cases and 210 controls) were analysed regarding phenotypic characteristics for risk of melanoma as well as number of grandparents born in Europe. European ancestry (Spanish, Italian, Germanic or Slavic, and 2 or more European country), eye colour (light brown and green or blue), presence of nevi, use of sunscreen, referred episodes of sunburn in adolescence or not, were independently associated with melanoma. Portuguese ancestry was not associated in multivariate logistic regression analysis. Our data confirmed the importance of European ancestry as a susceptibility factor. The higher tendency to develop melanoma in persons with those ancestries could be related not only to the phenotypic but probably also to other genetic characteristics.

P2-443 | A RETROSPECTIVE EPIDEMIOLOGICAL STUDY OF ENDEMIC WATERBORNE ILLNESS IN A PASTORAL COMMUNITY IN KENYA

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Case-patients for a retrospective epidemiological cum microbiological study in Njoro Town, Kenya were selected after self-report of waterborne illness within 7 days of exposure through drinking water. Controls were matched for location, household income and type of drinking water source. Households with piped water in one high-income district reported considerably lower illness rates compared to unconnected households in two low-income districts. Analysis of the ORs identified water from the stream to be associated with the highest risk of illness (OR=3.95, p=0.03) compared to untreated rainwater (OR=2.45, p=0.02), untreated water from boreholes (OR=1.90, p=0.02) or treated water from any source (OR=0.62, p=0.01). Bacteria densities in water obtained from the stream were generally 1−3 log units higher compared to other sources, staying within 3−4 log units for HPC (cfu/ml) and TC (cfu/100 ml), 2−3 log units (cfu/100 ml) for *Escherichia coli* and intestinal enterococci and within 1 log unit (cfu/100 ml) for Salmonella. Several confounding risk factors other than contaminated water were identified. Their detection for over 50 % of all illness cases was significant. It was concluded that the importance of drinking water quality as the most likely source of endemic waterborne illness in the community may have been previously overestimated. Therefore, interventions on water supply in the town should include strategies that address confounding risk factors, especially, poor hygiene and occupational hazards, as well as piped water distribution to low-income households.

P2-444 | INCIDENCE AND CORRELATES OF "GROWTH FALTERING" AMONG 0−6 YEAR'S CHILDREN: A PANEL STUDY FROM RURAL WARDHA, INDIA

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Objectives To study the magnitude and determinants of growth faltering among 0−6 year's children in adopted villages of rural medical college.
Material and Methods A total 305 children of <6 years were followed monthly for 1 year to assess the growth faltering. At each visit, the mothers/caretaker of children were interviewed and information regarding immunisation, morbidity profile, dietary history and child feeding practices collected using a pre-tested interview schedule. Monthly anthropometric measurements of child were taken.

Growth faltering has been defined as failure to gain weight or actual loss of weight, and weight gain <300 g over a period of three consecutive months.
Results The cumulative incidence of growth faltering among 0−6 years children was 930 per 1000 children per year (95% CI 900.8 to 959.2). The number of growth faltering episodes per child per year was 3.1 (95% CI 2.9 to 3.3). In the multivariate analysis we found presence of anaemia, presence of any illness & improper household ventilation as significant predictors of growth faltering.
Conclusion Our finding suggests more focus should be given on early detection and timely correction of growth faltering rather than just identification and treatment of severely malnourished children.

P2-445 | MATERNAL RISK FACTORS ASSOCIATED WITH LOW BIRTH WEIGHT IN WARDHA, INDIA

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Objective To evaluate the maternal risk factors associated with low birth weight.
Material and Methods A case control study was carried out on 307 cases (mothers of neonate weighing <2500 g) and 307 controls (mothers of neonate weighing ≥2500 g) in District Hospital Wardha. Information was obtained by maternal interview, from medical records and by anthropometric measurement of mother and infants.
Data entry and Analysis The data entry and analysis was done in Epi-Info 6.04. OR was calculated to find out the association of various factors under study with low birth weight.
Results Among various determinants of low birth weight studied, the determinants which were found associated with high odds of LBW were - maternal age <20 years or >30 years, maternal weight <40 kg, gestational weight gain of less than 6 kg, BMI<18.5 kg/m^2 and MUAC <23 cm, previous history of giving birth to LBW babies, maternal anaemia.
Conclusion Significant determinants of LBW were maternal age <20 years or >30 years, maternal weight <40 kg, gestational weight gain of less than 6 kg, BMI<18.5 kg/m^2 and MUAC <23 cm, previous history of giving birth to LBW babies, maternal anaemia.

P2-446 | WITHDRAWN

P2-447 | RISK FACTORS OF MULTI-DRUG RESISTANT TUBERCULOSIS (MDR TB) IN NEPAL

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Introduction Multi-drug resistant (MDR) tuberculosis is defined as disease caused by *Mycobacterium tuberculosis* with resistance to atleast two anti-tubercular drugs isoniazid and rifampicin. Recent surveillance data have revealed that prevalence of the drug resistant tuberculosis has risen to the highest rate ever recorded in the history. The most powerful predictor of the presence of MDR-TB is a history of treatment of TB. Shortage of drugs has been one of the most common reasons for the inadequacy of the initial anti-TB regimen, especially in resource poor settings.
Method A case control study was carried out to among diagnosed MDR TB cases and Non-MDR TB cases to explore the risk factors. A total of 55 cases and 55 controls were enrolled for the study from central Nepal.

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

doi:10.1136/jech.2011.142976l.77

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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

doi:10.1136/jech.2011.142976l.78

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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

doi:10.1136/jech.2011.142976l.79

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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 Obesities 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

doi:10.1136/jech.2011.142976l.80

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