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 LONGITUDIINAL 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 κ=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 2003–3004. 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* Height^2/Resistance)+(0.231* weight)+(0.130* Reactance) +(4.229×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%. κ Statistic was used for evaluating agreement between both methods, in each category of BF%, in each sex.
Results κ 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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The objective of syndromic surveillance is to identify illness clusters early and to mobilise a rapid response, thereby reducing morbidity and mortality.

Objective To describe the system named Bonis, which uses Information and Communication Technology to prevent, warn, monitor and control the spread of febrile syndromes and influenza like illness (ILI) at the community level.

Methods Bonis has a kernel free software application; Asterisk, a phone center with VoIP service, PHP as Script language and Mysql as data base management. The system was implemented in a primary healthcare.

Results The developed system has the ability to record, classify, and prioritise automatically through the Interactive Voice Response the suspected cases. It has been programmed in a PHP language script AGI to improve the functionality of the Asterisk, in a way that during the user call to report a possible case, the system feeds a database, through the manager module based in a web application developed in PHP. The system, to which the users access from a mobile or fixed telephone, automatically receives the call with 9 questions on signs and symptoms. The system is working since May 2010 and records the phone calls correctly; follow-ups of these patients are performed by the teams within a period of 24 h.

Conclusion The developed system is allowing the community to notify and register events that require surveillance, and the community health agents is prioritising visits to those homes from where fever cases are reported for sooner and more appropriate interventions.

P1-105 INCIDENCE OF SEVERE ACUTE RESPIRATORY INFECTIONS (SARI) AND DEATHS ASSOCIATED WITH INFLUENZA

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Background Respiratory infections are one of the leading causes of morbidity and mortality worldwide: influenza is one of the predominant pathogens responsible. During 2010, Paraguay actively sought for pH1N1 case-patients to estimate the incidence of severe acute respiratory infections (SARI) and deaths associated with influenza.

Objective To determine the contribution of Influenza in patients hospitalised with clinical evidence of severe acute respiratory infections (SARI).

Methods During 1 January 2010–31 December 2010, hospital staff identified all case-patients who met the SARI definition of sudden onset fever, and cough or sore throat, with shortness of breath requiring hospitalisation. Physicians obtained nasal and pharyngeal swabs from case-patients and sent the samples to the Paraguay National Influenza Center for influenza testing by immunofluorescence and reverse transcriptase polymerase chain reaction.

Results Hospital staff identified 2145 SARI cases of which they tested 1581 (74%) for influenza. Of these 284 cases (18%) were positive for influenza. The most frequently subtypes identified viruses were Influenza A H3N2 71% (202/284), influenza A H1N1 14% (41/284), influenza B 14% (41/ 284). We estimated that the rate of influenza-associated mortality was 2.8/100 000 persons-year (py).

Conclusion Out findings suggest that influenza caused a significant burden and may warrant further investments in its control and prevention.

P1-106 CAPTURE-RECAPTURE ANALYSIS OF ALL-CAUSE MORTALITY DATA IN BOHOL, PHILIPPINES

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Introduction Despite the importance of mortality data, official reporting systems rarely capture every death. Completeness of death reporting and the subsequent effect on mortality estimates was examined in Bohol province in the Philippines using a system review and capture-recapture analysis.

Methods Records of deaths were collected from local civil registration offices, health centres and hospitals, and parish churches, and reconciled using a specific set of matching criteria. Two and three source capture-recapture analysis was conducted. For the two-source analysis civil registry and health data were combined due to dependence between these sources, and analysed against church data.

Results Significant dependence between civil registration and health reporting systems was identified. There were 8075 unique deaths recorded in the study area between 2002 and 2007. Government records capture only 77% of deaths, while 5%–10% of deaths were not reported to any source. Average life expectancy (2002–2007) was estimated at 65.7 years and 73.0 years for males and females respectively, 4–5 years lower than estimated from civil registration data alone. Reporting patterns varied by age and municipality with childhood deaths more under-reported than adult deaths. Infant mortality was under-reported in civil registration data by 62%.

Conclusion Deaths are under-reported in Bohol and uncorrected mortality measures would subsequently be misleading if used for health planning and evaluation purposes. These findings highlight the importance of ensuring official mortality estimates from the Philippines are derived from data that has been assessed for under-reporting and corrected as necessary.

P1-107 CONTEXTUAL CIRCUMSTANCES AND PATTERNS OF CHILDHOOD WEIGHT CHANGE

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Introduction Worldwide, the prevalence of childhood obesity has not abated, indicating that prevention strategies, traditionally implemented at the individual- level, may not be effective. Conceptualising childhood obesity within multiple levels of influence, specifically within residential communities and over the lifecourse, is necessary to design effective prevention strategies that shift the distribution of risk downward.

Methods Participants of the Québec Longitudinal Study of Child Development (n=1588) comprised the sample for analysis. Standardised BMI measurements from 4 to 10 y of age and a semi-parametric mixture modelling method were used to estimate developmental trajectories of weight change. The influence of the residential environment on weight trajectories was estimated after controlling for social and early life factors, such as SES and birthweight.

Results Four distinct weight trajectory groups were estimated: (1) Low- increasing (7.1%), (2) Low/medium-increasing (35.2%), (3) Medium/high- increasing (47.4%), and 4) High-stable (10.3%). Switching from urban to rural living decreased weights in Group 1, but increased weights in Group 4. In Group 2, changing from urban to medium density living increased weights. For Group 1, moving to a more cohesive neighbourhood increased weights, and moving to a more highly disordered neighbourhood decreased weights. Compared to the other three groups, Group 4 children were more likely to be overeaters and have obese mothers.

Conclusion The characteristics of residential environments may play a role in childhood weight status beyond social and early life factors. These characteristics may have differing effects within the population, so a 'one-size fits all' strategy for intervention may not be appropriate.