studies were conducted between 1990 and 2010, predominantly in middle- and high-income countries, although there has been an increase in the number of studies from low-income countries recently. HBV markers measured and definitions of HBV infection varied between studies; 146 studies reported specifically on prevalence of antibodies to HBV core antigen, and 90 reported prevalence of HBV surface antigen. Few papers reported age- or gender-specific prevalence estimates.

Conclusions This is the first comprehensive review of the global prevalence of HBV in this high-risk population. Data quality and research methods, particularly HBV markers assessed, varied markedly. Better quality and more complete data are required to accurately assess the scale and significance of this public health problem.

| P2-417

NICOTINE DEPENDENCE AMONG DAILY CIGARETTE **SMOKERS IN 14 COUNTRIES**

doi:10.1136/jech.2011.142976l.47

¹J Hsia,* ²J Samet, ¹S Asma, ¹G Nelson-Blutcher. ¹US Centers for Disease Control and Prevention, Atlanta, Georgia, USA; ²The Keck School of Medicine at University of Southern California, Los Angeles, California, USA

Introduction Tobacco use is the leading preventable cause of death globally, causing more than five million deaths a year. There have been studies on nicotine dependence in developed countries. However, it is little know about nicotine dependence at population level in high burden and high populated countries. Nicotine dependence is important for tobacco control strategies. In this paper, we will present nicotine dependence among daily cigarette smokers in Russian Federation, Ukraine, Poland, Turkey, Brazil, China, Thailand, Vietnam, Philippines, India, Bangladesh, Uruguay, Mexico, and Egypt.

Methods Daily cigarette and bidi smokers are analysed from 2009 to 2010 Global Adult Tobacco Surveys (GATS) in 14 countries: China, India, Bangladesh, Brazil, Russian Federation, Vietnam, Philippines, Thailand, Mexico, Egypt, Turkey, Poland, Ukraine, and Uruguay. Nicotine dependence is measured by heaviness of smoking index calculated from the time since the first smoke and the number of cigarettes (and bidis that are analysed separately) smoked per day. A statistical package, SUDAAN, was used in the analyses to take the complex survey into account.

Results Heaviness of Smoking Index (HSI) for daily cigarette smokers ranges from the lowest in Bangladesh (1.32) to the highest in Poland (2.53). For males, the highest HSIs are in the Russian Federation (2.75), Ukraine (2.69), and Poland (2.66). For females, the highest HSIs are in Poland (2.34) and India (2.12). Daily cigarette smokers who think about quitting have a lower HSI score than those who do not want to quit.

Conclusion Nicotine dependence among daily cigarette smokers varies by geographic region.

P2-418 | WEATHER VARIABILITY AND THE INCIDENCE OF **INFLUENZA: BAYESIAN TIME SERIES ANALYSIS**

doi:10.1136/jech.2011.142976I.48

¹W Hu,* ¹G Williams, ¹S Tong. ¹The University of Queensland, Brisbane, Australia; ²Queensland University of Technology, Brisbane, Australia

Introduction Influenza is one of the most common infectious diseases in the world. Few studies have examined the quantitative relationship between weather conditions and influenza. This paper examined the potential impact of weather variability on the incidence of influenza in Brisbane, Australia.

Methods Data on daily weather variables (minimum temperature and rainfall), notified influenza cases and population size in Brisbane were supplied by the Australian Bureau of Meteorology, Queensland Health, and Australian Bureau of Statistics for the period of 1 January 2002-31 December 2008, respectively. Bayesian time series Poisson regression model was performed to examine the potential impact of weather variability on the incidence of influenza.

Results The weekly mean of number of influenza cases, minimum temperature and rainfall were 12.59, 15.41°C and 16.52 mm between January 2002 and December 2008, respectively. Bayesian time series Poisson regression model shows that the average number of weekly influenza cases increased by 8% (95% credible interval (CrI): 9 to 10%) and 6% (95% CrI: 2 to 10%), for a 1°C decrease in average weekly minimum temperature at a lag of one week and a 10 mm increase in average weekly rainfall at a lag of one week, respectively. An interactive effect between temperature and rainfall on influenza was also found.

Conclusions The results of this study suggest that temperature and rainfall are among the main determinants of influenza transmission.

P2-419 PHYSICAL ACTIVITY AMONG DUBAI POPULATION PREVALENCE AND SOME ASSOCIATED FACTORS

doi:10.1136/jech.2011.142976l.49

H Hussain.* N Hassan. Dubai Health Authority. Dubai. United Arab Emirates

Objectives Study the prevalence of physical activities among Dubai population and the effect of some associated factors, assess the knowledge, practice and attitudes.

Methodology A cross sectional survey has been carried out upon random sample of adult Dubai population age range (18–65) years. the sample was identified from schools, universities, primary healthcare centers visitors, governmental offices, commercial Malls and house hold families, sample size was estimated by using Epi Info software, it was 2226 individuals of different age, sex, income, social class. socio-demographic data, Knowledge, attitudes, practice, and reasons of avoidances.

Results 23.6% of the sample showed good knowledge and 86.6% showed positive attitude towards practicing physical activities, about 34.6% of the sample are practicing physical activity regularly (prevalence rate among Dubai adult population), it was appear that practicing of physical activity is significantly higher among emirates in comparison with expatriates, highly educated individuals (university and above), and high income people (10000 ED and above), the study showed that the main reason behind non practicing physical activity were lack of time 47.3%, tiredness and exhaustion 20.1%. UN availability of suitable places 17.3%, the multiple logistic regression analysis showed that there are four factors significantly affect on practicing of physical activities in Dubai, they are, Nationality OR was 1.49 among Emirates compared to expatriates, Educational level, OR was 2.00 among higher education compared with low education (primary school), Awareness and knowledge factor OR 3.49 and income factor showed higher practicing of physical activity among individuals with high income (10 000 and above) compared to low income individuals < 10 000 ED. **Recommendations** Establishing national public health program to approach physical activity problem and developing effective strategies to deal with the causes.

P2-420 IMMUNOGENICITY OF PANDEMIC INFLUENZA A (H1N1) MONOVALENT VACCINE AMONG IMMUNOSUPPRESSED **HEMATOONCOLOGY PATIENTS**

doi:10.1136/jech.2011.142976l.50

¹S Ide,* ²Y Imamura, ³Y Ide, ¹C Tsutsumi, ¹Y Ifuku, ²M Koga, ⁴K Maeda, ¹M Washio, ³Y Hirota. ¹St. Mary's College, Kurume, Fukuoka, Japan; ²St. Mary's Hospital, Kurume, Fukuoka, Japan; ³Osaka City University School of Medicine, Osaka, Osaka, Japan;