Analyses by race seek to reflect racial inequalities in access to health services. To describe avoidable IM from the Brazilian List of Avoidable Deaths (LBE). A descriptive study of avoidable child deaths among Caucasians and Afro-descendents in Belo Horizonte from 2000 to 2007. We calculated the infant mortality rate (IMR), the neonatal IMR (N IMR) and Postneonatal IMR (PN IMR), infant mortality proportional to avoidable cause (IMPAC) and infant mortality proportional to ill-defined causes (IDC). There was a reduction of 31.23% in the IMR, of 32.6% in the N IMR and of 28.4% in the PN IMR. Avoidable deaths accounted for 70.2% of the total, and this percentage was higher (73.8%) among Afrodescendants. The highest percentage occurred in the subgroup "newborn care" (48.6%). Afro-descendants accounted for 52.9% and Caucasians for 42.8% of these deaths. The main causes were respiratory and cardiovascular diseases, with the highest proportion for Afro-descendants (29.8%). Deaths from IDC decreased 23.8% in the period, but the largest proportion occurred among Afrodescendants (4.5%). Filling in of information on the variable race/colour still presents problems. We observed a high number of deaths by "newborn care" and "pregnancy care." We detected racial inequality in IMPAC, Afro-descendant children having the highest percentages. These inequalities are influenced by socio-economic status and access to health services. The health services play a fundamental role in reducing the gaps in infant mortality observed in this study.

### P1-138 | Frailty Syndrome in Brazilian older adults

doi:10.1136/jech.2011.142976d.31

Y Duarte, \* M L Lebrão, L P Corona, D P Nunes, J L Santos, T S Alexandre. University of Sao Paulo, Sao Paulo, Brazil

**Introduction** The increase in the percentage of older adults is increasing more rapidly today in the developing world than previously occurred in the developed nations. These trends have important implications for understanding the mechanisms of population ageing and for all aspects of contemporary life. Frailty is considered to be a wasting syndrome that elevates the risk for a variety of adverse outcomes.

**Objectives** Using Fried's model, identify frailty syndrome and associated factors in Brazilian older adults.

Methods Data comes from a longitudinal survey—SABE (Health, Well-being and Ageing), with a multistage clustered sample of 1413 people aged ≥65 years-old in Sao Paulo-Brazil in 2006. Frailty was defined as the presence of 3 or+ of five criteria of the Fried's model, unintentional weight loss, exhaustion, weakness, slowness and low physical activity. Pre-frail was defined as the presence of one/two items. Multivariable linear regressions identified associated factors with frailty at baseline.

Results Prevalence of pre-frail was 45.9% and frailty was 12.9%. Associated factors adjusted by age and gender included less education (OR=2.40, p=0.03); fair/poor self-reported health (OR=2.81/ 3.63, p=0.01), stroke (OR=6.54, p=0.02), depressive symptoms (OR=4.55, p<0.00), disability  $\geq 1ADL$  (OR=2.79, p=0.02) and ≥1IADL (OR=3.81, p=0.04), hospitalisation last 12 months (OR=3.81, p=0.01). There was poor concordance between frailty and disability (3.4%) and modest with comorbidities (26.2%). These three conditions were present in 55.1% and frailty alone was identify in 15.2% of older.

Conclusion Recognition of associated factors with frailty syndrome may help to perform active prevention and intervention actions and, consequently, maximise older quality of life.

## P1-139 | FRAILTY IMPACT ON OLDER BRAZILIAN SURVIVAL: 3 YEARS **FOLLOW-UP SURVEY**

doi:10.1136/jech.2011.142976d.32

Y Duarte, \* L P Corona, M L Lebrão, J L F Santos. University of Sao Paulo, Sao Paulo,

**Objective** In this study we will analyse the survival curve of older Brazilians (≥75 years) according frailty categories (not frail, intermediate, frail) in a large, well-defined sample of older Brazilian in 3 years follow-up.

Methods Data comes from a longitudinal survey—SABE Study (Health, Well-being and Ageing) that began in 2000 with a sample (n=2143) older adults (≥60 years) living in São Paulo/Brazil.In 2006 1115 older adults were re-interviewed when the frailty analysis (Fried's model) began. The follow-up were analysed with data from four waves, on 2008 and 2009. Survival analysis was done based on data of 2006 (n=687 olders ≥75 years) up to 2009 (death analyses). Kaplan-Meier Survival Analysis was used to analyse the results considering frailty categories in baseline. Cox proportional hazards model was tested using social demographic and health conditions.

Results There were 134 deaths and 116 follow-up losses. In survival analysis, the three strata (not frail, intermediate and frail) did not reach the median survival; only frail elders reached 25% survival time, with 17.2 months, so frail elders presented the worst prognosis. The HR for intermediate is 1.94 and 5.47 for frail, in relation to robust (p trend=0.000). The hazard adjusted model showed a HR 1.6 for pre-frail and 2.9 for frail (p<0.01; p trend=0.003).

**Conclusions** Frailty is associated with mortality in Brazilian elders. Recognition of variables involved in frailty may help to perform active prevention and intervention actions and, consequently, maximise survival.

### P1-140 WHAT KINDS OF HAND INJURIES ARE MORE LIKELY TO **RESULT IN AMPUTATION? AN ANALYSIS OF 6549 HAND INJURIES**

doi:10.1136/jech.2011.142976d.33

<sup>1</sup>R Durusoy,\* <sup>1</sup>A Davas, <sup>2</sup>M Kayalar, <sup>2</sup>E Bal, <sup>1</sup>F Aksu, <sup>2</sup>S Ada. <sup>1</sup>Department of Public Health, Ege University Medical School, Izmir, Turkey; <sup>2</sup>EMOT Hospital, Izmir, Turkey

Aim The aim of this study was to identify risk factors for hand amputations using the records of a hospital in Turkey specialising in hand and microsurgery.

**Method** This is a restrospective analytical chart study. We analysed 6549 hand injuries treated between 1992 and 2005. Researchers coded the variables "intent", "activity when injured", "mechanism of injury", "object/substance producing injury" and "place of occurrence" according to the International Classification of External Causes of Injuries (ICECI), 2004.  $\chi^2$  Test and univariate logistic regression analyses were used to explore the effects of ICECI categories and gender, age, social security, residence, season on the presence of an amputation.

Results There were 2899 (44%) hand amputations and 2812 (97%) were finger amputations. Left-side injuries were more prone to amputation (OR=1.13, CI 1.03 to 1.25). The risk of amputation was higher in men, workers and those in the 15-24 and 45-54 year-old age groups. Compared to home, commercial area was the place with highest risk (OR=4.06, CI 2.52 to 6.54), followed by farm (OR=3.64, CI 2.66 to 4.98) and industrial/construction area (OR=3.12, CI 2.55 to 3.82). The majority of amputations occurred in industrial/construction areas (87%). Among objects/substances producing injury, watercraft (OR=49.5, CI 6.2 to 394.9) led to the highest risk of amputation and contact with machinery (OR=9.04, CI 7.53 to 10.85) was the mechanism with highest risk. Press machines were the most frequent objects causing amputation both

### Poster session 1

in men and women, followed almost equally by powered wood cutters in men. Doors were the most frequent objects of amputation in children, followed by powered wood cutters.

Conclusion Education, enforcement, and improved engineering are the keys to prevent amputations. Precluding illegal child labour is essential.

# P1-141 MYOCARDIAL RE-INFARCTION: COUNTRY OF BIRTH. GENDER, SOCIO-ECONOMIC POSITION (SEP), AND AGE TO **BE CONSIDERED**

doi:10.1136/jech.2011.142976d.34

<sup>1</sup>D Dzavee.\* <sup>1</sup>O Beiki. <sup>2</sup>R Liung. <sup>1</sup>T Moradi. <sup>1</sup>Division of Epidemiology, Institute of Environmental Medicine, Karolinska Institute, Stockholm, Sweden; <sup>2</sup>Upper Gastrointestinal Research, Department of Molecular Medicine and Surgery, Karolinska Institute, Stockholm, Sweden

Introduction Myocardial re-infarction is common and carries a high mortality rate. The risk of myocardial re-infarction in Sweden is less known, and no studies are conducted to consider re-infarction among immigrants in Sweden. We are aimed to compare the risk of myocardial re-infarction among foreign-born to the risk among those born in Sweden.

Methods We followed a cohort of 330 thousand men and more than 180 thousand of women ages 30 to 85 years between 1987and 2008 through linkages between Swedish National Registers. HR is adjusted for age, calendar year of diagnosis of first MI and education. The main outcome measure was second myocardial infarction in relation to main exposure which is country of birth.

**Results** We observed an overall higher risk of second MI among immigrants compared to swedes, the risk was statistically significantly 5% higher (HR 1.05; 95% CI 1.02 to 1.09) among women foreign-born and 7% higher (HR 1.07; 95% CI 1.04 to 1.10) among men foreign-born. The risk decrease with increasing level of education for both Swedes and immigrants and with increasing age the risk will increase.

**Conclusion** The higher risk of second myocardial infarction among immigrant in Sweden apart from common risk factors (life style, stressful migration, problem in communication) also might be due to differences in access and utilisation of care after MI. It is important for healthcare providers to guarantee the equality of healthcare and to be directed by medical requirements.

# P1-142 PREVALENCE OF MULTI-DRUG RESISTANT TUBERCULOSIS IN KARACHI PAKISTAN: IDENTIFICATION OF AT RISK

doi:10.1136/jech.2011.142976d.35

M Ejaz,\* A R Siddiqui, R Hassan. Aga Khan University Hospital, Karachi, Pakistan

Background Multidrug-resistant tuberculosis (MDR-TB) is a possible threat to global tuberculosis control. Despite a disease prevalence of 263/100 000 population Pakistan lacks information on prevalence of drug resistant TB.

**Objective** Our objective was to estimate prevalence of MDR and associated risk factors in patients with Pulmonary Tuberculosis in Karachi.

Methods 640 adult consenting patients were enrolled from field clinics (July 2006 to August 2008) through passive case finding. Prevalence of MDR-TB with 95% CI was calculated with Epi-Info. Logistic Regression analyses were performed for risk factors associated with MDR.

**Results** Overall MDR rate was 5.0%, 95% CI 3.3% to 6.6% (untreated 2.3%, treated 17.9%). Mean age was 32.5 (±15.6) years. With 45.6% (n=292) females and 54.4% (n=348) males. Factors independently associated with MDR were; female gender (OR 3.12;

95% CI 1.40 to 6.91), and prior history of incomplete treatment (OR 10.1; 95% CI 4.71 to 21.64). Ethnic groups at higher risk for MDR included Sindhis (OR 4.5; 95% CI 1.42 to 14.71) and Pashtoons (OR 3.6, 95% CI 1.12 to 11.62).

**Conclusion** This study reports an over all MDR rate of 5.0% in our study population. It further highlights the need for MDR prevention through re-focusing DOTS delivery with emphasis on women and certain high risk sub groups.

# P1-143 | ETHNIC INEQUITIES IN HEALTHCARE CONSUMPTION: DATA REQUIREMENTS FOR FUTURE RESEARCH

doi:10.1136/jech.2011.142976d.36

M L Essink-Bot,\* M Lamkaddem, K Stronks. Academic Medical Center, University of Amsterdam, Amsterdam, The Netherlands

Introduction Ethnic variations in healthcare consumption do not necessarily reflect inequities (variations that are avoidable, unfair and unjust). We analysed the usefulness of the literature for interpretation of ethnic variations in healthcare consumption, and the data requirements for further research.

**Methods** Conceptual review of empirical studies based on healthcare registry data.

Results Studies documenting ethnic variations in healthcare consumption, and studies using healthcare consumption data to define quality of care indicators and subsequently comparing these across ethnic groups, are not conclusive on (in)equity of care. If such studies include analysis of the impact of ethnic variations in consumption on health outcomes, and if medical need and other explanatory variables are taken into account, conclusions on (in) equity of care are possible. Following Andersen's model and its clinical adaptation by Rathore (2004), we specified the explanatory variables needed to understand ethnic variations in healthcare consumption and their effect on health outcomes as: objective medical need, socio-economic factors, patient preferences, lifestyle and therapy adherence. We found no published studies or datasets allowing for comprehensive analyses of causal associations of healthcare consumption and health outcomes.

**Conclusions** The literature does not provide sufficient evidence to distinguish between ethnic variations in healthcare consumption reflecting systemic inequities and those reflecting ethnic variations in medical need. The distinction has important policy implications, because the first requires measures to overcome ethnic bias in care, the second ethnic targeting of services.

### P1-144 FOOD INSECURITY IN PREGNANT WOMEN: SOCIOECONOMIC DETERMINANTS AND ASSOCIATION WITH DIETARY PATTERNS

doi:10.1136/jech.2011.142976d.37

A P Esteves-Pereira, N Coelho,\* S Gama. ENSP, Fiocruz, Rio de Janeiro, Brazil

Introduction In Brazil, 37.7% of all households are food insecure (FI). The prevalence is high not only in North-46.4% and Northeast-53.6% regions, but also in the South-23.5% and Southeast-27.1%.

Objectives Describe socioeconomic characteristics of FI and investigate the association of FI with dietary patterns.

**Methods** Longitudinal study was carried out with 1482 pregnant in two cities of Rio de Janeiro State, Brazil. Women were interviewed during the first trimester of pregnancy where FI was assessed and at postpartum when a frequent food questionnaire was applied. Principal components analysis was used to identify dietary patterns. Multiple logistic regression was performed to study the association of socioeconomic characteristics and FI and multiple linear regression to study the association of FI and dietary patterns.