic (ROC) curves, besides adjusted odds ratios for quantifying and attributable risk (AR) for measuring the impact of the exposure.
Results: Nutritional risk classified by WC was present in different categories of BMI among women and men. Age and schooling were independently associated with nutritional risk. The new cutoff points for obesity were: 1. for women aged <40 years: BMI of 26 Kg/m2, WC of 84cm and %BF of 34%; for women

aged > 40 years: 28 Kg/m2, 90cm and 37.4%, respectively; 2. for men aged <40 years: BMI of 26.3 Kg/m2, WC of 86cm and % BF of 22.5%; for men aged > 40 years: 26.3 Kg/m2, 89 cm and 24.5%, respectively. The BMI was the method with higher area under the curve (AUC) even when stratified by skin color. The prevalence of AH was 43.8%. The independent factors associated with AH among women were age, low socioeconomic level and blood glucose; for men, were age, non-white skin-color, %BF, glucose and cholesterol. The attributable risk estimates according to the modifiable exposure risk showed a reducing in the AH in women, varying from 29 to 41%; among men from 32 to 57%.
Conclusion: This study showed the importance of using simultaneous nutritional markers with appropriate cutoff points, in a mixed raced-population, for the selection of AH risk groups. Also showed how much AH could be reduced through the implementation of health promotion and care, reducing the burn of premature death by cardiovascular diseases associated with hypertension.

O-020 MICRONUTRIENT DEFICIENCIES IN A MULTI-ETHNIC, URBAN COHORT OF PREGNANT WOMEN: FIRST RESULTS OF THE AMSTERDAM BORN CHILDREN AND THEIR DEVELOPMENT STUDY

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Introduction: It is generally acknowledged that a healthy intrauterine environment, allowing for adequate fetal growth and development, is at the root of a child's health at birth and in later life. Ethnic disparities in health, observed in many populations, may therefore well be established already in pregnancy. One of the pivotal factors for a healthy intrauterine environment is maternal nutrition, which suggests that ethnic differences in nutritional status have consequences for ethnic differences in birth outcome and later health. As a first step in investigating this hypothesis, we explored the nutritional status of a multi-ethnic urban cohort of pregnant women.
Methods: Design: Prospective observational study. Study population: Subsample of the Amsterdam Born Children and their Development (ABCD)-cohort, who donated blood at their first antenatal visit (around 12 weeks' gestation) (n=4,187). Country of birth defined ethnic background: the Netherlands (68%), Suriname (5%), Turkey (3%), Morocco (5%), other non-western country (10%) or other western country (9%). Outcome measures: Serum concentration and prevalence of deficiency of selected micronutrients. Deficiencies were established using a published threshold-value (folate, vitamin B12, vitamin D, ferritin and retinol) or the value of the 10th percentile for the entire population (calcium, magnesium, and zinc). Statistics: Analysis of variance to compare micronutrient serum concentrations and chi-square tests to compare the prevalence of deficiency between ethnic groups.
Results: All non-western ethnic groups showed multiple micronutrient deficiencies, with 5- to 10-fold higher prevalence rates compared to native Dutch and western women. Vitamin B12 deficiency (<203 pg/mL) was highly prevalent among Turkish women (49%), folic acid deficiency (<7 nmol/L) among Moroccan women (16%). More than 60% of the Surinamese, Turkish and Moroccan women, and 45% of the other non-western women, suffered from vitamin D deficiency (< 30 nmol/L), while iron deficiency (ferritin < 15 μg/L) was present in more than one-quarter of thes groups. Although vitamin A deficiency (<0.7 μmol/L) was not observed, serum retinol levels were significantly lower among non-western ethnic minorities than among native Dutch. Low levels of calcium, zinc or magnesium (< p10 cut-off value), lastly, were relatively more common among Surinamese and Turkish women.
Conclusion: Micronutrient deficiencies are a major public health issue in Amsterdam pregnant women from Surinamese, Turkish, Moroccan and other non-western origin. Although further research is necessary to elucidate the exact consequences of these nutritional inadequacies on the child's health at birth and in later life, interventions to improve nutritional status in ethnic minority groups seem warranted.

O-021 CHILDHOOD RISK, SOCIAL SUPPORT AND MENTAL HEALTH PREDICT PHYSICAL HEALTH STATUS IN YOUNG ADULTHOOD

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Using data from the Ottawa Language Study, this paper reports the 20-year health outcomes of 220 parti-

cipants. Individual participants and their parents were asked about the physical health status of each participant, including what medical disorders, accidents or head injuries they have or may have sustained. This information was obtained at each of the four waves of this study, i.e., at age 5, age 12, age 19 and age 25. Here we report on the health outcomes at age 25. Using a cluster analytic approach we identified 9 clinical clusters of co- morbid psychiatric and substance use disorders at age 19 and age 25, namely: Anxiety Disorders, Anxious Drinkers, Depressive Disorders, Depressed Drug Abusers, Antisocial Disorders, Antisocial Drinkers, Problem Drinkers, Drug Abusers and a no- disorder control group. We examine self reported and parent reported health status, including medical illnesses, and accidents according to clinical cluster membership, and mobility status, ie, whether they had moved from their city of rearing in which they lived at the time the study began in 1982. With information obtained at age 5 to identify risk variables, we found strong correlations between age 5 risk variables, and health outcomes at age 25. Those individuals with anxiety, depression or a drug abuse disorder rated their own health as lowest. Social supports and early risks, such as low income, or low education were strong predictors of poor health outcomes. Interestingly, parents' ratings of the health of their offspring showed the weakest correlation with their child's self ratings of their health for those with anxiety and drug use disorders. These disorders in turn had the weakest level of social support. Depressed drug abusers and anxious drinkers reported significantly more medical illnesses than participants with other clinical conditions. Patterns of association between clinical cluster membership and physical health and accidents were evident. For example, about one third of the anxious drinkers reported having asthma and more than 30 percent of the participants reported being in an accident requiring medical attention, or having a head injury with loss of consciousness. This was most common among the antisocial Drinkers. Childhood risks, social support, mental health and mobility predict physical health status in young adulthood. The implications of these findings are discussed.

O-022 SOCIAL CAPITAL, SOCIAL NETWORKS AND HEALTH AMONG THE ELDERLY IN PARIS

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Introduction: Social capital, conceived at both the individual and community levels, has been linked with health outcomes in the literature, though there are some inconstancies in its conceptualization and measure. Moreover, this link is not well known among the elderly. Social capital is defined as 'features of social organization such as networks, norms and social trust that facilitate coordination and cooperation for mutual benefits' (Putnam, 1995). This study explores the impact of individual level of social capital and social network on elderly health, in Paris, using quantitative methods. This study take is part of an urban ecology study of old age in Paris and New York.

Methods: A two degree random sampling of old persons among people aged 75 and older receiving benefits from the national pension found and living at home in Paris, was made after stratification on the neighborhoods of residence (on household's average income and elder density). Face to face interviews were performed at home (N=310). The data analysis considers the impact of social network (measured by using validated scale Social Network Index (SNI) including friends, children and other relatives ties) and three indicators of social capital including both norms (perception of reciprocity and civic trust) and behaviors (social participation) on self perceived health. The analyses were based on logistic regression models including demographic variables.

Results: Social Network Index was lower among women ($p=0.05$), and elderly living alone ($p<0.001$). There is no relation between SNI and income, neither age. High SNI was related with better self perceived health, after adjusting on demographic variables (OR= 1.21 [1.05-1.38]). The three indicators of social capital were not significantly related with self perceived health. A low participation in this study may produce a bias in the association between health and social capital as being healthy and trustful may be a prerequisite for involvement.

Conclusion: This study suggests that social networks exert an effect on elderly health. Examining social capital highlights the need for validated social capital instruments that may be employed at the micro or macro level. While the measures we used were in accordance with previous literature, they remain poorly evaluated.

O-023 WHY ARE YOUTH ON THE STREETS? : FINDINGS FROM ENHANCED SURVEILLANCE OF CANADIAN STREET YOUTH (E-SYS)

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Introduction: Homeless youth have often been found to come from backgrounds high in stress and challenging living situations. Street youth (SY) become homeless for a variety of reasons; top among them is the situation and living conditions at home. Life on the street can therefore become a solution to an intolerable family and institutional situation.

Methods: Enhanced Surveillance of Canadian Street Youth (E-SYS) is a repeated cross-sectional survey carried out in 1999, 2001 and 2003 to monitor risk determinants and examine associated behaviours in this high-risk population. SY aged 15-24 years inclusive, who had spent at least 3 consecutive nights away from home were recruited in 7 cities across Canada. Information was collected in a nurse-administered questionnaire.

Results: A total of 4728 SY were recruited: 1645 in 1999, 1427 in 2001, and 1656 in 2003. Most youth reported unstable living conditions while growing up: 13% and 15% of youth in 2001 and 2003 respectively reported that their family was previously homeless, over one third reported their parents were arrested and jailed while more than half reported their parents abuse each other either verbally or physically and display fits of anger. In 1999 and 2001 respectively, youth reported leaving home mostly because of an inability to get along with parents (23.7% and 16.8%), being thrown out of the house (13.9% and 15.1%), seeking independence (17.6% and 15.5%) and trouble with the law (5.3% and 3.6%).

Other reasons include abuse, drug use and being placed with social services. The proportion of youth who reported leaving home because of abuse was high; 27.9% in 1999, 24.1% in 2001 and 19.1% in 2003. Abuse was described as physical, sexual and emotional (including neglect). In 2001, more females than males reported abuse as the main reason they left home (14.1% vs. 9.2%, $p<.002$) while more males than females reported trouble with the law (5.0% vs. 1.7%, $p<.002$) as the main reason for leaving home. Interactions with the social service system - social worker (>60%), foster care (>35%) and group home (>40%) was high. In 2003, more than half (58%) reported running away from foster care at some point.

Conclusions: Common with many homeless youth are troubled and complex backgrounds characterized by unsupportive home lives involving neglect and conflict. Majority of street youth reported leaving home because of family problems, being thrown out and abuse. These findings have significant implications for interventions in the SY population.

O-024 DISCREPANCIES BETWEEN PERSONAL INCOME AND NEIGHBOURHOOD STATUS: EFFECTS ON CHANGES IN PHYSICAL AND MENTAL HEALTH

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Introduction. During their life course, older persons' income level may become discrepant with the socio-economic status of their residential environment. This study examines how such discrepancies affect declines in their physical and mental health.

Methods. Using 1992-93/2001-02 data from the Longitudinal Aging Study Amsterdam, 1228 non-institutionalised persons aged 64-94 years were classified based on self-reported income and neighbourhood status in 2001-02. Two categories defined discrepancies: discrepant-low (DL, low income in high status neighbourhood, 6% of sample), and discrepant-high (DH, high income in low status neighbourhood, 8% of sample). Both categories were compared with the same reference category: matched-high (MH, high personal and high neighbourhood income status, 10% of sample).

Results. The DL category mainly lived in rural areas, and had experienced significant income declines over the past nine years. The DH category predominantly lived in large cities, where neighbourhood status had significantly declined over the past nine years. The DL category compared unfavourably with the MH category on physical and cognitive decline. The DH category compared unfavourably with the MH category only on physical decline.

Conclusion. Discrepancies between personal income level and socio-economic status of one's neighbourhood can be attributed to relatively recent changes in one of these two factors, supporting the view that

the relation between neighbourhood and health is a dynamic one. It is concluded that living in a neighbourhood that has grown discrepant with ones income unfavourably affects health.

O-025 CULTURE AS RESILIENCE: EXAMINING THE LINK BETWEEN URBANIZATION, IDENTITY, AND SMOKING AMONG BLACK WOMEN IN SOUTH AFRICA

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Background: As cigarette smoking has decreased in the United States, there has been concern about rising rates of smoking in developing countries. Research suggests that increasing urbanization, such as that underway in South Africa, may contribute to smoking. Transitioning into an urban area from a rural area involves psychosocial changes in self-definition that may have implications for increased smoking. For example, urban environments may conflict with unique cultural identities, particularly for women for whom cultural beliefs tend to be strongest. In this study, we examine how transitioning to urban areas may influence women's cultural and health identities, and, in turn, their smoking behavior.
Method: Using a randomized sampling strategy, we recruited 1,314 black women who were currently living in one urban township in Cape Town, South Africa. Trained interviewers administered a cross-sectional questionnaire to women in their native language, Xhosa. The two primary predictors are Xhosa (cultural) identity and health conscious identity. Both were measured using 2-item, 5-point scales. We assessed women's urban transition by asking them the type of area (rural, city) where they were born and how long they had currently lived in Cape Town (a large city). Using multivariable regression, we examine relationships between cultural and health conscious identity & smoking behavior (outcome) for people who are from cities and currently live in a city and for people who moved to cities from rural areas.
Results: Results show that Xhosa identity is significantly correlated with health consciousness. Those who transitioned from rural areas to a large city maintain strong Xhosa identity that significantly protects them against engaging in smoking once they have transitioned to an urban area (OR=0.82; CI: 0.73, 0.93). Those from both rural areas (OR=0.85; CI: 0.74 ' 0.98) and cities (OR=0.79; CI: 0.69 ' 0.97) show significant associations between health consciousness and not smoking. In a two-predictor model (with Xhosa and health conscious identities), strong cultural identity remains significantly associated with not smoking, while health conscious identity did not for those from rural areas. The opposite was true for those from cities.
Conclusion: Cultural identity and health consciousness may contribute to resilience against influences encountered in the transition to more urban areas. Therefore, to the extent that cultural beliefs support healthy behaviors, they can be used as effective tools/resources for general health promotion. Identifying how and when identity prompts resilience in transitioning societies is an important area for additional research.

O-026 RACIAL RESIDENTIAL SEGREGATION AND ADVERSE BIRTH OUTCOMES

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Introduction: The disparity between black and white women's adverse birth outcomes has been subject to much investigation, yet the factors underlying its persistence remain elusive, which has encouraged research on neighborhood-level influences, including racial residential segregation. Racial residential segregation has been a prominent feature in many major U.S. cities, but segregation in smaller cities has rarely been considered. This work addresses three main questions: 1) are black and white women living in Wake County, NC differentially exposed to each other? 2) is differential racial exposure associated with preterm birth outcomes? And 3) at what scale of geographic aggregation are segregation effects most pronounced? METHODS. The authors examine racial segregation in Wake County NC census tracts (1999-2001) using multilevel logistic models. Geocoded vital records and US Census data (2000) were analyzed. PTB was defined as birth at < 37weeks (& < 3888g) gestational age. Residential segregation was defined as racial exposure, or the average probability of contact between racial groups residing in the same census tract. Race-stratified random effects logistic models with fixed slope predictor values and randomly distributed tract-specific intercepts were fit; models were adjusted for maternal age, education and tract-level deprivation. Results: On average, white women are more isolated from black women (mean

probability = 0.15) than black women are from white women (0.37). Exposure varies by maternal education, with > high school educated whites have less exposure to blacks (0.14) but more educated blacks having more exposure to whites (0.43). In adjusted models, increasing exposure to black women was associated with increased odds of PTB (Odds Ratios [OR] = 1.77; 95% Confidence Intervals [95% CI]: 1.2, 2.8), but this relationship was attenuated following adjustment for maternal and area-level covariates. In unadjusted models, increasing exposure to white women was associated with decreased odds of preterm birth for black women (OR= 0.54, 95% CI: 0.5, 0.9). This association remained significant for the highest tertiles of exposure, following adjustment (OR=0.57; 95% CI: 0.47, 0.97). The results of the different scales of analysis will be reported. IMPLICATIONS. Differential exposure to resources and disamenities are two mechanisms by which racial residential segregation may influence birth outcomes to women living in cities. Understanding how neighborhoods may affect the racial disparity in preterm birth has important implications for public policy, urban health and preterm prevention efforts.

O-027 YOUTH AND HIV/AIDS: THE CHALLENGES AND WAY FORWARD

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Issues: While not recognized at the onset, the HIV/AIDS epidemic is now clearly worst among youth. Over a period of 20 years, more than 60 million people have been infected with HIV. In some Africa countries more than one young woman in every five is living with HIV/AIDS. Everyday, over 7,000 more young people become infected and worldwide, people ages 15-24 accounts for about 30% of all PLWHAs. Such numbers underscore the urgency of addressing HIV/AIDS among youth who are vulnerable to HIV/AIDS because of the physical, psychological, social, and economic attributes of adolescence. Many adolescent are at risk because some parents, and adults believe that sex education encourages sexual experimentation and AIDS education has been excluded from schools' curricula making it difficult for adolescents to learn about HIV/AIDS and how to protect themselves and others. Also the traditions that shape young people's behaviour have weakened in the face of urbanization, new attitudes towards sexuality and the break down of the extended family.

Description: In attempt to bridge this gap, Action E3 in 2001 launched its HIV/AIDS program in six states. Students, parents, educators, counselors, health care workers, religious and community leaders were mobilized, trained and provided with HIV/AIDS information. Combinations of approaches/strategies adopted include advocacy, education and communication, Access to condom, peer education, VCCT and referral. Over 20 schools, 20,000 students and two thousand parents and adults were reached. The program stimulated exchange of views and eliminated various communication barriers between parents and young people.

Lesson learnt: Reviews of program evaluations find that HIV/AIDS education programs do not hasten the start of sexual activity, do not increase the frequency of sex, and do not increase the number of sex partners among adolescents. Break down of traditional cultures has left many parents with the challenge of talking to their children about HIV/AIDS as well as sex, and many are ill prepared.

Recoomendation: Addressing the HIV/AIDS epidemic among young people requires reaching not only youth themselves but also others who influence their lives. Parents and other adults/family members can help prevent HIV/AIDS among young people.

O-028 'KEEP IT ALIVE': CREATING AN HIV PREVENTION SOCIAL MARKETING CAMPAIGN FOR AFRICAN AND CARIBBEAN PEOPLE IN ONTARIO

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Introduction: In 2003, African and Caribbean people accounted for 13% of the HIV cases in Ontario yet they comprise less than 4% of the population. Understandably, African and Caribbean people in Ontario have not been part of the larger HIV discourse due in part to community HIV stigma and other sociopolitical factors facing African and Caribbean communities. Through a stakeholder consultative process, the African and Caribbean Council on HIV/AIDS in Ontario (ACCHO) was developed to address HIV among African and Caribbean communities.

Methods. A social marketing campaign, funded by the AIDS Bureau, Ontario Ministry of Health and Long-Term Care, was developed by ACCHO. A communications company was hired to create the campaign materials. Using ACCHO's strategy as a guide and through discussions/consultations, the campaign targeted individuals between the ages of 18 ' 55 and urban settings in Ontario. It addressed HIV stigma, testing and prevention, with a particular focus on young people, homophobia, care and support in the realm of friendship, family and self-respect. Telephone surveys and focus groups with African and Caribbean people were conducted to help shape the campaign content and messaging. The results of that research, scientific evidence and discussion at the ACCHO table were incorporated into the final campaign.
Results: The awareness campaign was launched in Toronto in June 2006. A staged launch including billboards, community newspaper advertisements, radio public service announcements and community events will continue throughout the summer 2006 in Toronto and other regions of Ontario. The campaign directs the audience to a website where further information can be obtained.
Discussion: Although a formal evaluation of the HIV campaign has not commenced, there has been important feedback from the community launch and from the traffic that the website has generated. Preliminary evidence suggests that the campaign is well accepted since it captures the realities of African and Caribbean life in Toronto. It is hoped that the highly visible media presence will stimulate people to access services provided by AIDS Service Organizations, and to create dialogue around issues that are often ignored. Community awareness and normalizing images of Black homosexuality, 'spreading the word' on HIV, community and individual responsibility, and fostering a sense of caring will help 'keep us alive'.

O-029 COMMUNITY BASED HIV PREVENTION: EXPERIENCES IN AMSTERDAM, THE NETHERLANDS

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Issues: Figures from the HIV Monitoring Foundation 2003, showed a rise in registered HIV infections within African (Sub-Sahara), Surinam and Dutch Antillean communities in Amsterdam. The responsible alderman picked up this indication. GGD Amsterdam wrote a project proposal in order to secure funding (under spending care 2003): the purpose of creating methods whereby community based organizations or self-organizations can create and conduct preventative activities. It has to be acknowledged that it is the first time that this approach was chosen on a large scale. The project was carried out from 2004 till 2005, and based on the lessons learned this approach will be continued until at least 2009.
Description: The program aims to raise awareness of the HIV/STD issue and test policy in the community with active participation from local organizations and key figures of the community, and a better connection between cultural activities from diverse target groups. This means activities by local organizations themselves with assistance from the GGD Amsterdam. 44 proposals from different community based organizations were received, from these 24 were granted. The activities were divers. One quarter of the proposals was from religious based organizations or churches. A variety of educational programmes have been used, like theatre, workshops, outreach programmes etc. Also a diversity of media have been used like local radio, local television etc. The GGD Amsterdam organized a series of supplementary trainings to improve the competence and knowledge of the organizations.
Lessons learned: To give community-based organizations the opportunity to be part of a HIV prevention strategy has shown that it raise the involvement of a community. Moreover, it gives the community the possibility to take its responsibility in this issue. At the same time it shows that not every public health problem has to be addressed from top down, and that policy from municipal services can be carried out by putting communities in charge.

O-030 EXPANDING THE SUPPORT NEEDS PROFILE OF LONG-TERM SURVIVORS OF HIV: IMPLICATIONS FOR HIV-PREVENTION, AIDS SERVICE ORGANIZATIONS AND COMMUNITY HEALTH CENTRES

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Introduction: AIDS-related bereavement coupled with negative health and social expectations have been linked in recent studies with HIV-symptom onset and increased mortality among people living with HIV. Social support and social environments are two primary determinants of health - both of which are indica-

ted as key elements in grief resiliency and recovery - a noted effective intervention to address AIDS-related bereavement among Long-Term (LT) Survivors of HIV/AIDS.
Methods: This community-based research project brings together the AIDS Bereavement Project of Ontario (ABPO) and researchers trained in community health and social epidemiology. The research project examined the impact of ABPO's Long-term AIDS-related Multiple Loss Survivor's Intervention Framework, 'Survive and Thrive,' on LT-Survivor's experience of social isolation and community re-integration. The intervention involved a series of 2-day retreats with LT-Survivors from across the province of Ontario, Canada. Matched-paired analysis examined depression, social isolation, community involvement and re-investment variables through self-completed quantitative instruments and a qualitative reflection tool from baseline, 3-weeks and 3-months after the intervention.
Results: Retreat participants (N=67) were primarily male (79%), HIV+(86%) and self-identified as gay (64%) or straight (19%); were between 34-63 yrs; and among HIV + persons were living with HIV for 12 years (6-18). Survivors report experiencing an average 157 AIDS-related; 76 non-AIDS-related deaths; and multiple non-AIDS related losses: career, friends/relationships, income, independence, and housing. Three-weeks after the intervention participants were significantly less likely to feel depressed, lonely, and guilty for still being alive; less worried/concerned about their future; less like withdrawing from social activities; and that their grief/loss no longer affected their sex-drive as much as before. Improvements were sustained 3 months after the retreat. A National HIV-prevention strategy was formulated and submitted to the Public Health Agency of Canada as the Action Outcome from this community-based research project.
Conclusion: Findings illustrate the effectiveness of ABPO's Intervention Framework, demonstrated through measurable indicators of marginalized identity, social isolation; and qualitative improvements in Survivor's abilities to balance loss and hope with resiliency and reinvestment in sexual and social relationships. In consideration of these findings we outline implications for HIV support and prevention, whereby AIDS-related bereavement support addresses cognitive-behavioural factors related to HIV risk-behaviours using a social determinants of health approach. Community Health Centres and AIDS Service Organizations serve as the best situates to provide AIDS-related bereavement support because these organizations are primarily located in urban environments accessed by Survivors, where the greatest impact on averted infections may be realized.

O-031 ONLINE SYPHILIS TESTING: THE USE AND EFFICACY IN AMSTERDAM OF FREE OF COST AND ANONYMOUS SYPHILIS TESTING THROUGH THE INTERNET

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Objectives: The aim of this study was to determine the feasibility and usage of the intervention and its efficacy in detecting men who have sex with men (MSM) with a syphilis infection. In addition, we examined the effect of Implementation Intentions (II) by way of a randomised trial (RT). II is a self-regulatory strategy that promotes the intention of goal directed behaviour by creating 'practical intentions' towards a certain behavior: planning in advance when, where and how one will complete a self-assigned goal.
Methods: The study was conducted over 15 months. Active recruitment took place only in the first 4 months by way of banners motivating men to visit the website www.syfilistest.nl (presently still available). The website provided the possibility to download a referral letter with which MSM could get tested for syphilis, free of charge and anonymously in a non-clinical setting. A week after the test, participants could retrieve their results online. To determine feasibility and efficacy of the intervention we compared the online sample with a sample of the STD clinic. For the RT, participants were divided in a group that received the II referral method and a group that received a standard referral method.
Results: During 15 months the website received 25671 visitors, 898 downloaded a referral letter and 10.4% (93/898) got tested, with a monthly average of 15 tests in the bannered period opposed to three tests in the non-bannered period. Of the testers, 96% (90/93) obtained their test results online. Of the testers, 15.1% (14/93) had a positive serology versus 21.9% (1284/5852) at the STD clinic. Among the testers, 35.7% (5/14) had an early syphilis and 14.3% (2/14) a (late) latent syphilis, compared to 20.7% early and 4.6% (late) latent syphilis at the STD clinic. Resulting in 50% (7/14) of the men tested online receiving treatment compared to 24.8%(319/1284) in STD clinic. Of those tested positive, 33% (3/10) never visited

the STD clinic before. The men who completed the II referral method and downloaded a referral letter had a 2.7(CI 1.73 - 4.19) higher chance to get tested.
Conclusion: The online testing for syphilis is feasible and successful in detecting men with an early or (late) latent syphilis. However more promotion of the website is needed to increase the number of men getting tested. Furthermore, the concept of II could contribute more to efficient STD testing online by selecting the participants with more serious test intentions.

O-032 THE GEOGRAPHY OF DISEASE RISK IN AMERICAN INNER-CITY TRUCKSTOPS

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Introduction: While mounting evidence recognizes the profound impact of social and physical environments on public health, the spread of infectious pathogens via multimodal risk networks of truckers in North America, in particular, involves multiple and intertwined infection channels. Our ongoing research with truckers in urban settings indicates that complex and oftentimes interacting factors such as occupational stressors, sex partner concurrency and bridging, and substance misuse along with spatial attributes and structural properties pose high risks for sexually transmitted and bloodborne infections (STIs/BBIs) not only for truckers but for their sex contacts and other populations in inner-city urban areas as well. Within this framework, this paper elucidates the underlying mechanisms of the physical and social topography of inner-city truckstop settings in the U.S. that trigger, exacerbate, and sustain the high risks of long-haul truck drivers and their sex and drug partners for acquisition and diffusion of STIs/BBIs.
Methods: Respondent-driven sampling and diverse methodologies were utilized to collect primary data on the role of social and spatial geography in disease risk among truckers and their sex and drug contacts in urban inner-city areas in two major U.S. metropolitan areas. Ethnographies and epidemiological surveys were used to collect data from truck drivers, female sexworkers, male truckchasers, and intermediaries (along with biological specimens).
Results: Grounded in social ecological and social cognitive theories, findings: (1) provide a comprehensive map of the sociocultural organization, structure, and topography of the physical context of truckers, their sex and drug contacts, and other urban populations and their multiple exposures to STIs/BBIs; (2) delineate the ways this high-risk space increases the vulnerability of these populations to STIs/BBIs; and (3) ascertain interactions among structural, spatial, sexual, network, psychosocial, and sociodemographic properties and processes and their roles in STI/BBI acquisition and transmission among truckers and members of their risk networks.
Conclusion: Preliminary analyses not only support the prime importance of social and spatial contexts in disease risks but also corroborate the multiplicity of infection risks and complexity of transmission at high-risk environments of urban truckstops. Additionally, findings provide the basis for the development of effective risk-reduction interventions that address the complexities of the infectious disease risks of urban risk networks of mobile populations.

O-033 IS HEIGHTENED OBESITY RISK IN HIGH-POVERTY URBAN NEIGHBORHOODS DUE TO NEIGHBORHOOD DIFFERENCES IN FOOD STORE AVAILABILITY?

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Introduction: Several recent studies have documented associations between neighborhood socioeconomic position and residents' body sizes. This study examined whether the greater likelihood of having an unhealthy body size among residents of higher poverty neighborhoods was due to neighborhood differences in food store availability.
Methods: The study draws on data from a probability sample survey of 919 African-American, Latino, and White residents of Detroit Michigan, the 2000 U.S. Census, and in-person observations of food stores. Multilevel regression models were used to relate neighborhood (census block group) poverty level and store availability to obesity and abdominal obesity, after adjustment for neighborhood racial composition and size and respondents' demographic characteristics and non-dietary health-related behaviors.

Results: Living in a high-poverty (vs. low-poverty) neighborhood was associated with a two times greater odds of abdominal obesity (p=0.011) and 56% increase in the odds of obesity (p=0.064). The presence of a specialty store in the neighborhood was associated with a 44% and 35% reduction in the odds of abdominal obesity and obesity, respectively (p=0.004, p=0.033). Respondents living in neighborhoods with at least five liquor stores (vs. neighborhoods with 0-4 liquor stores) had a 53% increased odds of being obese (p=0.018). Convenience store availability was associated with an approximate 30% increased risk of obesity and abdominal obesity (p=0.088, p=0.096 respectively). Grocery store availability was not associated with either obesity or abdominal obesity. There were few differences in store availability by neighborhood poverty level in this sample, and the study provided only modest empirical support for neighborhood food store availability as a pathway by which living in a high-poverty neighborhood contributed to an unhealthy body size.
Conclusions: The availability of stores offering a wide selection of inexpensive, energy-dense foods and relatively few healthful alternatives may contribute to an obesogenic environment. Improving metropolitan-wide planning for retail food outlet siting across neighborhoods and increasing healthful food options at stores (e.g., liquor stores) already present are important short-term primary prevention strategies of obesity. However, such strategies in and of themselves may be insufficient to curb obesity and related chronic conditions that disproportionately affect residents of high-poverty urban neighborhoods. The findings suggest the importance of further research into the complex pathways through which high-poverty urban neighborhood environments increase residents' risk for obesity. Efforts to eliminate economic inequalities are critical counterparts to more local strategies and can contribute to healthy body sizes in the population long-term.

O-034 SOCIO-ECONOMIC DIFFERENCES IN ACTUAL AND PERCEIVED ENVIRONMENTAL CONDITIONS IN THE NETHERLANDS-AN ENVIRONMENTAL EQUITY STUDY

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Introduction: The National Institute for Public Health and the Environment (RIVM) reported that urban residents are more often annoyed by noise and malodour, feel less healthy, and are less satisfied with their residential situation compared to rural residents. Additionally, they reported that of all types of neighbourhoods, quality of the local environment is worst in the postwar urban neighbourhoods, which are more often inhabited by people with a lower socio-economic status (RIVM, 1997, 2000). These people generally have a weaker health, which may make these people more vulnerable for health impacts of environmental risks. To further investigate the association between environmental conditions and socioeconomic status, RIVM and University of Utrecht performed a research on environmental equity, the distribution of environmental burdens and benefits among socioeconomic groups. An important objective was to investigate differences among these groups in local environmental conditions and in the way citizens perceive them, both in the Netherlands as a whole and in selected urbanized regions in specific (the Rijnmond region and the Amsterdam Airport ('Schiphol') region).
Methods: Descriptive statistical analyses were performed on secondary nationwide data to analyse this topic. Environmental conditions considered included traffic noise, NO2, external safety risks, and the availability of public green space. These indicators were analysed separately and in combition. Perception data included annoyance and satisfaction with the neighbourhood, among others. Income was selected as main socio-economic indicator.
Results: The results confirmed that environmental conditions are worse in the selected urbanized regions compared to the nationwide situation. Socio-economic differences in exposure to negative environmental conditions- such as levels of traffic noise and NO2 higher than the legal standard- are generally limited. However, higher incomes have more access to positive environmental conditions, particularly to the accumulation of these. People with a lower income are more often dissatisfied with (environmental quality in) their neighbourhood than people with a higher income, who also seem to attach more value to good environmental conditions.
Conclusion: People with a higher socioeconomic status have more access to positive environmental con-

ditions compared to people with a lower socioeconomic status. Since they often have more options to move away from and defend themselves against unwanted situations, (health) inequalities may increase. Particularly in urban regions, where open space is scarce, and environmental pressure is high, this may occur. If this is considered to be unacceptable, policymakers are adviced to take action through regulations and by empowering weaker groups in society.

O-035 NEIGHBOURHOOD CHARACTERISTICS, WALKING AND DIABETES MELLITUS IN A LARGE CANADIAN URBAN CENTRE

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Introduction: Diabetes affects 135 million people worldwide. It is a rapidly growing cause of disability and premature mortality that is linked to obesity and physical inactivity. Features of residential neighbourhoods may be important determinants of physical activity and ability to access healthy foods. Our objective was to determine the relationship between neighbourhood characteristics, walking, and the prevalence of diabetes in an urban environment.
Methods: The setting was Toronto, Canada's largest city with a population of approximately 2.5 million. The design was an ecological analysis using the population-based Ontario Diabetes Database, the world's largest validated registry of people with diabetes. Characteristics of Toronto's 140 neighbourhoods were derived from the 2001 Canadian census and data obtained from the City of Toronto. The percent of trips made by walking was obtained from a 2001 Toronto transportation survey. An Activity Friendly Index was constructed using neighbourhood car ownership, population density, commercial service density and spread and crime, all equally weighted. Spearman correlation coefficients were used to examine associations between variables and ordinary least-squares regression was used to control for neighbourhood income, education and immigration.
Results: 5.5% of Torontonians had diabetes in 2001. Age-adjusted neighbourhood rates ranged from 2.8% to 7.6%. The percent of trips made by walking was strongly associated with cars per household (-0.608), population density (0.713), commercial services per capita (0.469), drug and violent crimes (0.444), average distance to the nearest five commercial services (-0.622) and the Activity Friendly Index composed of all five factors (0.596), all p-values < 0.01. The Activity Friendly Index was inversely associated with age-sex adjusted diabetes rates (-0.235) and this relationship remained significant after controlling for neighbourhood income, education and immigration ($p < 0.0001$).
Conclusion: Neighbourhood characteristics were strongly associated with walking in a large urban centre. An Activity Friendly Index incorporating car ownership, population density, service density and spread and crime was associated with the neighbourhood prevalence of diabetes, with higher index values corresponding to lower diabetes rates. These analyses do not permit causal inferences but it is very possible that neighbourhood environments act as barriers and facilitators to walking and other physical activities. Neighbourhood environmental factors may be important avenues for intervention to enhance physical activity and lower rates of diabetes and other obesity-related conditions.

O-036 DISPARITIES IN PREVENTABLE HOSPITALIZATIONS IN LOS ANGELES COUNTY, CALIFORNIA: HOW MUCH IS DUE TO NEIGHBORHOOD DIFFERENCES IN ACCESS TO CARE?

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Introduction: Disparities in health outcomes have been shown to exist at the individual level. In 2000 for example, African Americans living in California were two and one half times as likely as Whites and Latinos and four times more likely than Asians to be hospitalized for Ambulatory Care Sensitive Conditions (ACSC, a.k.a. Preventable Hospitalizations). There is a known relationship between the supply of physicians in a given geographic region and the utilization of health care services. This paper seeks to determine how much of the observed disparities in preventable hospitalization rates at the community level are accounted for by differences in community accessibility to health care resources.
Methods: To address the research question, we used outcome data on early preventable hospitalizations

(from the California Hospital Discharge Database, 2000), community control variables (predisposing, enabling, and need based), and three health care resource based predictor variables: 1) physician to population ratios, 2) physicians per road-way-mile, and 3) ratios of low income population to safety net clinics, to determine whether community variation in preventable hospitalizations is explainable by accessibility to providers. We fit the most parsimonious negative binomial regression model to analyze this relationship for the 94 urban Medical Service Study Areas in Los Angeles County, California. Early avoidable hospitalizations were defined as those occurring among persons age 45-64 for, 1) congestive heart failure, 2) chronic obstructive pulmonary disease, 3) diabetes and 4) hypertension.
Results: Results indicate that when community predisposing, enabling, and need based characteristics are controlled for, the three health care resource measures are highly significant (doctors offices per 1000 persons, P=.000, Exp.Beta=.9259, doctors offices per road-way-mile, P=.000, Exp.Beta=1.1990, safety net providers per 10,000 low income persons, P=.000, Exp.Beta=1.3025) The model explained 13% of the variance (Pseudo r-squared=.1267) and was highly significant overall(Chi2=.000).
Conclusion: There is a relationship in Los Angeles County between the supply of physicians in an area and hospitalization rates for ambulatory care sensitive conditions. It appears that populations that have greater access to physician supplies have fewer avoidable hospitalizations. Conversely, greater access for low income persons to safety net clinics (publicly funded) is associated with higher ACSC hospitalization rates as is geographic access to physicians' offices. Given that low income areas within Los Angeles County are also more densely populated and health care resource poor, further analysis of the linkages between Americas' urban poor and local health care systems is needed.

O-037 MICRO-ENVIRONMENTAL AND MACRO-ENVIRONMENTAL RISK FACTORS FOR URBAN VISCERAL LEISHMANIASIS IN A LARGE CITY IN BRAZIL

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Visceral leishmaniasis is one of the most important vector borne diseases in the world. The objective of this paper is to describe the spatial distribution of visceral leishmaniasis in the Belo Horizonte Metropolitan Area, between 1994 to 2004 and its association with some urban micro- environmental and macro-environmental factors. Because of the number of events are small and the rates are unstable, we built maps of areas using the Spatial Bayesian Empirical approach. We also detected clusters space-time for high and low rates and we run a Poisson regression model, which dependent variable was the incidence rate for each city. To study the micro-environmental factor associated to the neighborhood we conducted a case-control study. We built four scores to characterize the micro- environment: indoor characteristics of the home, outdoor characteristics of the home, animals inside the house, animals in the neighborhood, and level of urbanization of the area. During the period of study, 1177 cases were reported. The rates increased in all cities. The disease sprayed from the Center to East. We observed 4 clusters space'time, 2 for high rates and 2 for low rates. The follow macro-environmental variables were statically associated to a larger number of cases: adequacy of climate to produce banana plant, average precipitation less than 1500 mm and a kind of vegetation called cerrado. A total of 106 neighborhood and 60 hospital controls were identified for 109 cases. Among the cases, 69 (63.3%) were men and 40 (36.7%) were women. Most of cases were under fifteen years old (64.22%) and only 5 cases were over 45 years old. Outdoors characteristics and the presence of animals in the local area were significantly associated with the odds of leishmaniasis in our sample. We found a significant interaction between gender and age. Male sex was more strongly associated with leishmaniasis in persons 15 or older than in persons under 15. Our study suggest that the local government needs to evaluate integral and contextual factors associated to the occurrence of visceral leishmaniasis and this paper brings some contribution to this discussion.

O-040 ETHNIC AND GEOGRAPHIC DIFFERENCES IN ACCESS TO FREE, UNIVERSALLY ACCESSIBLE GENOTYPIC RESISTANCE TESTING IN ONTARIO, CANADA

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Purpose: Access to HIV-related interventions has often been inequitable. We examined differential use of

genotypic resistance testing (GRT), a new advance in the care of people living with HIV with a particular interest in ethnicity and geography.
Methods: We studied participants in the Ontario HIV Treatment Network Cohort Study, a longitudinal study of people receiving care in primary and specialty clinics. Clinical and demographic data were collected prospectively through clinical chart review. Administrative data regarding GRT testing were obtained from the provincial Ministry of Health, which records virtually all tests in Ontario. We included participants with complete medication data who could be linked deterministically between the two sources. We designated a participant as eligible for GRT when they met guidelines pertaining to viral load levels and medication history. Individuals were censored if they died or at the time of last data collection. We used time-to-event analysis and analyzed potential correlates using the log-rank test and Cox proportional hazards method.
Results: Of 489 evaluable participants, 252 (52%) had a GRT. The median (interquartile range) of time to GRT testing was 150 days (56 to 385). In the entire cohort, the mean (+ standard deviation) age was 43.6 (+ 8.6), 89% were men, 16% were non-white, 79% had a high school education or higher, 13% had a history of injection drug use, and 42% lived in Toronto, the biggest city in Ontario. The median time since HIV diagnosis was 8.9 years (IQR 6.2 to 11.6); 92% had used combination antiretroviral therapy, and 31% had a previous AIDS-defining condition. At GRT eligibility, the mean viral load was 4.30 log10 copies/mL (+ 0.75) and the mean CD4 count was 344 cells/mm3 (+ 248). In univariate analysis, early access to GRT was associated with non-white race, residence in Toronto, a history of past AIDS, and low CD4 count.In multivariable analysis, the relative hazard of having an early GRT was 1.81 (95% confidence interval 1.40, 2.34) for Toronto residents, 1.35 (0.98, 1.84) for non-white participants, 1.25 (0.95, 1.64) for participants with a history of AIDS, and 1.05 (0.99, 1.13) for every 100 cells/mm3 decrease in CD4 count.
Conclusion: Our results suggest that access to GRT was delayed for HIV-positive participants living outside of Toronto. Paradoxically, we found that non-white participants may have had enhanced access to GRT testing, which might suggest that systemic barriers for non-white participants may be less important in the context of universal public health insurance.

O-041 THE IMPLICATIONS OF MIGRATION FROM SUB-SAHARA AFRICA TO THE UK ON HIV/AIDS SERVICE PROVISION IN LONDON AND URBAN CENTRES IN THE SURROUNDING HOME COUNTIES

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This paper looks at the implications of increased migration from sub-Sahara Africa on HIV/AIDS services in London and adjacent Home Counties towns in Hertfordshire, Bedfordshire and Buckinghamshire. It draws data from two main sources: a) three qualitative studies on HIV, health and social care needs among African communities in London and the home counties that the author worked on as part of a research team, and b) critical literature from many sources, including the Department of Health, Health Protection Agency and Greater London Authority available on London and the home counties about this subject. In the past, numbers of migrants from sub-Sahara Africa to the developed world were small. The UK, as with many developed countries, recently has been experiencing large increases of sub-Sahara African migrants. The size of the 'black African' population more than doubled between the 1991 and 2001 censuses (from 212,000 to 480,000). Migration has been important in this rapid increase of the African population in England. Over 3/4 live in Greater London, with the highest numbers in Inner London boroughs (8.3% of the population). In Outer London, the percentage is 3.4%. London is also disproportionately affected by the burden of HIV, with 60% of all UK cases. Africans are the largest single ethnic group most affected by HIV in the UK. Evidence suggests that most HIV cases in African communities are heterosexually transmitted, possibly acquired in high prevalence countries in Sub-Sahara Africa. HIV patterns among Africans in London and the UK reflect the pandemic in sub-Sahara Africa. Thus, migration seems to be at the centre of the pandemic dynamics among Africans in the UK. HIV transmission among Africans in London is compounded by the capital's health divide between most affluent and deprived communities, reflected by wealthy and privilege, poverty and deprivation, respectively. Evidence suggests a correlation between poverty, social exclusion, social marginalisation and risk factors in HIV infection. In addition, the increase in onward internal migration of Africans to the Home Counties where HIV services are less developed creates

new challenges for public health in these adjacent towns. Thus, whilst international migration has always posed real challenge to healthcare services in London, migrants' onward internal migration to new towns calls for additional strategies. Therefore, understanding the intersection of globalisation, migration and health is crucial in designing urban health policy that is sensitive and responsive to the healthcare needs of ethnic minority groups.

O-042 PERCEIVED DISCRIMINATION AND PATIENT RATINGS OF THE HIV HEALTH CARE SYSTEM AND THEIR PROVIDERS

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Studies continue to document that people with HIV report experiencing discrimination in their interactions within the health care system, which can have negative implications for treatment patterns and outcomes. Methods: We explored the association between perceived discrimination and ratings of the health care system in a survey of 523 unstably housed people with HIV. Results: A total of 207 participants (39.6%) reported experiencing discrimination in the health care system, and in people reporting discrimination, the most common attributions were HIV infection (N=122, 59.8%), drug use (N=100, 49.8%), homelessness (N=71, 34.6%), and race/ethnicity (N=69, 35.2%). Perceived discrimination was significantly associated with poorer access to care, greater mistrust in the health care system, less trust in the provider, and worse engagement with the provider, even after adjusting for patient clinical and sociodemographic characteristics. Conclusions: Members of this vulnerable population commonly report discrimination within the health care system and these experiences are associated with poor health care ratings. These findings support the need for closer examination of the HIV health care delivery system for this population to improve their access to appropriate care.

O-043 RISK BEHAVIOUR AND KNOWLEDGE OF POSITIVE HIV STATUS AMONG INJECTING DRUG USERS IN THE NETHERLANDS

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Introduction: Injecting drug users (IDUs) are a major risk group for HIV infection. In the Netherlands, transmission of HIV via injecting drug use has declined in the last years. This is probably due to programmes like needle exchange and counselling and testing on HIV. In some countries in Europe, IDUs are still important in HIV transmission. It is unknown if IDUs show less risk behaviour when they tested HIV positive. In this study, knowledge of positive HIV status among IDUs in the Netherlands is assessed. Furthermore, current risk behaviour is determined among HIV positive IDUs who are aware of their status and HIV positive IDUs who are not aware of their status.

Methods: Data of cross sectional surveys in nine regions in the Netherlands were used. In these surveys, IDUs were recruited on the street, at drug user known social venues, prostitution zones and at drug treatment services. Demographics, current risk behaviour and history of HIV testing were assessed in face-to-face interviews. Blood or saliva samples were taken to establish HIV status. Chi-square tests were used to establish differences between groups.

Results: 1844 IDUs were included and HIV prevalence was 8.2% (95% CI: 7.0-9.5%). 59% of the IDUs reported a former HIV test. Women were more often tested than men (77% vs. 55%) and younger IDUs (< 45 years) were more often tested than older IDUs (62% vs. 49%). 149 IDUs were HIV positive. Of them, only 50% were aware of their positive status. 17% reported a prior negative HIV test and 33% did not have any test or result before. IDUs that were aware of their positive status less often borrowed syringes (3% vs. 12%, p=0.07), lent out syringes (2% vs. 12%, p=0.02) and borrowed injections paraphernalia (25% vs. 41%, p=0.06) than IDUs who were not aware of their positive HIV status. They also used condoms more often with steady partners (56% vs. 25%, p=0.04) and casual partners (87% vs. 33%, p<0.01).

Conclusion: HIV positive IDUs who are aware of their status report less risk behaviour then HIV positive IDUs who are not aware of their status. Active HIV testing is highly recommended in IDUs, especially in countries with a high HIV prevalence among IDUs.

O-044 PUBLIC INJECTING AMONG USERS OF VANCOUVERS SUPERVISED INJECTION FACILITY

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Objectives: Public injecting, which impacts the individual as well as at a societal level, is a serious public health concern in many urban settings. In September 2003 a supervised injection facility (SIF) opened in Vancouver, Canada. We sought to evaluate the prevalence of public injecting among SIF users, as well as the characteristics of those who continue to inject in public.
Methods: The Scientific Evaluation of Supervised Injection (SEOSI) cohort involves 1046 randomly selected SIF users. SEOSI participants complete an interviewer administered questionnaire and provide blood samples at baseline and semi-annually. We examined self-reported rates of public injecting at participants' baseline and first follow-up visits. We also examined univariate associations between public injecting at follow-up and various socio-demographic, HIV risk, and drug use characteristics.
Results: As of January 2006, 714 SEOSI participants had completed at least one follow-up visit. Among these individuals, the median age was 39 years and 29% were female. In total, 503 (70.4%) participants reported injecting in public at baseline, while 337 (47.2%) participants reported injecting in public at their first follow-up visit. Participants who reported public injection at follow-up were more likely to be homeless (OR=3.91, p <.001), involved in the sex trade (OR=2.38, p<.001), recently incarcerated (OR=2.24, p<.001), borrow needles (OR=3.61, p<.001), lend needles (OR=8.54, p<.001), require help injecting (OR=2.53, p<.001), inject heroin (OR=3.34, p<.001) and cocaine daily (OR=1.62, p<.006), and use crack daily (OR=2.53, p<.004). Public injectors were less likely to be on methadone (OR=0.64, p<.006).
Conclusions: We observed a substantial reduction in self-reported public injecting among SIF users. Individuals who continued to inject in public are at heightened risk for HIV infection due to syringe sharing and other high risk injecting practices. These observations suggest the need for additional interventions that target individuals who inject in public spaces.

O-045 HEATH CARE UTILIZATION OF BRAZILIAN HIV/AIDS TREATMENT SERVICES: COMPARING INJECTING DRUG USERS AND OTHER CLIENTS

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After 1996, with the advent of HAART and its protocols, a new course in the history of the HIV/AIDS epidemic has been observed. In Brazil, public policies targeting health services structure associated with universal access of HAART patients were decisive for the reduction of morbimortality rates and improvement of the quality of life for people. Notwithstanding, some authors show that characteristics of the patients/providers have negative impacts on access to and utilization of services. This study compared healthcare utilization by injection drug users (IDUs) and non-IDUs. Data were abstracted from patients' medical records, admitted on HIV/AIDS treatment centers, between 1986-2002, forming a non-concurrent cohort study. Variables included: sociodemographics, HIV/AIDS exposure group, healthcare utilization (consultations, procedures, and prescriptions). Univariate statistical analysis included comparison of distributions with the Mann-Whitney U test and of proportions with chi-square. In order to verify probable calendar effects of the source of infection and of sex on indicators of healthcare utilization, a stratified analysis was conducted for the periods of greatest concentration of visits: 1991/1995 and 1996/ 2002. In the multivariate analysis of factors associated with requests for viral load count, logistical regression was used for each group separately (IDUs/non-IDUs). Sociodemographic variables and healthcare utilization indicators were: age at first admission to the service, sex, education, sexual partners, year of admission, number of medical visits, duration of care, indicators of ARV use, time elapsed since first visit, and viral load count. Out of 170 patients, with an average age of 30 years, 39.4% were IDUs, 71.8% were males and had low levels of education. At the first consultation, 86.5% neither received an ARV prescription nor had a request for CD4 or viral load. The number of ARV prescriptions at the first consultation did not differ significantly according to the use of injection drugs (p=0.76). The absence of requests for TCD4 counts (61.8%, n=105) had a significantly larger percentage (p<0.01) among IDUs (77.6%) as compared to non-IDUs (50.5%). The same pattern was encountered for requests for viral

load count: absence in 132 individuals (77.6%), of these 85.1% among IDUs and 71.7% among non-IDUs (p=0.04). Healthcare utilization increased in calendar-year in the non-IDUs group, parallel to the implementation of the Brazilian health policy of universal care. However, this favorable trend was not observed among IDUs. Differential outcomes for HIV/AIDS among IDUs, towards worse prognosis, suggest difficulties in terms of adherence and follow-up of ARV therapy in this population.

O-046 IMPACT OF A MULTI-YEAR COMMUNITY HEALTH PARTNERSHIP ON URBAN-RURAL DIFFERENCES IN ARMAVIR MARZ, ARMENIA

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Introduction: A multi-year community health partnership project was carried out between Armavir Health Department and University of Texas, Galveston, aimed to improve population health and primary healthcare services in urban and rural areas of Armavir region, Armenia. To evaluate the partnership impact, baseline (2001) and follow-up (2004) household surveys were conducted among representative samples of urban and rural residents of the region to measure the changes that occurred in their social conditions, self-reported health status, knowledge, attitudes, and practices.

Methods: To generate comparable data, the same instruments and study methodology were applied during the baseline and follow-up surveys: multi-stage cluster sample, probability proportional to size, cross-sectional, hybrid (combination of interviewer-administered and self-administered surveys) design, resulting in selection of 400 urban and 619 rural households from 59 populated areas at the baseline and 360 urban and 659 rural households from 63 populated areas at the follow-up survey. The respondents were women aged 18 years old and older living in a selected household. Trained nurses from the local clinics conducted the fieldwork. The study protocol was approved by the American University of Armenia Human Research Committee. Data analysis was conducted using SPSS 11.0 software.

Results: Significant urban-rural differences were identified at the baseline study in several domains. Unhealthy behaviors (smoking, drug abuse) and some perceived chronic health conditions (e.g. gastro-intestinal diseases, vision problems, diabetes) were more widespread among urban residents, while larger families with more children, lower living standards, lower health knowledge and health services utilization were more typical for rural residents. The follow-up survey revealed improved living conditions, increased satisfaction with own health and life, lower frequency of smoking and self-reported chronic health conditions, particularly those related to stress (cardiac, gastro-intestinal, mental problems), decreased frequency of accidents/injuries among household members, and higher satisfaction with received health care. These changes occurred or were more apparent in urban areas resulting in reduction of some urban-rural differences identified during the baseline survey.

Conclusion: The differences between perceived health status, behaviors, and lifestyles of urban and rural residents, revealed at the baseline survey, emphasized their differing health priorities and helped the partnership to apply geographically targeted approaches to address those needs. This and the marked improvement in living conditions of the population were probably the main factors responsible for reduction of many urban-rural differences identified at the baseline survey. Further research was recommended to investigate other possible causal factors of the detected changes.

O-047 SOCIAL CAPITAL OUTWEIGHS ECONOMIC RESOURCES IN ITS ASSOCIATION WITH SELF RATED HEALTH AMONG OLDER MEN AND WOMEN IN UNDERPRIVILEGED COMMUNITIES IN BEIRUT, LEBANON

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Introduction: Social and economic factors have been consistently associated in the literature with health and well being. This study examines the importance of particular dimensions of these factors in relation to self-rated health (SRH), an established predictor of morbidity and mortality, particularly among older adults. The study attempts to determine whether risk differentials vary between men and women aged 60 years and over.

Methods: The study is cross-sectional in design and is based on the older adults' component of the Urban Health Survey conducted in three underprivileged communities in the suburbs of metropolitan Beirut. Face to face interviews were conducted with 340 men and 423 women. SRH was assessed by a single question

and treated as a dichotomous variable (very poor and poor vs. good, very good and excellent). Social factors included: social network and social support, social capital (locational capital, trust, and reciprocity), and economic resources. Summary indices were computed for the different dimensions, and were subsequently dichotomized using the median as a cutoff point. Multivariate logistic regressions were conducted to examine the relative strength of the association between the various social and economic dimensions and poor SRH in men and women separately, adjusting for baseline demographic and health-related variables as covariates.
Results: Women were significantly more likely to report poor SRH than men (38% vs. 26.5% respectively). While dimensions of network and trust were not associated with poor SRH among either men or women, measures of social capital, specifically locational capital and reciprocity, were significant determinants of poor SRH among both gender. Contrary to expectation, the perception of instrumental social support particularly financial support increased the likelihood of poor SRH among men. While the association between a high index of economic resources and poor SRH failed to reach statistical significance among women, its significance was attenuated among men in light of social factors. Social capital was found to outweigh economic resources in its association with SRH among older men and women when all constructs were included simultaneously in the regression model.
Conclusion: Findings from this study indicate that, in these poor urban neighborhoods, locational capital and reciprocity outweigh economic measures regarding the promotion of SRH among older adults, more notably among women. Improving the conditions of the neighborhoods and promoting reciprocal behavior or attributing a productive role to older adults is recommended as a public health action to improve their health perception.

O-048 A TRANSDISCIPLINARY EVALUATION OF THE COMMUNITY ADVISORY PANELS MODEL OF COMMUNITY RESPONSIVENESS AT ST. MICHAELS HOSPITAL, TORONTO, CANADA: REMOVING BARRIERS AND BUILDING BRIDGES THROUGH HOSPITAL AND COMMUNITY COLLABORATION

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Introduction: St. Michael's Hospital (SMH) is a major teaching hospital, fully affiliated with the University of Toronto. SMH serves the broad community through specialized programs and services. Established in 1892 by the Sisters of St. Joseph, SMH has maintained and expanded its commitment to provide services for marginalized populations. This commitment has resulted in the formation of the Community Advisory Panels (CAPs), established by the hospital in partnership with community agencies and patients. The CAPs are organized into four panels: HIV/AIDS, Homeless and Underhoused, Mental Health and Women and Children. The mandate of the CAPs is to provide these groups with a meaningful voice. Through community-hospital partnerships, the goal was to ensure a venue for client input to the improvement of hospital services to better meet the need of marginalized groups. The CAPs have been functioning within the hospital and community for more than a decade, however, their effectiveness at achieving their mandate has not been evaluated. This presentation reports on the effectiveness of the Community Advisory Panel Model and on the process of undertaking a transdisciplinary program evaluation.
Methods: The Transdisciplinary Evaluation Team is comprised of researchers (with backgrounds in psychology, psychiatry, epidemiology, public health, public and social policy, ethics, philosophy, social work, biostatistics and medicine) and CAP members. We employed a mixed methods design involving the collection and analyses of both quantitative and qualitative data. The CAPs the Inner City Health Program and the Hospital were partners in the development of the evaluation methods.
Results: Several key themes emerged from the survey, the document review and the interviews. The majority of respondents (65-80% by survey item) were very satisfied with the CAPs' accomplishments, felt that they were meeting their mandate and reported that the CAPs provided exceptional service to the community, communicated effectively with the hospital and the community, were inclusive of patients/consumers, and fair in their dealings with community bodies. Several barriers to CAPs visibility in the community were identified.
Conclusion: Results from this program evaluation show that the Community Advisory Panel Model implemented by St. Michael's hospital is a successful means of ensuring effective communication and accoun-

tability between a hospital and its stakeholders, especially with regard to the inclusiveness of marginalized groups. The results also give evidence of how to develop and carry out a successful program evaluation using a transdisciplinary approach, which is specifically suited for carrying out complex and non-traditional program evaluations.

O-049 US/SPLIT, CROATIA PARTNERSHIP TO REDUCE ADOLESCENT ALCOHOL USE - A COMMUNITY INTERVENTION

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Health in Croatia has been negatively impacted by the break-up of Yugoslavia and the war. Croatia lags behind other European Union (EU) countries on many important health indicators. Since Croatia's independence, the health care system has introduced privatization and market approaches to providing health care and health prevention/wellness promotion efforts have not been a priority. Increased alcohol abuse in Croatia has followed world trends. Croatia reports substantial consumption of beer, wine and spirits and estimates suggest that in areas where the population produces its own alcohol, consumption may be two to three times the recorded level. Prevention and treatment programs that existed prior to the war diminished following the war. Youth are the most vulnerable population in transitioning societies. War, exposure to trauma and high unemployment rates have led to increases in adolescents' risk-taking behavior such as alcohol use. A 1999 Croatian study showed a high rate of alcohol use by high school students - 63% reported consuming alcohol in the month before the survey. In such a volatile political and economic environment, adolescents are at risk for alcohol abuse. Cultural patterns may not protect adolescents from the risks associated with alcohol consumption. The American International Health Alliance, funded by USAID, sponsored a partnership between the University of Medicine and Dentistry of New Jersey and Split, Croatia. Split was identified through the Croatian Healthy Cities Network to collaborative with its US partners to strengthen capacity nationally and within local communities by mobilizing a broad coalition of key stakeholders. As a result Project Northland (PN), a school-based curriculum for sixth, seventh and eighth grade students was implemented. PN uses an ecological framework to address individual behavioral and environmental change. PN strives to change: parents/child communication, peer influences, and community response to adolescent alcohol use. PN has been shown to delay the age of youth onset drinking, reduce use, and reduce alcohol-related problems among youth. The project was evaluated to determine PN's impact on students' attitude, knowledge and behavior, teachers' reactions, parents' satisfaction with their participation, and community's (i.e., local and national government, NGOs, schools, and media) perception of the partnership benefits. The presentation will include the findings from parents, teachers and students focus groups and surveys. Qualitative findings show that the intervention was positively received by participants. Quantitative analysis showed that PN had a greater effect on younger grade students. A description of the intervention and evaluation findings will be presented.

O-050 THE SIGNIFICANCE OF NEIGHBOURHOOD CONTEXT TO CHILD AND ADOLESCENT HEALTH AND WELL-BEING A SYSTEMATIC REVIEW OF MULTILEVEL STUDIES

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Growing up in a poor neighbourhood has negative effects on children and adolescents. In the literature it has been concluded that the risk of low birth weight, childhood injury and abuse, and teenage pregnancy or criminality double in poor areas. However, the validity of such studies has been questioned, as they have been associated with ecological or individualistic fallacies. Studies using multilevel technique might thus contribute important knowledge in this field. The present review clarifies the importance of neighbourhood contextual factors in child and adolescent health outcomes, through considering only studies using multilevel technique. Keyword searching of the Medline, ERIC, PsycInfo, Sociological Abstracts, and Social Citation Index databases was performed. Original studies using multilevel technique to examine the effect of neighbourhood characteristics on child and adolescent health outcomes, and focusing on populations in high-income countries were included. Neighbourhood socioeconomic status and social climate were shown to have small to moderate

effects on child health outcomes, i.e. birth weight, injuries, behavioural problems, and child maltreatment. On average, 10% of variation in health outcomes was explained by neighbourhood determinants, after controlling for important individual and family variables. This review demonstrates that interventions in underprivileged neighbourhoods can reduce health risks to children, especially in families that lack resources. An analysis of methodological fallacies indicates that observed effects and effect sizes can be underestimated, and that interventions may well have greater impact than this review was able to establish.

O-051 MAXIMIZING RESEARCH UPTAKE FOR COMMUNITY ATTENDEES AT HEALTH CONFERENCES: EVALUATION RESULTS FROM ICUH, TORONTO, 2005

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Introduction: Increasingly, funders, policy-makers, researchers and community groups are forging collaborative efforts to help solve the complex health problems facing urban communities. Consequently, the gulf between academic and community perspectives on important issues is narrowing through the collaborative efforts of both sectors in endeavours such as community-based participatory research (CBPR). Despite some of these significant changes, the full participation of community partners in academic research conferences has been slower to occur. As a result, the ability of community groups to derive benefit from these conferences is hampered.
Methods: A comprehensive and multi-faceted 'community engagement' strategy was used to engage community participants at the 4th International Conference on Urban Health held in Toronto, Canada, in the fall of 2005. It included utilizing community networks to target promotion, ensuring a generous community scholarships program, offering pre-conference workshops and community site visits to community registrants, and showcasing excellence in CPBR via the inclusion of a dedicated conference stream. This presentation draws upon evaluation data from 135 attendees at that conference.
Results: The conference drew more than 30% of registrants from the community and almost 50% of oral presentation showcased excellence in CBPR. Evaluation of the strategy included a survey component (n = 97) and in-depth interviews (n=38) which focussed on the ability of community members to: network and meet potential research partners from both the academic and community sectors; build an evidence base through acquiring new information and applying it in their daily work; and helping to build a culture in their home agencies that is supportive of CBPR, research evidence in general, and program evaluation.
Conclusion: Academic health conferences play an increasingly important role in enhancing the capacities of front-line community organizations to build research evidence into their work. These evaluation results support the need for comprehensive strategies to ensure community inclusion at such conferences. Attendance by community participants provides important opportunities to meet potential academic and community research partners and increases the uptake of research findings. This brings greater credibility to their front-line practice, their advocacy efforts, as well as their policy and community development work.

O-052 ENVIRONMENTAL ATTRIBUTES RELATED TO WALKING AND BICYCLING AT THE INDIVIDUAL AND CONTEXTUAL LEVEL.

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Introduction: Until now, it remains unclear which environmental attributes contribute to physical activity at the individual level and which at the contextual level. The aim of the present paper was to try and disentangling environmental determinants of physical activity at the individual and the contextual level.
Methods: Individual level data originated from the 2004 Health Survey carried out by the Amsterdam Municipal Health Service. Contextual level data comprehended aggregated data from two monitors executed by O+S Amsterdam, the research department of the municipality Amsterdam. Data from both levels was merged by neighborhood, creating a multilevel design since one neighbourhood corresponded to more than one individual. Uni-level and multilevel regression analysis was used to study the association between environmental attributes and walking and bicycling.

Results: Individual level data was available for 1736 adults aged 18 year and over. Because of missing values, data analysis was performed on data of 1429 participants (655 men and 774 women). Concerning walking no statistically significant associations were found. Living in an enjoyable neighborhood en feeling at ease with ones neighbors measured at the individual level proved to be associated with spending more time bicycling and people hardly knowing each other measured at the contextual level proved to be associated with spending less time bicycling.
Conclusion: The results showed that associations found at the individual level do generally not exist at the contextual level and the other way around. This leads us to conclude that indeed the level (individual or contextual) on which the environmental attributes are measured has great impact on the results one would expect to find. However, in order to make clear statements on which environmental attributes contribute to physical activity at what level more comparable research is needed.

O-053 SUBJECTIVE PERCEPTIONS OF THE LOCAL SOCIAL AND PHYSICAL ENVIRONMENT AND THEIR ASSOCIATIONS WITH HEALTH

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Introduction: There is increasing evidence which suggests that area of residence is associated with health and health related behaviours over and above individual characteristics e.g. SES. Potential explanations include the quality of the local social and physical environment. We explore the extent to which residents perceptions of the local neighbourhood are socially patterned (by age, sex or social class) and examine cross sectional associations between these perceptions and a range of physical health measures (body mass index, waist hip ratio, waist circumference, systolic and diastolic blood pressure), mental health (anxiety and depression) and health behaviour (smoking).
Methods: Analysis of data collected in face to face interviews at the fourth wave of longitudinal health survey of three adult age cohorts (current age 30, 50 or 70 years) in the West of Scotland (n=2400). Anthropometric body measurements and blood pressure were taken by nurse interviewers, mental health was ascertained by use of the Hospital Anxiety and Depression Scale. To measure respondents' perceptions of local problems, they were shown a list of sixteen types of socio-environmental problems and asked the extent to which they presented a problem. Respondents were invited to reply using a three point scale ('not a problem' score 1, 'minor problem' score 2, 'serious problem' score 3). Responses were scored and subsequently split into two domains: (i) 'incivilities' (e.g. litter, graffiti), (ii) absence of 'environmental goods' (e.g. lack of recreational facilities, safe play areas for children). Using General Linear Modelling in SPSS v.12.0 we examined, separately for males and females, whether any of the health measures or smoking were associated with perceived neighbourhood 'incivilities' or 'absence of goods' after adjustment for socio-demographic variables (age, social class).
Results: The youngest age cohort and people in lower social class groups had the most negative view of their neighbourhood in terms of 'incivilities' and 'absence of goods'. There was no significant difference by sex. In multivariate analysis, perceived 'incivilities' were associated (after controlling for age and social class) with body size and shape (in women only), blood pressure (in males only) and anxiety and depression (in both men and women). Perceived 'absence of goods' was associated with body size and shape and likelihood of smoking (in women only) and anxiety and depression (in both men and women).
Conclusions: Our findings indicate the need to monitor the quality of the local neighbourhood as a potential influence on health.

O-054 A NEW RESEARCH AGENDA: SOCIAL AND HEALTH IMPLICATIONS OF MODERN URBAN DESIGN PRACTICES

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Introduction: This paper proposes a new research area for urban planners, designers and architects, focusing on the effects of urban environments on the social capital of a community. The influence of social capital on physical and mental health has been well established in psychology, sociology and epidemiology. Literature shows that social capital and social networks influence public health in many ways and play a

role in the health behaviors, morbidity and mortality of a community. Interest in these social health determinants has been gaining popularity in epidemiological research, and social health indicators are being incorporated by countries worldwide to study population health. Despite this, the social environment of neighborhoods is seldom considered in urban planning and design. The planning and design practices in the United States are often criticized for catering only to the physical needs of its residents, and creating environments that deplete the social cohesiveness and social capital of communities. As a result, modern neighborhoods are devoid of an active social life and are not conducive to social interaction. This paper will illustrate how urban design and planning can play a role in creating environments that are conducive to the formation of social networks and social capital.
Methods: The study will synthesize and critically analyze literature from various disciplines and present evidence that will illustrate the channels through which public health is affected by social capital and cohesiveness. This paper will then demonstrate how urban design elements such as mixed land use, open spaces, street connectivity, public transportation, and architectural design features can be used to create spaces and communities which are socially interactive.
Results: The literature analysis and synthesis will clearly establish the importance of social health determinants and the fact that urban planning and design decisions have a considerable role to play in the social strength of communities. The study will identify gaps in research evaluating social capital and health interactions, and the lack of studies on this topic in the field of urban planning. This paper will suggest an interdisciplinary research approach, which is needed to understand the role of urban planning on social capital.
Conclusion: The study will conclude by strongly encouraging urban researchers to participate in this new health agenda, and to incorporate social implications of design as a coherent part of the decision making process. The results will have implications for research in urban design, urban planning, and architecture.

O-055 SOCIAL OR PHYSICAL ENVIRONMENT: WHICH IS MORE IMPORTANT WHEN IT COMES TO HEALTH?

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Introduction: The environment in which people live influences their health but individual characteristics seem to be more important when it comes to health. Little research however has addressed the effect of both social and physical environment in a more detailed manner.
Aim: To what extent do social and physical neighbourhood characteristics explain the geographical variation in mortality across neighbourhoods in the Netherlands?
Methods: For all individuals living in the Netherlands, data on gender, age, marital status, country of origin and address was available for the years 1995 through 2000. Mortality records from 1995 to 2000 were linked with these individual data through personal identification number. Social and physical characteristics of 3,518 neighbourhoods were linked through address information. The social environment was indicated by networks of community support such as contact with neighbours, degree of community integration such as solidarity, incivilities and threats to personal safety such as vandalism and norms and values such as religion. The physical environment was indicated by housing such as construction year of the houses, services such as availability of shops and physical features of the environment such as noise pollution.
Neighbourhood indirectly standardised mortality rates, adjusted for gender, age, marital status and country of origin were calculated. Poisson regression analyses were used to determine the effect of neighbourhood characteristics on both mortality and their contribution to the geographical variation of mortality. Analyses were adjusted for neighbourhood socio-economic level.
Results: The social and physical environment together explain more than 3% of the geographical variation in mortality, with the physical environment being slightly more important. Social environmental factors related to neighbourhood mortality are contacts between neighbours, neighbourhood inhabitants that know each other, solidarity, vandalism, fear of being robbed or bothered, percentage of inhabitants that donate to charity and do not go to church. Physical environmental factors related to mortality are percentage rented houses, construction year of houses, number of retail businesses and industries in the neighbourhood.

Conclusion: The environmental effect on mortality is small, but might be larger when other health outcomes are investigated. The physical environment explains slightly more of the variation in mortality across neighbourhoods than the social environment.

O-056 CORRELATES OF OVERCROWDED HOUSING AMONG UNDOCUMENTED MEXICAN IMMIGRANTS IN NEW YORK CITY

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Introduction: Mexicans make up the largest percentages of documented and undocumented immigrants in the United States. In New York City (NYC), however, this population has grown only recently, expanding by 275% between 1990 and 2000, and now ranks fifth in size (up from 17th in 1990) among immigrant groups in NYC. Immigration is known to be associated with overcrowded living conditions, which in turn have a complex relationship to health. Overcrowding increases exposure to communicable diseases, and there is some evidence indicating overcrowding is associated with psychological distress in adults and poor long-term health outcomes in children. New York has one of the tightest and least affordable housing markets in the country, but little research to date has investigated the housing conditions of the rapidly expanding Mexican immigrant population in NYC.

Methods: We used data from a pilot survey among Mexican immigrants in NYC. Respondents were recruited through venue-based sampling in neighborhoods with large Mexican immigrant populations. Our sample included only undocumented immigrants (n=423). Crowding was defined as >1 person per room (PPR) in multi-room (>1) apartments or houses and as >2 PPR in one-room studio apartments.

Results: The sample was 29.7% female, the median age was 30 (IQR=13), median years living in the US was 5 (IQR=7), 83.0% had not completed high school, and the mean PPR was 2.2 (1.2, 0.13, 11). In bivariate analyses, mean PPR decreased with higher education (1.77, at least some college vs. 2.32, high school/GED and 2.19, less than high school) and higher taxable income (1.58, >$10,000/yr vs. 2.24, <$10,000/yr, p=0.088). In stepwise logistic regression, overcrowding was positively associated with having >3 children (OR=2.22, 95% CI=1.10, 4.45) and was negatively associated with poor reported mental health (1-5 vs. 0 poor mental health days, OR=0.53, 95% CI=0.28, 0.99; >5 vs. 0 poor mental health days, OR=0.45, 95% CI=0.22, 0.91).

Conclusions: Overcrowded housing significantly affects this new population of immigrant New Yorkers. Considering the disproportionate effect on households with children, additional research into the health effects of overcrowding on the children of immigrants is needed. These data do not support the hypothesis that overcrowding is associated with poorer mental health. The reverse relationship seen here raises the possibility that social support inherent in more crowded living conditions has an ameliorative effect on this population of recent immigrants, or that those with poorer mental health live in more isolated conditions.

O-057 LIMINALITY AND MENTAL WELLBEING AMONG NON-STATUS IMMIGRANTS IN TORONTO: QUALITATIVE ASPECTS OF STRESS, STIGMA, SOCIAL SUPPORT AND CONTROL

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Introduction: This qualitative study analyzes psychosocial health and migration experiences among non-status ('irregular') migrants, a growing population in Canada, where at least 200,000 work in the underground economy. The study aims were to discover who non-status immigrants are and to explore the meaning of living without legal status, its impact on mental well being and implications for health care and social integration.

Methods: Semi-structured, open-ended interviews were conducted with a purposive sample of 11 Latin American non-status immigrants recruited at a community health centre in downtown Toronto. Interview transcripts were coded, and analyzed using grounded theory and qualitative techniques. The theoretical model used is derived from the interactive stress process of immigrant health and an anthropological paradigm of liminality applied to the migration process. Data are examined in light of hypothesized feelings of lack of control, social isolation and the stigma of criminalization.

Results: Study participant's experiences are contrary to prevailing assumptions about non-status immi-

grants as illegitimate migrants. Most migrated to escape violence in home countries rather than for economic gain. All had entered Canada legally and were waiting for immigration decisions from authorities. Most were parents or grandparents and were working at low-paying, precarious jobs. They lacked social supports beyond the immediate family, but made efforts to contribute socially to an 'imagined' community in Canada. Mental distress was often linked to critical life events and encounters that challenged the sense of self. Most showed signs of suffering from emotional distress including trauma, depression, family separation, and chronic stress related to lack of control. Beyond the individual effects, the greatest impact of 'being non-status' was on the children and other family members, who often had mixed legal statuses. Non-status migrants have positive self-images and resist the stigma of criminalization, but feeling trapped on the threshold of society, they achieve only partial social incorporation and limited health security.
Conclusion: Study findings suggest that non-status immigrants are more similar to refugees (forced migrants) than to immigrants (voluntary migrants) in terms of unmet psychosocial health needs, are even more socially excluded and therefore at risk of poor health. Lack of status and health care access may be a result of bureaucratic and policy failures rather than migrants' intent to circumvent laws. More information about, and community health services for, non-status immigrants are needed for health promotion, provision of mental health services and fair, evidence-based policy formulation.

O-058 THE 2001 ANTHRAX ATTACK: LESSONS LEARNED AND BEST PRACTICES

S. Crouse Quinn (University of Pittsburgh, Pittsburgh, United States of America)

Introduction: Highly populated urban centers are more likely targets for terrorist threats and acts. Urban centers around the world are home to diverse ethnic and cultural groups and these residents are also diverse in a multitude of other ways- economics, education, language, and abilities. These differences provide a particular challenge for those charged with preparing for and responding to terrorist events. Racial and ethnic communities often hold less trust in government, including public health responders, and are often less inclined to follow public health advice. This presentation aims to provide insights into working with diverse communities by sharing the lessons learned from the 2001 anthrax attacks. Methods: This exploratory, qualitative study, funded by the Centers for Disease Control and Prevention (CDC), had two goals: To develop a full understanding of the reactions of postal workers and public health professionals working with them to the anthrax crisis, particularly the optional use of the anthrax vaccine; and to offer some specific guidelines for risk communication and other strategies for building trust with the African American community members. Focus groups, key informant interviews and semi-structured interviews were used to garner information from postal workers and public health professionals in the three epicenters of the attacks- New York, New Jersey and Washington DC. In total, 65 postal workers were interviewed (9 key informant and 56 in either individual interviews or focus groups) Of the 65, 50 of the participants identified as African American, Hispanic or African American/Hispanic.
Results: One of the major findings of this study is lack of trust that postal workers held for public health intervention. We will discuss the factors impacting trust and offer guidelines for working with diverse populations. Additionally, we will discuss risk communication including risk perception, trust, credibility, social context and other factors that influenced the communication between public health professionals and postal workers.
Conclusions: These findings offer insights into the challenges of responding to the needs of the public during a terrorist event and provide best practices in the event of future terrorist acts.

O-059 BIRD FLU IN THE CITY: ETHICAL CONSIDERATIONS IN PREPAREDNESS PLANNING FOR PANDEMIC INFLUENZA

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Introduction: The threat of an influenza pandemic looms large on the global horizon. Cities and highly urbanized areas are particularly vulnerable owing to high population densities and heavy air passenger traffic. As with other public health emergencies, in the event of a pandemic, public co-operation will be fostered if citizens subscribe in advance to the rationale behind the difficult choices that will have to be

made. Indeed, a shared set of ethical values can serve to inform and guide the decision making process. The World Health Organization has recommended that ethical issues be considered in the development of preparedness plans for an influenza pandemic.
Methods: In Autumn 2005, a pandemic influenza working group was formed at the University of Toronto Joint Centre for Bioethics (JCB) to consider the important ethical issues most likely to arise during an influenza pandemic. Based on experiences and study of the 2003 SARS crisis, on broad-based stakeholder consultation, and on group consensus-building methods, four key ethical issues were discerned: health workers' duty to provide care during a pandemic; restricting liberty in the interest of public health by measures such as quarantine; priority setting, including the allocation of scarce resources such as vaccines and antiviral medicines; and global governance implications, such as travel advisories. Each key issue was analyzed by the working group to identify the salient substantive and procedural values involved.
Results: This presentation will describe a 15-point ethical guide for pandemic planning and decision-making, as developed by the JCB working group. The framework is structured around 10 substantive values (individual liberty, protection of the public from harm, proportionality, privacy, duty to provide care, reciprocity, equity, trust, solidarity, and stewardship) and 5 procedural values (reasonable, open and transparent, inclusive, responsive, and accountable). Public policy recommendations will be presented for each of the key ethical issues identified.
Conclusion: The SARS outbreak demonstrated that while new emerging diseases often originate in rural areas it is our cities and large urban areas that are most vulnerable to epidemic spread of virulent organisms such as influenza. To maximize public acceptability and co-operation, pandemic preparedness plans should be founded on commonly-held ethical values. Governments and health care organizations should include an explicit ethics component in their pandemic plans. The JCB framework presented here is freely available to be adopted or adapted as appropriate.

O-060 POST-TRAUMATIC STRESS DISORDER IN A NEW ORLEANS WORKFORCE FOLLOWING HURRICANE KATRINA

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Introduction: On August 29, 2005, Hurricane Katrina made landfall resulting in catastrophic flooding to New Orleans and the Gulf Coast. Understanding the mental health effects of this tragic event in those who have returned to work and are at the core of attempts to rebuild the economic infrastructure of New Orleans is essential for developing policy and interventions to mitigate the impact on survivors of disasters.
Methods: We performed a cross-sectional, web-based survey of the workforce from the largest employer in New Orleans to assess post-traumatic stress disorder (PTSD) 6 months after Hurricane Katrina made landfall.
Results: Of 1,542 participants who completed the survey, the prevalence of PTSD was 19.2%. Significant predictors of PTSD in a multivariate regression model included female sex [OR 1.45 (95% CI 1.07, 1.99)], non-black race [0.57 (0.36, 0.92)], knowing someone who died in the storm [1.79 (1.35, 2.37)], not having property insurance [1.70 (1.17, 2.47)], having had a longer evacuation [1.95 (1.25, 3.03)], a much longer work commute compared to before Hurricane Katrina [1.55 (1.06, 2.26)], and currently living in a temporary trailer [2.01 (1.15, 3.53)]. Despite universal health coverage and the benefits of an employee assistance program for all employees, only 28.5% of those with PTSD had talked to a health professional about the events of Hurricane Katrina or issues encountered since the storm.
Conclusions: We found a significant burden of PTSD among a large group of adults who had returned to work in New Orleans following Hurricane Katrina. There is a tremendous need to identify those in the workforce with PTSD and enhance treatment options. The strong relationship between displacement from ones' pre-Katrina residence and PTSD suggests a need to focus resource utilization and interventions on individuals living in temporary housing.

O-061 BEYOND GROUND ZERO NETWORK: A MODEL FOR A GRASSROOTS RESPONSE TO HEALTH NEEDS FOLLOWING AN ENVIRONMENTAL URBAN DISASTER

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The destruction of the World Trade Center (WTC) in New York City on 9/11/01 was a major environmental disaster that resulted in the massive release of pulverized dust and combustion products in the surrounding urban residential and commercial neighborhoods. Local residents and clean-up workers, many of who were immigrants (Asia, Latin America, Eastern Europe) and from low-income communities had significant and persistent WTC dust exposure. These communities were excluded from private and government assistance in the initial years following the disaster. To address this problem, disparate local community organizations formed a single coalition called the Beyond Ground Zero Network (BGZ) to provide outreach, identify unmet health and economic needs and advocate for the community. Outreach by peer-volunteers was performed with door-to door surveys, town hall meetings, and the formation of a local community office center to access disenfranchised groups. Emerging and persistent health problems were identified as a major concern of local residents and clean-up workers. BGZ advocated for a partnership with Bellevue Hospital, a public hospital in New York City. Whereas screening and treatment programs for individuals involved in the recovery and clean-up efforts, no program was available for residents. An unfunded program was developed to provide medical services and expertise to a limited number of residents with the most severe symptoms. The success of this pilot program and the identification of the continued and expanding need, allowed the community and medical partnership to compete successfully for funding from non-government organizations. Funding from the American Red Cross Liberty Disaster Relief Fund allowed for expansion and continued provision of interdisciplinary medical, mental health, and social services. Several components contributed to the ability of the organization to obtain a medical partner and funding for an urban disaster relief program: 1) the identification of organizations with strong ties in the community, 2) the use of peer volunteers to identify and prioritize unmet needs, 3) the formation of a unified coalition from disparate organizations with power to advocate for concrete services. This partnership among local community groups and the medical community, is a model for a community-driven response to aid socio-economically disadvantaged populations after urban disasters.

O-062 WORLD TRADE CENTER EVACUATION STUDY: INCIDENCE OF DISABILITIES AND MEDICAL CONDITIONS

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Introduction: Persons with disabilities or medical conditions (DMCs) may be at increased risk of morbidity and mortality during emergency situations that require evacuation. In this study, designed to identify the individual, organizational, and environmental (building) factors that affected the evacuation from the World Trade Center Towers (WTC) 1 and 2 on September 11, 2001, we examined the relationship between disabilities and the evacuation process. This information may be helpful to emergency planners.
Method: The World Trade Center Evacuation Study utilized both qualitative and quantitative data collection methodologies. A convenience sample of evacuees was recruited; there were 1444 participants who evacuated either WTC 1 or WTC 2 on September 11, 2001. The study questionnaire, available as web-based or hard copy version, included a number of items that addressed disabilities, disability preparedness, and co-workers' awareness of disability planning for emergencies.
Results: Of the 1444 evacuees who participated in the study, 23% (n = 322) reported that they had a DMC that was diagnosed by a physician prior to September 11, 2001. DMCs included: 28% respiratory, 28% mobility, 17% mental health, 16% heart conditions, 6% sensory deficit, and 7% general medicine. Of those reporting a DMC, 29% reported that the disability limited their ability to walk down a large number of stairs. Persons with DMCs were 1.5 times more likely to delay the initiation of their evacuation once they determined they needed to evacuate compared to persons without a DMC (OR = 1.58, 95% CI 1.12-2.23). Persons with DMCs were twice as likely to be injured during their evacuation as employees without a DMC (OR = 2.16, 95% CI 1.70-2.74). Knowledge of preparedness for persons with DMCs was low among evacuees. Although 28% of evacuees reported having a person with a DMC on their floor, only

11% reported that a plan for the evacuation of persons with DMCs was in place, only 10% reported that co-workers were designated to assist persons with DMCs, and only 8% were aware that there was special equipment available to assist co-workers with DMCs.
Conclusion: Persons with DMCs may be at increased risk during emergency situations that require evacuation. Preplanning therefore, is especially important to ensure safe and effective evacuation of persons with DMCs, and preparedness training for persons with DMCs should be conducted at all levels (e.g., individual, co-worker, employer, tenant, building owner, security personnel, etc.).

O-063 BEYOND GROUND ZERO NETWORK AND BELLEVUE HOSPITAL: A MODEL FOR A COMMUNITY-MEDICAL PARTNERSHIP FOLLOWING AN ENVIRONMENTAL URBAN DISASTER

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The destruction of the World Trade Center (WTC) in New York City (NYC) on 9/11/01 was a major environmental disaster that resulted in the massive release of pulverized dust and combustion products in the surrounding residential and commercial neighborhoods. Local residents and clean-up workers included immigrants and members of low-income communities. Adverse mental and respiratory health effects were documented in these populations. Beyond Ground Zero Network (BGZ), a coalition of community-based organizations identified an unmet health need in these vulnerable, medically uninsured and isolated populations and appealed to Bellevue Hospital a NYC public hospital, to provide medical services. An unfunded pilot program was developed to address medical needs of residents with the most severe symptoms. Subsequent funding resulting from joint community and medical advocacy was obtained through a September 11 Recovery grant from the American Red Cross Liberty Disaster Relief Fund. This funding allowed for expansion and continued provision of interdisciplinary medical, mental health, and social services. BGZ was integrated into the program and provided continued input. To date, 444 residents and clean-up workers have enrolled in the program (245 male, 199 female). These were overwhelmingly immigrant populations from Latin America (59%), China (28%) and Eastern Europe (7.8%). Most were uninsured (66.8 %). Medical services included evaluation and treatment for respiratory complaints (rhinosinusitis, shortness of breath and wheezing) and major persistent, unaddressed mental health needs. The first time access to the health care system for many individuals resulted in identification of additional untreated basic health needs. Significant interactions between mental and physical health issues and social and economic stressors were recognized. Barriers for individual care included unfamiliarity with the health care system, lack of insurance and immigration status. To reduce these obstacles, BGZ provided an interface to facilitate access to care, support for navigation of the medical system, community education and culturally sensitive support programs. Difficulties for the health care team included language and cultural barriers, multiplicity of untreated medical problems, and unaddressed mental and social issues. Extensive translation services and the interdisciplinary nature of the program improved the capacity to provide treatment despite these obstacles. The alliance between a community-based organization and a medical team provide a model program for the delivery of health care to a disenfranchised population adversely affected by an urban environmental disaster.

O-064 FAMILY MIGRATION AS A VEHICLE FOR URBAN POVERTY

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Between one and two million migrants reside in cramped conditions in Nairobi's slums without proper access to sanitation or affordable clean water. Children in such areas are exposed to enormous risks, health risks in particular. For example, a large demographic and health focused survey conducted in various Nairobi slums in 2002 by the African Population and Health Research Center (APHRC) finds that not only are morbidity risks for all major childhood illnesses (fever, cough, diarrhea) higher for slum children compared to children elsewhere in Kenya, slum children also have less access to healthcare, including immunization, and subsequently face higher mortality rates than even their rural counterparts.
One coping strategy for slums dwellers is to adopt split migration where wife and children are secured in the home village while the head of household undertakes the migration project. However this strategy is

often impaired by the important monitoring costs that the migrant incurs to ensure that spouse fulfills the ex-ante contract and does not divert the remittances into unproductive activities. The welfare implications of this information asymmetry are significant. Precious resources that could otherwise have been spent on, for example, healthcare or school fees, are spent on frequent costly traveling home. Some families for whom monitoring is simply too costly decide to move altogether to Nairobi, leaving children to be raised in precarious urban slum conditions, with obvious implications for children's health and general well-being.
It's against this backdrop that the proposed study seeks to understand the contribution of joint migration as compared to the more efficient strategy of split migration in the urbanization of poverty and poor health in the two slums (Korogocho and Viwandani) of the Nairobi Demographic Surveillance System (DSS). The present research is based on a panel study, the '2004 Nairobi Informal Settlement Survey' conducted between 04 May 2004 and 27 June 2004 in these two DSS communities. The survey was conducted on a random sample of 1817 'eligible' heads of households. Eligibility was defined as being 'ever married' and between the ages of 24 and 56 years old; i.e. (1) heads of households who were divorced or separated (153 in total), or widowed (150); heads of households who were married and lived with their spouse together in the Nairobi informal settlement (858 in total); or heads of households who were married but lived split from their spouses (who usually live in the up-country village) (656 in total).

O-065 THE IMPACT OF CORPORATE PRACTICES ON THE HEALTH OF CITIES: IMPLICATIONS FOR HEALTH PROMOTION

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In the twentieth century, two trends changed the world: increasing urbanization and the rise of corporations as the dominant political and economic global power. While urban health researchers have studied the influence of social structures, neighborhood conditions, and public policies on health, few have investigated corporate influences on urban health. In this session, we explore the intersection of these trends and their impact on the health of urban populations. After a brief review of the various mechanisms by which corporations influence health (e.g., through production practices, movement of capital, influence on political processes), we focus on the role of corporations in influencing health behaviors and lifestyle in cities. We describe several practices that influence health including advertising and development of new markets, product design, and corporate involvement in municipal policies and elucidate the pathways by which these practices affect the health of various urban populations.
Our report is based on our ongoing work on the influence of the consumer practices of six industries (alcohol, automobile, food and beverages, firearms, pharmaceuticals and tobacco) on patterns of mortality and morbidity in the United States. These industries were selected for their centrality to the global economy, their impact on health and the existence of advocacy efforts to change their practices. We examine the specific roles these industries play in cities and the extent to which their influence on health differs in urban and nonurban areas. We also compare corporate influences on health in developed and developing world cities.
Finally, we describe various types of health advocacy efforts designed to modify health damaging corporate practices. These include advocacy campaigns, public health regulation, litigation, and taxation. We compare and assess the potential of these strategies for improving the health of people living in cities in the developed and developing world and suggest research and intervention priorities for promoting urban health altering corporate practices.

O-066 A HEALTHIER FUTURE FOR GLASGOW: BUILDING UNDERSTANDING, EVIDENCE AND INSIGHTS INTO HOW TO MAKE MEASURABLE IMPROVEMENTS TO OUR CITY'S HEALTH

C.E. Tannahill (Glasgow Centre for Population Health, Glasgow, United Kingdom), P. Hanlon, A. Kearns, M. Petticrew

In social, economic, demographic and physical terms the city of Glasgow has changed dramatically over recent decades, yet its health statistics remain among the worst in western Europe. There is a sense of needing to take stock with regard to the best ways forward for health improvement, and this was the starting point for the Glasgow Centre for Population Health when it was established in 2004. This year, the Centre

published 'Let Glasgow Flourish', the most comprehensive description ever of the city's health and its determinants, within which insights are gleaned as to the ways in which things are improving, as well as the issues proving intractable to change (Hanlon, Walsh & Whyte, 2006). One stark fact from these analyses is that our least healthy communities are different in every way from our most healthy ones. This raises the issue of whether the current policy drive towards community regeneration, aiming to transform not only the physical environments of areas but also their social, economic and service environments, can be successful in yielding improved health and sustainable communities. Glasgow is currently experiencing a huge programme of multi-faceted community regeneration with the aim of profoundly changing its communities in many ways. Through the GoWell programme, the Glasgow Centre for Population Health and its partner organisations will over the next ten years (i) keep track of neighbourhood changes as they unfold, and (ii) measure the effect of the changes on the health and wellbeing of individuals, communities and the city as a whole.
GoWell has five research components:
a) Ecological study of city-wide changes
b) Community health and wellbeing study
c) Tracking study of mobile and displaced households
d) Qualitative study of governance, participation and neighbourhood change
e) Nested studies of wider actions
GoWell also has a strong emphasis on learning - for communities, practitioners, policy-makers and politicians (not only within Glasgow but also nationally and internationally). Both through its detailed analysis of urban health in 'Let Glasgow Flourish' and through the complex research and learning of GoWell, the Glasgow Centre for Population Health is working at the interface of science and politics in developing insights into how to build a healthier future for some of Europe's least healthy communities.

O-067 METHODS FOR DEMAND-ORIENTED PREVENTION POLICY

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Why do health prevention policies too often fail? A hard question to answer. Until recently, health prevention policy was mainly based on epidemiological data concerning health problems and opinions of professionals. The policy was less responsive to actual needs and wants of citizens. However, more and more it becomes clear that prevention policies are most effective if the target group already disposes of certain needs concerning the health topic addressed. Hence, knowledge about these needs and wants is essential. This information is often absent. In 2004 the Municipal Health Service Utrecht and 'Clientenbelang Utrecht' (a patients association) started the project 'demand-oriented prevention policy' to fill up this gap. The project was financed by 'Fonds OGZ' (a fund for public health care).
During the first phase of the project needs and wants of citizens in deprived neighbourhoods were investigated. Three different methods were used:
- a large number of questions on needs and wants were included in a population survey;
- local health professionals and other local key persons were consulted by questionnaires and stakeholder-interviews;
- citizens were consulted by group interviews.

Through triangulation the results of these methods were compared. The most prevailing needs identified concerned overweight, mental health problems, (chronic) physical disorders, loneliness, staying independent, health care and physical environment. During the second phase the project focussed on using the research results to influence prevention policy. A discussion group was composed in which managers of several organisations in the fields of healthcare, mental health care, welfare, care insurance and the social and physical environment participated. Together, the participants decided to concentrate on overweight and loneliness and elaborate the chain approach concerning these topics. The project offered a considerable amount of information on needs and wants of citizens in deprived neighbourhoods. Besides these insights, it produced a new research design. The combination of a population survey with stakeholder-interviews appears to be an efficient and valid method.

It was also possible to use the gained insights to influence prevention policy. However, it became obvious that the needs concurred with other incentives that concern policy-making as interests of involved organisations. With this project some first steps are made for a more demand-oriented health prevention policy, but a long road is still ahead. It can be concluded that it is possible to investigate needs of citizens with relatively simple methods. However, it is more difficult to influence general health prevention policy.

O-068 INJECTING DRUG USERS WHO FULLY PARTICIPATE IN HARM REDUCTION PROGRAMS ARE AT DECREASED RISK FOR HIV AND HCV, EVIDENCE FROM THE AMSTERDAM COHORT STUDIES

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In Amsterdam, The Netherlands, methadone programs are implemented according to the harm reduction approach, in which illicit drug use is tolerated. The main goal is to keep in contact with as many drug users (DU) as possible, combining methadone provision with social-medical care and needle-exchange programs (NEP). We investigated whether harm reduction has an impact on the incidence of HIV and HCV. The study population comprised 714 HIV and/or HCV negative ever-injecting DU from the open and ongoing Amsterdam Cohort Studies (ACS) that started in 1985. DU participating in the ongoing ACS return every 4'6 months. At every visit blood is drawn for HIV testing and stored serum was retrospectively tested for HCV antibodies. The association between harm reduction and HIV and HCV seroconversion was evaluated using poisson regression. Harm reduction was measured by combining the two most important components: participation in a methadone program and the use of NEP, resulting in 5 categories ranging from no participation to full participation (defined as: no current injecting and > 60 mg methadone/day, or current injecting but all needles exchanged and > 60 mg methadone/day). Information on current harm reduction refers to the period between the present and the preceding visit. During follow-up, 91 DU seroconverted for HIV and 58 for HCV. Methadone use or use of NEP alone was not associated with HIV or HCV seroconversion. However, when combining these variables as previously described, we found an HIV incidence rate of 1.2/100 person years (PY) in DU who fully participated in the harm reductions program versus 3.8/100 PY in DU who did not participate. For HCV these figures are 3.5/100 PY and 23.2/100 PY respectively. The corresponding relative risks were 0.32 (95% CI 0.17-0.62) for HIV and 0.15 (95% CI 0.06-0.40) for HCV. These results did not substantially change after correcting for potential confounders. In conclusion, ever-injecting DU who fully participate in harm reduction programs are at decreased risk of both HIV and HCV infection, indicating that combining prevention measures, in stead of only supplying NEP or methadone, can reduce the spread of these infections.

O-069 LOVE THROUGH THE EYES OF URBAN AFRICAN AMERICAN YOUTH: A COMMUNITY-BASED PHOTOVOICE PROJECT IN BALTIMORE

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In the United States, the media, policymakers, and even social scientists often characterize the lives of urban youth of color in terms of social problems (e.g., teen pregnancy, school drop-out, drug use, etc.). While these social problems are critical to address, it is also important to highlight the strength that exists within urban communities. This presentation describes a community-based participatory research study that used Photovoice to document how adolescents define and describe the construct of 'love,' the relationships of love to adolescent health, and the positive aspects of adolescents' lives and neighborhoods. Participants were African American youth (n = 20) in Baltimore who are members of the Johns Hopkins Center for Adolescent Health Youth Advisory Committee. When choosing topics for the Photovoice project, the participants decided they were tired of focusing on the problems in their communities and instead wanted to focus on positive topics, specifically love. The youth in this project were given digital cameras and over a period of three months, they photographed various images that conveyed the love in their lives. In this presentation, we describe how we used the Photovoice research method to examine love from the perspective of Baltimore adolescents. We will present data collected using the SHOWed method (Wang,1999)'i.e., consciousness-raising discussions that identify themes related to love, and the relati-

onship of love to adolescent health, from the photographs taken by study participants. Various themes relating to love were explored including familial love, romantic love, as well as love for pets and extracurricular activities. These themes provide poignant insights into the positive aspects of the youth's lives that are informative to health interventions. Finally, this presentation will discuss how data on love, and its relationship to adolescent health, can be used to help develop interventions to support health-promoting behaviors in urban adolescents.