

level demonstrates the distinctiveness of regions within countries. The project aims to support the development of health policy and systems at regional, national and European level through comparable health and health service information.

**Methods** The I2SARE project evolved from the ISARE I–III projects which explored regional boundaries and comparable indicators. In 2008 information for the 37 indicators was collected by project partners in each country. Datasets were subsequently cross validated, indicators calculated and entered into the regional health profiles. Each indicator compares the region with the lowest and highest values for the country and Europe and the European median.

**Results** The European regional health profiles present information on “demography and socioeconomic conditions”, “mortality”, “morbidity”, “risk factors” and “health professionals and healthcare services”. The profiles showed that the English regions and devolved countries have a very high proportion (18%–29%) of obese adults compared to a median of 14% in Europe. In France perinatal mortality was particularly high while female premature mortality for circulatory diseases was among the lowest in Europe.

**Conclusion** The European regional health profiles for the first time provide internationally comparable health and health service information on regional level. The information can be used to support regional and national governments and health systems to improve the health of their population and to address inequalities.

## REFERENCE

<http://www.i2sare.eu>.

### P1-101 CONTRASTS BETWEEN RECIPIENTS OF FORMAL CARE AND THOSE WITHOUT: ENGLISH LONGITUDINAL STUDY OF AGEING 2008–2009

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**Introduction** England has a market-led welfare state with means-tested services. Funding of care is a live issue. Objectives were to compare socio-demographic characteristics and functioning according to sources of help received for disabilities.

**Methods** Cross-sectional analysis of participants in the fourth round of fieldwork from the English Longitudinal Study of Ageing. Subjects analysed (n=5653) were aged 50 and over, living in the community and reported difficulty with at least one motor skill, activity of daily living, or instrumental activity of daily living.

**Results** Among the eligible participants 58% received no help (NH), 34% only informal help (IH), 4% paid help but no state help (PH), and 4% state help with or without other sources (SH). The PH and SH groups were older than the other two and less likely to have a partner but the wealthiest were over-represented in the PH group whereas the SH group were most likely to be in the poorest wealth quintile. The SH group scored worst on subjective and objective measures of physical and cognitive functioning whereas the PH group were similar to the IH group. The SH group were most likely to have a mobility aid or an adaptation in their home. The NH group mainly had difficulties with motor skills and performed better cognitively.

**Conclusion** In the English system small group with substantial problems in functioning receives state help. Another small group pays privately for help, possibly substituting informal help. The sources of help appear to reflect some indicator of need.

### P1-102 PREVALENCE OF DENTAL INJURIES AND ITS ASSOCIATION WITH ALCOHOL USE AMONG ADOLESCENTS

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**Introduction** Alcohol consumption is a substantial and growing health problem among adolescents. However, it is not known whether the dental injury is associated with alcohol consumption.

**Methods** In 2009–2010 we carried out a cross-sectional study among a random sample of 687 adolescents (aged 14–19 years) from public and private schools in Diamantina, Minas Gerais, Brazil. Information on dental injuries and alcohol consumption were collected via a clinical examination by one researcher (intra-examiner  $\kappa=0.93$ ) and a self-administered questionnaire: Alcohol Use Disorders Identification Test (AUDIT), validated in Brazil. Study in public or private school was used for socioeconomic indicator.

**Results** The prevalence of dental injuries was 26.6% and the prevalence of risk from hazardous levels of alcohol consumption was 44%. The traumatic dental injuries were significantly associated with the high risk of alcohol consumption ( $p=0.031$ ), hazardous use ( $p=0.009$ ) and binge drinking ( $p=0.036$ ). The Results of the logistic regression revealed that hazardous use (OR –1.4 CI 1.007 to 2.061), remained associated with traumatic dental injury independent of other variables as age, gender, overjet and type of school.

**Conclusions** There is a high prevalence of traumatic dental injuries and hazardous alcohol use among adolescents, and alcohol consumption was associated with the prevalence of dental injuries.

### P1-103 BIAS OF IMPEDANCE EQUATION FOR ESTIMATING EXTREMES OF BODY COMPOSITION

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**Introduction** Resistance and reactance are often used in body composition compartment regressions which require the assumptions that the body is a cylinder of constant transversal area and the hydration is constant. Problems can be found in extremes of body composition, when those assumptions are not met.

**Objective** To analyse if the impedance equation estimative of body fat (BF) agrees with that provided by the DEXA reference method.

**Methods** We used representative data of the North American population, entitled Nhanes 2003–2004. Individuals aged 20–49 from both sexes (n=1716) were selected and information on BF% estimated by DEXA, resistance, reactance, height and weight were used. Impedance equation was proposed by Kyle *et al* for lean body mass:  $-4.104 + (0.518 * \text{Height}^2 / \text{Resistance}) + (0.231 * \text{weight}) + (0.130 * \text{Reactance}) + (4.229 * \text{sex})$ ; Sex: man=1 and woman=0. Weight minus lean mass provided the BF%. BF% was divided in four categories: 15%, 15%–25%, 25%–35%, and 35%–45%.  $\kappa$  Statistic was used for evaluating agreement between both methods, in each category of BF%, in each sex.

**Results**  $\kappa$  Statistics from lowest to highest categories of BF% were 0.35; 0.38; 0.47; 0.46 and 0.39; 0.51; 0.48 and 0.63 for male and female, respectively (all  $p<0.001$ ).

**Conclusion** Estimates of %BF by impedance equation and DEXA differ, mainly in lowest categories of %BF and among males, but not for highest category among females. Caution must be taken in using such equations among individuals with extreme body composition compartments.

### P1-104 COMMUNITY SYNDROMIC SURVEILLANCE SYSTEM USING INFORMATION AND COMMUNICATION TECHNOLOGY IN PARAGUAY

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