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Bjørn Lomborg, ed. RethinkHIV - Smarter ways to invest in ending HIV in Sub-Saharan Africa. Cambridge: Cambridge University Press; 2012.

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TELEMEDICINE AS A SUCCESSFUL TOOL FOR IMPROVING TERRITORIAL CARE TO ELDERLY PEOPLE

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BACKGROUND: Telemedicine offers a number of services addressed to chronic diseases able to improve the quality of care by applying technology to clinical practice. Elderly people need a highly personalized diagnostic approach aimed to the improvement in the quality of life and the delay in disease progression.

AIMS: The aim of the present work was to compare a sample of 11 patients who underwent telemonitoring of health conditions (group A) with a sample of 11 patients (group B) following the routine geriatric check-up.

METHODS: People were from Catanzaro Lido or Chiaravalle Districts, age 65 year old or older; they had to be affected with hypertension, diabetes, respiratory insufficiency/COPD. Telemedicine tools included Phebo platform, with a software able to receive signals from peripheral devices in real time. Devices were directly provided to patients. All of them were linked to a smartphone with evodroid system, able to communicate to the central platform through the internet. Patients were administered a questionnaire for assessing the compliance in the two groups: 1) self monitoring of parameters, adherence to 2) pharmacological prescriptions and 3) to diet, 4) adherence to parameter monitoring and self-care and 5) the perception of patient's care.

RESULTS: Telemonitored patients globally presented a better adherence to monitor the examined parameters (blood pressure, oxygen saturation, glycemia and body weight). The adherence to drug treatment was higher in group A (82%vs73%). Unlike group B, patients of group A declared they never changed drug regimen autonomously. The adherence to diet was overall low in both groups. The level of perceived quality of assistance was high in both groups (55% in group A *vs* 45% in group B).

CONCLUSIONS: Telemonitored patients presented a high compliance to clinical monitoring and drug treatment and low adherence to diet regimens. Clinical monitoring was much higher compared with non-telemonitored patients. In conclusion, compliance improved as much as perceived care got better and the tools provided by telemedicine offered a valid help for improving parameters monitoring.

THE ELDERLY PATIENT WITH HEART FAILURE: EMPOWERMENT STRATEGIES

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BACKGROUND: The heart failure is one of the most common disease , as it is the second most important cause of hospitalization in Western Europe, with a prevalence, in Italy, of 1-2% in patients with an average age of 80. It's important to support people suffering of chronic disease by putting in place therapeutic education's interventions to develop the empowerment, to make them autonomous in the management of disease and to improve their life's quality.

AIMS: The proposal is to conceive and create an informative brochure about the disease including information about it, right habits to be taken (weight-monitoring, diet, water and sodium income), signs and symptoms that can happen manifest and that require medical attention. The brochure, delivered at resignation, is an useful tool for facilitating disease's management.

MATERIALS AND METHODS: It has been carried out a bibliographic research to PubMed from May to July 2016, where it has been carried out a random sample of patients including just those with heart failure. It has been analyzed medical records of chosen patients, in particular it has been considered the variables: co-morbidities, cognitive impairment, ADL, IADL, hospitalization's duration, caregivers.

OUTCOMES: Through the bibliographic revision it has been described the best education intervents to be able to develop the empowerment and to provide an appropriate tool for the patient and for the caregiver to allow optimal disease's management. It has been created an informative brochure to deliver to the patients at the resignation's time. The outcomes demonstrate the importance of therapeutic education during personalized cares of elderly patients suffering from chronic heart failure.

CONCLUSIONS: The education must be continuous to be efficient and it is necessary to pull over various tools in order to make the educational process compelling and interactive concentrating all the attention to the patients and his needs.

PERFORMANCE OF CHA2DS2VASC SCORE IN PREDICTING ISCHEMIC EVENTS AMONG HOSPITALISED ELDERLY PATIENTS WITH ATRIAL FIBRILLATION

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BACKGROUND: Basing on CHA2DS2VASc score all patients with atrial fibrillation (AF) aged 75 or more should receive anticoagulation. Nevertheless, recognizing that frailty and comorbidity may limit quality of life much more than consequences of AF in this population, 2016 ESC guidelines suggest an integrated management for such patients.

AIMS: To evaluate how CHA2DS2VASc score and a standardized comprehensive geriatric assessment (CGA) perform in predicting stroke in elderly patients with AF and different estimated survival probability.

METHODS: We studied a cohort of over-75 patients affected by AF consecutively discharged from Trieste Geriatric Division between 2012 and 2015. They underwent a CGA with calculation of Multidimensional Prognostic Index (MPI) risk score. Survival and ischemic events were recorded during the following year. In each MPI risk class we evaluated the performance of CHA2DS2VASc and other CGA scales (ADL, IADL, MMSE, MNA, CIRS, Exton-Smith, social support, number of prescribed drugs) in predicting ischemic events among patients who do not receive anticoagulation. C-statistic and generalized linear models were used for this purpose.

RESULTS: Of 668 patients discharged alive,628 (94%) completed CGA and of these 590 (94%) had 1-year follow up. One-year survival in high, medium and low MPI risk group was respectively 49, 71 and 86%. CHA2DS2VASc predicted ischemic events with a C-statistic respectively of 0.59, 0.50 and 0.77. A generalized linear model with all CGA scores suggested that respectively in medium and high risk group ADL score at admission (p=0.02, C-statistic 0.72) and CIRS severity score (p=0.02, C-statistic 0.73) independently predict 1-year occurrence of stroke.

CONCLUSIONS: Among elderly patients with estimated medium-high mortality CHA2DS2VASc score may be inaccurate in evaluating ischemic risk. Functional level and a comprehensive comorbidity assessment could be more tightly associated with stroke occurrence.

COMPREHENSIVE GERIATRIC ASSESSMENT AND THERAPEUTIC CHOICES FOR CEREBRAL THROMBOEMBOLISM PROPHYLAXIS IN ELDERLY PATIENTS WITH ATRIAL FIBRILLATION

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BACKGROUND: International guidelines recommend oral anticoagulants (OACs) use in all patients with atrial fibrillation (AF) if CHA2DS2VASc score is ≥ 2. Nevertheless, these drugs are often underprescribed in the geriatric population.

AIMS: To identify possible reasons for underprescription of OACs.

METHODS: We considered all patients aged 75 or more discharged alive from our geriatric ward between January 2012 and December 2015 with non-valvular AF. We registered age, sex, drugs prescribed at discharge and haemoglobin concentration at admission; we evaluated their functional, cognitive, affective, nutritional and comorbidity status (respectively through ADL and IADL, MMSE, GDS, MNA, CIRS 13 items) and pressure ulcer risk (Exton-Smith) as required to calculate the multidimensional prognostic index (MPI) value. We used Tukey's test for multiple comparisons and a generalized linear model to identify factors that were independently associated with OACs prescription.

RESULTS: Of 668 patients, 30.5% received OACs at discharge, 54.8% an antiplatelet drug, 14.7% received no prophylactic therapy. In OACs group patients were younger, had a higher haemoglobinemia, a better cognitive, functional and nutritional status, and a lower Exton-Smith and MPI score compared both to patients on antiplatelet therapy and to those without any specific prophylaxis (p<0.001 in all comparisons). Between the last two groups there was no significant difference in any of the overmentioned parameters. Sex, CIRS and GDS score were not different in the three groups. Age, haemoglobin, MNA and MMSE score resulted to be independently associated with OACs prescription.

CONCLUSIONS: Comprehensive geriatric assessment can identify factors that are associated with OACs underprescription. The choice between prescribing an antiplatelet drug or no therapy doesn't seem to be associated with any of the factors we examined.

NOT SELF-SUFFICIENCY AND CIVIL DISABILITY: A MODEL OF PRE-SHAPED CERTIFICATION FOR A FAIR AND OBJECTIVE EVALUATION

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AIMS OF THE STUDY: Current legislation about civil disability regarding over 65 years old establishes the right of economic indemnity to those who "are not able to walk without permanent caregivers' help" or to those that "are not able to perform common activities of daily life". On the other side legislation does not identify which tools have to be used nor the entity of the limitations to which civil disables are subjected to, leaving so interpretation difficulties and the consequent risk of social inequality. VMD (Multi-Dimensional Evaluation) helps to identify, through Mono-Dimensional (MD) tools, the health status of an elder and subsequently the degree of non-self-sufficiency.

MATERIALS AND METHODS: Over the past 5 years in the ASL 3 Genovese have arisen many geriatric clinics, aiming to respond to the pressing presence of chronic diseases and also aiming to quantify disable's dependency level in order to recognise their civil disability degree. Hence, it has born a partnership with the Forensic Medicine, starting with upgrade courses and reaching the proposal of a single certification model, based on the pivotal role of VMD.Starting from history and physical examination, evaluation areas involve: - The comorbidity, according to the degree of severity (*e.g.* Rating scale: CIRS=or >3/5) - The clinical instability - The presence of Major Geriatric Syndromes: Dementia - Depressive Syndrome - Hypokinetic Syndrome - Sphincter Incontinence - Postural Instability with falls - Iatrogenic Syndrome - Malnutrition Syndrome - Chronic pain - Immunodeficiency Disorder - Sleep Disturbance - Sensory deficit - The cognitive, behavioral and thymus status (*e.g.* CDT-MMSE-NPI-GDS) compared to the impact on quality of life (*e.g.* CDR) and on the caregiver burden (*e.g.* CBI) - The functional status (IADL and ADL) and motor (Tinetti Balance and Gait - Barthel Mobility - Risk of falling) - The socio-economic-familiar status (short social history).

RESULTS: Creation of a standard pre-shaped model of "Medical Legal Certificate for Civil Disability", lays the bases for a forensic medical epicrisis aiming to evaluate quantitative data and to better define the dependency degree, nevertheless leaving freedom of choice of preferred MD instruments to be adopted according to individual experience and primarily starting with the analysis of different health domains in elder people.

CONCLUSIONS: A standardised protocol and a technical consultancy, offered by specialists, can represent a valid support to the Disability Commission, summoned to judge the right of financial compensation even with lack of time and evidences.

INCIDENCE AND COSTS OF HIP FRACTURES IN LIGURIA AND IN THE METROPOLITAN AREA OF GENOA: THE LICOS STUDY

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BACKGROUND: Osteoporotic Hip Fractures (HF) are a major health care issue in Western Countries characterized by increasing numbers of older adults, being associated with increased mortality, disability and healthcare costs. The LICOS project has been designed and implemented with the objective of reducing the burden of osteoporosis and related fracture in Liguria (Northern Italy).

AIMS: The aim of this analysis was to calculate the incidence of HF in people older than 45 years old and estimate direct and indirect costs related to HF in Liguria and in the metropolitan area of Genova, over the period of 3 years (2011-2013).

METHODS: Information concerning hospitalizations for HF were retrieved from hospital discharge records stored in the electronic regional database, using ICD-9-CM diagnosis codes. Incidence of HF (cases per 10,000 person-years) was calculated using population data obtained from the regional registers. Direct costs sustained for hospitalization and treatment of HF were calculated on the basis of the value of the diagnosis-related groups referring to hip fractures. The expenses of rehabilitation and indirect costs were estimated using a previously validated algorithm (Rossini *et al.*, 2005). Direct, rehabilitation and indirect costs were calculated on annual basis.

RESULTS: In Liguria, the incidence rates of HF were 41 per 10,000 person-years in year 2011, 42 per 10,000 person-years in year 2012, and 44 per 10,000 person-years in year 2013. The corresponding figures for the metropolitan area of Genova were respectively 32 per 10,000 person-years (2011), 30 per 10,000 person-years (2012), and 31 per 10,000 person-years (2013). In Liguria, during the year 2013 the direct costs of hospitalization in patients over 45 years were almost 24.6 million Euros, with an increase of 8% as compared to 2011. In the metropolitan area of Genova direct costs of hospitalization in year 2013 were about 8.9 million Euros, with a decrease of 6.0% as compared to 2011. Considering also estimated rehabilitation costs and indirect costs, we calculated that, during the year 2013, HF created over 53 million Euros in expenses in Liguria and about 20 million Euros in expenses in the metropolitan area of Genova.

CONCLUSIONS: In Liguria, preventive intervention strategies to reduce the burden of HF are required.

APPLICATION OF GENETICS IN THE ELDERLY: DEVELOPMENT, INTEGRATION, ANALYSES - AGE-DIAMOND: DEVELOPMENT OF A MODEL BASED ON CLINICAL AND GENETIC DETERMINANTS TO PREDICT CLINICAL OUTCOME

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BACKGROUND: The burden of age-related chronic diseases, such as neurodegenerative disorders, led to an increasing interest in the risk factors for physical, psychological and functional decline. Frailty is a geriatric syndrome of decreased resistance to stressors and increased risk for adverse health outcomes that can be defined based on a multidimensional approach, such as the Multidimensional Prognostic Index (MPI). To date there is no available tool to predict the clinical outcomes in the elderly that comprises also constitutional, biological and genetic factors.

AIMS: The goal of this work was to design a real-world clinical protocol aimed to develop a predictive multidimensional model based on clinical, biological and genetic data, including biomarkers associated with frailty, ageing and cognitive decline.

METHODS: The project team surveyed and critically appraised the current clinical procedures and the recommended protocols (including geriatric assessment, neuropsychological assessment and genetic counselling). The study design and the clinical protocol were revised until consensus was reached.

RESULTS: A cross-sectional study was designed. All consecutive patients referred to the geriatric unit for cognitive decline and/or frailty syndrome are eligible. The primary outcome measure is MPI. Secondary outcomes will include the longitudinal change of MPI, cognitive decline, mortality, hospitalization, pharmacological and non-pharmacological treatments response. Clinical assessment will be provided by a multidisciplinary team and will include geriatric clinical evaluation, neuropsychological examination and genetic counselling. Patients will be asked to fill a questionnaire for family history collection. A blood sample will be collected and stored for the biological and genetic investigations. For each patient, at least one follow-up visit will be performed. The study protocol was approved by the Regional Ethics Committee. Patients enrolment is expected to start in June 2017.

CONCLUSIONS: The AGE-DIAmond study is envisaged to develop in a real-world setting a model which will validly predict clinical outcome in ageing individuals. Once an accurate and robust model is established, personalised preventive and therapeutic procedures can be successfully accomplished. The availability of valid biomarkers and of a robust predictive model may influence the design of clinical trials for innovative treatments.

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ARNOLD CHIARI SYNDROME I: CASE REPORT

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BACKGROUND: According to the recent data of the international literature, for Arnold-Chiari malformation meaning, the complex of symptoms caused by Chiari malformation, which includes a diverse group of anomalies of posterior fossa structures, which have in common the herniation of the tonsils cerebellum through the foramen magnum.

CASE REPORT: Patient of 53 years, male, former smoker, occasional alcohol, 2 sons, one disabled, work: assistant cook. AF: nil. From October 2015,presented with spinal pain radiating to the lower limbs, performed a spinal MRI L-S- with evidence of reversing hint L2-L3 with wide ranging disc protrusion section. Performed MRI brain-trunk in December (initially unavailable) and subsequent hospitalization in German hospital for appearance of pains in the head, double vision, dizziness when changing position. The patient dismissed himself. He presented to our A & E for appearance of stranguria, abdominal pain and

worsening of pain. There were blood and instrumentals performed which were okay. Evaluated by a neurologist who advised execution of SSPE which were negative, evaluated by a specialist in infectious diseases and pain therapy with subsequent admission to our unit. Not convinced we asked to view MRI brain-trunk performed by external sources which highlighted in particular,a location lower than under the right cerebellar tonsil outcropping to the foramen magnum.

CONCLUSIONS: We repeated neurological examination and arrived at the diagnosis of Arnold Chiari I.

DEPRESSION AND CHRONIC OBSTRUCTIVE BRONCHITIS IN ELDERLY OUTPATIENTS

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As it is known in recent years the problem of depression in the elderly is growing, on the one hand the increase in the elderly population and on the other the appearance and / or persistence of chronic conditions often disabling that interfere with mood such as COPD (ill. preventable and treatable characterized by a chronic obstruction to the air flow in the intrathoracic airways. the presence of an FEV1 / FVC ratio of less than 0.70, demonstrated by spirometry performed after administration of a bronchodilator, is necessary criterion to confirm the clinical diagnosis of the disease).The aim of this study was to verify a possible correlation between low mood and COPD in ambulatory elderly subjects.

METHODS: From October 2016 to February 2017 we submitted the Geriatric Depression Scale - J.Yesavage (one of the most popular scales for evaluation of depressive symptoms in the elderly, the instrument consists of 30 items which excludes the detection of somatic symptoms and psychotic symptoms, the answers are reciprocating (yes / no), the score ranges from 0 to 30 with a threshold level to 11 place, beyond which are clinically relevant depressive symptoms) to 99 elderly subjects (33F-44M) with age average of 76 related to the clinic of Pneumology simultaneously undergo spirometry.

RESULTS: Our data in line with other studies shows no correlation between depression severity and severity of obstructive, other parameters considered such as sex, BMI and FVC showed no correlations.

INFECTION FROM *SCEDOSPORIUM APIOSPERMUM*: CASE REPORT

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BACKGROUND: Scedosporium: filamentous fungi ubiquitous opportunists group isolated from the ground and from contaminated waters. Notes are the two main species pathogenic to humans: 1) *Scedosporium apiospermum* and 2) *Scedosporium prolificans*, more virulent and more resistant to treatment.

CASE REPORT: Patient of 88 years suffering from myasthenia gravis, being treated for years with corticosteroids, is hospitalized at the Department of Internal Medicine of the Hospital of Cuggiono for the appearance of a swelling extended from the middle third of the left forefoot leg oedema of the subcutaneous tissues, the presence of nodular lesions painless and collected swelling deep between muscle planes. Making serial recordings with pus evacuation. Samples were sent to the Laboratory of Microbiology. in suspicion of necrotizing fasciitis and set broad-spectrum antibiotic treatment associated with antifungal.

MATERIALS AND METHODS: microscopic examination of the material grown lets you highlight septate hyphae are differentiated conidiophores the originators conidia oval individuals or in small groups. This helps identify the fungus as microscopically *S. apiospermum.*

CONCLUSIONS: the increased incidence of fungal infections, especially in immunocompromised patients in our case the diagnosis of *Scedosporium apiospermum* allowed to set the targeted therapy with voriconazole which, combined surgical aspiration of infectious outbreaks, has led to a clear resolution of the problematic fungal.

STILL'S DISEASE IN THE VERY OLD WITH FEVER: A HYPOTHESIS TO BE EVALUATED

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Adult-onset Still's disease is a rare systemic inflammatory disease accompanied by spiking fever, rash and arthralgia. Pathogenesis is still unknown but proinflammatory cytokines are likely involved. Diagnosis according to Yamaguchi's criteria is one of exclusion. Incidence is 0.16-0.4/100000 and prevalence 1-34/1000000. Women are affected more than men; the onset age shows a bimodal range at 15-25 and 35-45 years of age. Very few cases are reported in people older than 70-years. An 86-year-old female was admitted to our community hospital after experiencing spiking fevers, confusion and loss of autonomy. She had been recently hospitalized for an accidental fall, then experienced fever treated with several empiric antibiotics and finally prednisone (12.5 mg for 30 days) with transient fever disappearance. Her past medical history was significant for cholecystectomy for gallstones, previous gastric ulcer with anaemia, hypertension, breast cancer surgically treated, osteoporosis, polyarthrosis with severe gonarthrosis. Diarrhoea and constipation had been alternating for months.Upon admission, on physical examination she had arthralgia, left knee inflammation and lower limbs oedema. Her hematologic tests showed leucocytosis with granulocyte predominance (WBC 13600/ul), elevated platelets (858,000/ul), ESR (106 mm), C-reactive-protein (18.78 mg/dl), fibrinogen (882.5 mg/dl), ferritin (542 ng/ml) and temporary increase in procalcitonin levels (1.21 ng/ml). Except for a positive K. pneumoniae urine culture, all culture examinations were negative, as well as serology for Mycoplasma, Chlamydia, Borrelia, Toxoplasma, Herpesvirus, Mantoux and rheumatologic tests (antinuclear and anti-citrulline antibodies and rheumatoid factor). An echocardiogram excluded endocarditis. In order to exclude localized infectious or neoplasia, a PET scan was performed with evidence of disomogeneous tracer collection in the splenic bowel curvature; a computed tomography of chest and abdomen excluded secondary localization while colonoscopy showed only diverticulosis of the sigma. According to Yamaguchi's criteria (neutrophilic leucocytosis, fever ≥39, arthralgia, mild abnormal liver function tests and negative rheumatologic tests) adult-onset Still's disease has been diagnosed. She started prednisone and methotrexate (12.5 mg and 5 mg twice a day) leading to fever resolution with a significant reduction in inflammatory tests, clinical and cognitive improvement and recovery of pre-hospitalization levels of independence. Still's disease in the elderly is rare and not easily considered as a differential diagnosis in fever of

unknown origin. It often causes a troubled diagnostic pathway with prolonged hospitalization and high risk of autonomy loss. Cardiovascular and articular comorbidity or asymptomatic bacteriuria may act as a confounding factor for possible alternative diagnoses such as lymphomas and infectious diseases.

DIFFICULT HOSPITAL DISCHARGE: OUR EXPERIENCE

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BACKGROUND: Time after discharges is critical, especially for individuals with complex care needs such as elderly adults. A possible answer is employing care transition programs aimed to guarantee the coordination among healthcare practitioners and continuity of medical care on moving among different settings and different levels of care.

AIMS: Discharging patients from the hospital is a complex process that is fraught with challenges. Preventing avoidable rehospitalizations has the potential to profoundly improve both the quality-of-life for patients and the financial well-being of healthcare system.

METHODS: A number of different health facilities have developed privileged ways for promoting an ideal network service following patient's discharge; in other words we mean the so called "protected discharges". Since 2009 a virtuous route has been promoted between ASP Catanzaro and "Pugliese-Ciaccio" Hospital, in Catanzaro, Italy. Our interfirms and multiprofessional team performed 1.177 assessments between January 2009 and December 2015. Mean age in the assessed patients was 81,19± 10,5 years old (women 54%, men 46%).

RESULTS: Our data show a increase in "protected discharges" in the 7-year time 2009-2015. In fact, an increase in the mean for-month "protected discharges" was observed; in particular the mean number increased from 10,18 in 2009 up to 12,16 in 2015 (mean for month 14,01 2009-2015) . The individualized health care settings were medicalized nursing home facilities (65,4%), home care (14,6%), rehabilitation facilities (16,9%), other (3,1%).

CONCLUSIONS: The continuity of care between hospital and out-of-hospitalcare systems is the most important health care procedure in a working Health Care System. In fact, the continuity of care means a global caring for elderly people, shared by different actors and different services aimed at care management and case management, especially during the vulnerable time which patient passes through.

RESISTANCE TO WARFARIN TREATMENT DUE TO ENTERAL FEEDING: A CASE REPORT

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An 86-year-old female was referred to our geriatric clinic complaints of "persistent fever resistant to antibiotics and dyspnea." Her past history included permanent atrial fibrillation (prophylaxis with warfarin), aortic valve bio prosthesis, monoclonal gammopathy, vascular dementia, hypokinetic syndrome, recent slow-resolution pneumonia. In Emergency Room ECG showed atrial fibrillation at 80 and right bundle branch block, chest X-ray revealed left thickening and supra-basal layers, unchanged from the previous control. Blood tests showed neutrophilic leukocytosis (WB 14.66 m/mcl, Neu 83.5%), mild renal impairment (creatinine 1.47 mg/dl), and an increase of proBNP (2178 pg/ml). On physical examination the patient was asleep but responsive to verbal and painful stimulation; feverish (37.8°C), the HR was 90 min, the percentage of saturation of hemoglobin was 80%; vesicular murmur was not valuable due to the poor compliance of the patient, extra-pyramidal stiffness was present. Routine blood tests, EGA and blood culture were required. During the hospitalization the patient had a neurogenic dysphagia and following the placement of nasogastric tube was initiated enteral feeding. Initially the patient stopped therapy with warfarin and started EPBM (enoxaparin 4000 ui 1 fl x2/die), when we restarted warfarin with high dosage (5-10 mg/die) we didn't arrive to the therapeutic range, the INR values were from 1.08 to 1.39. The patient was not treated with NAO for the presence of severe comorbidities with high risk of renal failure and for the high degree of irreversible dependence. We confirmed literature data showing interaction between coumarins and enteral feeding but the mechanism that motivate this interaction are not yet fully known[1-4].

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USEFULNESS OF THE MULTIDIMENSIONAL PROGNOSTIC INDEX FOR IDENTIFYING ELDERLY PATIENTS WITH CONTINUING HEALTHCARE NEEDS AFTER HOSPITAL DISCHARGE

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BACKGROUND: Older adults hospitalized for an acute condition often require appropriate, well-timed discharge planning to ensure comprehensive care for those with continuing care needs. The use of Comprehensive Geriatric Assessment (CGA) can identify frail patients and their healthcare needs and strengthen links between in-hospital acute care and long-term care services.

AIMS: The aim of the study was to evaluate the usefulness of the Multidimensional Prognostic Index (MPI), a CGA-based prognostic tool, in identifying patients who are able to return home (with or without home care service support) and those who need to be admitted to post-acute care facilities.

METHODS: This study was carried out on 263 older patients consecutively admitted to hospital for acute disorders (males 99, females 164, mean age 86.73±5.6 years). On admission, they underwent CGA to calculate their MPI by integrating information on functional status (Basal and Instrumental activities of Daily Living-ADL, IADL), cognitive status (Short Portable Mental Status Questionnaire-SPMSQ), nutrition (Mini Nutritional

Assessment-Short Form MNA-SF), risk of pressure sores (Exton Smith Scale-ESS), comorbidity (Comorbidity Illness Rating Scale-CIRS), and multi-drug and co-habitation status. Patients were divided into three risk-groups based on MPI values: MPI-1 low-risk, MPI-2 moderate risk, MPI-3 high-risk patients.

RESULTS: According to their MPI score on admission, 24 patients were classified as MPI-1 (9.1%), 131 patients as MPI-2 (49.8%) and 108 as MPI-3= (41.1%). MPI-3 patients displayed not only a higher mortality rate (15.7%) than MPI-2 (9.2%) and MPI-1 patients (4.2%), but also the highest likelihood of being admitted to a post-acute care facility (MPI-3: 37.0%; MPI-2: 22.1%; MPI-1: 8.3%). By contrast, MPI-1 patients exhibited the highest probability of returning home, both without the support of any healthcare service (MPI-1: 71%; MPI-2: 61.8%; MPI-3: 38.9%) and with home care (MPI-1: 16.7%; MPI-2: 6.9%; MPI-3: 8.3%) (chi-square test, $p=0.004$). The most crucial predictor of returning home after hospitalization was the ESS score (binary logistic regression, OR 1.19; CI95% 1.09-1.29; $p<0.001$).

CONCLUSIONS: CGA-based MPI is very useful in identifying frail patients and their healthcare needs even after hospital discharge. MPI can therefore help clinicians in the process of discharge planning.

SHORT GERIATRIC OBSERVATION IN THE CITY OF TRIESTE: AN ALTERNATIVE TO RECOVERY?

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INTRODUCTION AND OBJECTIVES: Since October 2015, an alternative response to traditional recovery – Short Geriatric Observation (OBG) – has been activated at the Geriatric Department of the Ospedale Maggiore of Trieste, a city with a high percentage of elderly people.In fact, traditional hospitalization in the elderly is often accompanied by side effects that negatively affect their functional status and the cost of the healthcare system; therefore, it is important that the hospitalization period is as short as possible and that after discharge the patient can find the best care facility.

METHODS: The OBG hosts patients over 75 years of age at risk of frailty, with medium to low severity acuities and possible rapid discharge. It is made up of 4 beds (out of 25 in total) and admission occurs from Monday to Friday in the daytime. It is possible to carry out urgent top-level blood chemistry analyses and instrumental tests. If the social and family situation is unstable, the patient is reported to the local services for a prompt takeover. If the discharge cannot be made within 48 hours the patient is hospitalized in the Geriatric Department.

RESULTS: One hundred and twenty-four patients with (mean age of 85.4 years) were hospitalized from October 2015 to January 2017. Of these 61 were referred by the Emergency Room (48.3%) and 63 by local facilities/general practitioners (51.7%).One hundred patients (80%) were discharged within 48 hours at their home (72), at a nursing home (14), or at medium term rehabilitation facility (14). The 30-day rehospitalization rate was 14.5% and mortality 3.2%.

CONCLUSIONS: During this first year of activation, collected data confirmed the possibility to effectively treat a large number of elderly people with this assistance model, which in most cases allows a discharge into the appropriate facilities within the time limits.It is hoped that this protocol will be enhanced in the future, for example with an increased admission capacity, and with a stronger interaction with emergency departments and local facilities.

DETECTION AND MONITORING TOOLS IN THE PROTECTED HOSPITAL DISCHARGES PROTOCOL BETWEEN AZIENDA OSPEDALIERA "PUGLIESE-CIACCIO" AND ASP OF CATANZARO

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BACKGROUND: "Protected discharge" means the scheduled transfer from a care setting to another one involving frail, mostly older, patients, affected with chronic diseases and comorbidities, with functional limitations and/or disabilities, so that it can guarantee the continuity of care process.

AIMS: Detecting and monitoring the level of satisfaction of patients beneficiary of protected discharge path in the context of the protocol of intent between Azienda Ospedaliera "Pugliese-Ciaccio" and ASP of Catanzaro.

METHODS: The rate of patient's satisfaction was investigated through the administration of an anonymous, multiple response, questionnaire (dichotomic). It was addressed to patients, when possible, or to their caregivers. The first and second item of the questionnaire were referred to the ability of patients to be independent in the activities of daily living before hospitalization and the appropriate assistance received during the hospital stay. The third item investigated the information/knowledge regarding the protected discharge mode. Time and setting chosen for the protected discharge and the possible tips were detected too.

RESULTS: One hundred consecutive protected discharges were assessed, strating from January 1st, 2016 (60% Men). 43% out of patients was older than 85 years, 37% was between 75 and 84 years old, 20% between 65 and 74 years old. The questionnaire on customer satisfaction showed that 56% out of patients was independent before hospitalization, 90% out of patients had received an appropriate assistance during the hospital stay, 96% had received an adequate information on the protected discharge path. 93% of customers were not satisfied on the time of hospital discharge. Lastly care setting found was nursing homes (71%), rehabilitation facilities (21%), integrated home care services (6%).

CONCLUSIONS: The use of SVAMA card and the assessment of Customer Satisfaction in the protected discharge path were shown to be valid tools in line with the outcomes set, forcing those who take part to stop, think over and confront on the issues emerged on patients with frailty and comorbidities. The questionnaire Customer Satisfaction shows a global customer satisfaction, except that for the waiting time for discharges judged too long. Lastly, as regards the care setting found, it's the offer to influence the demand, making the strengthening of home care services desirable.

IMPROVING BEHAVIORAL DISORDERS IN DEMENTIA: A NEW NURSING COUNSELING

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BACKGROUND: Progressive aging of the population leads to the responsibility of the socio-sanitary system to ensure a good quality of life for the elderly. The challenge lies in implementing these interventions in chronic-degenerative diseases such as dementia, both for people with this disorder and for the caregiver who cares for them. The highly complicated role of caregivers, especially from an emotional point of view, is due to the behavioral and psychological symptoms of dementia.These are related to increased stress and a worsening of the quality of life for both the patient and the caregiver. Very often, family

members are not aware of the occurrence of behavioral disorders, nor are they familiar with the characteristics, the less they are able to deal with them in the best way for both the patient and their own.

AIMS: Check for cognitive impairment slowdown and functional performance in patients undergoing training. To assess the presence of improved quality of life and behavioral disorders in the patients undergoing training.

METHODS: A total of 12 patients (10D, 2U) with degenerative and vascular dementia with relative caregivers (7D, 5U) were included in the study. Psychological General Well-Being Index, Caregiver burden inventory and Caregiver Strain Index were administrated to assess the quality of life and caregiver's stress. Neuropsychiatric Inventory were used to assess the behavioraland psychological symptoms of dementia. Each patient was given a nursing counseling manual prepared specifically for the study. The same sample was evaluated after three months to investigate changes in the areas studied.

RESULTS: The patients in the case group showed an improvement in the quality of life, which can be found in the variations of the test scores and in the caregiver's perception itself, and a decrease in stress in the management of the patient. There is also a decrease in the manifestation of behavioral disturbances for the patient respect on the patients in the control case.

CONCLUSIONS: The results of this study suggest that, in order to improve the condition of the caregiver from the point of view of quality of life and stress, it is useful for nursing education on behavioral disorders management; Education that must understand the explanation of the symptoms, the reasons why they manifest themselves, the right approach at the time they are presented and the steps to be taken to avoid their onset on environment and behavior.

NEW APPROACHES IN TELEMEDICINE: THE REMOTE MANAGEMENT OF PATIENTS RECEIVING ENTERAL NUTRITION THROUGH GASTROSTOMY TUBE IN NURSING HOME

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BACKGROUND: It is difficult to ensure continuity in therapeutic-care for patients receiving EN because of the low sustainability of home visits in NH and problems in transporting patients to the hospital.

AIMS: The Clinical Nutrition Service (CNS) of San Lazzaro Hospital (Alba) started a monitoring project for patients receiving EN through the use of a specific telemedicine system called eViSus®.

METHODS: Remote monitoring has been possible through eViSus®, a telemedicine system composed by: Totem station Placed in the NH, it can be moved to the patient's bed. It consists of touchscreen display, webcam, mic/speaker, PC, and communication box. When a remote session has been established, audio video interaction with the operator is possible. Control Station Placed at CNS, it consists of display, webcam and PC with client software. During the A/V remote sessions the operator controls zoom and movements of the remote totem camera. Central Control Server Server software in the cloud manages totem and control stations through encrypted channels preserving communications privacy and integrity. During the study each patient receiving EN and located in NH has been monitored with eViSus®. The following activities have been carried out: medical evaluation; dietary recall and dietetic counselling, if necessary; prescription of nutritional products and devices required for EN; gastrostomic exit site evaluation and management instructions.

RESULTS: From August 1, 2016 to March 31, 2017, 50 video consults were carried out in 12 patients with gastrostomy. The average time between different consults in the same patient was 31 days (min 1-max 68).

CONCLUSIONS: Benefits of using eViSus® system were numerous: Patients transport to hospital can be avoided;- Improved monitoring frequency; Patients were evaluated in a familiar environment, often with their family members; Better audio/video quality compared to traditional video conferencing devices allowed to replace the face-to-face nutritional visit. (1). eViSus® system was simple and did not require specific technological competences. It was effective in monitoring remote operators in NH, who simultaneously could acquire new knowledge and get consultations by experienced colleagues. Through telemedicine, it was possible to create a flexible and secure network between experienced hospital staff and NH staff, achieving a unified system of diagnostic, assistance and remote care.

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ARTIFICIAL NUTRITION AND ONE-YEAR ALL-CAUSE MORTALITY IN HOSPITALIZED OLDER PATIENTS: CLINICAL USEFULNESS OF THE MPI TO MEASURE MORTALITY-RISK PROFILE

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BACKGROUND: The MPI_AGE is a European Union co-funded project aimed to identify the most cost-effective health interventions in older adults by using Multidimensional Prognostic Indices (MPI) in different European regions. Aim of this international, multicenter, one-year follow-up study was to evaluate the association between artificial nutrition(AN) interventions and all-cause mortality in older patients stratified according to their individual mortality-risk profile by using the MPI.

METHODS: Older patients consecutively admitted to nine Geriatric Units across Europe and Australia for acute disorders underwent a Comprehensive Geriatric Assessment (CGA) to calculate the MPI at hospital admission by integrating information on functional status (Basal and Instrumental activities of Daily Living-ADL, IADL), cognitive status (Short Portable Mental Status Questionnaire-SPMSQ), nutrition (Mini Nutritional Assessment-Short Form MNA-SF), risk of pressure sores (Exton

Smith Scale-EES), comorbidity (Comorbidity Illness Rating Scale-CIRS), polypharmacy and co-habitation status. Patients were divided in MPI 1-low-risk, MPI 2-moderate-risk and MPI 3-high-risk of mortality. Age, sex, length-of-stay in hospital (LOS) and one-year all-cause mortality were measured. Multivariate logistic regression analyses adjusted for age, gender, hospital center, LOS, MPI value and AN were performed,setting one-year all-cause mortality as dependent variable.

RESULTS: 1.139 hospitalized patients were recruited and classified according to their MPI score at hospital admission as MPI-1=168 patients (14.7%), MPI-2=502 patients (44.0%) and MPI-3=469 patients (41.2%). AN was prescribed in 98 patients (8.6% of the overall study population), significantly more frequently in patients with higher MPI mortality-risk class (MPI-1=1.2%, MPI-2=2.8%, MPI-3=17.5%, p<0.0001); as expected, the mean MPI values were significantly higher in AN-treated than AN-untreated patients (MPI mean values 0.76±0.13*vs* 0.57±0.2, p<0.0001). Multivariate logistic regression models, adjusted for age, gender, hospital center, LOS, MPI value and AN prescription, demonstrated that one-year all-cause mortality was significantly and independently associated with age (OR=1.04, 95%CI=1.02-1.06), male sex (OR=2.02, 95%CI=1.49-2.73), AN (OR=2.11, 95%CI=1.23-3.60) and MPI value (OR=1.42, 95%CI=1.31-1.55). Stratifying patients by their MPI-risk class, a significant association between one-year mortality and age (OR=1.06,95%CI=1.03-1.10), male sex (OR=2.44, 95%CI=1.56-3.85), AN (OR=2.08, 95%CI=1.12-3.87) and MPI value (OR=1.4, 95%CI=1.06-1.86) was observed in high-risk patients (MPI-3 group). Conversely, in low-moderate risk patients (MPI-1 and MPI-2) a significant association between one-year all-cause mortality was observed only with male sex (OR=1.75, 95%CI=1.15-2.70) and MPI score (OR=1.37, 95CI% 1.16-1.63). The interaction between AN and MPI class was not significant (p-value for interaction =0.7), suggesting that AN did not influence the association between MPI value and one-year mortality.

CONCLUSIONS: AN was more prescribed in MPI-3 high-risk mortality hospitalized older patients. AN was significantly and independently associated with higher mortality in MPI-3 high-risk class patients but not in MPI-1 and MPI-2 (mild-moderate) class risk patients. Mortality-risk profile, as evaluated by the MPI, may be useful to evaluate the beneficial effects (in terms of reduced mortality) of AN interventions in hospitalized older patients.

MULTIDIMENSIONAL PROGNOSTIC INDEX PREDICTS IN-HOSPITAL MORTALITY AND LENGTH-OF-HOSPITAL-STAY IN HOSPITALISED OLDER PATIENTS: A MULTICENTRE PROSPECTIVE STUDY OF THE EUROPEAN PROJECT MPI_AGE

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BACKGROUND: The MPI_AGE is a European Commission co-funded project aimed to identify reference models of appropriate interventions by using Multidimensional Prognostic Indices (MPI) in older adults in different European regions.

AIMS: To identify the accuracy of the Comprehensive Geriatric Assessment (CGA)-based MPI in predicting in-hospital mortality and length-of-stay (LOS) in older patients admitted to nine Geriatric Units across Europe and Australia.

METHODS: Older patients consecutively admitted to hospital for acute disorders underwent a CGA to calculate MPI at admission and at hospital discharge by integrating information on functional status (Basal and Instrumental activities of Daily Living-ADL, IADL), cognitive status (Short Portable Mental Status Questionnaire-SPMSQ), nutrition (Mini Nutritional Assessment-Short Form MNA-SF), risk of pressure sores (Exton Smith Scale-ESS), comorbidity (Comorbidity Illness Rating Scale-CIRS), polypharmacy and co-habitation status. Patients were divided in MPI 1-low-risk, MPI 2-moderate-risk and MPI 3-high-risk of mortality. Logistic and Cox regression modelling were applied, adjusting for age, gender and hospital center.

RESULTS: 1,142 hospitalized patients were recruited (mean age 84.1±7.4 years, females=60.8%) and were classified according to the MPI score at admission as MPI-1=168 patients (14.1%), MPI-2=503 patients (44.0%) and MPI-3= 470 patients (41.2%). Cox regression adjusted for sex, age and hospital centre showed that MPI at admission significantly predicted in-hospital mortality: an MPI higher of 1 decimal point (*i.e.* 0.3*vs* 0.2) translated in a significant mean higher mortality risk of ~24% (OR=1.24, 95%CI:1.06-1.44, p=0.006). Logistic modelling confirmed good accuracy (area under the curve-AUC=0.76, p<0.001). Moreover, MPI class was significantly predictive of LOS: MPI 1=7.9±5.6 days *vs* MPI 2=13.5±10.2 days *vs* MPI 3=16.5±13.6 days (p fortrend<0.0001). Moreover, a significant correlation was observed between MPI continuous value and LOS (Spearman's rho=0.2607, p<0.0001). During hospitalization, patients in MPI-1 group were more often diagnosed using X-Ray tests (MPI-1=54% *vs* MPI-2=55% *vs* MPI-3=61%, p=0.006) and less frequently using ultrasonography (MPI-1=18.5% *vs* MPI-2=16.6% *vs* MPI-3=12.8%, p=0.01) or endoscopy (MPI-1= 5.0% *vs* MPI-2=3.5% *vs* MPI-3=3.7%, p=0.02). No differences were observed in TC, MRI or nuclear medicine diagnostic prescriptions.

CONCLUSIONS: This international multicenter prospective study confirmed that MPI on hospital admission significantly predicts in-hospital mortality and LOS with high-grade of accuracy. Moreover, MPI stratification may identify different rates of diagnostic prescriptions. MPI confirmed to be an accurate, reliable and feasible tool in older patients hospitalized in different centers across Europe and Australia.

PARENTERAL ANTIMICROBIAL THERAPY IN HOME-CARE SERVICE AND ANTIMICROBIAL STEWARDSHIP IN OLDER ADULTS WITH INFECTIOUS DISEASES: A FEASIBILITY STUDY

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BACKGROUND: Antibiotic misuse increases antimicrobial resistance rates, toxicities and Clostridium-difficile infections which prolong period of illness in elders. Recently it was underlined importance of antimicrobial-stewardship-programs (ASPs) to improve antibiotic use reserving ones directed against multidrug-resistant-organism (MDRO) to infections with MDRO proven or suspected for patient history/epidemiology. No study describes ASPs feasibility in elders treated at home with parenteral-antimicrobial-therapy (PAT) by home-care-services.

AIMS: Evaluating feasibility of ASPs in older adults treated with PAT in home-care-services.

METHODS: All patients 65 years and older treated with PAT by our Hospital home-care-services from December-1st-2015 to May-31st-2016 were submitted to comprehensive geriatric assessments to evaluate ADL, IADL, cognitive status (SPMSQ), nutrion(MNA-SF), mobility, co-morbidity (CIRS) and polypharmacy calculating Multidimensional Prognostic Index (MPI), a validated tool predictive of negative outcomes including death and hospitalization. Acccording to MPI, patients were stratified in risk classes, MPI-1low-risk, MPI-2moderate risk, MPI-3high risk of mortality. PAT was prescribed in hospital before discharge or by home-service-physicians in patients starting at home. Treatments were empirical, driven by disease and MDRO risk factors, and turned to specific ones after microbiological isolation. Patients were visited at baseline, treatment conclusion and 30 days after (30FUP). Treatment failures requiring re-treatment, hospitalization and mortality were recorded.

RESULTS: 55 patients were enrolled, 7 in MPI-1class, 14 in MPI-2class, 34 in MPI-3class. In 30 cases (54,5%) treatment was empiric; in 25 cases (45,5%) driven by microbiological results, 13 of which (23.6%) MDRO. The commonest antibiotics were piperacilline-tazobactam (29,2%) ceftriaxone (27,8%), ertapenem (22%), teicoplanine (18,5%), and daptomicine (7,3%). 46 patients (83,6%) reached the end-of-treatment (EOT). Two rehospitalizations for not infectious reasons, one treatment failure and 6 deaths were observed. During follow-up 1hospitalization and 3 deaths were observed while 42 patients (76,4%) reached the 30 FUP. All patients who didn't reach it belonged to MPI-3 class.

CONCLUSIONS: The study demonstrated the feasibility of ASPs with PAT in home-care-service in older patients without worsenings on rates of survival at 30FUP without necessity of rehospitalization or antibiotic failure.

MULTIDIMENSIONAL PROGNOSTIC INDEX TO STRATIFY THE RISK OF MORTALITY IN LONG-TERM CARE

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BACKGROUND AND AIMS: The purpose of this paper is to describe the main care methods using a holistic approach via Multidimensional Prognostic Index (MPI), to stratify the risk of mortality in Long-Term Care. Due to the complexity of the patients received, it is necessary to submit all elderly patients to a geriatric multidimensional evaluation, in order to detect functional parameters related to different areas, such as selfsufficiency in the basal activity of daily living (B-ADL), autonomy in the instrumental skills (IADL), the cognitive status (SPMSQ), the risk of bedsore (Exton Smith), the risk of malnutrition (MNA), comorbidities (CIRS), social status.

METHODS: The study was conducted on 1555 patients admitted from 01/01/13 to 30/09/16 to Long-term care of Sassari. Within 24 hours of admission patients were subjected to multidimensional geriatric evaluation with the calculation of the risk of 1-year mortality through MPI.

RESULTS: The elderly long-term care patients have a high average age, over 82 years. They are strictly confined in autonomy for baseline and instrumental activities of daily living (ADL, IADL), and manage to undertake just over one action (dressing, toileting, use the phone etc.) out of 14 possible. The mental state is moderately deteriorated for medium entities cognitive impairment (SPMSQ). Nutritional status as assessed by MNA input is particularly affected, with detection of deep malnutrition in over 70% of the patients.

CONCLUSIONS: The risk of mortality at one year, using MPI valuation, is high (70%).

PERFORMANCE OF LACE INDEX AND ASSESSMENT OF FUNCTIONAL STATUS IN PREDICTING 30-DAYS READMISSION OF ELDERLY ADMITTED IN COLLEFERRO'S MEDICINE WARD

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INTRODUCION: R is considered an indicator of poor healthcare system. Dealing with planning for E ensure transition from acute medicine ward to home in the real world, often we need a model to predict risk of R and to obtain a good allocation of appropriate resources. In our analysis the outcome is assessing and reducing the risk of 30-days R.

MATERIALS AND METHODS: In this analysis we compared 237 E (group A, 79±8, 128 F, 109 M) discharged from Medicine ward with DCP with 256 E (group B, 78±6, 138 F, 118 M) discharged without DCP. All E admitted from emergency department (ED), no difference in comorbidity. We consider previous 6 months-access in ED, clinical and laboratory variables during the admission.

RESULTS: Median length of stay was 9 days in A *vs* 10 in B. Median Li 10 in A. 31 E in A were readmitted in Hospital *vs* 38 in B. The 30-days readmitted E were older, longer length of stay in ward, more drugs and high Li.

DISCUSSION: In our analysis a poor functional status is associated with high risk of 30-days R, expecially if not using DCP. We consider DCP as a useful tool to identify predictor of R in frail E. Our model could be considered available to identify patients at high risk to receive interventions and potentially avoid R.

THE OPTIMAL USE OF DIRECT ORAL ANTICOAGULANTS IN NON VALVULAR ATRIAL FIBRILLATION

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BACKGROUND: In our OAC Surveillance Ambulatory (Medicine Unit, Colleferro's Hospital) we followed 426 P with AF evaluating the efficacy/safety of DOACs [Dabigatran (D), Rivaroxaban (R), Apixaban (A) and Edoxaban (E)] *vs* Warfarin (W).

METHODS: 74 P (39 F, 35 M; 76±9 ys) with NVAF in W were compared with P in naïve NVAF, of which, 116 in D (61 F, 55 M, 77±8 ys), 93 in R (33 F, 60 M, 75±7 ys), 101 in A (54 F, 47 M, 78±7 ys) and 42 (19 F, 23 M, 80±9 ys) in E. We tested comorbidity, previous thromboembolic events(TE) and haemorragic events(HE), renal/hepatic diseases, diabetes. During the observation we evaluated adherence to therapy, TE/HE events in

P with 65-75 years and in those with >75 years old, TE/HE events in renal diseases subgroups.

RESULTS: After evaluation of CHADsVasc/HASBLED scores, we update TE/HE balance in subgroups broken down by ag, comorbidity and grade of renal failureDiscussion: Our data report difference in TE/HE balance between subgroups.

CONCLUSIONS: Choice of OAC is a combination of TR/HR scores, clinical evaluation and individual preference. DOACs in aged people have net clinical benefit *vs* W.

ELDERLY AND NUTRITION: A PREDICTIVE ANALYSIS ABOUT RISK FACTORS

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INTRODUCTION: Malnutrition and weight loss are a common concern in the geriatric population. They have a negative influence of health state.

AIMS: The aim of the study is to underline what are the risk factors connected to malnutrition and weight loss and to define nutritionally vulnerable patients in order to work on them.

MATERIALS AND METHODS: It has been choosen 42 patients (25 women, 17 men) from Geriatric Unit of Molinette Hospital which they have been subjected a SNAQ (Simplified Nutritional Appetite Assesment) Questionnaire. It is about alimentary habit, home appetite, socio-psico-economic aspects. For some of them it was evaluated the nutritional status by SF-MNA (Short Form Mini Nutritional Assesment) Scale.

OUTCOMES: According to SNAQ Questionnaire, 40% of patients (SNAQ≤14) are at risk of weight loss wich 48% reports a poor appetite and 30% significant alteration of taste. A SNAQ low score is significant correlate to a SF-MNA low score (inpatients, under nourished patients or patients at risk). Furthermore a SNAQ low score is correlate to a CIRS high score in the field of severity index and a bad humor ($p < 0,05$). The study shows how a major indipendence of carry out ADL is related to a SNAQ high score.

CONCLUSIONS: The study underlines the necessity of nutritional status routine evaluation for elderly people and suggest as a valuable instrument the SNAQ Questionnaire that also foresees a undernourishment status to hospitalisation. Furthermore this questionnaire defines high risk patients which show depression, increase of disease severity, ADL dependence and disability.

COMMUNITY OF PRACTICE OF HEALTHCARE PROFESSIONALS FOR PATIENTS UNABLE TO REPORT THEIR PAIN

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BACKGROUND: In Italy, such as in Europe, nursing care for patients with cognitive impairment, unable to report the pain, is not optimal. A different thinking of the healthcare professionals is required. The focus on this problem has become more and more intense. An interactive environment such as a community of practice has been shown to play an important role to understand lived, expressions and behaviours. People share an interest, a problem, an experience such as the pain in a community of practice. Learning is a social process to partecipate in a practice.

OBJECTIVES: The focus is identifying the pain in the patients with cognitive impairment at risk of under-treatment through the community of practice.

METHODS: Case-based learning, demonstrations, and didatics could help to improve nursing care of the patients with impairment cognitive. Focus groups and semi-structured interviews at baseline and after three months.

RESULTS: Learning in the community and sharing nursing care for patients with impairment cognitive will improve self efficacy, empowerment and professional identity. For a long time, the community of practice will improve quality of life and will reduce the hospitalizations.

CONCLUSIONS: Learning in the community will increase the skills of the healthcare professionals for pain management of patient with impairment cognitive.

PREDICTORS OF 6-MONTH MORTALITY AFTER HIP FRACTURE

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BACKGROUND: Hip Fractures (HF) are a major health care issue in Western Countries, being associated with increased mortality, disability and healthcare costs. Although several clinical and functional variables have been associated with adverse outcomes after HF, the role of some potential risk factors, such as vitamin D and muscle strength, has not been fully understood.

AIMS: The study investigated mortality risk associated with HF in elderly people, and evaluated potential predictors for 6-month mortality.

METHODS: This is a prospective cohort study of 355 patients aged ≥65 years, consecutively admitted with HF to the Orthogeriatric Unit of the Galliera Hospital (Genova, Italy). On admission, each subject received a comprehensive geriatric assessment, including demographic variables, biochemical markers, and basic medical, functional, muscle strength and cognitive assessment. Patients were followed by telephone interviews at 6-month. The relationship between mortality and the risk factors recorded was assessed using logistic regression models.

RESULTS: Of the 355 patients eligible (mean age ± SD, 85 ± 7 years; 21% males), 16 (4.5%) died during the acute in-hospital stay. The cumulative mortality at 6-month was 12.7%. The risk factors significantly associated with mortality were: age, gender, discharge destination, vitamin D, hand grip strength, American Society of Anesthesiologists physical status classification system (ASA) score, comorbidity, functional and cognitive status. In multivariate models, male gender (OR 3.0, 95%CI 1.4-6.3, P=.004), older age (>84 years, OR 2.9, 95%CI 1.3-6.4, P=.012), and higher ASA score (>3, OR 3.0, 95%CI 1.2-7.2, P=.017) were significant risk factors of mortality after 6-month, while being discharged at home was protective (OR 0.3, 95%CI 0.1-0.9, P=.025).

CONCLUSIONS: Our study identified predictive factors that may be helpful in improving case management during hospital stay and discharge planning. In contrast with previous findings, we failed to identify an association between vitamin D status or muscle strength and mortality risk.

WEANING OFF THE URINARY CATHETER AND REACTIVATION OF THE SPONTANEOUS URINATION: A SERIOUS HEALTHCARE ISSUE

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BACKGROUND: The inappropriate use of urinary catheter in elderly hospidalized population, is one of the most common problems in care of patients. We estimate that in geriatric setting, ¼ of urinary catheters in patients age 70 and older and 1/3 of urinary catheters in patients age 85 and older are not necessary.

AIMS: The aim of this study is to try to solve the nursing and clinical problems in the management of the catheterized elderly patients. This study emphatisizes the crucial post-catheterization phase (to get the bludder back to normal after a catheter) and the need to guarantee the reactivation of spontaneous urination. It also underlines how useless and harmful the bladder training is.

METHODS: A literature review has been conducted through the international biomedical literature database Pubmed and the Institutional websites, filtering samples by age and selecting only studies with a sample of patients age 65 and older.

RESULTS: The bladder training probably derives from an erroneous translation from English. It has turned out to be ineffective, harmful and it is strongly discouraged. This research outlines that a lower number of improper catheterizations and a better outcome for hospitalized patients can be reached if a nurse commonly shared and driven procotol is developed, where nurses can autonomously decide to remove or positions urinary catheters afther an accurate assessment.

CONCLUSIONS: This survey has not resulted in any systematic reviews or specific guidelines about the weaning off the urinary catheter because literature focuses more on catheters management than on monitoring and reactivation of spontaneous urination. The results of the research and the comparison between nursing and medical staff have led to the drafting of forms for the early identification of improper catheterizations and for monitoring the reactivation of spontaneous urination.

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CAREGIVERS' STRESS OF HOSPITALISED GERIATRIC PATIENTS WITH DELIRIUM

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BACKGROUND: Delirium is a very common disorder in hospitalized older patients and difficult to manage by both health professionals and caregivers. Very few studies have evaluated the stress of caregivers of older patients with delirium hospitalized in acute geriatrics unit.

AIMS: Aim of the present study was to identify the stress of caregivers of older patients with delirium, hospitalized in geriatrics unit for acute or a relapse of a chronic disease.

METHODS: This was a pilot study carried out in 41 caregivers (males 16, females 25, mean age 55.9±24.4 years; range 36-91 years, scholarship 10.4±3.9 years, range 5-18 years) of 85 hospitalized older patients (males 26, females 59, mean age 86.28±64.5 years) who experienced at least one episode of delirium during hospitalization. Caregiver stress was evaluated by using the Caregiver Burden Inventory test (CBI). Moreover, nine caregivers underwent a structured interview to evaluate unexpressed needs and feelings. At hospital admission all patients underwent a Comprehensive Geriatric Assessment (CGA) to evaluate functional, cognitive, nutritional, mobility, comorbidity, polypharmacy and co-habitation status and to calculate the Multidimensional Prognostic Index (MPI).

RESULTS: Delirium occurred ad hospital admission (prevalent delirium) in 49.4% of cases while in 50.6% delirium was observed during hospitalization (incident delirium). Most of patients were in a moderate or high-risk MPI class (MPI-1 low-risk:0%; MPI-2 moderate-risk:41,2%, MPI-3 high-risk:58,8%). Most of caregivers were patient's family persons (96%). Higher CBI values were significantly associated with young age of both caregivers (Total CBI: p=0,004) and patients (Total CBI: p=0,05; CBI T1-T5:p=0,021) and with the number of education years of caregivers (Total CBI: p=0,022). Analysis of components of the CBI demonstrated that health load, social load and emotional load were significantly associated with education (CBI S6-S10:

p=0,005; CBI D15-D19: p=0,001) and age (CBI T1-T5: p=0,023; CBI S6-S10: p=0,014) of caregivers. Interestingly, caregivers stress resulted independent from the severity of patient's functional and cognitive impairment as documented by the CGA-based MPI. The qualitative study on unexpressed needs and feelings of caregivers demonstrated: sense of inadequacy for technical ability, lack of time to be devoted to the assisted one (related to CBI T1-T5 and D15-D19), feelings of uncertainty, fear and anxiety (related to CBI S6-S10). Points spontaneously discussed in the most of interviews were fear for the future and falls and access to emergency departments.

CONCLUSIONS: Stress of caregivers of hospitalized older patients who developed delirium, was independent from the patient's physical and cognitive impairments while it was related mostly to caregivers' age, education and feelings. These findings suggest that psycho-social and educational supports are needed to manage stress of caregivers of hospitalized older patients with delirium.

THE MULTIDIMENSIONAL PROGNOSTIC INDEX IMPROVES INDEX OF CARE COMPLEXITY IN MEASURING HEALTH-CARE MANAGEMENT COMPLEXITY IN HOSPITALISED OLDER PATIENTS

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BACKGROUND: Comprehensive Geriatric Assessment (CGA) is the gold standard approach to evaluate and manage health care of the older adults. Based on information collected through a CGA, the Multidimensional Prognostic Index (MPI) was developed and validated as excellent predictive tool of health-care negative outcomes, including mortality and frailty, in hospitalized and community-dwelling older adults. Index of Care Complexity (ICA) provides information on individual health-care load resulting useful to the overall operational care plan.

AIMS: Aim of this pilot study was to explore whether MPI and ICA may integrate health-care parameters with relevant information to geriatric frailty in order to improve the treatment plan.

METHODS: The study was carried-out in 54 older patient (males 20, females 34, mean age 88,46±5,26 years). At hospital admission, all patients underwent a CGA to evaluate functional, cognitive, nutritional, mobility, comorbidity, polypharmacy and co-habitation status and to calculate the MPI. The mean MPI values was 0.774. According to their MPI values patients have been divided in three risk-groups. In all patients, ICA was calculated to evaluate nursing procedures, integrate health-care support workers and to monitor the care needs.

RESULTS: Most of patients were in a moderate or high-risk MPI class (MPI-1 low-risk=5.6%; MPI-2 moderate risk=29.6%; MPI-3 high-risk=64.8%). 54 older patients were evaluated for a total 617 days of hospitalization and 50.447 nursing care activities (mean 81 activities/per day/ patient). According to ICA parameters, the rate of health-care services with the highest degree of priority (5 and 4) was in 89% of all the activities. MPI score was significantly correlated with all the ICA variables (p<0,0001). Interestingly, individuals with higher MPI score required a significantly more time-assistance, with a significant increase in health-care activities (p=0,015). Moreover, the mean value of ICA (p=0,020), ICA Severity Class (p=0,013) and the mean daily time of ICA-related assistance (p=0,005) were significantly higher with increase of the MPI risk class.In detail, ADL and IADL (p=0.0004) and the Exton-Smith scale (p=0,042) scores were inversely correlated with the mean value ICA and the total amount of health-care time ICA-related, while malnutrition, evaluated by MNA-SF, was predictive of mean daily care needs (OR 0.597, 95%CI 0.413-0.863; p=0.006). Interestingly, no significant correlations between comorbidity index or the number of prescribed drugs as well as patients' age and ICA variables were found.

CONCLUSIONS: CGA-based MPI may improve Index of Care Complexity (ICA) and provide useful information for the health-care management and planning of hospitalized older patients.

DEVELOPMENT OF AN AUTOMATIC SYSTEM FOR FUNCTIONAL AND MOTILITY ESTIMATION OF ELDERLY SUBJECTS

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BACKGROUND: According to the World Bank, Italy has the second-highest share of population aged over 65 worldwide. Aging brings, in general, the reduction of the individual's functional and motility skills, bringing him into a state of vulnerability and instability of the clinical condition, *i.e.* frailty that is a good predictor of health negative outcomes (hospitalization institutionalization and mortality). Accurate estimation of functional and motility skills therefore is a fundamental goal in geriatrics.

AIMS: In this work, we develop an automatic system to evaluate the functional and motility skills of the older patients through assistive technologies and compare data with the clinical evaluation assessment carried-out according to the standard methods Comprehensive Geriatric Assessment (CGA).

METHODS: A facility consisting of a two-bedroom apartment equipped with several sensors (cameras, RGBD sensors, light sensors, pressure sensors, PIR, localization sensors, smartwatch and clinical devices) is available for older patients after being discharged from the hospital. The patient is hosted in the apartment for a few days, in free living conditions, while the system of sensors acquires integrated data over time. The three main monitoring functionalities are: (1) health monitoring; (2) continuous localization; (3) estimation of activities of daily living. Advanced signal processing and machine learning methods allow for the understanding of the scene, providing a quantification of the behavior of the patient in terms of motility and functional skills.

RESULTS: Preliminary results from 5 adult healthy volunteers (M 3, F 2, mean age 27±4) and from 7 older subjects (M 4, F 3, mean age 77.4±7.8) admitted to the facility demonstrated that the system is capable of devising many aspects of the motility, including velocity, walking behavior, oscillations, sit-to-stand transitions, and the overall amount moving time. A quantitative analysis carried out on manually labeled data shows an accuracy in estimating the overall moving time of ~95%. Users are correctly associated with a sitting state with an accuracy of ~99%. The percentage of correctly detected sit-to-stand transitions is ~79%. Also, the deviations from average velocities can be accurately detected.

CONCLUSIONS: We developed an automatic system that may be useful to evaluate functional and motility skills of the older subject through assistive technologies. Further studies are

needed to expand the system for the evaluation of all CGA domains.

PREVENTION OF SECONDARY HYPOPARATHYROIDISM DUE TO VITAMIN D DEFICIENCY IN A FRAIL ELDERLY POPULATION AT HIGH RISK OF FRACTURES, ADMITTED INTO THE GERIATRICS OPERATIVE UNIT OF THE "SANTA MARIA GORETTI" HOSPITAL IN LATINA

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BACKGROUND: Vitamin D deficiency is particularly frequent in elderly patients (1) because the deficient condition increases with aging, affecting almost the entire elderly population over time (2). Vitamin D deficiency is associated with increased mortality rates in hospitalized elderly patients. Vitamin D supplementation in these patients can have significant benefits on clinical results, especially on the risk of fractures and, in the long term, on survival and mortality as well (3). Moreover, vitamin D deficiency can cause a secondary hyperparathyroidism with a greater loss of bone mass and an increase in morbidity (4). Since secondary hypoparathyroidism due to vitamin D deficiency is reversible through supplementation, it follows that a preventive treatment is even more important (4).

AIMS: In November 2006, an observational study was conducted at the Geriatrics UOSD of the "Santa Maria Goretti" Hospital in Latina: regardless of the hospitalization/admission diagnosis, all the patients admitted to the Unit over a 15-day period, for a total of 46 patients observed, were enrolled to evaluate the need of a preventive therapy aimed to supply a potential vitamin D deficiency. The study population was composed as follows: 30 female patients and 16 male patients, with a median age of 83 and 81 respectively. At the moment of admission, on average, each patient presented at least three concurrent pathologies and the most recurrent comorbidities were: heart failure, ischemic heart disease, arterial hypertension, diabetes mellitus type 2, dyslipidemia, atrial fibrillation, chronic obstructive pulmonary disease (COPD), respiratory failure, kidney failure, fever and/or septic-infectious status of unknown origin.

METHOD AND RESULTS: All the subjects of the study underwent an endocrine-metabolic evaluation, with calcium/vitamin D metabolism assessment, bone mineralometry, fracture risk assessment (FRAX Fracture Risk Assessment Tool; DeFRA Derived Fracture Risk Assessment). The study population showed the following levels of vitamin D: among females, 43% had a serious deficiency (serum 25[OH] D levels ng/ml <10); 42% had an insufficient vitamin D status (10-29 ng/ml), and only 15% showed sufficient levels (>30 ng/dl); male participants showed the following results: 50% serious deficiency, 36% insufficient vitamin D status, 14% insufficiency. Among these patients, 9,2% showed high PTH levels, portraying already a serum-hematic situation of secondary hyperparathyroidism due to vitamin D deficiency. The distribution of calcium levels was the following: 50% and 64% of female and male patients respectively showed values within the normal range (8,8-10,4 mg/dl), 43% of females *versus* 33% of males showed values below it (<8,8 mg/dl), and only 7% of females showed increased hematic values (>10,4 mg/dl). Bone mineralometry showed that 50% of the patients had a T-score below average (osteopenia/osteoporosis). Since all the retrieved data were also related to a high fracture risk index in patients with high comorbidity, all the subjects with vitamin D deficiency were treated with a supplementation of cholecalciferol at a dosage of 25,000/50,000 IU every 15-30 days. The study sample was numerically insufficient for further investigation, given that there was no follow-up of the treatment. Nonetheless, it is advisable for frail elderly patients with comorbidity to follow a therapy with vitamin D compounding in order to prevent secondary hyperparathyroidism and the fracture risk.

Conclusions: According to the obtained results and to all the existent scientific literature on the effects of vitamin D deficiency, effective preventive strategies seem necessary in order to increase vitamin D levels among frail elderly population at risk of fall and fracture, as well as to obtain clinical benefits in terms of survival over time.

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EFFECTIVENESS OF A QUALITY IMPROVEMENT PROGRAM IN REDUCING CATHETER-RELATED BLOODSTREAM INFECTION IN A GERIATRIC POST-ACUTE CARE UNIT

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BACKGROUND: The growing need for intravenous therapies in post-acute care wards requires the availability of stable venous access. Central Venous Catheters (CVCs) provide secure vascular access, but they are associated with a risk of severe complications. Catheter-related bloodstream infection (CRBSI) is the commonest cause of nosocomial bacteremia and is one of the most frequent, lethal, and costly complications of central venous catheterization. Different measures have been implemented to reduce the risk for CRBSI, including use of maximal barriers, precautions during catheter insertion, effective skin and device anti-sepsis.

AIMS: As we observed at the beginning of 2016 a high rate of CRBSIs in our post-acute care ward (diagnosed by means of 'Differential time to positivity'), we considered implementing appropriate strategies to reduce this complications.

METHODS: We did an audit with the hospital infection monitoring service and consequently decided to take the following initiatives: - Training course for all the nurses of our department on CRBSIs prevention - Review of hospital CVCs protocols- Creating a small nursing team (3 nurses) dedicated to CVCs dressing within our staff - New disposable caps instead of the previous needle-less devices.

RESULTS: In the 196 patients admitted to our post-acute care Unit during the first six months of 2016, we observed eight CRBSIs (4%): 6 blood-stream infections were due to Staphylococcus while the other two were due to Candida spp. In June 2016 we started the corrective actions described above. Over the next six months we registered only two CRBSIs (due to Staphylococci) among the 201 patients admitted to our post-acute care Unit (0,99%).

CONCLUSIONS: Our findings demonstrated that continuous quality improvement programs, education, and training of health care workers, and adherence to standardized management protocols represent one of the most important preventive measures of CRBSI and can significantly reduce the incidence of CRBSIs.

CHANGE OF THE MULTIDIMENSIONAL PROGNOSTIC INDEX DURING HOSPITALISATION: RESULTS OF THE EUROPEAN PROJECT MPI_AGE

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BACKGROUND: The MPI_AGE is a European Commission co-funded project aimed to identify reference models of appropriate interventions by using Multidimensional Prognostic Indices (MPI) in older adults in different European regions. Aim of this multicenter study was to describe changes in the MPI score between admission and discharge in older patients admitted to geriatric units and the association of these changes with long-term one-year mortality and home.

METHODS: The MPI was evaluated at admission and discharge in 984 older patients (mean age=84.2±7.4 years, females=61%) consecutively admitted to nine Geriatric Units across Europe and Australia for acute disorders or a relapse of a chronic disease. The MPI was calculated by integrating information on functional status (Basal and Instrumental activities of Daily Living-ADL, IADL), cognitive status (Short Portable Mental Status Questionnaire-SPMSQ), nutrition (Mini Nutritional Assessment-Short Form MNA-SF), risk of pressure sores (Exton Smith Scale-ESS), comorbidity (Comorbidity Illness Rating Scale-CIRS), polypharmacy and co-habitation status. MPI change during hospitalisation was defined as difference between MPI score at admission and discharge. Patients were followed-up for one-year after hospital discharge and one-year mortality and access to home-care serviceswere recorded. We adopted multivariate logistic regression and Cox proportional hazard modeling analyses, settingone-year mortality and access to home-care services, respectively, as dependent variables, adjusting for age, gender, hospital center, length-of-hospital stay (LOS), MPI at baseline, and artificial nutrition.

RESULTS: During hospitalisation MPI improved in 350/984 patients (35.6%), worsened in 264/984 patients (26.8%) while MPI no changed in 370/984 patients (37.6%). As expected, patientsin MPI-3 high-risk group at admission had a significant decrease of MPI score at discharge (delta-MPI-3: -0.04, p<0.0001), whilepatients in the MPI-1 low-risk group experienced a statistically significant increase of the MPI values (delta-MPI-1: +0.02, p=0.006). The mean age was significantly lower in subjects who improvedin MPI score compared with subjects who had unchanged or worsened MPI score (mean age=83.5 *vs* 84.0 *vs* 85.6, respectively; p=0.004). Multivariable analyses confirmed that factors significantly and independently associated with worsening of the MPI score during hospitalization were lower MPI score at admission (OR 0.79 95%CI 0.72-0.87) and old age (OR=1.03, 95%CI 1.00-1.05). Using adjusted Cox proportional Hazard modeling, MPI improvement during hospitalization was significantly associated with a 35% reduction in one-year mortality (HR=0.65, 95%CI: 0.48-0.87, p=0.004); in addition, MPI worsening was significantly associated with a 54% increase in admission to home-services (HR 1.54, 95%CI 1.10-2.15, p=0.01).

CONCLUSIONS: The MPI is sensitive to change of patient's health status and might be used to objectively track and monitor the clinical evolution of acutely-ill geriatric patients admitted to the hospital. Moreover, MPI changes during hospitalisation are significantly associated with long-term outcomes such as one-year mortality and access to home-care services.

VENOUS THROMBOEMBOLISM: FROM CLINICAL TRIALS TO GUIDELINES

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Talking about the results of clinic trials which are used in the main guidelines for TVP-PE treatment and prevention, the most important issues in the geriatric patients are: 1. The TVP-PE prevention in the hospitalized patient; 2. The Continuation of prevention after the discharge; 3. Extending treatment beyond the acute phase or, chronically, in bed rest patients; 4. The role of D-dimer and residual vein thrombosis; 5. The TVP-EP treatment with the novel oral anticoagulants (NOAC); 6. Which choices in the patient with renal failure. Concerning the TVP-PE, it is decided to follow the ACCP (American Chest College Physicians) guidelines because, during their several editions, lots of Italian physicians worked on it. In order: 1. Medenox (Samama MM, NEJM 1999) is the first trial used in patients with acute ill and bed rest for at least three days, then Prevent trial which has tested LMWH as well as Medenox, and finally Artemis with fondaparinux. Subsequently the efficacy of the prevention used at most 14 days, was recommended (grade 1A) in the ACCP guidelines in the year 2004 and then it was preserved during the following editions (grade 2B in 2012). For our geriatric patients, the Padova Prediction Score (PPS, Barbar 2010) for acutely ill hospitalized patients, doesn't recognize patients with low risk of thrombosis, such as the IMPROVE bleeding score (Tapson 2007, Decousus 2011). That's because with the former, PPS, all the patients are included with the prevention treatment and with the latter, due to the items, you could be aware that the hemorrhagic risk will be elevated. 2. The attempt to extend the prophylaxis in the geriatric patients also after their recovery, it has been analyzed by some trials like Exclaim with l'enoxaparina (38 days) Adopt, Magellan and Apex with NOAC, in order to find some benefits for the treatment extensions against TVP. As a result of the prevention utilized, the increase of the hemorrhagic risk in these 4 trials mentioned, orients the 2012 ACCP guidelines, against the extension of prophylaxis beyond the acute phase (grade 2B). 3. However, the doubt that the physicians have with chronically bed rest patients is: should I make the prophylaxis or not or even interrupt it, because there aren't clinic trials which have faced the issue. Furthermore the PPS has been recommended and tested for the hospitalized patient. I suggest that we could make punctual prophylaxis, namely when the patient has an acute episode, for example infective, heart failure or something else. In this moment we can make the prophylaxis like Medenox or other similar studies. 4. It is well-known the benefit of D-dimer in order to rule out a TVP-PE when the D-dimer is under the cut off (negative predictive value, ruled out TVP-PE). Its utilization is no less important after the suspension of the treatment for a TVP-PE, particularly if it is unprovoked: patients who have an increase after a month of treatment suspension, have more risk in recurring event TVP-PE, with the suggestion of restarting the anti-

coagulant therapy (Palareti, NEJM 2006). Another evolution about the utility of D-dimer, is originated from the combination with the ultrasonography doppler which helps to find residual vein thrombosis: the combination of both let to better identify the group of patients who will be able to have a thrombosis recurrent and for who is not recommended the stop of the anticoagulant treatment. (Palareti, Dulcis trial, Blood 2014. Prandoni, Morgagni trial, Th Res 2017). 5. It is important to remember that the first NOAC available in Italy for the TVP-PE treatment in 2014 was the rivaroxaban. This is one of the reason why, nowadays, it is more utilized than the other NOAC on the market. Firstly, for the start treatment, rivaroxaban and apixaban don't require overlapping with LMWH or fondaparinux as with dabigatran, edoxaban or AVK (antagonist Vitamin K). After the studies of phase III, the guidelines of ACCP (update, CHEST 2016), guide towards the preference of NOAC (grade 2B), without distinction between one molecule and another, instead AVK and LMWH (grade 2C) for TVP without cancer. Vice versa if TVP is correlate to cancer it is better LMWH and AVK. Apart from the acute phase and the first three-six months of treatment, the possible continuation of treatment is well-known with the utilization of D-dimer and residual vein thrombosis. 6. It is well-known that the decline of renal function with the age influences the treatment choice: the parameter target with NOAC is the estimate with clearance of creatinine (CLCr) with the formula of Cockcroft-Gault. Even if with the well-known limits, this is the one that can be used as reference for the NOAC choice or AVK. Until 30 µl/min of CLCr everyone can be utilized, until 15 the dabigatran is excluded and under 15 only AVK use remains.

EFFECTIVENESS AND TOLERABILITY OF TAPENTADOL IN VERY ELDERLY PATIENTS WITH ASSESSMENT OF COGNITIVE-BEHAVIOURAL ASPECTS

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BACKGROUND: The prevalence of pain increases with each decade of life but pain, though frequent, is not part of physiological ageing. In Italy persistent pain, or pain that lasts more than three months, is related to progressive non-neoplastic pathologies, affects from 40% to 85% of the very elderly population, and 2/3 of cases are caused by musculoskeletal diseases.

AIMS: The aim of the study was to assess the analgesic effectiveness and tolerability of Tapentadol PR (50-250 mg BID) in very elderly patients, with assessment of cognitive-behavioural aspects.

METHODS: Forty patients were enrolled (mean age 78.9 years, SD 5.7, 88% women), with pain intensity greater than or equal to 4 on the NRS (Numerical Rating Scale). Analgesic therapy using Tapentadol PR was begun at a dose of 50 mg twice a day (BID), increased if necessary to 50 mg twice a day up to total daily dose not exceeding 500 mg. The patients were examined upon joining the study (V0), and after 7 (V1), 30 (V2) and 60 days (V3). Assessment was made of the trend in quality of life using the Short Form-12 questionnaire (SF-12), the trend in cognitive status using the Mini-Mental State Examination questionnaire (MMSE) and the trend in functional autonomy using the BADL questionnaire (Basic Activity of Daily Living) and IADL (Instrumental Activity of Daily Living). During the observation period all side effects were recorded, specifically for their severity, duration and possible therapeutic measures.

RESULTS: Within the first 60 days (visit V3) of treatment with Tapentadol, 28 patients out of 39 (72%) were responders to therapy (95% CI: 55% - 85%). In the period between the initial visit and the one after 7 days, the intensity of pain diminished by 22%, down from an average value of 7.2 on the NRS scale to an average of 5.6. After 30 days, it decreased by 39% (NRS=4.4) while, after 60 days, the reduction was 58% (NRS=3.0). The reduction in pain intensity was statistically significant for all follow-up visits ($P < 0.01$). Physical and mental health improved significantly ($P < 0.01$ for physical health and $P < 0.05$ for mental health). No significant changes in functional autonomy and cognitive status were detected during follow-up.

CONCLUSIONS: The analysis shows pain in elderly patients was reduced by administering Tapentadol.

MANAGEMENT OF PROBLEMATIC DISCHARGES IN GERIATRIC PATIENTS: PLAN OF ACTION AND ORGANISATIONAL STRATEGIES

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BACKGROUND: Concerning ospital admissions from 01/06/2015 to 31/12/2016 in the geriatric ward of San Giovanni Addolorata Hospital in Rome, the hospital stay average is 8,7 days,whereas the average hospital stay regarding 10% of patients with problematic discharges (transfered to facility) is 11,8 days.

AIMS: Decrease number of days in hospital stay and manage the best applicability as much as possible regarding difficult discharges and transfers to facility.

METHODS: Integration in geriatric ward of San Giovanni Addolorata Hospital of a nurse professional trained as case manager as part of the professional team, multidimensional patient evaluation, adequate data sheet and profile for an appropriate plan of suitable discharge.

RESULTS: In the geriatric ward from 01/02/2017 is currently working a nurse professional trained as case manager; the multid.pat.eval.and the appropriate data sheet for a plan of suitable discharge are applied, gaining for 178 pat. with an average age of 84,1 years discharged from 02/02/2017 to 14/04/2017 the following results: hospital stay average about a total of 178 pat. of 7,7 days, with a brass average (discharge risk management screening) of 16,4; hosp.stay average regarding pat. transfered to home (107 pat.) of 7,1 days, with a brass average of 15,1; hosp.stay average regarding problematic discharges of pat. transfered to appropriate facility (17 pat.) of 9,5 days with a brass average of 21,6; Cod.5 and Cod.6 protected discharges and outpatient service (20 pat.) with an hosp. stay average of 5,8 days and brass average of 12 ; discharges regarding patients transfered to home and assisted by CAD (8 pat.) with an hosp.stay average of 11,87 days and brass average of 22,8.

CONCLUSIONS: The introduction of a nurse who has the requirements set forth and has completed the specialty case manager nurse training program, the multid. pat. evaluation implementation and the discharge plan sheet application have contributed in reduction of hospital stay in total from 8,7 days to 7,7 days, reduction of hospital stay regarding patients transfered to facility from 11,8 days to 9,5 days; they also have enabled patients with the higher brass average of 22,8 to be transfered to home and to be assisted by CAD.

MULTIDIMENSIONAL PROGNOSTIC INDEX PREDICTS RE-HOSPITALISATION IN FRAIL OLDER PATIENTS ADMITTED TO HOSPITAL: A MULTICENTRE, INTERNATIONAL, ONE-YEAR FOLLOW-UP STUDY

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BACKGROUND: The MPI_AGE is a European Commission co-funded project aimed to identify the most cost-effective health interventions according to the individual prognostic mortality-risk profile by using Multidimensional Prognostic Indices (MPI) in older adults in different European regions.

AIMS: To evaluate the usefulness of the MPIin predicting one-year re-hospitalization in older patients admitted to nine Geriatric Units across Europe and Australia.

METHODS: Older patients consecutively admitted to hospital for acute disorders or a relapse of a chronic disease underwent at hospital admission a Comprehensive Geriatric Assessment (CGA) in order to calculate MPI by integrating information on functional status (Basal and Instrumental activities of Daily Living-ADL, IADL), cognitive status (Short Portable Mental Status Questionnaire-SPMSQ), nutrition (Mini Nutritional Assessment-Short Form MNA-SF), risk of pressure sores (Exton Smith Scale-ESS), comorbidity (Comorbidity Illness Rating Scale-CIRS), polypharmacy and co-habitation status. Patients were divided in MPI-1-low-risk, MPI-2-moderate-risk and MPI-3-high-risk of mortality. Time-to-event (Kaplan-Meier and Cox regression) and logistic analyses were performed adjusting data for age, gender and hospital center.

RESULTS: 1,140 hospitalized patients were recruited at baseline (mean age 84.1±7.4 years, females=60.8%) and were classified according to the MPI score at admission as MPI-1=169 patients (14.8%), MPI-2=502 patients (44.0%) and MPI-3=469 patients (41.1%). During the one-year of follow-up (median follow-up: 12.3 months) 606/1140 patients (53.1%) were re-hospitalizated. Stratifying patients according to their MPI grade, a significant association between MPI risk-class and one-year re-hospitalization was observed (MPI-1=Odds Ratio:1.0 reference; MPI-2=OR 1.86,95%CI 1.3-2.7, MPI-3=OR 1.59,95%CI 1.1-2.3). A significant association between one-year re-hospitalization and all-cause mortality was also observed (HR=1.83, 95%CI 1.42-2.36, p<0.001). Multivariate logistic regression analysis confirmed that one-year re-hospitalization was significantly and independently associated with MPI grade at baseline (MPI-1=Odds Ratio 1.0 reference; MPI-2=OR 1.71,95%CI 1.17-2.48, MPI-3=OR 1.54,95%CI 1.04-2.26), lower age (OR=0.98, 95%CI 0.96-0.99), male sex (OR=1.28, 95%CI 1.0-1.65) and the geriatric centre (OR=0.91, 95%CI 0.86-0.96).

CONCLUSIONS: Re-hospitalization is significantly associated with all-cause mortality in hospitalized older patients. MPI performed at hospital admission is useful to identify frail older patients at high risk of re-hospitalization during the follow-up period of one-year after hospital discharge.

USEFULNESS OF THE MULTIDIMENSIONAL PROGNOSTIC INDEX TO PREDICT POST-DISCHARGE HEALTH-CARE OUTCOMES IN HOSPITALISED OLDER PATIENTS: A INTERNATIONAL, MULTICENTRE, ONE-YEAR FOLLOW-UP STUDY

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BACKGROUND: The MPI_AGE is a European Commission co-funded project aimed to identify the most cost-effective tailored health interventions according to the individual prognostic mortality-risk profile by using Multidimensional Prognostic Indices (MPI) in older adults in different European regions.

AIMS: To identify the usefulness of the MPI in predicting post-discharge outcomes, including one-year all-cause mortality and access to health-care in Home-Care Services and in Nursing Homes in older patients admitted to nine Geriatric Units across Europe and Australia.

METHODS: Older patients consecutively admitted to hospital for acute disorders underwent a Comprehensive Geriatric assessment (CGA) to calculate MPI by integrating information on functional status (Basal and Instrumental activities of Daily Living-ADL, IADL), cognitive status (Short Portable Mental Status Questionnaire-SPMSQ), nutrition (Mini Nutritional Assessment-Short Form MNA-SF), risk of pressure sores (Exton Smith Scale-ESS), comorbidity (Comorbidity Illness Rating Scale-CIRS), polypharmacy and co-habitation status. Patients were divided in MPI-1-low-risk, MPI-2-moderate-risk and MPI-3-high-risk of mortality. Time-to-event (Kaplan-Meier and Cox regression) and logistic analyses were performed adjusting data

for age, gender and hospital center. Area under receiving-operating-characteristic (ROC) curve was also calculated.

RESULTS: 1,069 hospitalized patients were recruited (mean age 84.1±7.4 years, females=60.8%) and were classified according to the MPI score at admission as MPI-1=167 patients (15.6%), MPI-2=482 patients(45.0%) and MPI-3=413 patients (38.6%). MPI at admission significantly predicted one-year all-cause mortality (MPI-1= Hazard Ratio 1.0 reference; MPI-2=HR 2.79,95%CI 1.56-4.97, MPI-3=HR 6.49,95%CI 3.69-11.4, log-rank p for trend<0.0001). Adjusted logistic modeling confirmed good accuracy of MPI in predicting one-year all-cause mortality (ROC curve=0.75, p<0.001). Moreover, MPI grade was significantly associated with post-discharge use of Home-Care Services (MPI-1=Odds Ratio 1.0 reference; MPI-2=OR 2.47,95%CI 1.5-4.0, MPI-3=OR 1.82, 95%CI 1.1-3.0, p=0.002) and admission to a Nursing Home during the one-year follow-up period (MPI-1=OR 1.0 reference; MPI-2=OR 2.2,95%CI 1.3-3.8, MPI-3=OR 1.7,95%CI 0.9-2.9, p=0.002).

CONCLUSIONS: This international multicenter prospective study confirmed that MPI on hospital admission significantly predicts long-term one-year mortality with high-grade of accuracy. Moreover, MPI stratification may identify older patients who need access to health-care in Home-Care Services and Nursing Homes after hospital discharge.

ASK ME NOT WHO I AM BUT WHO I WANT TO BE! LIGURIAN REGIONAL REFERENCE CENTRE FOR "DOWN SINDROME IN ADULTS" E.O. OSPEDALI GALLIERA-GENOVA: A YEAR LONG EXPERIENCE

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BACKGROUND AND AIMS: Adults with Down syndrome (DS) and their families, especially siblings, need careful information and training on the development of such a condition during the aging process. Moreover, DS represents a premature aging pattern condition. The Ligurian Regional Centre "Down Syndrome and Adults with Intellectual Disabilities" was born in June 2016 inside the Department of Geriatric Care, Orthogeriatrics and Rehabilitation at the Galliera Hospital in Genova, Italy - thanks to the long-standing tradition of the Hospital in such a condition. The centre provides assistance to subjects aged 18 years and older with intellectual disabilities such as Down syndrome, Fragile X syndrome or Williams syndrome. The intellectual disabilities that may occur in DS seems to be linked to an excess of beta-amyloid produced in the brain, a pathophysiological phenomen similar to Alzheimer's disease. Indeed, the excess of genetic material in DS patients/trisomy 21 patients results in an increased biochemical expression that caused an increased of production of hydrogen peroxide (H_2O_2). That has harmful effects on DNA causing premature aging until the clinical manifestation of dementia. The Center, works in close collaboration with all the Hospital Units to offer a flowing path and allow the patient to perform the examinations as soon as possible.

METHODS: Clinical Operational Protocols. At the first admission, patients and their caregivers are welcomed by front-office staff and receive a detailed brochure. The team takes in charge patients and proceeds, over the operating framework clinical, to a Multidimensional Assessment to evaluate functional aspects (Basal and Instrumental Activities of Daily Living - ADL, IADL), cognitive status (Short Portable Mental Status Questionnaire), nutrition (Mini Nutritional Assessment-Short Form), risk of pressure injury (Exton Smith scale), Co-morbidity (Cumulative Illness Rating Scale-CIRS), polytherapy and cohabitation status, to calculate the Multidimensional Prognostic Index (MPI). This index provides information on prognosis in terms of mortality and other negative outcomes (risk of institutionalization, hospitalization, length of hospital stay). All data are collected by using the Integrated Multidimensional Computerized Folder. During the following visits DS subjects will complete the diagnostic path eventually with additional instrumental and/or laboratory examinations. In case of a suspected cognitive impairment, subjects undergo a psychological counselling to establish a tailored psychological intervention to patient and caregivers.

RESULTS: During the last one year, 93 DS subjects and their caregivers (male 51, female 42, mean age 31) were admitted and followed-up.

CONCLUSIONS: The Centre for DS subjects and their caregivers is useful to improve healthcare as well as physical and cognitive impairment of subjects and their families.

THE DEMENTIA CARE: FROM OBSERVATION TO THE PROSTHETIC MODEL PROJECT

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Apply non pharmacological therapies which have equal value in addition to the pharmacological therapy of dementia. One of these is Gentlecare method developed by the therapist Moira Jones, a care system that pursues the objective of well-being through a prosthetic approach. The prosthesis is an individual project consisting in three elements in dynamic relation to each other: People who care - Programs and Activities - Physical environment. The goal of the study was to evaluate the importance of integration of environment as therapeutic role and nurses trained to work not for tasks but for goals. Starting with an analysis of the structures dedicated to dementia all over the national territory, those with the prosthetic model requirements have been identified. Six hundred sixty-one residences obtained by the National Observatory Survey of Health Services for dementia have been analysed and forty-five residences, dedicated specifically to Alzheimer's, have been selected by evaluating compliance with the model according to the three key points, using a semi-structured interview. *1st. Role of the nurse:* taking care of the patient involves to assume autonomy and responsibility arising from the complexity of the setting, taking into account a progressive worsening of the disease. His prosthetic role, facilitator, arises from an holistic view of the patient evaluating the clinical conditions, the cognitive and attention level, the behavior, the motor and functional autonomy, the residual and potential capacity. The result is a welfare project involving the multidisciplinary team and the family. The nurse builds a purely human relationship with the patient, learning to use verbal and nonverbal communication, in a new form of "observation-relation". *2nd. The environment:* environment as a space for therapy and therapy itself, aimed to the promotion of the person welfare, to the control of behavioral problems, to the caregivers stress reduction, to the physical restraints and/or pharmacological means reduction, in a better organizational climate, and in a patient and operator-friendly space. The envisioned plan for 20 guests, divides spaces and its intended use answering as first question: "who will inhabit our environment?". It provides spaces and paths based on compliance with current regulations in terms of safety, architectural barriers, sizes compliance, furniture, fire regulations and furthermore with all activities carried out within the therapeutic programs. In particular the Multipurpose room, the Music Therapy Area, the Therapeutic Kitchen, the Sensorial Garden with wandering path, are aimed to psychomotor rehabilitation,

recovery or support of IADL, enhancement of the residual capacities, reduction of behavioral disorders, of space-time disorientation and of escape attempts. Moreover, it has been developed a study based on furniture and its materials, colors and lights according to activities and usage destination. Up to now, waiting for finding effective therapeutic solutions in the prevention and treatment of Alzheimer's disease, we continue to get results especially through non-pharmacological methods, where human and personal side with a well-codified methodology, embedded in a proper environment and entrusted to a culturally prepared setting, can slow down the damage and maintain the dignity of the sick person.

ANTIDEMENTIA DRUG USE AND ALL-CAUSE MORTALITY IN COMMUNITY-DWELLING FRAIL OLDER PATIENTS WITH DEMENTIA: A TWO-YEAR RETROSPECTIVE OBSERVATIONAL STUDY

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BACKGROUND: Decision making for therapeutical, including non-pharmacological, options in older patients with dementia is under debate, particularly in frail older patients with comorbidity and high mortality risk.AIMS: to estimate the all-cause mortality risk linked to antidementia drug use in older community-dwellers patients with dementia.

METHODS: Retrospective study involving 6818 community-dwelling older subjects with dementia (women 70.4%, mean age of 84.1±6.9 years) who underwent a SVaMA evaluation to establish accessibility to homecare services/nursing home admission. Mild (MPI-SVaMA-1), moderate (MPI-SVaMA-2), and high (MPI-SVaMA-3) risk of mortality at baseline and propensity score-adjusted hazard ratios (HR) of two-year mortality were calculated according to antidementia treatment.

RESULTS: During the 2-year mean follow-up period, people treated with antidementia drugs reported a significant lower risk of death (HR=0.82; 95% [confidence intervals] CI: 0.73-0.92) and 0.56; 95% CI: 0.49-0.65 patients treated for less than 2 years and for more than 2 years, respectively). The association between antidementia treatment and lower mortality was present only in the mild risk group of the MPI-SVaMA as confirmed even after the adjustment for the propensity scores.

CONCLUSIONS: In a large cohort of community-dwellers frail subjects with dementia and a very old age, during the 2-year follow-up period, a significant association between antidementia drug use and lower all-cause mortality was found only in the mild mortality risk group, suggesting a prolonged survival linked to antidementia drugs in older frail demented subjects with lower multidimensional impairment.

THE "SOUND RELATIONSHIP": EFFICACY OF AN INDIVIDUALIZED MUSIC THERAPY PROGRAM TO REDUCE BEHAVIOURAL AND PSYCHOLOGICAL DISORDERS IN OLDER NURSING-HOME RESIDENTS WITH ALZHEIMER'S DISEASE

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INTRODUCTION: Previous studies suggested that Music Therapy (MT) might be useful in preventing and treating Behavioural and Psychological Disorders (BPSD) in older patients with Alzheimer's Disease (AD) admitted to Nursing Homes (NH).

AIMS: To evaluate feasibility and efficacy of a MT program on BPSD of older NH residents.

METHODS: Patients with BPSD were divided into two groups: 1) individual MT treatment (MT group); 2) control group. The MT technique was the voice dialogue that alternates active and receptive individual MT moments according to Berenzon's MT theories (sound identity, intermediary object) and Stern's psychological theory (affect attunement) as re-elaborated by Postacchini. Individual MT program was carried-out in a medium sized room, furnished with a circular table on which the instruments were placed). The MT sessions were conducted by a social worker/music therapist in training, supervised by an expert music therapist. During each MT sessions were collected an audio recording of the verbal musical interaction (to observe quantitative and qualitative relationships developed during the program) and a video recording (to evaluate the MT process through MT Check List (Raglio, 2007). At baseline and after MT program, subjects underwent a Comprehensive Geriatric Assessment (CGA) to evaluate functional (ADL, IADL), cognitive (SPMSQ), nutritional (MNA-SF), risk of pressure injury (Exton Smith scale), co-morbidity (CIRS) and polytherapy to calculate the Multidimensional Prognostic Index (MPI), a validated tool to predict health negative outcomes in hospitalized and community-dwelling older adults. BPSDs were evaluated through the Neuropsychiatric Inventory-UCLA scale (NPI-UCLA, Cummings 1984). Psychodiagnostic tests were administered by an expert psychologist.

RESULTS: Three AD subjects were included in the MT program (mean age: 82±2years, MMSE: 11±0.8, MPI value: 0.54, NPI-UCLA: 24±2/144) and underwent 8 MT sessions over a period of 2 months. Patients were chosen according their musical inclination and ability to adapt to different spaces experiences.Control group included three subjects with similar clinical characteristics (mean age: 83±2 years, MMSE: 12±0.8, MPI: 0.61, NPI-UCLA: 22±2/144) who did not participate to individual MT program. Subjects who underwent individual MT program showed a reduction of BPSD (UCLA-NPI 24/144 *vs* 10/144, $p<0.05$).

CONCLUSIONS: This individualized MT program is a useful non-pharmacological co-treatment to reduce BPSD in older NH residents with AD.

IMPROVING THE CENTRAL NERVOUS SYSTEM ACTIVE DRUGS PRESCRIPTION APPROPRIATENESS IN THE HOSPITALIZED ELDERLY THROUGH COMPUTERISED INTERDISCIPLINARY SMART MULTICOMPONENT SYSTEM

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INTRODUCTION: Elderly are at high risk of receiving Potentially Inappropriate Prescriptions (PPI) of Central Nervous

System (CNS) active drugs (eg: benzodiazepines, antidepressants, antipsychotics) with an increased risk of developing Adverse Drug Reactions (ADR).

AIMS: To evaluate if the computerized Interdisciplinary Smart Multicomponent (SMI) system is able to improve CNS active drugs (benzodiazepines, antidepressants, antipsychotics) prescription appropriateness in the hospitalized elderly.

METHODS: 102 elderly subjects aged ≥ 65 years (mean age: 87±5.4 years, 72% women) consecutively hospitalized for acute illness at the SC Geriatrics EO Ospedali Galliera in Genova (Italy), taking CNS active drugs (antipsychotics or antidepressants or benzodiazepines) at home, were enrolled. Those subjects who died during hospitalization and those with terminal cancer or other chronic diseases were excluded from the study. On admission to the hospital, all enrolled subjects underwent Ma Comprehensive Geriatric Assessment (CGA) to evaluate: functional (ADL, IADL), cognitive (SPMSQ), nutritional (MNA-SF), risk of pressure sores(Exton Smith), Co-morbidity (CIRS), polytherapy and cohabitation status, in order to calculate the Multidimensional Prognostic Index (MPI), a validated tool to predict health negative outcomes in hospitalized and community-dwelling older adults. MPI identifies three risk classes (low MPI-1, moderate MPI-2, high MPI-3). Subjects underwent a computerized Interdisciplinary Smart Multicomponent (SMI) system evaluation, on admission to and discharge from the hospital, too. The above mentioned software integrates clinical information with Screening Tool of Older Persons' Prescription (STOPP) criteria of prescription appropriateness and major drug interactions from Micromedex Drugdex database. The prescription appropriateness of admission to and at discharge from the hospital was measured with the Prescription Appropriateness Index (MAI).

RESULTS: 102 elderly subjects aged ≥ 65 years (mean age: 87±5.4 years) of which 72% women. Stratification by MPI showed: MPI-1=7 subjects (7.1%), MPI-2=34 subjects (34.6%), MPI-3=61 subjects (62.2.%). From the admission to the discharge from the hospital the total number of PPI due to CNS active drugs decreases significantly (MAI input: 3,98 *vs* MAI discharge: 1.53, p=0.004). Stratifying patients based on MPI scores, those belonging to the classes MPI1+MPI2 don't show a statistically significant reduction of MAI at entrance *Vs* MAI at discharge (2.18 *vs* 1.81, p=ns) while the subjects belonging to high-risk class MPI-3 show a significant reduction of MAI at entrance *vs* MAI at discharge (2.16 *vs* 1.14, p=0.01) Dividing patients according to the current/actual therapies: 24 subjects (MPI-1: 0 cases, MPI-2: 5 cases and MPI-3: 19 cases) were taking antipsychotics on admission to the hospital; the variation of MAI at entrance *Vs* MAI at discharge was significant (3.58 *vs* 1.17, p=0.01). 44 subjects (MPI-1: 4 cases, MPI-2: 15 cases and MPI-3: 25 cases) were taking antidepressants on admission to the hospital; the variation of MAI at entrance *Vs* MAI at discharge was significant (4.84 *vs* 2.80, p=0.02). 34 subjects (MPI-1: 3 cases, MPI-2: 14 cases and MPI-3: 17 cases) were taking benzodiazepines on admission to the hospital.

CONCLUSIONS: The Interdisciplinary Smart Multi component (SMI) system significantly improves the prescription suitability for CNS active drugs in hospitalized elderly. The improvement is greater in individuals most compromised by a multidimensional point of view and at increased risk of adverse outcomes (MPI-3). The SMI system can be a useful tool for the clinician to improve the prescription appropriateness in the hospitalized elderly.

USEFULNESS OF THE MULTIDIMENSIONAL PROGNOSTIC INDEX FOR IDENTIFICATION AND MANAGEMENT OF HOSPITALISED OLDER PATIENTS WITH DELIRIUM

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BACKGROUND: Delirium is a complex syndrome which occurs frequently in older adults admitted to hospital acute wards for acute diseases or a relapse of a chronic diseases.

AIMS: The aim of the study was to evaluate the usefulness of the Multidimensional Prognostic Index (MPI) in identifying and managing patients admitted to acute Geriatrics Unit with delirium or at high risk for delirium.

METHODS: The study was carried-out in 154 older patients (males 50, females 94, mean age 87,03±5,21 years), consecutively admitted to our Geriatric Unit. At hospital admission, all patients underwent a Comprehensive Geriatric Assessment (CGA) to evaluate functional, cognitive, nutritional, mobility, comorbidity, polypharmacy and co-habitation status and to calculate the MPI, a validated tool predictive of negative health outcomes in hospitalized older adults. Patients were divided into three risk-groups based on MPI values: MPI-1 low-risk, MPI-2 moderate risk, MPI-3 high-risk patients. The presence of delirium (at admission and during hospitalization) was evaluated by means of the Confusion Assessment Method (CAM) – Short form. The diagnosis of dementia was made according to DSM-IV.

RESULTS: According to their MPI values, only two patients were in the low-risk category (MPI-1: 1,3%), while 85 patients (55,2%) were in MPI-2 and 67 (43,5%) in MPI-3. The diagnosis of delirium was ascertained in 47 subjects (30,5%): in 20 patients it was present at hospital admission ("prevalent" delirium); in the remaining 27 patients delirium occurred during hospitalization ("incident" delirium). Dementia was diagnosed in 57 patients. The overall delirium occurrence was significantly more frequent in patients with dementia (70% *vs* 7% in non-demented subjects) and associated with higher mean MPI values (0,66 *vs* 0,61, p=0,039), especially in subjects with "incident" delirium (MPI value 0,69). Patients with delirium showed an increased risk of pressure sores (Exton-Smith scale, p=0,003), a worse nutritional status (MNA, p=0,004), worse cognitive function (SPMSQ, p=0,006). Delirium also resulted an hinder factor to return home after discharge (p=0,014). Finally delirium was significantly associated with mortality during hospitalization (p=0.05).

CONCLUSIONS: CGA-based MPI resulted very useful to identify hospitalized older patients with or at risk of delirium and to provide clinical information to develop individual health-care management plan during hospitalization.

CASE REPORT: ACUTE HEPATITIS INDUCED BY PARENTERAL AMIODARONE

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INTRODUCTION: Amiodarone is a class III antiarrhythmic drug used to treat ventricular tachyarrhythmias. Intravenously (IV) amiodarone-induced acute hepatitis, due to parenteral therapy, is extremely rare. We report an unusual case of acute hepatitis following the beginning of IV amiodarone.

CASE REPORT: A 78-year-old woman arrived to the ER complaining dyspnea due to minimal exercise. She was affected with post-ischemic dilated cardiomyopathy and severe decrease of ejection fractio (EF 20%). She had undergone percutaneous angioplasty (PTCA) on the interventricular anterior artery and implantation of Cardiac Resynchronization Therapy Defibrillator (CRT-D) in 2007. She was also affected with moderate-severe mitralic insufficiency, chronic renal failure. Physical examination showed holosystolic murmur at apex, lower limbs edema and blood pressure (BP) was 100/60 mm Hg: On the electrocardiogram (ECG) synus rhytm 60 beats per minute (bpm)was found. Liver enzymes were within the normal range, plasma creatinine was 1.7 mg/dl. Six days after hospitalization she complained sudden onset of dyspnea, palpitation and oliguria. ECG showed atrial flutter with mean ventricular frequency 135 bpm. BP was 95/60 mm Hg. Intravenous bolus injection of amiodarone hydrochloride 50 mg/ml (one ampoule) and three ampoules in 250 ml 5% glucose IV infusion, 37 ml/h with restoring sinus rhythm (heart frequency 72 bpm). Two days after blood exams showed acute increase in liver enzymes (AST 2605 (normal range (nr) 0-38 U/L), ALT 1789 (nr 0-41 U/L), alkaline phosphatase 210 (35-105 U/L), total bilirubine 1,47 (nr 0-1.20 mg/dl), creatinine 1,7 mg/dl. The next day further increase of liver enzymes AST3829, ALT2894. Hepatitis markers were negative. Hepatic ultrasound showed venous congestion. In the suspect of amiodarone induced – liver damage drug was stopped and there was a rapid decrease of liver enzymes: AST795, ALT1652, which progressively normalized after10 days.

DISCUSSION: Intravenous amiodarone is typically used for IV infusion for getting therapeutic plasma concentrations in a short time. The CIOMS/RUCAM scale identifies our patient's acute epatitis as a highly probable adverse drug reaction (score >8). The underlying mechanism responsible for the liver damage is controversial and still unknown. It has been hypothesized that the acute liver injury following the IV amiodarone formulation is related to liver ischemia, rather than to direct drug toxicity. Another report ascribes responsibility of liver toxicity to solvents such as polysorbate 80 in the IV amiodarone preparation.

CONCLUSIONS: We believe that in susceptible elderly patients, even the standard intravenous amiodarone dose may cause direct drug toxicity and hypotension especially in patients affected with heart failure, thus leading to hepatic injury.

LIGHT AND SHADE OF ANTICOAGULANT THERAPY IN A FRAGILE ELDERLY

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BACKGROUND: Anticoagulant therapy in fragile person is characterized by a cost-benefit ratio uncertain. We describe a case as an example.

CASE REPORT: We called home in counseling for a 88 years old patient, in hypothyroid replacement therapy, smoker with chronic respiratory failure, moderate IRC (GFR 50 ml/min), post-ischemic dilated cardiomyopathy with reduced EF, AF with HR 90 bpm prior therapy with warfarin. A few months earlier, accidental fall at home with post-traumatic ESA, with minimal outcomes collection imaging control.

RESULTS: At home oriented patient with good vital signs (there was an arrhythmic activity about 95 bpm, RR 20 breaths, SpO2 91%), peripheral edema in the legs up to the knee. ADL 1/6; IADL 0/8. An echocardiogram was performed with portable equipment, which showed dilation of the left ventricle with global hypokinesis and systolic dysfunction (EF 46%), moderate mitral and tricuspid regurgitation, pulmonary hypertension (PAP 60 mm Hg) with the following parameters: DTD 67 mm, DTS 50 mm, SIV 7 mm PP 8 mm. We set therapy: fondaparinux 2.5 mg, 125 mg furosemide, thyroxine 50 mcg, pantoprazole 20 mg.

CONCLUSIONS: Among the various treatment options, in a patient with permanent AF and dilated (post-ischemic?) cardiomyopathy and double valve insufficiency (both functional), the pentasaccharide it seemed to us more advantageous, compared to warfarin, NAO and DAPT, both against the thrombotic risk intracavitary (situation of cardiac kinetic with perturbed Virchow's triad) and secondary DVT from poor mobility, taking into account the pure possible risk of bleeding (in patient with previous ESA). It also used in treatment of ischemic heart disease (ESC guidelines). In clinical practice, there is no can fully entrust a Guidelines, score goals and recommendations for the Anticoagulation Clinics for these elderly subjects and benefits and risks must be carefully evaluated.

NUTRITION AND TERMINAL DEMENTIA

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BACKGROUND: The theme of the decision to start an invasive nutrition, by the doctor or by the competent patient or family caregiver, it is not easy.

AIMS: The decision on the beginning the NIA often occurs when the disease is at an advanced stage, when its role is controversial, and in many cases the choice is left to the parents / caregivers, without that patients were involved in advance. The doctor should objectively inform about nutrition at this stage of the disease, without affecting or download their own uncertainties about who takes care of the sick.

METHODS: Patient 90-year-old, state of relative well-being up to 80 years when there were dismnesie and disorientation, later framed as Alzheimer's disease, by two years progressive decline psicorganic with severe dementia, sphincter incontinence and hypokinetic syndrome. For several months dysphagia, need intravescical catheter and lifter bed armchair, MMSE not administered. In December 2016 aspiration pneumonia treated with antibiotics and infusion therapy (including nutrients). In the month of January 2017 clinically stable, alert, calm, no obvious physical discomfort or pain. For dysphagia begins nutritional therapy vith nasogastric tube.

RESULTS: There are controversial opinions on starting or not the NIA in the advanced stages of dementia, justified if patients is severely ill (not shown a benefit in terms of survival except for the possibility of hydration and drug administration). On the other hand the demented patient with dysphagia has a few months lease of life, and if its organic conditions are discrete enteral nutrition can prolong its survival.

CONCLUSIONS: If the clinical condition of the subject with dysphagia is severe there is no reason to artificial nutrition, while NIA is acceptable if it can prolong the patient's life or lessen his suffering.

USABILITY IN CLINICAL PRACTICE OF HUNOVA, A NEW ROBOTIC REHABILITATION DEVICE

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BACKGROUND: The role of robotic devices in rehabilitation has been investigated intensively. However, it remains to be understood how they integrate in clinical setting and their usability.

AIMS: The aim of this work is to test the usability and the effectiveness of hunova, a robotic rehabilitation device designed for the assessment and treatment of neurological, geriatric and orthopedics patients.

METHODS: Hunova was installed in the rehabilitation gym of Casa di Cura Falciani (Villa delle Terme Group) and used in clinical practice. hunova provided treatment and assessment of balance, core stability and proprioception. Patients with stable medical condition and with sufficient cognitive abilities underwent 10 robotic training sessions. In each session, clinicians can parametrize the exercises to tailor the treatment on subject's impairment and improvements. Before and after the treatment, patients were evaluated through clinical scales (Mini-Mental State Examination, MMSE; Bartel Index, BI; Trunk control Test, TCT; Harris Hip Scale, HHS; Canadian Stroke Scale, CSS; European Stroke Scale, ESS; International Knee Score, IKS) and robotic assessment (reactive balance; proprioceptive abilities; equilibrium with open and closed eyes and static and dynamic conditions; sit to stand).

RESULTS: Both the management and clinical staff appreciated the simplicity and usability of hunova. Physical therapists have appreciated the dual function of hunova that can be used both as an accurate biomechanical assessment and rehabilitation tool due to its sensorized robotic technology. hunova has proved to introduce the concept of personalized rehabilitation thanks to its capability of evaluating the patient and providing the best rehabilitation strategy for a specific treatment within a wide range of pathologies (neurological, orthopedic or geriatric), ages (from 40 to 96 years) and cognitive impairments (MMSE: from 14,4 to 30). The robotic assessment before and after the training highlights general improvements, in fact 97% of subjects (37/38) enhanced their performance.

CONCLUSIONS: The study shows that hunova adapts very well to all clinical practices since it provides rehabilitation programs that can be personalized standardized, measured and monitored. This makes this device flexible and adaptable to a wide range of patients and rehabilitation requirements.

FALL RISK ASSESSMENT IN ELDERLY PEOPLE USING HUNOVA, A ROBOTIC REHABILITATION DEVICE

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BACKGROUND: Fall risk prediction in elderly people is an important goal to prevent fall-related health problems and injuries and to reduce health costs related to fall consequences. Such prediction is usually performed by means of clinical scales.

AIMS: The aim of this study is to introduce a robotic-assisted evaluation of balance impairments performed with a new robotic system (hunova), and to evaluate its capability in identify fallers, by comparing robotic measures with clinical instruments used for the evaluation of fall risk in elderly people.

METHODS: This is an observational trial that foresees the enrolment of 99 subjects aged >65 years. According to the number of falls and/or fractures in the last 12 months, each participant was allocated to one of the following groups: low (no falls), medium (1-2 falls) and high (>2 falls or 1 fall+1 fragility fracture) risk of fall. All participants were also evaluated with Time Up and Go (TUG) test, Walking Speed, Short Physical Performance Battery (SPPB), Hand Grip measure and the Physical Activity Scale for the Elderly (PASE). The instrumental assessment includes automatic measurements using hunova, a new robotic device designed to assist the sensorimotor rehabilitation process and the functional evaluation of lower limbs and trunk. hunova allows the evaluation of traditional stabilometric parameters as well as subject's capability to restore balance after a perturbation (Reactive Balance), the capability to adapt and improve after multiple perturbations in different directions (% of Adaptation), the Limits of Stability (LOS) and the duration of the Five Time Sit to Stand test (5TSTS).

RESULTS: A total of 70 older subjects (mean age: 76.5±6.6 SD years, 23 male) were enrolled in the study. 26 subjects were classified in the low, 27 participants in the medium and 17 participants in the high group of fall risk. Robotic parameters showed a linear correlation with clinical scales and can estimate the risk of fall class of the subjects. In particular, the more sensible parameters were the 5TSTS duration, the Reactive Balance, the% of Adaptation and the LOS.

CONCLUSIONS: The preliminary findings of our ongoing study suggest that hunova robotic measures are sensitive to identify balance impairments and estimate fall risk in older subjects, and that they could be an useful tool in identify fallers and prevent fall risk.

PREVENTION AND TREATMENT OF FRAIL ELDERLY: ASSESSING PHYSIOTHERAPIC TREATMENT AND PAIN TO SUPPORT FUNCTIONAL AUTONOMY

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BACKGROUND: Pain is one of the most important symptoms that elderly population have to cope with. Pain is linked to osteoarthritis, falls, low back disorders, physical inactivity, hip fractures, and other types of fractures. Physical inactivity is one of the most common causes of pain and frailty or pre-frailty and disability in the elderly. Pain and deficits in ADL's autonomy lower the quality of life of elders. The assessment of physical and psychosocial skills linked to a physiotherapic treatment is useful to measure pain.

AIMS: This study aims at assessing physical and psychosocial skills linked to a physiotherapic treatment and to estimate correlations with pain.

METHODS: A physiotherapic assessment tool (The Svft_02) was used to assess physical and psychosocial skills and pain of elders who were patients and former patients of the physiotherapic unit at Asl 3 Genovese.

RESULTS: We investigated N= 2,271 elders. Pain correlates significantly and positively with balance (r: 0.125; p<.001), movement skills (r: 0.162; p<.001), and posture changes (r: 0.157; p<.001). A linear regression analysy show that posture changes (ß: .157; p<.001), motivation ß: .263; p<.001), and self-efficacy (ß: -.130; p<.001), were pain predictors.

CONCLUSIONS: Assessing physical and psychosocial skills linked to physiotherapic treatment is useful to predict pain and to support functional autonomy for elders. This conclusion needs to be capitalized upon to promote a better quality of life for elderly.

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ADAPTED PHYSICAL ACTIVITY'S PROGRAM FOR EMPOWERMENT AND ACTIVE AGEING IN GENOVA SOCIO-SANITARY DISTRICTS

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BACKGROUND: Ageing boom, according to a global study on the burden of diseases (Vos, Flaxman, Naghavi, et alt. ,2010), is one of the most important greatest causes of disability world-wide and it represents a sort of "chronic volcanic eruption" on individual and social well-being in the modern society. The Non-communicable disease's, musculoskeletal conditions with other risk factors (for example an insufficient physical activity, social deprivation, mental and neurological conditions), changed the political and social maps of the Nations health, generating a troubled global problem.

AIMS: The main goal for public health systems, is to create a new collaborative leadership and empowerment for a new health pro-active deal with many partners (social and private stakeholders together with citizens). In Genova the Socio-Sanitary Districts approach a new pro-active deal for health using Adapted Physical Activity (APA) program for elders. The main aim is to create a virtuous process of care and information for old people and to improve an active lifestyle for them.

METHODS: The general purpose of this Program is to help elderly with frailty and disabilities to socialize more with others practicing Adapted Physical Activity. The study investigates:the process of APA (enrollment criteria, monitoring actions, empowerment actions, communication policies and social engagement and fair activities in solidarity)the data analysis physical performances (balance, strength, and walking speed), and psychosocial dimensions (motivation and collaboration). The study involves N=316 elders (F=80,1%; M age=71.4±7.2 years; overweight T0=40.8%; M drugs a day T0=3) participated to an APA program during a six months course (from October 2013 to May 2014).

RESULTS: Physical abilities and functionalities improved and elders' determinants of quality of life enhanced. Data analysis demonstrate significant results on: the use of drugs per day, Numerical Pain Rating Scale, Barthel Index and SPPBT.Preliminary statistical analyses show significant results on physical autonomy, reduction of pain and use of drugs. Moreover, significant improvement on physical performance (balance, strength, and walking speed), and on psychosocial dimensions (motivation and collaboration) were found.

CONCLUSIONS: The study confirms scientific literature and indicates some directions to promote health and wellness for elders through APA. Data emphasize important suggestions and supplying informations to develop a theoretical debate about wellness through an APA Program in the elderly.

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METFORMIN ASSOCIATED LACTIC ACIDOSIS: CASE REPORTS

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BACKGROUND: Metformin (MF) is the first line therapy for type 2 Diabetes Mellitus (T2D) because MF is inexpensive and it has low risk of hypoglycemia, low rates of cardiovascular events/death and a better control of body weight. The drug is absorbed in the duodenum and proximal jejunum and it is excreted by the kidney. The safety profile is well known and gastrointestinal disorders are the more frequent adverse event. When MF accumulates in the plasma, elimination may be prolonged, resulting in "metformin associated lactic acidosis" (MALA). The risk of MALA has been matter of continuous debate. Impaired kidney function is the first risk factor for MALA MethodsWe describe two cases of MALA treated with renal replacement therapy.

CASE 1: A 89-year-old man with T2D treated with combination of metformin and pioglitazone, and hypertension, presented after minor head injury. On admission, his blood pressure was 130/80 mmHg, heart rate was 50 bpm and saturation was 97%. Examination revealed bradycardia (40 beats per minute) and lungs were clear to auscultation. Admission laboratory tests showed acute kidney injury with creatinine of 10 mg/dl, potassium level of 7.50 mmol/l, metabolic acidosis with pH of 7.22, lactic acid of 1.20 mmol/L, serum bicarbonate of 13.70 mmol/L. ECG showed second-degree A-V block with heart rate of 48 bpm. The patient underwent emergent hemodialysis and the lactic acidosis promptly resolved. At discharge there was no recovery of kidney function and patient underwent hemodialysis twice-weekly.

CASE 2: A 88-year-old woman with T2D treated with metformin, ischemic heart disease, polivascular disease and obesity, presented with vomitus and heart failure. On admission, her blood pressure was 110/70 mmHg, heart rate was 80 bpm and saturation was 98%. Examination revealed the presence of leg swelling and bilateral lung crackles. Laboratory results revealed acute kidney injury with a creatinine of 7.40 mg/dl, potassium of 7.30 mmol/L, lactic acidosis with pH of 7.03, lactic acid of 12.80 mmol/L and bicarbonate of 8.30 mmol/L. Chest x-ray showed left pleural effusion. She underwent hemodialysis with correction of the metabolic acidosis.

CONCLUSIONS: The reported incidence of MALA is ≤10 events per 100,000 patient-years of exposure but the mortality rates is 30 to 50%. Patients with impaired kidney function have a higher risk of developing metformin-associated lactic acidosis but a secondary event (dehydration, hypoxic state, hemodynamic instability) is necessary to result in lactic acidosis in the presence of metformin.

THE ENERGY BALANCE AND FOOD INTAKE IN A GERIATRIC DEPARTMENT

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BACKGROUND AND OBJECTIVES: The weighed food records is a gold standard method able to reduce underestimation of visual methods for energy intake. Until now in the clinical practice for elderly hospitalized patients there is the lack of a score index able to quantify the energy balance which could be negative because of decreased intake, increased expenditure, or both. The main aim of this analysis was to calculate the negative balance through a score (Caloric Gap score).

DESIGN: This is a retrospective observational study. Setting Geriatric Department – Geriatric and Intensive Geriatric Cares ward of " San Giuseppe Moscati"- Avellino - Italy.

PARTECIPANTS: The study cohort comprised 328 patients aged 65 years or older consecutively admitted to the geriatric department.

INTERVENTION: Three areas of intervention have been identified: 1) dietary changes; 2) oral nutritional supplementation and dietetic counseling. 3) artificial feeding. Measurements: Resting Energy Expenditure (REE) was measured with Harris Benedict (HBE) equation and daily caloric intake was measured with weighed food records according to the protocol adopted by the nutrition service. The caloric gap was calculated as difference between these two measures. For each patient the following measurements have been considered: sex and age, height and weight, comorbidity, laboratory tests, Mini Nutritional Assessment (MNA) and Body Mass Index (BMI), Charlson comorbidity index (CI) and Simplified Acute Physiology Score II (SAPS II).

RESULTS: This study showed a good correlation between CGs and all clinical and prognostic indexes evaluated. Patients with high CG score had poorer prognosis compared with patients with low and intermediate scores.

CONCLUSIONS: The energy balance expressed by CGs may represent an useful tool with high specifity and sensitivity for the nutritional assessment and treatment of patients in a geriatric department.

A COGNITIVE PREVENTIVE INTERVENTION BY MEANS OF MEMORY TRAINING IN A SAMPLE OF OLDER ADULTS AGED 65+

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AIMS: Primary goal of the study is to prove the efficacy of MT in a 930 subject, cognitively intact, aged 65-80. Secondary goals: how participants evaluate themselves and their cognitive performances and depressive symptoms.

MATERIALS AND METHODS: The project is in collaboration with Regione Liguria. All participants in the study were evaluated via a clinical conversation and administration of neuropsychological screening tests. Inclusion criteria: age between 65 and 80 years; absence of psychiatric pathologies; absence of sensorial deficits; absence of dementia. Evaluation tests for cognitive status include: MMSE1 and CDT2. The cognitive stimulation programme includes: 1,30 minutes meetings, once a week, over three months. Each meeting include a maximum of 20 participants. At baseline, at conclusion of intervention is measured: cognitive status, by learning test of three word lists3 and verbal fluency by letter (Tognoni,1986) ; self-perception of cognitive functionality by MACQ (Crook,1992); depression by GDSsv (Almeida,1999).

RESULTS: The score of the outcomes at conclusion of intervention presented a statistically significant improvement with respect to base values.

CONCLUSIONS: The study proves that the MT produce significant improvement of cognitive status, self-perception of cognitive wellness by participants and reduction the depressive symptoms. The results to suggest that the use of MT is feasible even into an advanced age, and that the improvement of cognitive activity, mood status and social well-being are protective factors with respect to cognitive deterioration. MT is to be considered primary social health preventive interventions, in their capacity of slowing down the negative effects of cerebral aging.

POLYPHARMACY IS ASSOCIATED WITH HIGHER FRAILTY RISK IN OLDER PEOPLE: AN EIGHT YEAR LONGITUDINAL COHORT STUDY

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BACKGROUND: Polypharmacy is associated with several negative outcomes in the elderly, but the effect on frailty is still limited to a few longitudinal studies.

AIMS: To investigate whether polypharmacy is associated with a higher incidence of frailty in a large cohort of North Americans over eight years of follow-up.

METHODS: This is a longitudinal study (Osteoarthritis Initiative) with a follow-up of 8 years including 4,402 individuals at high risk or having knee osteoarthritis free from frailty at baseline. Details regarding medication prescription were captured and categorized as: 0-3, 4-6, and >7. Frailty was defined using the Study of Osteoporotic Fracture (SOF) index as the presence of ≥2 out of: (i) weight loss >5% between baseline and the subsequent follow-up visit; (ii) inability to do five chair stands; (iii) low energy level according to the SOF definition. Cox's regression models calculating a hazard ratio (HR) with 95% confidence intervals (CIs), adjusted for potential confounders, were undertaken.

RESULTS: During the 8-year follow-up, from 4,402 participants at baseline, 361 became frail. Compared to participants taking 0-3 medications, the incidence of frailty was approximately double in those taking 4-6 medications and six times higher in people taking >7 medications. After adjusting for 11 potential baseline confounders, participants using 4-6 medications had a higher risk of frailty of 55% (HR=1.55; 95%CI: 1.22-1.96; p<0.0001), whilst those using more than 7 drugs were at approximately 147% (HR=2.47; 95%CI: 1.78-3.43; p<0.0001). Each additional drug used at the baseline increased the risk of frailty at the follow-up of 11% (HR=1.11; 95%CI: 1.07-1.15; p<0.0001).

CONCLUSIONS: Polypharmacy is associated with a higher incidence of frailty over 8-year follow-up period. Our data suggest evidence of a dose response relationship. Future research is required to confirm our findings and explore underlying mechanisms.

LOW DOSE ASPIRIN USE AND COGNITIVE FUNCTION IN OLDER AGE: A SYSTEMATIC REVIEW AND META-ANALYSIS

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BACKGROUND: Low-dose aspirin is efficacious for the prevention of cardiovascular and cerebrovascular conditions, established risk factors for the onset of poor cognitive status and dementia. AIMS: We investigated whether low-dose aspirin (*i.e.* a daily dosage <300 mg) can influence the onset of cognitive impairment/dementia in observational studies and improve cognitive tests scores in randomized controlled trials (RCTs) in participants without dementia.

METHODS: In this systematic review and meta-analysis, we considered both observational and interventional studies including subjects initially with no dementia/cognitive impairment. Odds ratios (ORs) and 95% confidence intervals (CIs), adjusted for the maximum number of covariates from each study were used to summarize data on the incidence of dementia/cognitive impairment. Standardized mean differences (SMDs) were used for cognitive test scores in RCTs.

RESULTS: Of 2,341 initial hits, 8 studies were eligible and provided data for 36,196 participants without dementia/cognitive impairment at baseline (mean age 66 years, 63% female). After adjusting for a median of 3 potential confounders, over a median follow-up period of 6 years, the use of low-dose chronic aspirin was not associated with a significant reduction in the onset of dementia or cognitive impairment (5 studies, N=26,159; OR=0.82; 95% CI [0.55,1.22]; p=0.33; I2=67%). In three RCTs (N=10,037; median follow-up=5 years), the use of low-dose aspirin was not associated with significant improvements in global cognition (SMD=0.005; 95% CI: [-0.04,0.05]; p=0.84; I2=0%) in individuals without dementia. Adherence was lower in aspirin compared to controls and the incidence of adverse events was higher.

CONCLUSIONS: This review found no evidence that low-dose aspirin buffers against cognitive decline/ dementia or improves cognitive test scores in RCTs.

EFFECTS OF ORAL AMINOACID SUPPLEMENTATION ON MULTIDIMENSIONAL PROGNOSTIC INDEX IN HOSPITALISED OLDER PATIENTS: A MULTICENTER RANDOMISED, DOUBLE-BLIND, PLACEBO-CONTROLLED PILOT STUDY

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BACKGROUND: The Multidimensional Prognostic Index (MPI) is a Comprehensive Geriatric Assessment (CGA)-based tools that predicts survival and other healthy negative outcomes such as institutionalization, hospitalization and length of hospital stay in older subjects. It is not known if aminoacid supplementations may influence health status in older acutely ill patients.

AIMS: To determine whether nutritional supplementation with aminoacids (©Aminoglutam), is associated with multidimensional improvement assessed with the CGA-based MPI. Study design: randomized, double-blind, placebo-controlled pilot clinical trial.

POPULATION: Onehundred and twenty-six patients aged 65+ enrolled in 6 Italian geriatric wards.

METHODS: A multidimensional evaluation according to the CGA-based MPI was performed at baseline and after 4 weeks of treatment with aminoacid supplementation or placebo administered twice a day for 4 weeks. Logistic regression modelling was applied to determine the effect of treatment on the improvement of MPI (*vs* no-change/worsening), adjusting for sex, age and MPI at baseline. Treatment's interactions with age, sex and MPI at baseline were tested adding the appropriate interaction parameter in the regression models.

RESULTS: 117/126 (93%) subjects completed the study. A significant improvement in MPI score was detected in the overall population (mean difference post-pretreatment: -0.03, p=.001), with no differences between active and placebo arms. Considering the single domains, we found significant increases in ESS (+0.45, p=0.02), ADL (+0.24, p=0.05), and MNA (+0.97, p=0.004), with no differences between treatment arms. Interestingly, in men the aminoacid supplementation group was associated with an improvement of MPI in 13/16 (81%) compared to 11/24 (46%) of placebo group (Fisher exact p=0.03). Adjusting for age, diagnosis and MPI at baseline, aminoacid treatment showed to be associated with an improvement in MPI in men (OR=4.82, 95%CI: 0.87-26.7), and not in women (OR=0.70, 95%CI: 0.27-1.81). The interaction effect between active treatment and gender was significant (p=0.04).

CONCLUSIONS: A 4-week aminoacid supplementation improved the CGA_based MPI significantly more in male hospitalized older patients than in women. Further studies are needed in order to confirm the gender effect of aminoacid supplementation on MPI in older patients.

STUDY ON DRUG THERAPIES IN RESIDENTIAL FACILITIES ASL 1 IMPERIA

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The significant and progressive increase of the elderly population is an already evident phenomenon in the Liguria region, and beyond, whose population in 2017 is composed by a 28% percentage of over 65. From the age of 65on the number of drugs taken per capita increases gradually, especially in women and institutionalized subjects by increasing the incidence of Polypharmacy (≥ 4 drugs per day). The result is a greater risk of interaction between active principles, adverse reactions, side effects, intolerance, medication errors, etc. This study will be the subject of my Thesis in Nursing and it wants to analyze from a quantitative point of view of quantitative prescribed and administered drug therapies in the structures of the province of Imperia, a never described before reality.In particular, the aim of this research is to quantify all the drugs administered by the nursing staff on a regular prescription, to the guests of Facilities for the Elderly and Disabled in the area ASL 1 Imperiese.The quantitative analysis is done through analyzing every single guest of the province (about 2180 sheets of therapy), showing the total number of drugs, psychiatric drugs and "needed" medications, that is conditioned upon the occurrence of a future event .The research is still in progress therefore the results will be available soon and presented in the 31st SIGOT National Congress.Given the recent introduction of Polypharmacy as a indicator of quality of care in the new regional contracts of accreditation of health facilities in Liguria, this study will be valid as a verification support, always implemented in the structures of our province, as a long-term monitoring tool, and as an incentive to find new activities of shared formation, to indrotuce more precautions about it.

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