Introduction Leptospirosis has emerged as an important health problem in developing countries due to the growth of slum settlements worldwide, where poor sanitation favours rat-borne transmission. Large urban epidemics occur during seasonal periods of heavy rainfall. However, a detailed analysis has not been performed to determine how rainfall, as well as other climatic factors, specifically influence the risk of leptospirosis in these endemic settings.

Methods We analysed data from 2083 leptospirosis cases which were identified during active population-based surveillance performed in the city of Salvador, Brazil between 1996 and 2010. Information on daily rainfall, humidity and temperature were obtained for the same period. A generalised additive model was fitted, using a negative binomial distribution for weekly aggregated data (729 weeks). We incorporated a non-parametric term to estimate the time trend and a sin-cosine term to control for seasonal confounding.

Results Rainfall and humidity were positively associated with the number of cases two weeks later, linearly and without a threshold. Temperature protected, even though the range between maximum and minimum temperatures is small; from 22 to 33°C. A decreasing trend was highly significant, possibly due to intervention of sewerage and garbage collection systems.

Conclusion Leptospirosis is expected to become an increasingly important slum health problem as predicted global climate change and growth of the world’s slum population evolve, and models adequate to estimate the impact of both environment and climate variables on incidence of all environmental related diseases should be incorporated in the epidemiologists toolbox.
**Results**
The prevalence of depression and depressive symptoms were 4.8% and 21.4%, respectively. Depression (OR 8.0; 95% CI 4.2 to 14.3) and depressive symptoms (OR 2.7; 95% CI 1.7 to 4.2) were strongly associated with high disability, even after adjustment for all demographic and socioeconomic conditions and physical morbidities. Depression had a PAF of 15% (95% CI 10% to 19%), whereas depressive symptoms had a PAF of 17% (95% CI 9% to 24%).

**Conclusions**
Depression and depressive symptoms were the morbidities that contributed most to the framework of disability in the elderly. Effective management of depressive states in the elderly, delivered at the primary care level, may reduce the total population disability.

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**P2-510 GESTATIONAL AND NEONATAL OUTCOMES IN TEENAGE PREGNANCIES**

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**Introduction**
According to the UK government, social exclusion increases the risk of teenage pregnancy and educational factors may be dimensions of such exclusion. In Brazil, around 700,000 girls (32,000 under 14 years) were reported to give birth in 1999.

**Objective**
To compare gestational follow-up and neonatal outcomes in the age groups of 12–14 years (early adolescence), 15–18 years (late adolescence), and 19–35 years (adulthood), based on the number of prenatal visits, birthweight, and 5-min Apgar score.

**Method**
Retrospective cross-sectional study conducted between 1 January 2006 and 31 December 2009, using secondary data (LiveBirth statement) from the South Wing Regional Hospital, Brasilia, Federal District.

**Results**
Of 24,800 newborns, the mothers of 87.06% were adults, 12.25% late adolescents and 0.40% of the late and early adolescents, respectively.

**Conclusions**
The number of prenatal visits was adequate (12.25% late adolescents and 0.69% early adolescents). The number of prenatal visits, birthweight, and 5-min Apgar scores were inadequate in 4.80% of early adolescence pregnancies, 2.80% of late adolescence pregnancies, and 1.90% of adult pregnancies, with distribution also differing among groups.

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**P2-511 THE RELATIONSHIP BETWEEN ALCOHOL USE AND INJECTING DRUG USE: IMPACTS ON HEALTH AND SOCIAL FUNCTIONING**

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**Introduction**
Alcohol is a major risk factor for heroin overdose, but the effects of alcohol consumption on other health and social outcomes for people who inject drugs have not been systematically evaluated. In this paper we explore the effects of alcohol on health and social outcomes for people who inject drugs.

**Methods**
Data were obtained from 655 people who inject drugs as part of the Melbourne Injecting Drug User cohort study (MIX). AUDIT-C scores (0, 1–2, 3+) were generated and associations between these AUDIT-C scores and health and social outcomes were examined using logistic regression for dichotomous outcomes and linear regression for continuous outcomes.

**Results**
While around 40% of the MIX cohort reported never drinking alcohol, 45% scored between 1 and 8 and 17% above 8 on the AUDIT-C. A score of 3+ on the AUDIT-C was associated with a variety of negative health outcomes including non-fatal heroin overdose, as well as increased use of health services such as hospital emergency departments. Participants who reported drinking were more likely to report perpetrating violent crime, but were no more likely to report committing other sorts of crime such as fraud. Drinkers were more likely to report less overall life satisfaction than non-drinkers.

**Conclusion**
The rate of abstinence in the MIX cohort was high, but those who reported drinking alcohol exhibited poorer health and social outcomes. Alcohol was associated with an increase in violent offending within a population with high rates of offending more generally.

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**P2-512 PSYCHIATRIC READMISSIONS AND THEIR ASSOCIATION WITH SOCIODEMOGRAPHIC AND CLINICAL PROFILES**

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**Introduction**
Despite recent advances, the frequency of psychiatric hospitalisations remains high.

**Objective**
To identify the frequency of readmissions in a psychiatric hospital associated with patients’ sociodemographic and clinical profiles.

**Methods**
A structured questionnaire was applied during 2008 to collect the reports from the Psychiatric Hospital at Ribeirão Preto – Brazil.

**Results**
In 2025 records, 681 readmissions (34%) were identified. Most of the subjects (99%) came from the same region of the study, the majority were men, 50%, aged 40–49 and 26% up to 29 years, 23% were married. Most of the readmissions were caused only by treatment dropout (47%) or associated with low family support (26%). Prevalent diagnoses were schizophrenia (27%), affective disorders (50%) and use of alcohol and drugs (15%). The mean age at beginning of disease was higher among men (p = 0.001). The length of stay in the hospital was higher for women, especially in the age group 40 to 49 (p = 0.032). Associations were found between gender and age (p = 0.007), marital status (p = 0.000), reason for hospitalisation (p = 0.002), physical status on admission (p = 0.004), hospitalisations in other psychiatric hospitals (p = 0.003), type of discharge (p = 0.003), treatment during hospitalisation and physical status at discharge (p = 0.004).

**Conclusions**
The flow of care is consistent with the principles of regionalisation of the Unified Health System (SUS), however, the rate of readmissions due to treatment dropout is very high, which is an epidemiological alert to all sectors involved.

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**P2-513 SOCIAL AND GEOGRAPHICAL VARIATIONS OF MATERNAL MORTALITY IN MEXICO**

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**Introduction**
This paper analyses the trend of maternal mortality rate in Mexico according to the level of social marginalisation.