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PATTERNS AND PREDICTORS OF HOSPITAL READMISSION IN TAIWAN
Cheng TS1, Ku HP1, Chang CJ2
1Chang Gung University, Taoyuan, Taiwan, 2Chang Gung University, Kuei Shan, Taoyuan, Taiwan
OBJECTIVES: Hospital readmissions have been an important issue, as they reflect suboptimal quality of medical care and incur high health care expenditures. However, limited information is available on the patterns of hospital readmission in the entire population to support a thorough planning to prevent hospital readmissions. Therefore, this study aimed to examine the patterns and economic burdens of hospital readmission in Taiwan, and identify predictors of hospital readmissions.
METHODS: This study used the National Health Insurance Research Database of individuals randomly selected from those enrolled in the National Health Insurance program in 2005. Individuals who were admitted to acute hospitals in 2005 were selected and their readmission patterns one-year after discharge were examined. Cox proportional hazards regression model was adopted to identify predictors of hospital readmission.
RESULTS: The 30-day, 6-month and one-year readmission rates were 11%, 25%, and 34%, respectively. During the one-year follow-up, 52% of total health care expenditures were due to hospital readmissions. Of those who were readmitted to hospitals, 56% were readmitted once and took up 29% of the cost of rehospitalization. However, those readmitted for more than three times (5%) accounted for 30% of the cost. The major disease category of the highest 30-day and one-year readmission rates was neoplasms. The disease of the highest 30-day and one-year readmission rates was cancer of bronchus and lung (36%) and cancer of liver and intrahepatic bile duct (74%), respectively, and the most frequent reason for readmission was the disease itself. Age, gender, place of residence, previous hospital care, and administrative costs were associated with hospital readmission. CONCLUSIONS: This study identified diseases of higher short-term and long-term readmission rates, causes of short-term and long-term readmission and risk factors of hospital readmissions. The information is of importance for planning interventions to reduce hospital readmission rate.

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SECURE SYSTEM FOR IV ADMINISTRATIONS: HEALTH ECONOMIC IMPACT OF A “SMART” INFUSION SAFETY SYSTEM
Schmidt K, Bénard S
stéve consultants, Oullins, France
OBJECTIVES: More than half of medication errors are reported during administration of chemotherapy (Guzzardi et al). Safety Systems (SSS) have been developed to avoid administration errors and provide data for continuous quality improvement (CQI). Few data produced by SSS have been analysed. Given the lack of clinical trials, a model was developed to assess the economic benefits of SSS from the perspective of public hospital. Overall, 207,025 infusions were analysed in six intensive care units (ICU) were analysed. Two types of alerts were defined: hard (absolute) and soft limits. An avoided error was defined as the detection of a scheduled infusion over a hard limit or a scheduled infusion over a soft limit that was later overridden by staff. The severity of consequences was estimated on the HARM index score, which is based on the pharmacologic risk, overdose detectability, overdosing range and the type of hospital unit. According to this score, errors were classified as minor, significant, and serious. The economic value was estimated based on the hypothetical resulting length of stay and the cost not been avoided, which increases according to error severity, and the financial impact was estimated from the perspective of the public hospital. RESULTS: Overall, 207,025 infusions were analyzed from the database of 6 ICUs and 4,503 of them were associated with a safety alert (4.1%), including 987 errors (0.48%). Applied to one public ICU equipped with 5 SSS, this resulted in an estimated 78 errors per year (34 minor, 12 significant, 12 serious) and avoid 173 days of hospitalization per year. This corresponds to an annual savings of $319,491 for the hospital (39% and 61% from significant and serious errors, respectively). CONCLUSIONS: This model demonstrated that an improvement of medication errors using SSS can be highly beneficial for the French public hospitals. To date, no equivalent evaluation has been conducted in France.

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VALUE OF LIFE AND COST OF PRE-MATURE DEATHS WITH THE PERSPECTIVE OF PRODUCTIVITY AS NET TAX REVENUE: A COMPARISON IN FRANCE, GERMANY, ITALY, SPAIN, UNITED KINGDOM
Tuna E1, Yenilmaz FB2, Atikeler K1, Kokcaya G2, Tatar M3
1Hacettepe University, Ankara, Turkey, 2Health Economics and Policy Association, Ankara, Turkey
OBJECTIVES: The Human Capital Theory emphasizes investments to the health care sector as an important element in achieving and sustaining economic development. Investments to health care sector improves macro and micro economic outcomes for the whole society. The aim of this study is to calculate the possible produced value for a lifetime term (VLT) and cost of premature deaths (CPD) from the productivity for France, Germany, Italy, Spain, UK.
METHODS: The possible produced value for a lifetime term (VLT) and cost for premature deaths (CPD) from the productivity for France, Germany, Italy, Spain, UK. RESULTS: However the study was based on a hypothetical model that calculated the NPV with the taxes and spending in a life-time term, the results of each country were parallel.

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SWITCHING PATIENTS WITH PRIMARY ANTIBODY DEFICIENCIES TO HOME-BASED SUBCUTANEOUS IMMUNOGLOBULIN: ECONOMIC EVALUATION OF AN INTERPROFESSIONAL DRUG THERAPY MANAGEMENT PROGRAM
Perraudin C, Bourdin A, Berger J, Bugnon O
School of pharmaceutical sciences, University of Geneva, University of Lausanne, Lausanne, Switzerland
OBJECTIVES: Lifelong immunoglobulin G (IgG) replacement is the standard therapy for patients with primary antibody deficiencies. It can be administered either intravenous (IVIg) by home care nurses in hospital or subcutaneous (SCIG) by patients at home. However, self-administration requires patients’ education and support over long term to ensure proper adherence and optimal efficacy and safety. Every patient who switches to SCIG is proposed by the Polyclinique Médicale des Hôpitaux Universitaires de Genève (Lausanne, Switzerland) a drug therapy management program with a nurse and a community pharmacist including training, coaching and follow-up. The aim of the study was to evaluate if switching to SCIG at home including the management program was cost-effective compared to IVIg at hospital.
METHODS: Assuming that both therapies provide similar efficacy, a 3-years cost-minimization analysis based on a simulation model was performed from a societal perspective. Health care costs (ICU, time of professionals, infusion pumps and disposables) were derived from the hospital and administrative costs. Costs related to care of switched patients were estimated. One-way sensitivity analyses were performed. RESULTS: Under base case assumptions, SCIG at home was estimated at 34,460 CHF per patient per the first year and the later 34,170 CHF, respectively. 6.2% in subsequent years against 34,170 CHF per year for IVIg. The total savings for a switch to SCIG at home with the program was 74,940 CHF per patient over 3 years. Results were relatively sensitive to the assumptions. CONCLUSIONS: Home-based SCIG therapy including an interprofessional therapy management program may be an effective and efficient alternative to hospital for patients with primary antibody deficiencies. Additional costs from purchase of equipment and management program in the first year were offset by hospital costs avoided in short term. Additional studies are ongoing to evaluate the retention in the long term and the impact on quality of life.

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GENDER MEDICINE IN GERMANY: WHAT IS SO DIFFICULT ABOUT ITS IMPLEMENTATION? - AN EMPIRICAL STUDY IN GERMANY
Chase DP1, Mitei F, Oertelt-Prigione S5, Hess N5, Amelung V1
1Unit for Applied Health Services Research, Medical University of Vienna, Austria, 2pfizer Pharma GmbH, Berlin, Germany, 3Charité Berlin, Berlin, Germany, 4Cardiology Practice, Berlin, Germany, 5Hannover Medical School, Hannover, Germany
OBJECTIVES: Personalized medicine is currently a popular topic in health care debate. Yet, the basic differentiation between females and males is hardly found in care delivery/health management programs. This study aimed at elucidating the concern of German Statutory Health Insurance (SHI) managers and internal specialists regarding gender aspects in order to understand the perceptions on responsibilities and possible implementation opportunities.
METHODS: Between April and June 2015, a questionnaire on the implementation of gender medicine in SHIs was distributed to 48 insurance managers of the largest German SHIs, covering over 60% of the SHI market, and approximately 15,000 physicians of the German Society for Internal Medicine (DGIM) were contacted to complete a web-based survey. Descriptive analyses, Chi-square tests, and Pearson correlation coefficient were used to investigate the research objective. RESULTS: According to both, insurance managers (76%) and physicians (60%), gender-specific care is not sufficiently incorporated into standard medical care. Respondents claim the responsibility lies with the ministry of health, physicians and medical staff, as well as their associations. Specifically, more evidence is needed to incorporate gender aspects in treatment guidelines, an idea which is well-supported by insurance (65%) and physicians (70%). A top-down approach for implementation is preferred by 65% of insurance managers and 50% of physicians, whereas fewer participants encourage bottom-up mechanisms. CONCLUSIONS: German SHIs expect a significant governmental influence and/or support of self-governing bodies to achieve an incorporation of gender medicine into daily practice. Priority responsibility for the integration of gender-specific approaches is perceived to lie with physicians. As soon as critical mass and/or support of self-governing bodies to achieve an incorporation of gender medicine into daily practice. Priority responsibility for the integration of gender-specific approaches is perceived to lie with physicians.