

lost. **CONCLUSIONS:** The most important indirect costs in Italy from 2009 to 2012 was represented by disability benefits (69% of the total indirect cost), followed by disability pensions (28% of cost) and incapacity pensions (3% of cost). A better prescription appropriateness and rapid access to innovative treatments (Italy, among the EU Countries, is the one with the greatest delay in access) would reduce the costs incurred by the social security system accompanied by an improvement on the effectiveness of interventions.

PMS30

SYSTEMATIC REVIEW OF SOCIETAL COST OF ILLNESS EVIDENCE IN PATIENTS WITH PSORIATIC ARTHRITIS

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OBJECTIVES: Societal cost evidence relating to patients with psoriatic arthritis (PsA) is required to understand the overall economic impact of the disease. The objective of this research was to systematically review the published data relating to the societal burden of PsA. **METHODS:** Embase, Medline, and Cochrane databases (accessed November 2013) were interrogated. Studies reporting on non-health sector costs or work disability associated with PsA were eligible for inclusion with no geographical restriction. **RESULTS:** In total, 19 studies met eligibility criteria of the review; nine studies reported indirect costs associated with PsA and 11 studies reported PsA-related work disability. Studies were conducted across Europe, USA, Canada, and Asia. Methodology used to calculate indirect cost estimates differed among studies; seven studies defined indirect costs as costs associated with productivity loss only, and two studies adopted a wider definition whereby indirect costs included productivity loss and out-of-pocket costs expenses (e.g. transportation, informal care, and home aids). Annual indirect cost associated with PsA, calculated using the human capital or friction capital approach, ranged from €1,261 (Spain) to €7,919 (Germany), with the majority of studies (71%) reporting annual indirect costs of less than €4,000 per person. Considerable heterogeneity was reported, with indirect costs of €74,009 over a two year period estimated in Norway, compared with 6-month costs of €576 in Italy. Indirect costs accounted for between 38% and 72% of total costs. Work disability estimates ranged from 5% to 39%. Disease severity, age, and gender were reported as main drivers of indirect costs and work disability. **CONCLUSIONS:** Cost associated with productivity loss represented the majority of indirect costs associated with PsA. Comparison of studies is confounded by heterogeneity between studies. Further research into the societal costs associated with patients with PsA in the UK is required as no studies reporting UK specific costs were identified.

PMS31

SYSTEMATIC REVIEW OF SOCIETAL COST OF ILLNESS EVIDENCE IN PATIENTS WITH ANKYLOSING SPONDYLITIS

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OBJECTIVES: Ankylosing spondylitis (AS), one of the most common spondyloarthritides, is a chronic condition with a significant impact on patient quality of life (QoL), particularly physical functioning. The objective of this research was to systematically review published data relating to the societal burden of AS. **METHODS:** Embase, Medline, and Cochrane databases (accessed November 2013) were interrogated. Studies reporting on non-health sector costs or work disability associated with AS were eligible for inclusion. **RESULTS:** In total, 42 studies met eligibility criteria; 19 studies reported indirect costs associated with AS and 23 studies reported AS-related work disability. Studies were conducted across Europe, Africa, North America, and Asia. All studies defined indirect costs as costs associated with productivity loss. Annual indirect costs, calculated using the human capital approach, ranged from €595 (Belgium) to €9,837 (Germany). Friction costs calculated ranged from €428 (France) to €6,843 (Spain). Considerable heterogeneity was reported, with 2-year indirect costs of €66,907 estimated in Norway. Despite heterogeneity between studies, 75% of publications reported indirect costs of less than €4,500 per patient/year, representing between 34% and 74% of total costs. Non-medical costs such as informal care, and transportation ranged from \$65 (US) to \$3,663 (US), indicating that loss of productivity was the main driver of indirect costs. Estimates of work disability varied greatly across studies primarily due to heterogeneous populations and the lack of standardised questionnaires. The work disability of AS was multifactorial with regression analyses identifying several factors associated with both indirect costs and disability including demographic factors, disease and job characteristics. **CONCLUSIONS:** Although reported indirect costs and work disability estimates varied between studies, findings from this systematic review indicate that AS represents a substantial burden both on society and individuals with AS. A lack of UK-based data illustrates the challenge of incorporating societal costs into future UK reimbursement submissions.

PMS32

DETERMINATION OF THE ANNUAL HEALTH INSURANCE COST OF OUTPATIENT CARE PHYSIOTHERAPY SERVICES FOR LOW BACK PAIN

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OBJECTIVES: The aim of our study is to assess amount and frequency of the physiotherapy services in Low Back Pain disease and determine the total health insurance reimbursement. **METHODS:** Data were derived from the countrywide database of Hungarian Health Insurance Administration (HHIA), based on official reports of outpatient care institutes in 2009. The total numbers of different physiotherapy services were determined by selecting the reported specific diagnoses codes and counting the number treatments provided for that specific diagnosis code. The different types of treatment codes are listed in the chapter of the Guidelines of HHIA for 'Physiotherapists, massage-therapists, conductors and other physiotherapy practices'. The Low Back Pain was reported according to WHO ICD diagnosis code M5450. **RESULTS:** Low Back Pain account for 1237263 cases in the annual number of the physiotherapy-related activities (32318413 cases) showing an approximately

3.83% prevalence. The 20 most frequent treatments accounts for 82.12 % (1016057) of total services. The following top-10 medical procedure were responsible for 58,05% (718.276) of total activities: 1) Ultrasound therapy 118806 (9.60%), 2) Iontophoresis 100788 (8.15%), 3) Passive movement 80424 (6.50%), 4) Mid-frequency treatment 77434 (6.26%), 5) Muscle strengthening exercises 62049 (5.02%), 6) Hand Massage 62026 (5.01%), 7) Ergo therapy 60462 (4.89%), 8) Spinal Mobilization 57609 (4.66%), 9) Diadynamic interference management 54092 (4.37%), 10) Training for circulation improvement 44586 (3.60%). Physiotherapy out-patient care for Low Back Pain patients were 1.23 million cases with 294 million Hungarian Forint (0.96 million Euro) health insurance subsidy. **CONCLUSIONS:** The list of the 20 most frequent types of services reflects to the demand for the combination of active and passive exercises in Hungary. In case of capacity planning for diagnostic and therapeutic procedures, these findings should be considered.

PMS33

COST OF TREATING HIP FRACTURES WITH CEPHALOMEDULLARY NAILS: A RETROSPECTIVE CLAIMS DATABASE REVIEW

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OBJECTIVES: The number of hip fracture hospitalizations in the U. S. was approximately 352,000 in 2011 and expected to rise. The consequences of hip fractures are significant regarding the associated negative impacts on functioning and quality of life. Intertrochanteric hip fractures are frequently stabilized surgically using cephalomedullary nails (CM). Complications may include post-operative femoral-shaft fracture, mechanical complications, and delayed/non-union, requiring reoperations that increase risk to the patient and cost to the health care system. **METHODS:** A retrospective analysis of the Premier research database was conducted. Patients diagnosed with open and/or closed intertrochanteric fractures (ICD-9-CM codes 820.2x or 820.3x) and treated for Hip Fracture (MS-DRG 480-482) from 1-JAN-2008 through 30-JUN-2012 were included in the study. Among this population, patients treated with IM were identified using standard charge descriptions within orthopedic-implant hardware charges. To identify patients who had a reoperation, patient-level admission records starting from index admission up to 12-months post-index procedure were investigated within the same MS-DRG classifications. **RESULTS:** Overall, 73,745 patients qualified for the study (71% female; 74% ≥ 75-years-old). Of these, 32,175 (44%) were treated using CM. The average hospital cost of the index procedure was \$15,798USD per patient (inclusive of fixed and variable costs), of which the average cost of the orthopedic nails was \$1,704USD. Among these patients, a total of 419 (1.3%) patients were readmitted at 427 occasions within the 12-month study period. The mean hospital cost of treating these readmissions was \$16,352USD, and the primary diagnoses codes for these readmissions included femoral fractures, nonunions, and device/mechanical complications. **CONCLUSIONS:** Although the incidence of readmission following a hip fracture is low, the economic burden placed on the health care system and the humanistic burden are both significant. The incidence rate and long-term sequelae for hip fractures are well documented in the literature; however, the mean costs to a hospital have not yet been published.

PMS34

COST RELATED TO THE WAITING LIST OF PATIENTS WITH VERTEBRAL MALFORMATION

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OBJECTIVES: The Hungarian health budget does not allow all candidates to be promptly operated on with vertebral malformation. The budget is enough for approximately 4000 stabilizations by implant. The rest have to be put on the waiting list. The aim of our study is to analyse the costs related to the patients being on waiting list for surgery of vertebral malformation. **METHODS:** Data derived from the nationwide financial database of the Hungarian National Health Insurance Fund Administration. 71 patients on waiting list of an institute in 2005-2006 were studied. We analysed the average waiting time and the costs related to patients either operated on or without operation. **RESULTS:** The average age of all candidates was 55 year and the average waiting time was 32 months. The treatment cost during the waiting time was US\$ 103 per month per patient. The average age of candidates operated on was 57 years and their average waiting time was 15 months with a costs of US\$ 155 per month per patients. The average age of candidates not operated on was 54 years and their average waiting time was 15 months with a cost of US\$ 92 per month per patient. **CONCLUSIONS:** Half of candidates have not been operated on, because at the appointed date they postponed the operation. But they seem not to really want to be operated on. The reason could be they were not sure enough to be able to get job after the operation at their age.

PMS35

TREATING TO THE TARGET OF DAS28 < 2.6 IN RHEUMATOID ARTHRITIS: THE IMPACT OF EFFICACY ON COST EFFECTIVENESS

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OBJECTIVES: Target measures such as DAS-28 < 2.6 are the goal of treatment in rheumatoid arthritis (RA). In general, DAS-28<2.6 is associated with improved functionality and reduced resource use but with higher treatment costs. This study evaluated whether treatment strategies that were more effective but more expensive in achieving DAS-28<2.6 in moderate to severe RA patients were cost effective (CE). **METHODS:** A micro-simulation model of 10,000 RA patients was developed that estimated lifetime Health Assessment Questionnaire (HAQ) progression, quality adjusted life years (QALYs) and direct costs from a UK NHS perspective. The model incorporated an initial response criterion of achieving a DAS-28 <2.6 at 6 months