Result As per the risk factor, smoking was found to be significant ($p=0.03$). Likewise, history of prior tuberculosis was found to be significantly different in cases compared to control ($p=0.02$). Social stigma has been more pronounced among the cases compared to control ($p=0.013$). The knowledge regarding MDR TB and DOTS Plus treatment was found to be very high among the cases OR=9.64 (95% CI 3.34 to 27.84) and OR=16.71 (95% CI 4.65 to 60.01) respectively.

Conclusion The ultimate strategy to control MDR-TB is one that implements comprehensive approach incorporating treatment of MDR-TB based on appropriate treatment strategies that use second-line drugs under proper case management conditions; uninterrupted supply of quality-assured antituberculosis drugs; standardised recording and reporting system.

P2-448 SMOKING AND BODY MASS INDEX AMONG MALES AGED 20 YEARS AND ABOVE: A SOUTH INDIAN STUDY

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A C Mathew,* A K Madhukeshwar, R Kurian. *PSG Institute of Medical Sciences and Research, Coimbatore, India*

Introduction To investigate the relationship between smoking status and Body Mass Index (BMI) in men aged 20 years and above.

Methods A cross sectional study was conducted in the rural field practice area of Department of Community Medicine, PSG Institute of Medical Science and Research, Coimbatore during June and July 2010. A total of 459 men aged 20 years and above were included in the study. Statistical analyses were done using General Linear Model procedure of SPSS.

Results Cigarette smokers weighed (kg) less, $p<0.01$ (age adjusted mean $\pm$ SE=58.64 $\pm$ 0.44) and were leaner, $p<0.001$ [age adjusted mean BMI (kg/m^2) $\pm$ SE=21.13 $\pm$ 0.13] than ex/non-smokers (61.11 $\pm$ 0.69 and 22.19 $\pm$ 0.2 respectively). Regarding the intensity of smoking and BMI, light smokers (1–20 cigarettes per day) were leaner than ex/non smokers (mean $\pm$ SE were 21.13 $\pm$ 0.13, 22.19 $\pm$ 0.208 respectively, $p<0.001$). Regarding the duration of smoking and BMI, a linear diminution in BMI is observed with increasing duration of cigarettes smoking compared to ex/non smokers (mean $\pm$ SE of BMI) for ex/non smokers 22.19 $\pm$ 0.208, 1–10 years of smoking 21.56 $\pm$ 0.221 ($p<0.05$); 11–20 years of smoking 21.23 $\pm$ 0.256 ($p<0.01$); 21–30 years of smoking 20.30 $\pm$ 0.333 ($p<0.001$); 30 and above years of smoking 20.07 $\pm$ 0.501 ($p<0.001$).

Conclusion We found significant results confirming an association between cigarette smoking and lower BMI in men.

P2-449 MATERNAL EDUCATION AND HEIGHT GROWTH TRAJECTORIES IN CHILDHOOD: 2004 PELOTAS BIRTH COHORT STUDY

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¹A Matijasevich,* ^{2,3}L D Howe, ²K Tilling, ¹I S Santos, ¹A J D Barros, ^{2,3}D A Lawlor. *¹Postgraduate Programme in Epidemiology, Federal University of Pelotas, Pelotas, Brazil; ²School of Social and Community Medicine, University of Bristol, Bristol, UK; ³MRC Centre for Causal Analyses in Translational Epidemiology, University of Bristol, Bristol, UK*

Introduction The aim of this study was to explore the age at which socioeconomic inequalities in child height emerge among children from a middle-income country.

Methods Using data from the 2004 Pelotas cohort study from Brazil we modelled individual height growth trajectories in 2106 boys and 1947 girls from birth to 48 months using a linear spline mixed effects model. We examined the associations of maternal education on birth length and length/height growth and explored the effect of adjusting for confounding factors.

Results We showed linear and positive associations of maternal education with birth length and length/height growth rates in the first four years of life. By age four, the mean height of boys in the lowest education category was 100.98 cm (SE=0.21) compared with 104.23 cm (SE=0.12) in the highest education category. The equivalent predicted heights at age four for girls were 100.08 cm (SE=0.25) and 103.00 cm (SE=0.15) in the lowest and highest education categories respectively. Thus for both boys and girls there was on average a 3 cm difference between the extreme maternal education categories. Differences in postnatal growth rates persisted in the adjusted analyses.

Conclusion Our data demonstrate an increase in the absolute and relative inequality in height after birth indicating that height inequality, which was already present at birth, widened considerably through childhood growth. These findings differ from studies in high income countries where height inequalities at birth exist but do not widen postnatally. Our results highlight the importance of postnatal environment on infant and childhood growth in a middle-income setting.

P2-450 WITHDRAWN

P2-451 WHAT WILL BE THE IMPACT OF CURRENT TRENDS OF OBESITY IN BRAZIL AND MEXICO ON THEIR FUTURE HEALTHCARE DEMANDS

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¹T Marsh, ²K McPherson,* ¹M Brown, ¹K Rtveladze. *¹National Heart Forum, London, UK; ²University of Oxford, Oxford, UK*

Introduction Brazil and Mexico are two of the fastest growing economies in the world. Mexico currently has one of the largest prevalence's of obesity in the world 24.2% for men and 34.5% for women in 2006 while Brazil has much lower levels of 8.9% and 13.1% (2003 figures). What will be the future impact of these trends particularly for their respective healthcare systems.

Methods Utilising the method developed for the Foresight Tackling Obesity study in the UK. The authors firstly predict future trends based on current data and then by feeding those into a micro-simulation programme developed by the NHF calculate future attributable disease burdens and their attendant health costs based on these trends and is able to test various future scenarios.

Results If unchecked the rates of increase of obesity in Mexico, will mean it faces an unsustainable attributable disease burdens and attendant health costs. If significant policies are enacted to ameliorate these trends then even relatively small population reductions in BMI could have significant health benefits to the population. Brazil though lagging behind could soon have unsustainable obesity levels too if nothing is done. The example of Mexico should offer a wake up call for Brazilian health policy makers and others in the region as to what the future impact of ignoring a rise in obesity trends will be.

Conclusion As yet there is little evidence of the effectiveness of national policies to stem the rise in obesity but this study shows even small population changes can have substantial savings to a countries future healthcare costs.

P2-452 THE CO-OCCURRENCE OF MUSCULOSKELETAL AND MENTAL SYMPTOMS AND ITS EFFECT ON PERCEIVED WORK ABILITY: TIME TRENDS IN FINLAND 1997–2009

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H Miranda,* L Kaila-Kangas, K-P Martimo, P Leino-Arjas. *Finnish Institute of Occupational Health, Helsinki, Finland*

Introduction We investigated whether self-perceived work ability related to co-occurring musculoskeletal and mental symptoms has changed over time.

Abstract P2-452 Figure 1

Methods Five cross-sectional telephone surveys were conducted triennially in 1997–2009 among representative samples of working Finns ($n=2000$ – 2400 /survey year, total $N=11\,000$). The risk of reduced work ability related to musculoskeletal pain and mental symptoms was estimated with log-binomial regression for each survey year separately. Current work ability was assessed with a scale from 0 to 10 (reduced ability: 0–7). Musculoskeletal pain concerned prolonged or recurrent pain in the neck, shoulders/arms, wrist/fingers, low back, or hips/lower extremities. Mental symptoms included feelings of depression, tiredness, irritability, difficulties to concentrate, and sleep problems. Models were adjusted for age, gender, education, BMI, smoking, chronic illnesses, physical and psychosocial work exposures, accidents at work, threat of unemployment, and family problems.

Results One-month prevalence of co-occurring pain and mental symptoms as well as that of self-perceived work ability remained stable in 1997–2009. The adjusted prevalence ratios of reduced work ability related to having both pain and mental symptoms increased from 2.7 (95% CI 1.7 to 4.2) in 1997 to 4.7 (95% CI 2.9 to 7.8) in 2009 (Abstract P2-452 figure 1). Changes in the risk of reduced work ability associated with musculoskeletal or mental symptoms only were less marked.

Conclusions The considerable increase that occurred during 12 years in the risk of reduced work ability implies that workers with co-occurring musculoskeletal and mental symptoms presently experience less ability to work than before, irrespective of assessed changes in for example, physical or psychosocial work exposures.

P2-453 NEONATAL SEPTICAEMIA IN INDIA: MAJOR CAUSE OF MORBIDITY & MORTALITY AND CHALLENGE FOR HEALTH PROFESSIONALS

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G Mudey,* N Tankhiwale, A Mudey. Jawaharlal Nehru Medical College, Sawangi (Meghe), Wardha, Maharashtra, India

Introduction Neonatal septicaemia is life-threatening emergency that demands urgent management and leading cause of neonatal mortality accounting nearly half of all *neonatal deaths*. Blood culture is gold standard method for diagnosis but changing pattern of organisms and frequent emergence of resistant bacteria causes difficulty in treatment. Non-specificity of symptoms creates difficulty in diagnosis of infections in the early stage. Present study was conducted with the objectives of isolation of bacteria from blood, their sensitivity and resistance pattern, correlation of maternal and fetal risk factors.

Methods Study was conducted in tertiary care centre on 210 cases of clinically diagnosed neonatal septicaemia admitted in NICU. Blood culture was done in all cases by conventional three subculture

method and antibiotic sensitivity was done by Kirby Bauer disc diffusion. All cases were studied for maternal & fetal risk factors.

Results Blood culture was positive in 49.05% cases. *Klebsiella Pneumoniae* was frequently isolated pathogen (63.11%), followed by *Escherichia coli* (12.62%) and *Staphylococcus aureus* (10.68%). Gram negative isolates from enterobacteriaceae were 100% sensitive to imipenem followed by amikacin and cefotaxime. *S. aureus* isolates were 100% sensitive to vancomycin followed by amikacin and cloxacillin. The commonest maternal risk factors were muconium stained amniotic fluid (42.72%), premature rupture of membrane (33%), History of fever (20.39%). Fetal risk factors commonly present were 79.61% low birth weight, 67.96% neonates were preterm and birth asphyxia (65.05%).

Conclusion There is a need of continuous surveillance of the bacteriological profile and antimicrobial sensitivity pattern of neonatal septicaemia in each and every NICU.

P2-454 ASSOCIATION BETWEEN HIV/AIDS RELATED ADULT DEATHS AND MIGRATION OF HOUSEHOLD MEMBERS IN RURAL RUFJI DISTRICT, TANZANIA

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¹F Murunga,* ¹H Masanja. ¹African Population and Health Research Center, Nairobi, Kenya; ²Ifakara Health Institute, Dar es Salaam, Tanzania

Introduction The dramatic increase in adult mortality attributable to HIV/AIDS in Sub Saharan Africa may increase the number of households that do not survive as a functional unit in the years to come. This report describes the extent at which these impacts are weathered by a rural community using data from the Rufiji HDSS in rural Tanzania.

Objectives The study describes adult mortality patterns in the area with an emphasis on the HIV/AIDS related adult deaths and the proportion of household members migrating following these deaths.

Methods A total of 32 787 households and 4603 adult deaths from 4019 households were recorded over the study period. Mortality trends and migration rates were computed while the association between adult mortality and out-migration of members assessed using Cox proportional Hazard model.

Results Adult deaths increase by about 9% the chance of a child to migrate within or without the DSA while HIV/AIDS adult deaths increase by a further 19 percentage point the risk of the child to migrate out of the DSA. Non-HIV/AIDS adult deaths also enhance the risk for female internal migration by 5% albeit hardly significantly (adj. HR 1.05; 95% CI 1.0 to 1.10, p value 0.05) but decreases the chance of male internal migration by 13% (adj. HR 0.87; 95% CI 0.81 to 0.93, p-value 0.01). HIV/AIDS adult death is strongly associated with out-migration of adults. The deaths female out-migration to 19% (adj. HR 1.19; 95% CI 1.09 to 1.30, p value <0.001) and male migration to 30% increased risk (adj. HR 1.30; 95% CI 1.16 to 1.45, p value <0.001).

P2-455 SLEEP DURATION AND RISK OF WEIGHT GAIN AND OBESITY: THE OHSAKI COHORT STUDY

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M Nagai,* M Kakizaki, I Tsuji. Tohoku University Graduate School of Medicine, Sendai, Japan

Introduction Several studies from Western countries have reported that sleep duration is associated with weight gain or obesity. We examined the association between sleep duration and risk of weight gain or obesity in Japan.

Methods We combined data from two cohort studies. In 1994, we delivered a questionnaire to all individuals aged 40–79 years who lived in the catchment area of Ohsaki Public Health Center. Of