

The intake was adjusted for within-person variability by the method proposed by Iowa State University, using the software PC-SIDE, and energy-adjusted for the residual method. The validity for 23 nutrients was assessed by Spearman correlation coefficient and weighted  $\kappa$ . Intra-class correlation coefficient and weighted  $\kappa$  was used to reproducibility assessment.

**Results** In the validation, the Spearman correlation coefficients ranged from 0.25 (riboflavin) to 0.57 (phosphorus) of which eight nutrients showed acceptable correlation ( $>0.4$ ). In the reproducibility analysis, the intra-class correlation coefficients ranged from 0.18 (vitamin C) to 0.57 (niacin), of which five nutrients showed acceptable correlation. The weighted  $\kappa$  ranged from 0.18 (sodium) to 0.67 (riboflavin) to reproducibility and from 0.19 (polyunsaturated fat) to 0.56 (calcium) to validation.

**Conclusion** The results support the use of this instrument to assess food intake in epidemiological studies conducted in São Paulo, Brazil.

### SP3-79 AUDIT OF A NATIONWIDE PATHOLOGY-BASED CANCER REGISTRY IN IRAN AND LESSONS LEARNED FROM SUCCESSFUL POPULATION-BASED CANCER REGISTRIES WORLDWIDE

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K Zendehelel, G Keshtmand,\* Z Sedighi, J Hassanloo, A Nahvijou, M A Mohagheghi. Cancer Research Center, Cancer Institute of Iran, Tehran University of Medical Sciences, Tehran, Iran

**Background** Several low- and middle- income countries, lack well-functioning population-based cancer registry. We evaluated the completeness of a pathology based cancer registry in Iran. We further studies evolutionary progress of the cancer registries worldwide.

**Methods** We evaluated consistency of the incidence rates reported by national pathology-based cancer registry in Iran from 2004 to 2007. We further compared the incidence rates of the pathology- and population-based registries in a few regions, where both data were available. In addition, we studied the increasing trend in the number of population-based cancer registries worldwide, using the reports published in the Volumes I–IX of the monograph “Cancer in Five Continents.”

**Results** The Iranian pathology-based cancer registry, reports only about 60–70% of cancers. The underestimates were greater in cancers with poor-prognosis including lung, stomach, and oesophageal cancers. Almost four regional cancer registries were established every 10 years since 1960. However, the USA was an exception, where the number of cancer registries increased from 14 in 1998 to 44 regional registries in 2002, due to the advance infrastructure in the health informatics and ambitious initiatives by the Centers for Disease Control in the USA.

**Conclusions** Pathology based cancer registry cannot provide reliable estimate for the cancer incidence rates, particularly in cancers with a poor prognosis. Developing countries should establish and support regional registries and expand their coverage gradually. Given the recent advances in the health informatics, small efforts will enhance the coverage of cancer registries worldwide, particularly in the less than middle income countries.

### SP3-80 PARENT'S SOCIAL STATUS AND EARLY NUTRITION INFLUENCES ON COLLEGE ENTRANCE AMONG BRAZILIAN YOUTH AT 2 DECADES

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L Baraldi,\* W Conde. Public Health School, São Paulo, São Paulo, Brazil

**Introduction** Human capital concept is related to social and nutrition experiences in childhood as well as social status inherited from their parents.

**Objective** Estimate the chance of university achievement among Brazilian youth with adequate or inadequate early nutrition and born from parents with low vs high school degree.

**Methods** A sample of young, aged 20–24 years, and their parents from three Brazilian surveys, PNSN-1989, POF-2003 and POF-2009. Nutritional status was standardised from WHO reference2007; highest school level achieved was used to classify social status. We set three nutrition groups (below  $-1Z$ ,  $-1$  to  $+1$ , and above  $+1Z$ , named N1, N2 and N3, respectively) for parents and youth and three school levels groups (elementary, high, college, named E1, E2, E3 respectively) for parents. Probability of beginning university by youth was estimated using multiple logistic regression. Survey year was included as independent dummy variable to estimate changes among periods.

**Results** The ratio between parents E3 vs E1 among youth N1 was 7.0 in 1989, 11.0 in 2003 and 6.1 in 2009. This ratio for young N2 was 5.9 in 1989, 9.7 and 5.0 in 2003 and 2009, respectively. For young's N3 that ratio was 3.9 in 1989, 8.8 in 2003 and 4.0 in 2009.

**Conclusion** The unequal chance of being university student in Brazil as function of parent's social status and early nutrition decreased from period 1989–2003 to period 2003–2009. Probably this change is associated with social mobility experienced in country this decade.

### SP3-81 GEO-EPIDEMIOLOGY OF MULTIDRUG-RESISTANT TUBERCULOSIS CASES IN THE STATE OF SÃO PAULO, BRAZIL, 2007–2010

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P A Opromolla,\* V M Galesi, L A R dos Santos, M J P Rujula. Secretaria de Estado da Saúde, São Paulo, São Paulo, Brazil

In São Paulo, resistant tuberculosis (MDR-TB) is defined for the purpose of notification and treatment, as those cases that present with in-vitro resistance to rifampicin and isoniazid, and a third standard drug. There is currently a system of epidemiological surveillance of MDR-TB, which monitors all re-treatment cases of the disease nationwide. In the State of São Paulo, this monitoring is done by the division of tuberculosis Epidemiological Surveillance Centre of São Paulo. The aim of this study was to analyse the spatial distribution of cases of resistant tuberculosis in the state of São Paulo, Brazil, in the period 2007–2010.

**Methods** We selected confirmed cases of MDR-TB, notified to the state of Sao Paulo in the period 1 January 2007 to 10 January 2011, with the county as the unit of spatial analysis. We also analysed data from incident cases of tuberculosis in the state during the same period and with the same spatial unit of analysis. In addition to these data, information about detention facilities was also collected. All data were analysed in GIS, using space techniques for the detection of clusters and spatial correlations.

**Results** We detected 355 cases of MDR-TB during the study period, 34% in 2010, 68.7% male, 63% Caucasian and 77% by 11 years of study. The mean age was 38 years ( $\pm 12$  years). 97% were of pulmonary disease, only 11% were HIV-positive. Using kernel parameters, the greatest probability of MDR-TB cases are concentrated in the southeastern state.

### SP3-82 FACTORS ASSOCIATED WITH ORAL HEALTH STATUS OF ADULTS, BRAZIL

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<sup>1</sup>F Floriano,\* <sup>1</sup>C Costa Mda, <sup>2</sup>M I Vianna, <sup>2</sup>M B Cabral, <sup>2</sup>M dos Santos, <sup>1</sup>G Santos. <sup>1</sup>ISC-UFBA, SSA, Bahia, Brazil; <sup>2</sup>FO-UFBA, SSA, Bahia, Brazil

**Introduction** The objective of this study was to evaluate the oral health status of adults in Salvador—Bahia, Brazil, and to identify