

OBJECTIVES: The Turkish Medicines and Medical Devices Agency (TMMDA) gives permission of unlicensed medicine use by patient basis. Authorized wholesalers including Turkish Pharmacists' Association (TPA) can import the drugs based on the TMMDA's permission. These medicines are reimbursed by the Social Security Institution (SSI), the main reimbursement agency in Turkey Until 2014 when wholesalers were also authorized, pharmaceuticals under this status could only be imported by the Turkish Pharmacists' Association (TPA). The aim of this study is to understand the trends in L group (Antineoplastic and immunomodulating agents) of ATC classification system unlicensed medicine consumption between 2011 and 2013 when the TPA was the only authorized supplier. **METHODS:** Consumption data of L group in the top 100 imported unlicensed medicines with the highest sales share in total expenses of imported off-label use was taken from the TMMDA computer database. Descriptive analysis was conducted. **RESULTS:** The analysis showed that the numbers of active ingredients of L group in the top 100 rose from 37 to 55, between 2011 and 2013. The average cost per box of unlicensed medicines in the L group increased from 4.973 TL to 7.436 TL in the same period. The total consumption of the unlicensed medicines in L group increased from 107 billion TL to 482 billion TL. **CONCLUSIONS:** The cost of imported unlicensed medicines used increased every year in Turkey. Some cost-containment measures (especially for antineoplastic medicines) should be taken to reduce the increasing cost without risking the patients' access to these innovative medicines.

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COSTS OF SEPTIC SHOCK IN ENGLAND, WALES AND NORTHERN IRELAND IN 2012

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OBJECTIVES: The objective of this study was to analyze the costs of septic shock in 2012 for England, Wales and Northern Ireland. **METHODS:** We analyzed length of stay and organ support of 20,549 adult septic shock patients. Septic shock was defined as severe sepsis including the presence of cardiovascular organ dysfunction. Data derived from the Case Mix Programme Database. This is the national, comparative audit of patient outcomes from adult critical care coordinated by the Intensive Care National Audit & Research Centre (ICNARC). These analyses were based on data from 136,880 admissions to 205 adult, general critical care units (CCU) based in NHS hospitals geographically spread across England, Wales and Northern Ireland. Unit costs were obtained from the National Schedule of Reference Costs 2012-2013. **RESULTS:** There were 22,081 admissions to CCU, with an average duration of 7.6 days. At a cost per day of £1044, this adds up to £175.2 million. There were 14,471 admissions to a post-unit discharge location (23.3 days, £240/day). Total ward cost is thus about £80.9 million. Renal and advanced respiratory support was required by 4,440 and 13,797 individuals, respectively (both cost £285/day). With an average duration of 5.4 days for renal and 7.7 days for respiratory support, the total costs amount to £6.8 million and £30.3 million, respectively. Therefore, the total cost of septic shock is estimated to be around £293.2 million. **CONCLUSIONS:** With annual costs of nearly £300 million, it is evident that septic shock patients pose a heavy burden to the national healthcare system. These patients require lengthy hospital stays, as well as substantial renal and respiratory support. Adding drug costs, societal costs, as well as Scottish data, would increase the total costs even further. Septic shock is a costly disease and every effort should be made to reduce this burden to the patients, hospitals and society.

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DISINVESTING IN LOW-VALUE CARE: OPPORTUNITIES AND CHALLENGES

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OBJECTIVES: The role of 'disinvestment' in health care, i.e., the withdrawal (partially or completely) of interventions that provide no or marginal benefit compared to alternative therapeutic approaches is attracting worldwide attention. The objective of this study was to identify and review empirical evaluations of disinvestment programs to gauge their success and determine key challenges. **METHODS:** We systematically searched the medical literature using the PubMed database for empirical evaluations of disinvestment programs using the following search terms: "disinvestment", "resource allocation", "low value", and "priority setting". We did not restrict our search in regards to study publication year. Two researchers assessed each identified abstract. For each study, we reported the disinvestment program that was assessed and categorized study findings as 'successful' if a reduction in utilization of the low-value service was reported, and 'unsuccessful' if no reduction in utilization was reported. We also reported challenges identified by the study authors in the implementation of the disinvestment program. **RESULTS:** We identified 34 studies describing empirical evaluations of disinvestment programs. Fifteen pertained to the National Institute for Health and Care Excellence's recommendations, and/or their 'do not do list', 8 pertained to the Choosing Wisely Campaign, and 11 pertained to unique initiatives worldwide—including the French initiative to delist unnecessary pharmaceuticals with the help of its Transparency Commission. The empirical evaluations varied with respect to the reported success of the disinvestment programs: twenty-one determined the program to be successful, and 13 unsuccessful. Common challenges reported by study authors include difficulty in identifying low-value care for disinvestment and gaining support among stakeholders. **CONCLUSIONS:** Empirical evaluation of disinvestment programs is limited. Available evaluations report varied success for existing disinvestment strategies and noted that a number of key challenges are yet to be overcome.

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ECONOMIC MODELLING STUDIES PUBLISHED IN 2014: WHICH DISEASE AREAS HAVE BEEN THE MAIN FOCUS OF CLINICAL RESEARCH?

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OBJECTIVES: To determine the disease focus of all economic evaluation papers indexed in the PubMed database that were published in 2014. **METHODS:** An evi-

dence surveillance process was established based on a systematic search of PubMed, using key words relevant to economic modelling in healthcare or disease and limited to studies published in English, in humans, and with abstracts. The surveillance incorporated all studies published from 2010 and was updated weekly. Abstracts identified by the search of economic evaluation studies were indexed according to disease area, using the chapter categorisation from ICD-10 as a framework. Articles were also included if they analysed the cost-effectiveness of healthcare service design or explored methodological issues related to economic modelling. To account for the delay in indexing of publications, we included all studies with a publication date of 2014 that were indexed in PubMed up to 8 June 2015. **RESULTS:** The search identified 2,772 articles published in 2014. Of these, 836 met the inclusion criteria and were sub-categorised according to topic. The greatest number, 19%, were conducted in patients with infectious diseases, with 14% in cancer, 12% in cardiovascular disease, 8% in musculoskeletal disorders, 7% in mental health disorders, 6% in endocrine or metabolic disorders and 4% in digestive disorders. A further 7% of identified papers reported on modelling methods and 3% on service design. All other disease areas accounted for 3% or fewer of the relevant publications per ICD-10 chapter. **CONCLUSIONS:** The focus of economic evaluations in 2014 was on infectious diseases, followed by cancer and cardiovascular disease. As these three disease areas accounted for almost 60% of global mortality in 2012, and cause considerable morbidity, it is encouraging to see that health economic research has prioritised finding the most cost-effective ways to reduce this burden.

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USE OF BUDGET IMPACT ANALYSIS (BIA) IN ECONOMIC EVALUATIONS OF DRUGS AND MEDICAL DEVICES SUBMITTED TO THE FRENCH NATIONAL AUTHORITY FOR HEALTH (HAS)

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OBJECTIVES: Since October 2013 HAS is required to provide the inter-ministerial pricing committee (CEPS) with an economic evaluation on innovative drugs and medical devices likely to have a significant impact on national health insurance expenditure. HAS' evaluation involves a critical appraisal of cost-effectiveness analyses (CEA) submitted by manufacturers. Although budget impact analysis (BIA) is currently not required by HAS, it may be provided as an optional complement to CEA. Our objective was to assess how BIA was undertaken in manufacturers' submissions. **METHODS:** We used a qualitative approach to assess manufacturers' submissions by end of April 2015 (n=49). As currently there is no formal HAS guideline on BIA, we used the recommendations of the French Collège des économistes de la santé as well as ISPOR Task Force Principles on Good Practices for BIA as an analytical framework, including perspective, time horizon, discounting, size of eligible populations, current comparators, anticipated uptake of the new technology, and cost of treatments. **RESULTS:** Eleven (22%) submissions included a BIA along with the CEA. Compliance with ISPOR Task Force principles was generally fair for perspective, time horizon and discounting. The selection of current comparators was considered problematic in 7 (64%) of these submissions. Regarding costs of treatments, the majority of BIA failed to include adverse events as well as follow-up costs. In most cases, there was a lack of transparency on BIA modelling and eligible population size estimates. Furthermore, in 9 (80%) BIA, scenarios were not explored through adequate sensitivity analyses. **CONCLUSIONS:** Although based on a small number of submissions, our study identified concerns about population size estimates, comparators, identification of costs beyond treatment acquisition and administration, BIA interpretation and scenarios sensitivity analyses. This raises the need to include explicit recommendations on BIA in the next, updated version of the HAS guideline on economic evaluation.

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SICK-PAY EXPENDITURES IN HUNGARY ACCORDING TO MAJOR DISEASE GROUPS

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OBJECTIVES: In our study we investigated how monetary payment of sick-pay from National Health Insurance Fund Administration changed in the analysed period according to groups of illnesses. **METHODS:** We used the data of National Health Insurance Fund Administration of Hungary and statistical reports of Nr. OSAP 1514, as well as data of Hungarian Central Statistical Office from the period between 2005-2013. At the determination of groups of illnesses we used the main diagnosis of ICD classification of diseases. We analysed the following indicators: the number or sick-pay cases as well as the number of days spent on sick-leave with regards to groups of illnesses. **RESULTS:** After having analysed the data we can ascertain that mostly musculoskeletal illnesses can be named as reasons for adhering to sick-pay every year. (24-28% of all cases) The average time spent on sick-leave in these cases was 33-41 days. The inflammatory disease of the respiratory system was the second cause every year (17-20% of all cases). Resorting to sick-pay because of mental illnesses fell from 9 to 5%. The period of sick-leave continuously decreased from 2009. The shortest, on average 7-18 days of sick-pay was resorted to because of infectious diseases; due to the infectious disease of the respiratory system people were on sick-leave for 12-19 days on average. The period spent on sick-leave because of cancer diseases in the investigated years was 55-65 days. **CONCLUSIONS:** Significant decrease occurred in the case of days spent on sick-leave due to mental and nervous system diseases (2007: 50 days, 3013: 33 days) and inflammatory disease of the respiratory system (2005: 19 days, 2013: 12 days).

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COST-EFFECTIVENESS ANALYSES IN FRANCE, ENGLAND AND CANADA: COMPARATIVE ANALYSIS OF STRUCTURAL CHOICES, RESULTS AND PERSPECTIVES

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