R.7. Health care capacity building

Networks of psychiatric services to foster care integration: Social Network Analysis of partnerships within the Belgian mental health care delivery reform

Pablo Nicaise

P Nicaise¹, V Lorant¹, the ‘Title107’ Study Group²,³
¹Institute of Health and Society (IRSS), Université catholique de Louvain, Brussels, Belgium
²LUCAS, Katholieke Universiteit Leuven, Leuven, Belgium
³MESO-OPIH, Vrije Universiteit Brussel, Brussels, Belgium
Contact: pablo.nicaise@uclouvain.be

Background
Belgium is in the process of reforming its mental-health care delivery system with the aim of strengthening community care and improving integration of care. Voluntarily participating psychiatric hospitals were requested to set up networks with community-based services to deliver integrated care pathways. Each network was free to include any type of partner and to develop its own governance mechanisms. Although the reform programme suggests that hospitalisation should be a last resort for care, hospitals lead and fund network projects. Moreover, centralised networks are best adapted to severe mentally ill patients, but the reform policy did not specify any target group. Hence, a debate was raised about the most efficient structure for care collaboration.
Methods
As part of an ongoing national evaluation programme, usual contacts about referrals and staff meetings between services in nine network projects were collected in 2013. Contacts were assessed using Social Network Analysis metrics, in particular density of ties, centralisation, and heterophily.

Results
Networks included 32 to 140 services and varied greatly in terms of service types: hospitals, community mental health, rehabilitation, social, and primary care. Density of ties was generally high (average degree = 44.82 ± 15.15) and negatively associated to centralisation (mean = 0.11 ± 0.04). Services tended to have relationships with complementary services. However, in 5 out of the 9 networks, psychiatric hospitals remained the most central service.

Conclusions
While high density of contacts and heterophily are two strengths for the effectiveness of the reform, heterogeneity of network structure and centrality of hospitals are two important threats to effective community-based and integrated care networks. Moreover, these network structures are not likely to be the best adapted to the patients that most require care integration in the community. Although follow up measures will have to complete the assessment of network development over time, managers of the reform policy have to clarify the role of psychiatric hospitals in network governance and clinical collaboration to increase reform chances of success.

Key messages
- The structure of service networks affects the capacity of services to deliver integrated care in community-based settings for patients in need and to eventually reach reform objectives.
- Managers of the reform policy have to clarify the role of psychiatric hospitals in network governance and clinical collaboration to increase reform chances of success.

Capacity for provision of primary care in Bulgarian health care system (2014)
Gena Grancharova

N Veleva, S Aleksandrova-Yankulovska, G Grancharova, M Draganova, T Vekov
Department of Medical Ethics, Healthcare Management and Information Technologies, Faculty of Public Health, Medical University of Plovdiv, Plovdiv, Bulgaria
Contact: gena_grancharova@hotmail.com

Introduction
Shifting the focus from hospital to primary care is one of the main directions for transformation of Bulgarian health care system towards individual's needs. In order to function well the primary care system has to be provided with enough personnel and strategies aimed at motivation and retention of the workforce.

Aim
To analyze and assess the current situation and trends of the capacity of Bulgarian primary health care system in terms of GPs workforce.

Material and Methods
The study is based on critical analysis of the available statistical data for GPs in Bulgaria up to 2014. Official data are taken from the public registers of all 28 Regional Health Authorities and National Association of General Practitioners. Data are processed with MS Office Excel 2010 and SPSS v. 13.

Results
The number of GPs has dropped by more than 10% from the beginning of reform in 2000 until now. Just for the last two years the decrease equals to 200 GPs. In 2014 GPs workforce in Bulgaria consists of 4527 physicians. The average number of patients per one GP is 1300. There are severe GP deficits in the rural and remote areas. Over one third (33.13%) of all GPs has a specialty in General medicine. Another 28.7% have specializations in Internal medicine, Pediatrics and Emergency medicine. Significant proportion (23.4%) of the physicians is in a process of specialization and 14.6% of the GPs are not enrolled in any training programme.

Discussion
The main challenges are related to the rapidly decreasing number of GPs which in contrast to other medical specialties is not due to emigration but to natural causes such as aging and death. There are also educational and qualification problems along with unattractiveness of general practice for young doctors due to high workload and low remuneration. With the mean age of 56 severe GPs workforce deficit is expected in 10-15 years due to retirement.

Key messages
- Perspectives for improving the health system effectiveness include investments in training of primary health care personnel and strategies aimed at motivation and retention of the workforce.
- The largest GPs workforce deficits are expected under conditions of increasing demand for personalized health care. Failure to deal with it will worsen the access and quality of primary care.

Preventing social exclusion among the young age population by creating new one roof solutions and services
Katja Louhio

K Louhio1,2, U Nord3
1University of Helsinki, Hospital District of Helsinki, Helsinki, Finland
2Uusimaa (HUS), Unit of Primary Health Care, Helsinki, Finland
3Youth services Helsinki Deaconess Institute, Helsinki, Finland
Contact: katja.louhio@helsinki.fi

Introduction
Social exclusion is a global issue (WHO, 2013). The term exclusion means that an individual is outside the normal procedures of society and not able to be contributing as a member of it. Social exclusion can include lack of access to education, employment or rehabilitation. In Finland there were 51,300 excluded young (aged 15–29) and 32,000 of them were “lost ones” (2010). The Finnish Ministry of Education and Culture has calculated that the measurable cost of exclusion to society is 1.2 million euro per marginalized young. The Helsinki Deaconess Institute is a public utility foundation in Finland, which has nearly 150 years created new solutions in those parts of the society where people are in danger to falling beyond the reach of services. Institute’s VAMOS work focuses on the young age populations threatened by social exclusion.

Methods
The main goal of the VAMOS is to support 16–29 year old youths, to find their way into education or working life. Many of the youths are not able to attend either at the moment, and therefore many rehabilitative services have designed from the needs of the youth. Many of youths need individual support to strengthen their skills of daily life and social interaction. Without holistic social strengthening there is no point to move towards, for example education, because it is not likely to last for long. In VAMOS work build everyone a unique service experience, which is voluntary for the youth, and doesn’t involve institutional power or financial components.

Results
VAMOS has reached about 3700 youth. Most clients (60 per cent) are male between the ages of 17–22, lacking education and work experience. Almost all of these youngsters have health problems. After a year of cooperation 65 % of VAMOS youths are in school, work or related activities. Activating costs via VAMOS is 1,600 euro per participated young.
Conclusions
All services, including health and social welfare, is under one roof. First mission is to get to know the youth. By building trust and showing actually care, the change will become possible. We need to set ourselves to the level of youths, make them know that we actually want to help. The way youth are encountered, does matter, much more than any methods.

Key message
• We need customer oriented one roof services.

Factors influencing the process of implementing Academic Primary Health Care Centres in Sweden
Håkan Uvhagen

Background
The need for continuous improvement in health care is well recognized. In most Western countries the ongoing demographic transition, changing expectations from patients, and tighter budgetary restrictions highlight a need for improvement of how health care is organized and delivered. One current attempt to meet these challenges is the introduction of Academic Primary Health Care Centres (APHC). The overall aim of APHC is, through connecting health care, education, and research, to improve quality of care and health in the population. Even though several studies have addressed challenges in implementing and transforming academic processes in health care, few studies describe factors influencing the implementation process. The aim of this study was to understand what contextual factors help and hinder the process of implementing APHCs.

Method
Data from documents and from individual interviews with eight APHC managers and four APHC-coordinators from a total of eight APHC were subjected to qualitative analysis. The interviews focused on the content of APHC, the implementation process, the APHC context, and the outcomes of APHC. Data were gathered between March and October 2013.

Results
The result showed that several factors were perceived as helping and hindering the implementation process. In the analysis supportive management, dedicated individuals, facilities fit for purpose to integrate academic processes into daily work and to nearby health care services were identified as helping factors. Factors that hindered the implementation process were conflicting non-supportive reimbursement systems, a lack of implementation strategy, and organizational and physical fragmentation between regular health care and health care involved in the academic processes.

Conclusions
The findings imply that implementing academic processes in health care is a complex process. Several contextual factors helping and hindering the implementation process needs to be taken into account when designing and implementing change processes for improved quality of health care. Based on these findings it is of importance to further explore the interaction between these factors to promote innovative service development in health care.

Key messages
• Implementing APHCs is a complex process where several contextual factors helping and hindering the implementation process need to be taken into account.
• To consider these helping and hindering factors seem to be important when designing and implementing change processes aimed at innovative service development for increased quality of health care.

Prevalence and incidence rate of cardiovascular disease in a cohort of vulnerable migrants followed by an outpatient clinic: time trend from 1997 to 2012
Giulia Silvestrini

Background
The prevalence of cardiovascular disease (CVD) is increasing and it has become the leading cause of mortality in most countries. There is scarce evidence about migrant population, even if they may be more exposed to multiple environmental and psychosocial risk factor for CVD. The aim of this study was to identify the time trend (1997-2012) in the prevalence and incidence of CVD in a cohort of vulnerable migrant followed by an “open access” outpatient clinic in Rome.

Methods
All migrants who entered Italy and had their first medical examination between January 1997 and December 2012 (N = 30,275) represented the study population. Patients with at least one diagnosis of CVD (ICD-9-CM 390-439) were considered as cases. The prevalence of CVD was computed dividing the number of patients (np) with CVD that accessed the clinic by the overall np visiting the clinic. Since the study population is greatly dynamic, with a great np flowing in and out of it, we computed a further prevalence measure, called “underlying” prevalence, taking into account, both in the numerator and in the denominator, patients who returned at least one time by 2012. CVD incidence was computed by dividing the np who received their first diagnosis at the clinic by the person year (PY) of patient without CVD. All the measures were computed for each year. The results are presented only for the period 2000-2009 in order to obtain more stable estimates.

Results
The np with CVD were 1568 (5.2%). About 40% were Eastern European citizens, 54% were female, 69% were Extra-EU undocumented migrants. The mean age at arrival in Italy was 32.0(SD11.6) and 43.0(SD11.9), for the total population and for patients with CVD respectively. Both prevalence measures increase during the study period with a greater increase of “underlying” prevalence. The prevalence went from 3.4% to 7.0%, while the “underlying” prevalence went from 3.2% to 9.1%, respectively in 2000 and in 2009. The incidence rate was not stable ranged from 2.6 per 100 PY in 2000 to 5.1 per 100 PY in 2002.

Conclusion
Our findings support the need to implement surveillance systems and to consider proactive prevention and therapeutic interventions focused on this target to prevent complications and to reduce future cost for the health care system.

Key message
• This study contributes to the research about assessment of health care need of vulnerable population in order to provide services focused on their real need.

Patients’ access to opioids medication in Albania
Edi Grabocka

Background
Palliative care and pain relief are considered critical public health issues by World Health Organization (WHO). Opioids are essential medicines for the treatment of pain and have been
Validity of the Brazilian and Colombian version of the CCAENA (care continuity across levels of care) scale

Irene García-Subirats

1Health Policy and Health Services Research Group, Health Policy Research Unit, Consortium for Health Care and Social Services of Catalonia, Barcelona, Spain
2Escuela de Medicina y Ciencias de la Salud, Universidad del Rosario, Bogotá, Colombia
3The Prince Leopold Institute of Tropical Medicine, Antwerpen, Belgium
4Universidade de Pernambuco, FIOCRUZ/PE, Pernambuco, Brasil

Introduction

The questionnaire of continuity of care across care levels (CCAENA in Spanish) assesses the three types of continuity of care (relational, informational, managerial) across care levels from the patient’s perspective. It had been validated for the Spanish health care context.

Objective: To evaluate the psychometric properties of shortened version of the CCAENA scale in the Colombian and Brazilian context.

Methods

Cross-sectional study by means of a population survey in municipalities of Colombia (n = 2,163) and Brazil (n = 2,167). Data were collected in 2011 using a questionnaire that included 14 items of the CCAENA scale adapted to both contexts (and translated). Construct validity (exploratory factor analysis), internal consistency (Cronbach’s alpha) and multidimensionality (Spearman correlation coefficients) were assessed.

Results

As in the original version, the factor analysis showed that the items grouped into three factors: continuity across care levels and patient-primary care provider and secondary care provider relationship. Cronbach’s alpha indicated good internal consistency (Colombia: 0.87, 0.91, 0.87; Brazil: 0.86, 0.89, 0.86). The correlation coefficients suggest that the three factors can be interpreted as separated scales (<0.70).

Conclusion

Validity and reliability of the shortened version of CCAENA are adequate in both countries – maintaining high equivalence with the original version – thus, it is a useful tool to assess continuity of care in these contexts.

Key messages

- This study demonstrates good psychometric properties - validity and reliability- of the shortened version of CCAENA scale adapted to the Colombian and Brazilian context.
- This tool will be useful for providers and researches to assess the three types of continuity of care across care levels from the patient’s perspective in Colombia and Brazil.

Short term risk adjusted outcomes for heart failure

Lorenzo Righi

G Messina1,2, S Forni3, F Collini3, L Righi2, V Di Fabrizio4, N Nante1,2

1Health Services Research Laboratory, University of Siena, Siena, Italy
2Post Graduate School of Public Health, University of Siena, Siena, Italy
3Tuscan Regional Health Agency, Florence, Italy
Contact: lorenzo.righi@gmail.com

Background

Cardiovascular diseases are still the leading cause of death worldwide. Heart failure (HF) is now recognized as a major problem in industrialized countries. Short-term adjusted outcomes are indicators of the quality of the diagnostic and therapeutic process during/after hospitalization. The aim of the study is to evaluate the in-hospital mortality and hospital 30-day readmissions for heart failure using two different Risk Adjustment (RA) tools.

Methods

We used data from the hospital discharge abstract (HD) of a retrospective cohort of heart failure patients (2002-2007) admitted in Tuscan hospitals, in Italy. The outcomes considered were: in-hospital mortality and hospital readmission at 30 days after discharge. We compare two RA tools: All-Patients Refined Diagnosis Related Groups (APR-DRG) system, based only on data of index hospitalization, and Elixhauser Index (EI), that also include informations on previous hospitalization. Logistic regression models were performed and models were compared using the C statistic (C).

Results

The study population included 58,202 hospitalizations. The crude in-hospital mortality was 9.7%, lower in females and increasing with age. Thirty-day readmissions was 5.1%, lower in females and higher in patients 85+. The APR-DRG class of risk of death was a predictive factor for in-hospital mortality, while the APR-DRG class of severity was not significantly associated with 30-day readmissions (p > 0.05). EI comorbidities associated with outcomes were: non metastatic cancer (OR 2.25, p < 0.05) for in-hospital mortality and diabetes (ranging 1.20-1.24, p < 0.05) for 30 day hospital readmissions. The discriminative abilities for in-hospital mortality were sufficient for both models considered, while were low for 30-day readmissions rate.

Conclusions

Our findings showed that: 1) age, gender, APR-DRG risk of death and some Elixhauser comorbidities are predictive factors of outcomes; 2) of the two RA models in heart failure patients, the APR-DRG showed an acceptable ability to predict hospital mortality while none of them was satisfactory in predicting the readmissions within 30 days. The recognition of patients at risk for these outcomes is a definite advantage to the improvement of health services.
Mortality for hip replacement surgery: risk adjustment comparisons
Antonello Galdo
G Messina1,2, M Falcone2, G Furia2, G Collini2, A Galdo3, N Nante1,3
1Health Services Research Laboratory, University of Siena, Siena, Italy
2Health Services Research Laboratory, University of Siena, Siena, Italy
3Health Services Research Laboratory, University of Siena, Siena, Italy
Contact: tonellogaldo@hotmail.it
Background
The lengthening of life expectancy and improvements in surgical techniques have resulted in a worldwide growing trend in number of hip replacement (HR), accompanied by a decline in fatal outcomes. Short term adjusted mortality for HR is acknowledged indicator of orthopedic surgery quality, but few studies have investigated the ability of several risk adjustment (RA) models to predict outcomes. Our study aims to: 1) evaluate the in-hospital and 30-day mortality in hospitalized patients for HR; 2) compare the performances of two RA algorithms.

Methods
We studied the hospital discharge records (HD) of a retrospective cohort of hospitalized patients undergoing HR surgery from 2000 to 2005 at hospitals of Tuscan Region in Italy. The outcomes considered in the study were in-hospital mortality and 30-Day mortality after surgery. Two RA tools were adopted to predict the outcomes: All-Patient Refined Diagnosis Related Groups (APR-DRG) system, based on information of HD considered, and Elixhauser Index (EI), referring to the admitting diagnosis of the past three years. Logistic regression models were applied for the analysis of the performance of the two models. C statistic (C) was used to define their discriminative ability.

Results
The number of HD studied was 26,277, 70% women and 85% patients 65+. In-hospital and 30-Day crude mortality were 1.3 and 3%. Female gender was found to be a significant (p < 0.05) protective factor using the APR-DRG (OR 0.64 for in-hospital and 0.51 for 30-Day mortality) and for EI (OR 0.55 for in-hospital and 0.48 for 30-Day mortality). Among EI comorbidities, heart failure and liver diseases were associated with in-hospital mortality (OR 9.29 and 5.60; p < 0.05); at 30 days, the association is reduced (OR 6.36 and 3.26; p < 0.05). Increasing Age and APR-DRG class of risk were predictive for all the outcomes. Discriminative ability of EI was reasonable both for in-hospital and for 30-Day mortality (C 0.79 and 0.68), while it was good for APR-DRG (C 0.86 and 0.82).

Conclusions
Our study found that gender, age, EI comorbidities and APR-DRG risk of death are predictive factors of outcomes. Although APR-DRG has shown a slightly better performance in predicting mortality, it has an economic cost, while EI is freely available.

Key messages
• Female, age, risk classes determined with APR-DRG/EI are predictive variables of in-hospital/30-Day mortality.
• RA tools are useful because allow a standardized comparison of Hospital Routine Data.

How to improve the accuracy of diagnostic ultrasound to identify small for gestational age fetuses?
Elena Azzolini
E Azzolini1, E Furia1, L Pistorius2, N Nante3, W Ricciardi2
1Department of Public Health, Catholic University of the Sacred Heart, Rome, Italy
2Wilhelmina Children’s Hospital, University Medical Center Utrecht, Utrecht, The Netherlands
3Health Services Research Laboratory, University of Siena, Siena, Italy
Contact: elenazzolini@hotmail.com
Background
Type 2 diabetes is an important and increasing public health problem worldwide. Achieving and maintaining recommended levels of glycemic control is the main target in the management of diabetes. Glycemic control is best achieved by effective self-care. More scientific research is needed in order to know how health care personnel can most effectively support patients in this task.

Methods
The study investigated associations between health care climate and outcomes of care in terms of felt self-care competence and glycemic control among patients with type 2 diabetes, when the effect of patients’ other important background and life context factors were adjusted for. The data were collected by a mail survey in 2011 from five municipalities in Southern and Central Finland (response rate 57%, n = 2866), Internationally validated question sets were used. The statistical analysis was carried out with multivariate linear and logistic regression analysis methods.

Results
Good glycemic control (HbA1c < 7%) was strongly associated with felt competence (p < .001) but not directly with health care climate. Good glycemic control was also positively associated with higher age, using tablets only as diabetes medication, social support and higher education, and negatively associated with long duration of diabetes and high BMI (p < .05-.001). Felt competence was most strongly associated with autonomous motivation and autonomy supportive health care climate (p < .001). In addition, felt competence was positively associated with energy, and negatively with stressful life experiences and poor status of health (p < .01-.001).

Conclusion
The preliminary results of the study showed, in line with the predictions of the Self-Determination Theory, that good glycemic control was strongly associated with felt self-care competence, which in turn was strongly associated with autonomous motivation and autonomy supporting health care climate.

Main messages
Health care personnel’s main task is to support patients’ autonomy and felt self-care competence in order to achieve favourable outcomes in diabetes care. The general well-being of patients must also be promoted.

Key messages
• Health care personnel’s main task is to support patients’ autonomy and perceived self-care competence in order to achieve favourable outcomes in diabetes care.
• The general well-being of patients must also be promoted.

Health care climate and outcomes of care among patients with type 2 diabetes in Finland in 2011
Anne Maarit Koponen
A Koponen, N Simonsen, S Suominen
Folkhalsan Research Center and Hjelt Institute, University of Helsinki, Helsinki, Finland
Contact: anne.m.koponen@helsinki.fi
Background
Type 2 diabetes is an important and increasing public health problem worldwide. Achieving and maintaining recommended levels of glycemic control is the main target in the management of diabetes. Glycemic control is best achieved by effective self-care. More scientific research is needed in order to know how health care personnel can most effectively support patients in this task.

Methods
The study investigated associations between health care climate and outcomes of care in terms of felt self-care competence and glycemic control among patients with type 2 diabetes, when the effect of patients’ other important background and life context factors were adjusted for. The data were collected by a mail survey in 2011 from five municipalities in Southern and Central Finland (response rate 57%, n = 2866), Internationally validated question sets were used. The statistical analysis was carried out with multivariate linear and logistic regression analysis methods.

Results
Good glycemic control (HbA1c < 7%) was strongly associated with felt competence (p < .001) but not directly with health care climate. Good glycemic control was also positively associated with higher age, using tablets only as diabetes medication, social support and higher education, and negatively associated with long duration of diabetes and high BMI (p < .05-.001). Felt competence was most strongly associated with autonomous motivation and autonomy supportive health care climate (p < .001). In addition, felt competence was positively associated with energy, and negatively with stressful life experiences and poor status of health (p < .01-.001).

Conclusion
The preliminary results of the study showed, in line with the predictions of the Self-Determination Theory, that good glycemic control was strongly associated with felt self-care competence, which in turn was strongly associated with autonomous motivation and autonomy supporting health care climate.

Main messages
Health care personnel’s main task is to support patients’ autonomy and felt self-care competence in order to achieve favourable outcomes in diabetes care. The general well-being of patients must also be promoted.

Key messages
• Health care personnel’s main task is to support patients’ autonomy and perceived self-care competence in order to achieve favourable outcomes in diabetes care.
• The general well-being of patients must also be promoted.
constructed. Each measurement of male and female fetal parameters was evaluated at each gestational age (GA) and converted to Multiples of Median (MoM). Statistical analysis was done using the unpaired t-test or Mann-Whitney U test for non-parametric values.

In the group of 5942 women that delivered from 0 to 6 days from US, abdominal circumference (AC) values were compared to Local Reference Curve, whilst all EFWs were compared to Festini nomogram, constructed and validated on Tuscany population.

Sensitivity, specificity, predictive values and likelihood ratios of AC and EFW were assessed by using Receiver Operating Curve (ROC) analysis.

Results
7359 pregnancies met the inclusion criteria. At birth 890 neonates were SGA (prevalence of 14.9%). Statistically significant gender difference in fetal AC-MoM and EFW-MoM values was observed at each GA, with lower results in female than male fetuses (p < 0.0001). According to Local Reference Curve (for AC) and to Festini nomogram (for EFW), at the best cut-off chosen by ROC curve analysis, in the identification of SGA fetuses AC and EFW achieved a sensitivity of 90.0% and 94.2% respectively; specificity 86.1% and 84.5%; LR+ 6.47 and 6.07; LR- 0.12 and 0.07; PPV 29.4% and 28.1%; NPV 99.3% and 99.6%. The area under the ROC curve was 0.915 for AC and 0.932 for EFW, respectively (p < 0.0001).

Conclusion
The present data suggest that taking care of gender variables, i.e. using sex specific nomograms and comparing EFW with a local population specific chart, it is possible to enhance the accuracy of the US assessment of fetal growth and weight. These devices correctly categorize each fetus during gestation and better estimate the risk of misdiagnosing fetuses at higher risk of poor outcome at birth.

Key messages
• The accuracy of diagnostic ultrasound to identify small for gestational age fetuses should be improved since these fetuses are at higher risk of poor outcome at birth.
• Taking care of gender variables is possible to enhance the accuracy of the US assessment of fetal growth and weight.

Variation in mental health care use at the end of life in Switzerland
Xhyljeta Luta

Institute of Social and Preventive Medicine, University of Bern, Bern, Switzerland Switzerland
Contact: xluta@ispm.unibe.ch

Background
Previous studies have documented high levels of psychiatric issues among people approaching death. We aimed to examine use of mental health services (MHS) among Swiss residents during the end of life (EOL).

Methods
The study population included 118,718 Swiss residents with federally mandated health insurance coverage who died between 2008-2010. We used insurance billing records to identify MHS 12 months before death. We categorized MHS by medical tariffication codes into four types of care: active psychotherapy (APT), phone consultation (PC), ambulatory psychiatric services (APS), and treatment of psychiatric crisis (TPC). Provider type was categorized as primary care, specialists, and inpatient services. Socio-demographic characteristics included age, urbanicity, language region and Swiss Socioeconomic Position Index (SSEP). We modelled total cost of mental health claims (MHIC) using multiple linear regression adjusting for sex, age, language region, urbanicity, SSEP and time to death.

Results
We identified 5,218 persons who used MHS in their last 12 months of life corresponding to 54,815 MHIC. The mean age of the study population was 68.3 years and included slightly more females (53.4%). Type of MHS varied by socio-demographic characteristics. Persons 85+ received the most APT (85.9%) and least TPC (4.7%). Persons with lower SSEP used more APT and fewer APS. The Italian language region had the highest TPC (7.6%). Males used more inpatient care (52.9%) less specialist (41.8%) and primary care (5.2%). Specialist care decreased with age (48.5%, 44.8%, 40.5%, 37.9%) and increased with SSEP (37.8%, 40.5%, 50.4%). Provider type varied by language region, with the least primary and inpatient care and the highest amount of specialists in the Italian speaking region. MHIC costs decreased with age, with the oldest having 56.3% (0.40-0.46) lower claims. The costs were lower in the Italian-speaking region by 22.4% and French-speaking region by 12.3% (1.05-1.19). MHIC costs were less in persons with lower SSEP 15.9% (0.76-0.91) and in the last month of life 59% (0.37-0.42).

Conclusions
Socio-demographic factors such as age, language region and SSEP contribute to the variation in MHS at the EOL in Switzerland.

Key message
• Socio-demographic factors such as age, language region and Swiss Socioeconomic Position Index (SSEP) contribute to the variation in mental health service use at the EOL in Switzerland.

Polypharmacy in an Italian Regional Health System: a survey on drugs use in different healthcare settings
Giovanni Cattani

G Cattani1, L Arnoldo1, P Tricarico1, A Agnoletto1, F Tosolini2, M Cristiani2, L Cancian2, F Gangi2, G Tonutti3, L Pletti2, M Prati1, P Cojutti3, F Pea3, S Brusaferro3, Friuli Venezia Giulia regional risk manager group3, M Chittaro, C Barazzutti, D Monteverdi, B Lavia2

1Department of Medical and Biological Sciences, University of Udine, Udine, Italy
2Central Directorate for Health and Social Care Integration, Social Policies and Family, Udine, Italy
3Institute of Clinical Pharmacology, University of Udine, Udine, Italy
Contact: giovanni.cattani@unud.it

Background
Polypharmacy is defined as the use of multiple drugs or more than are medically necessary. Drugs overuse/misuse represents one of the main reasons for the occurrence of adverse events in elderly people with an higher risk of hospitalization and/or prolonged hospital stay. The prevalence of drugs consuming increases with the age in all healthcare settings.

Objective
To study the prevalence of drugs suspected overuse (more than 5 medications as a reference) within population >65 years in different healthcare settings of North Italian Region (Friuli Venezia Giulia (FVG)).

In the study, part of the regional program on patient safety, were included 9 public and private hospitals, 22 Long Term Care Facilities (LTCF) and 23 Nursing homes (NH) of the regional healthcare system. We collected anonymously physiological and pathological characteristics of the patients, number and doses of chronic medications used, the last week of March 2014.

Results
Patients included in the study were 1056 with a mean age 82.7 (range 65-105) and 633 (59.9%) were female. Patients discharged from the selected hospital wards (Geriatrics and Internal Medicine, Cardiology, Neurology) were 528 (50%) while 219 (20.7%) and 309 (29.3%) were residents in LTCF and NH, respectively. Globally 5522 drugs were prescribed with a mean of 6.2 medication for patient (range 1-19). Patients with a prescribed number of drugs comprised from 1 to 5 resulted 41,4% (437), 49,1% (518) had from 6 to 10 drugs and 9,6% (101) of patients were in therapy with more than 10 drugs. Proton Pump Inhibitors was the most prescribed class of drugs (7,3%), followed by Non-steroidal Anti-inflammatory Drugs and Diuretics, 6,5% and 5,9% of all prescriptions, respectively.
Conclusion
These results are a first step to define the entity of drug consumption by elderly of different healthcare setting in FVG and represent the base for planning and launching a policy to reduce multiple drug prescriptions, to limit the risk of adverse reactions, to improve elderly quality of life and of course to reduce healthcare systems costs.

Key message
- The survey represent a first step for planning and launching strategies with the aim of reducing drug prescriptions in elderly people.

Adequacy of antenatal care received by Nigerian women and some related factors
Sarp Uner

AS Berde, S Uner
Hacettepe University Institute of Public Health, Ankara, Turkey
Contact: sarpuner@yahoo.com

Background
Antenatal care (ANC) is recognized as one of the major health care solution in preventing maternal deaths and morbidity. Although the situations associated with ANC utilization in Nigeria and other Sub Saharan Africa countries are well documented, but only few studies that highlight on the quality of ANC received by these women. The aim of this study is to examine the adequacy of ANC received by Nigerian women when provided by skilled providers in Nigeria.

Methods
The analysis was based on data from the 2008 Nigeria Demographic and Health Survey (NDHS), a nationally representative survey. Women who had at least one ANC visit were selected as the universe of the study (n = 9604). The output variable adequacy of received ANC (ARANC) score was calculated as follows; ARANC Score = Provider \times (Number of visits + Timing of first visit + Content of ANC. Skilled provider had score of 1 while non-skilled provider had score of 0. ANC visit, timing and contents were given equal weight. The ARANC score can be within 0-3. Complex sample analysis using the SPSS complex sample command was used for both bivariate and multivariate analysis.

Results
ARANC score was calculated and 16.3% of respondents had score of 0. Most women had scores of 2 (46.1%). The lowest value was observed among those with scores of 3. Older age, low number of birth, living in urban area, high educational level, daily exposure to mass media, working in an income generating job, knowledge on modern contraceptive methods, high household wealth index and easy access to health facility were positively associated with ARANC score (p < 0.05).

Conclusion
The findings suggest that as women social status and economic conditions improves, the adequacy of received antenatal care also increases. As such, public health policies should focus on women empowerment as well as health promotion.

Key message
- The influence of household wealth, education, other social status indicators on ANC use shows a need to explore effective ways of increasing service utilization among poor and less-educated women.