PHP161
THE RELATIONSHIP BETWEEN DISABILITY AND MIGRATION STATUS IN CHILE: PRELIMINARY ANALYSIS FROM REPEATED CROSS-SECTIONAL SURVEY

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OBJECTIVES: Disability in Chile is a growing public health problem that causes deterioration of individual wellbeing, family burden and premature mortality. The distribution of disability among immigrants has been under-researched. The objective was to explore crude and adjusted associations between total disability and immigration status (immigrant versus Chile) in Chile between 2006 and 2009. **METHODS:** Exploratory secondary analysis of nationally representative, anonymous survey CASEN 2006 and 2009 (n2006 = 268 873; n2009 = 246 924 participants). The relationship between self-reported total disability (dependent variable) and immigration status (independent variable) was modeled using weighted logistic regression. Adjustment variables were demographics (DG: age, sex, ethnicity, region, rural/urban residence, marital status) socioeconomic status (SES: household income and education). Analysis was conducted in STATA 13. **RESULTS:** Self-reported prevalence of disability in Chile, according to CASEN 2006 and 2009, was 6.9% and 7.6%, respectively; more prevalent in women than men and with a clear inverse gradient according to income (4.8% richest quintile versus 9.6% poorest quintile). Immigration in Chile increased from 1% to 1.3%. Multivariate analysis indicated that the total population of immigrants have a lower chance of reporting disability (OR=0.49; 95%C=0.37-0.66), even after adjusting for DG. However, this protection disappeared after adjusting for SES (OR=0.75; 95% CI=0.45-1.25). These results did not change significantly between 2006 and 2009. **CONCLUSIONS:** We found a healthy migrant effect on the total population, which disappears after adjusting for socioeconomic variables. More robust analysis needs to be conducted to test these findings, ideally with longitudinal data. This is an urgent global health matter.

PHP162
SOCIAL AND HEALTH VULNERABILITY OF INTERNATIONAL IMMIGRANTS IN CHILE: PRELIMINARY FINDINGS FROM A SPATIAL ANALYSIS USING 2002-2012 CENSUS DATA

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OBJECTIVES: The territories are diverse and human settlements converge on it at a local and global scenario. These populations have varying degrees of socioeconomic and health vulnerability, and this is important to monitor for policy and practice. We explored the spatial distribution of social and health vulnerability of international immigrants in Chile based on 2002-2012 Census data. **METHODS:** Exploratory study of spatial vulnerability of international immigrants in Chile using 2002-2012 Census data. The total population was the comparison groups. Spatial vulnerability was measured at borough level for the entire Chilean territory (n=339 for 2002 and n=343 for 2012) using three unique dimensions of the Index of Multiple Deprivation (binary variables: disability rate, primary education rate, unemployment rate). Pearson correlation tests were used to test the difference in rates of social and health vulnerability measures between the immigrant and the total population in the country. **RESULTS:** According to Census 2012, 320,850 international migrants live in Chile (2% total population, similar to 2002). They are largely concentrated in the north (15% for 2012 and 6% for 2002) and centre (60% in 2012 and 48% in 2002). There was a significant correlation between separate and combined measures of IMD for both the entire population (R=0.95), and for international immigrants (R=0.95). Generally, both the total population and immigrants were more concentrated at the borough level when there were higher degrees of social and health vulnerability and these remained the same between 2002 and 2012. **CONCLUSIONS:** Geographic location of the total Chilean population and especially of international immigrants varies depending on the degrees of social and health vulnerability and we can observe this trend for last ten years. The correlation between spatial location and vulnerability among immigrants was significant and consistent over a 10 years period.

PHP163
CHILEAN VALUATION OF THE EQ-5D HEALTH STATES

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OBJECTIVES: To estimate a country-level value set for the 243 health states of the EQ-5D instrument in Chile. **METHODS:** A probabilistic sample from the Chilean adult population (N=1,695) was selected to value a group of 31 EQ-5D health states using the time trade-off method between August 2013 and January 2014. Each respondent assessed a pre-defined subset of health states from the EQ-5D 3 level version and their values were used to fit several econometric models. Besides the 10 dummy variables that represent the effect of health problems in each of the 2 levels (i.e. moderate and severe) of the 5 dimensions of the instrument, a group of 10 other interaction variables were also considered to improve statistical performance. The final model was chosen applying criteria of 1) parsimony 2) goodness of fit and 3) high prediction capacity. The extrapolation was performed based on the chosen model to estimate the totality of 243 health states generated by the EQ-5D system. **RESULTS:** A pooled least square model was selected, which included only the 10 main effects EQ-5D dummies plus a constant. The model was robust with an R2 of 0.26, MAE of 0.047 and a good predictive capacity (11 of the 31 health states had an estimated residual error higher than 0.05). The selected model was also parsimonious, considering only 11 variables. **CONCLUSIONS:** It was possible to successfully extrapolate the valuation for the 243 EQ-5D health states in order to construct a country-level social value set. The final model differs from models developed in other countries and also also from the previously reported model in Chile in 2008, which was constructed using data collected only in the Metropolitan Region. Our findings support the continuous methodological improvements of Cost-effectiveness analyses in Chile and highlight the importance of large-scale surveys to adequately reflect the preference of the society as a whole.

HEALTH CARE USE & POLICY STUDIES – Prescribing Behavior & Treatment Guidelines

PHP164
AN EVALUATION OF THE USE OF ANTIBIOTICS IN A TEACHING HOSPITAL IN BAHAWALPUR

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OBJECTIVES: Antibiotics are among the most commonly prescribed drugs globally. Now a days overuse and inappropriate use of antibiotics have become a very serious issue in Pakistan and a very limited data is available on the use of antibiotics in Pakistan. The study was aimed to evaluate frequency, rates of incorrect prescribing and inappropriate use of antibiotics and to identify any opportunity for its improvement. **METHODS:** This prospective and point prevalence surveillance study was performed on April 19, 2013 at Bahawal Victoria Hospital, Bahawalpur. Data of all hospitalized patients on antibiotic therapy were collected on a standardized questionnaire. **RESULTS:** Out of 692 patients 483 (69.8%) patients were given one or more antibiotics. Out of these 483 patients the antibiotic therapy was inappropriate in 266 (55.1%) patients. In 18 (3.7%) patients antibiotic therapy was given on microbiological assay bases while in 465 (96.3%) patients on empirical bases. The wards with the highest rate of antibiotic use were in ENT (96.8%), ophthalmology (96.2%) and urology (95.2%) while highest rate of antibiotic inappropriate use were in pediatrics (90.0%), neurosurgery (88.0%) and dermatology (66.7%). **CONCLUSIONS:** Overuse, misuse and inappropriate use of antibiotics were detected in this hospital. A close surveillance regarding antibiotic use in hospitals and the forming of new policies concerning antibiotics use is strictly required to improve the appropriate use of antibiotics.

PHP165
PROSPECTIVE STUDY ON PRESCRIPTION PATTERN IN TERTIARY CARE HOSPITAL IN SOUTH INDIA

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OBJECTIVES: The main objective of the study is to evaluate the components of the prescription pattern and to determine the physicians written prescription non-compliance to the in-house guidelines of tertiary care hospital. **METHODS:** A prospective study with outpatients as study subjects are carried out in a tertiary care hospital, for a period of two months. A separate prescription audit checklist is used to see the completeness of the prescription according to in-house guidelines of tertiary care hospital which includes patients, physician and drug related information. **RESULTS:** A total of 2200 prescriptions assessed, with respect to patient information 52% of patient's age and 52% of patient's gender were missed. Regarding physician information 100% prescriptions contained the signature of the physician. Regarding the drug related information out of 2200 prescriptions (57.7%) brand names were found and 23.9% of drugs were not in capital and 2.5% appropriate abbreviations found, 8.% of prescriptions were missing the dosage and 4.7% was missing the route of administration 6.04% were missing the frequency, 7.22% were missing the duration, 1.18% were missing the dosage form, 0.09% of drug substitution,5.63 % were missing the directions for use and 20.68% of prescriptions were polypharmacy,1.40% Prescriptions were illegible,0.36% were missing the registration number. **CONCLUSIONS:** The main findings concluded majority of the practitioners are not writing the generic names and which were not in the block letters. Also information of patient demographics which included gender and age were not mentioned. This study proved non-adherence to in-house guidelines by physicians and incompleteness of prescription.

PHP166
EVALUATION OF KNOWLEDGE, ATTITUDES, AND PRACTICES OF HEALTHCARE PROVIDERS TOWARDS NUTRITION SUPPORT IN PAKISTAN

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OBJECTIVES: Malnutrition (i.e. under-nutrition and over-nutrition) is among the top healthcare issues that can be fatal if proper nutrition-care is not provided by healthcare providers. Until now this problem is equally affecting adults as well as children because of healthcare providers' inadequate knowledge, poor attitudes and inappropriate practices (closely monitoring patients' health status and regularly reviewing their treatment plan to make sure patients' nutritional needs are being met). The aim of this KAP study was to evaluate the knowledge, attitudes, and practices of healthcare providers (doctors, pharmacists and nurses) towards nutrition support in a tertiary care hospital in Pakistan. **METHODS:** A cross-sectional study was conducted on a newly developed and validated self-administered research tool. Face and content validity of the research tool was done by various healthcare individuals including academics, surgeons, pharmacists and senior nurses. The research tool was also piloted on 15 healthcare providers in a different hospital before start of the study. Only registered healthcare providers of Pakistan were approached to take part in the study. A p-value < 0.05 was considered statistically significant. **RESULTS:** Total 200 participants out of 350 took part into the study. Among the respondents, doctors (33.7%) expressed greater knowledge than pharmacists (26.7%) and nurses (21.2%). All doctors, pharmacists and nurses showed indecisive attitudes toward nutrition support to the patients. However, in the practice assessment, pharmacists had a slightly higher score. Only 19.4% respondents stated that they perform nutrition screening on admis-

sion, and 35% of them prefer to perform nutrition assessment during hospitalization. **CONCLUSIONS:** Inappropriate nutrition care from healthcare providers was possibly due to the lack of appropriate guidelines and insufficient knowledge. Special nutrition management trainings and continuing professional development (CPD) courses will be of great help to improve KAP of healthcare providers towards nutrition.

PHP167
TRENDS IN USE OF HEALTH ECONOMIC EVIDENCE FOR DEVELOPING CLINICAL GUIDELINES

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OBJECTIVES: The recent reforms and policy changes have increased the cost pressures on all healthcare stakeholders, including clinical experts. In the past, clinical guidelines were developed independent of cost or economic considerations. However, increasingly, more clinical guidelines are mentioning cost concerns and referring to economic data in new recommendations. The objective of this study was to analyze trends in the use of health economic information for developing clinical guidelines. **METHODS:** A systematic literature search was undertaken for the databases Pubmed, Embase, Biosis, Google Scholar, and Cochrane. The guidelines published between 2003-2012 were included. For guidelines which met the search criteria, data was collected for the name of the authors, indication, year of publication, country/ region, and context of use of cost/economic evidence. **RESULTS:** Sixteen clinical guidelines published between 2003-2014 met the inclusion criteria for specific mention of cost/economic evidence. More than 50% of these guidelines were published between 2006-2014. For indication, 3 out of 16 guidelines were for diabetes, while the rest were for different indications. In these16 guidelines "cost effectiveness" was mentioned 14 times, either referencing cost-effectiveness data or to mention the importance of such data for selecting treatment options. The guidelines commonly cite high cost of disease or high economic burden as one of the considerations for developing new recommendations (11 out of 16). Another term that was commonly used by these guidelines was "cost-benefit", which was mentioned 5 times in these guidelines. Notably, QALY was rarely mentioned (1 out of 16 times) in these guidelines. **CONCLUSIONS:** This analysis suggests that some clinical experts groups are increasingly showing willingness to use and incorporate health economic information for developing new recommendations. Findings from this study might aid drug and device manufacturers in understanding the context of use of such information and allow them to tailor their product development plans for generating such evidence.

HEALTH CARE USE & POLICY STUDIES – Quality of Care

PHP168
EFFECTIVENESS OF INTERVENTIONS FOR DRUG PRESCRIBING IMPROVEMENT IN PRIMARY HEALTH CARE

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OBJECTIVES: To determine effectiveness of interventions for drug prescribing improvement in primary health care units. **METHODS:** Systematic review and meta-analysis. Was held a quest in MedLine©, ScienceDirect©, Springer©, SciELO©, Dialnet©, RedALyC© and Imbiomed©, since indexation date of each database until August 2014. Were utilized keywords "drug prescribing", "intervention studies" and "primary health care" with your synonyms. Were included quantitative studies, experimental and quasi-experimental, wrote in Spanish, English or Portuguese, and published in any country, with CASP-score equal or major than five, where drug-prescribing quality was evaluated accord to physicians' adherence to drug posology and mexican guidelines for diseases treatment. Were excluded studies without raw data, qualitative studies, systematic reviews, protocols, essays, government documents, non-pharmacologic or alternative treatment studies and gray literature. Odds ratios (OR) with 95% interval confidence (p$\leq$0,05) were obtained. **RESULTS:** Were found 522 publications, were excluded 405 for title, 99 for abstract and 9 for full text. Were included 3 references of the references. Don't found references' citations. Were analyzed 12 articles that reported 17 interventions: 64,7% educative, 23,5% incorporating of degreed in pharmacy to the health team, and 11,8% software utilization. The association forces "intervention/ improvement" obtained were: educative interventions OR=2,47 (IC95% 2,28, 2,69), incorporating of degreed in pharmacy to the health team OR=3,28 (IC95% 2,58, 4,18), and software utilization OR=10,16 (IC95% 8,81, 11,71). **CONCLUSIONS:** The software utilization interventions showed major effectiveness for to improvement drug prescribing quality, versus educative interventions and incorporation of degreed in pharmacy to the health team. However, educative interventions may have a better cost-benefit relationship.

HEALTH CARE USE & POLICY STUDIES – Regulation of Health Care Sector

PHP169
THE ROLE OF VOLUNTARY HEALTH INSURANCE FUNDS IN SELF-CARE IN HUNGARY

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OBJECTIVES: Hungary runs a compulsory, solidarity based health insurance based system with a single payer. However, there is an increasing market of voluntary health insurance schemes and funds. The aim of this study is to analyze the voluntary health insurance market in Hungary. **METHODS:** Our analysis is based on annual data from 2002 to 2013. The analysis of the number of funds and membership figures is based on end of the year data, the analysis of services and payments is based on annual data. We performed time series analysis and calculated dynamic

and intensity relative numbers. **RESULTS:** In 2002, a total of 151,220 members were registered in 35 funds, increasing to 1,033,615 members in 31 funds by 2013. The total revenue of the health funds was HUF 6.699 billion in 2002, HUF 35.097 billion in 2007, and HUF 50.923 billion in 2013. The distribution of health fund payments as a percentage of consumption showed: in 2007, 88.4% supplementary health insurance services, including 16% supplementary services within the framework of social security benefits, 77% self-care services provided by the health funds (67.1% medicine, 31.2% medical device); while in 2013, 98.2% supplementary health insurance services, including 18.6% supplementary services within the framework of social security benefits, 80.7% self-care services provided by the health funds (71.2% medicine, 28% medical device). Health fund payments for lifestyle improvement services reached 11.6% in 2007, and 1.5% in 2013. **CONCLUSIONS:** Reduction in the number of health funds, and an increase both in membership and revenues indicate the consolidation of the function of health funds. The distribution of payments by consumption shows no significant progress: medicine and medical device still play a major role, and disease prevention and health care services still represent a very small proportion.

PHP170
WHEN CAN PHARMACEUTICAL COMPANIES COMMUNICATE HEALTH ECONOMIC CLAIMS TO PAYERS? 10 CASE STUDIES

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OBJECTIVES: In the United States, Section 114 of the Food and Drug Modernization Act of 1997 (FDAMA) governs pharmaceutical companies' promotion of health economic information to payers. Research shows that while payers frequently seek cost-effectiveness information, drug companies may hesitate to promote it because the law is unclear. The Food and Drug Administration (FDA) has not offered further guidance, although it suggested that it plans to publish draft guidance in 2015. We developed hypothetical case studies of promotional claims and explored key questions about whether the FDA would allow them under Section 114. **METHODS:** We created ten categories of potential claims: 1) Costing out on-label clinical endpoints, 2) Promotion of a costing exercise to physicians working in an accountable care organization settings, 3) Burden of illness claims, 4) Economic analyses of a formulary restriction policy, 5) Extrapolations to doses, populations, or settings not covered in trials, 6) Adherence claims, 7) "Utilization of care" as a secondary endpoint in randomized clinical trials, 8) Costing out a competitor drug's adverse event, 9) Economic analysis of comparative effectiveness claims using an indirect treatment comparison, and 10) Extrapolating from surrogate to long-term outcomes in an economic model. We developed a case study for each. We sought to balance examples across diseases and to address the components of Section 114: information type, connection to labeled indication, audience, and evidence quality. **RESULTS:** Most cases fall into a "gray area" as to whether they are allowable under Section 114. In particular, there is a lack of clarity about whether claims meet requirements that they be "directly related" to approved indications and supported by "competent and reliable scientific evidence." **CONCLUSIONS:** This study reinforces the need for further guidance and/or legislation to clarify and possibly expand the Section. It also illustrates challenges the FDA faces in regulating this area.

PHP171
IMPLEMENTATION OF NICE CLINICAL GUIDELINES (CG) – WHAT CAN BE LEARNED FROM A UK CASE STUDY AND HOW TO ENSURE THAT HEALTH SERVICES DO NOT FALL SHORT OF THEIR OBLIGATIONS

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OBJECTIVES: There is a perception that the National Institute of Health and Care Excellence (NICE) has struggled to get clinical commissioning groups (CCGs) to follow guidelines. There is a legal obligation to follow NICE technology appraisal guidance (TAG) when these are accompanied by a funding direction; however it has long been considered that this was not the case for Clinical Guidelines (CGs) nor is there any right of appeal in relation to CGs. We seek to demonstrate that CGs could be effectively mandatory unless a reasoned justification is provided. The position is contrasted with respect to guidance from technology appraisals. **METHODS:** Case law and legislation are reviewed to compare the enforceability of general guidelines and health technology appraisal-derived guidance. In particular Regina vs. North Derbyshire Health Authority, ex parte Fisher (1997) (Regina), and the recent decision of Rose vs. Thanet CCG (Rose) are referred to. We review both the CGs and TAGs issued and compare the strength and range of the recommendations. **RESULTS:** The Reginacase established that a decision not to follow national policy was only lawful if there was some 'special factor', which 'exceptionally justified departure'. Disagreement with the policy was not enough. Following this, the recent Rose case considered that the CCG was under an implied obligation to give reasons for any general policy not to fund a particular intervention, which suggests that the guidance is effectively mandatory unless there are special grounds. **CONCLUSIONS:** Even if the Rose decision were successfully appealed or distinguishable, CCGs will need to consider special circumstances if they do not wish to implement a CG. Along with financial constraints on health budgets, this creates dilemmas for CCGs including local priority setting. Therefore, as the law stands, exceptional circumstances will need to be identified by CCGs taking a contrary decision to a CG.

PHP172
IRRATIONAL DRUG USE PATTERN IN HOSPITALS. A WARNING FOR HEALTH CARE SYSTEM

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