

nese women should be determined with consideration for multiple CRFs in terms of cost-effectiveness.

PMS72

EVALUATION OF CLINICAL PERFORMANCE AND VARIATION AMONG THREE TYPES OF PATIENTS WITH RHEUMATOID ARTHRITIS: OPPORTUNITIES TO RAISE QUALITY AND LOWER COSTS

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OBJECTIVES: To determine the quality and variability of care in rheumatoid arthritis (RA). **METHODS:** We recruited 109 board-certified rheumatologists. Physicians evaluated 3 common RA cases: A) mild disease activity, inadequately treated with conventional disease modifying antirheumatic drugs (DMARDs); B) increasing disease activity, inadequately treated with conventional DMARDs; and C) stable disease activity, adequately treated with DMARDs, with a complicating co-morbidity. Clinical performance and value (CPV) vignettes, a validated case-mix adjusted measure of clinical practice, assessed variability and quality of care. Consented physicians completed one online vignette for each case-type obtaining a history, physical examination, ordering tests and determining treatments. Criteria for evaluating clinical decisions were based on ACR guidelines, published evidence and expert panels. Vignette scores are reported as percentages of total criteria correct overall and by domain, (e.g., treatment prescribed). **RESULTS:** The mean quality score for all simulated cases (n=327 cases) was 61.3%. Mean scores for history were 62.8%; physical examination: 55.8%; laboratory testing and imaging: 61.1%; disease activity assessment: 52.6% and treatment: 66.9%. Ordering unnecessary tests was most common: rheumatologists ordered 1.8 additional laboratory and 1 additional imaging test. Among the 3 case types, lowest quality and most clinical variability occurred in the case with the co-morbidity (Case C), associated with unnecessary testing and inappropriate use of biologic and/or combination DMARDs. Variability was also found in Cases A and B: 3 of 10 and 2 of 10 rheumatologists, respectively, used combination and/or biologic DMARDs unnecessarily. **CONCLUSIONS:** Improving quality and lowering cost is a strategic focus of payers and providers. Using CPV vignettes, we found a wide range of variation in RA practice, which resulted in unnecessary testing, repetition of potentially expensive imaging studies and varying use of DMARDs. This variability indicates there are opportunities to improve quality of care and lower costs.

PMS73

A SYSTEMATIC LITERATURE REVIEW OF ECONOMIC STUDIES AND A COST ANALYSIS RELATED TO EPIDURAL STEROID INJECTIONS IN THE ELDERLY

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OBJECTIVES: To appraise existing economic evaluations of epidural steroid injections (ESIs) for lumbar spinal stenosis and to estimate Medicare-based reimbursed amounts. **METHODS:** We searched PubMed through June 2011 for low back pain, spinal stenosis or sciatica, and ESI and included observational studies with cost outcomes. We performed a supplementary descriptive analysis of Medicare reimbursed amounts associated with ESI performed at a single institution in 2010. **RESULTS:** Our literature search indicated that rates of lumbar ESI increased 271% from 1994 to 2001 in Medicare beneficiaries ≥ 65 years of age with professional charges per injection nearly doubling (\$115 to \$227) during this time period. A second study found the rate of lumbar epidurals was 67% higher in 2006 versus 2002 in Medicare beneficiaries of any age, and allowed charges of all spine epidural increased from \$336 to \$395. Our single-institution estimation sample included 279 patients receiving one (n=179), two (N=93), three (N=30), or four (N=2) ESIs. We estimated mean total Medicare reimbursement per outpatient ESI episode procedure to be \$635 in 2010 (technical reimbursement and estimated professional payment). The associated reimbursement estimates were \$1239 and \$1834 for those receiving 2 and 3 ESI episodes, respectively. **CONCLUSIONS:** There are few studies investigating the economic impact of ESI procedures for lumbar spinal stenosis in the elderly, or providing estimates of technical and professional reimbursement amounts. Our single-institution estimate suggests that Medicare-based reimbursement is greater than \$600 per ESI (technical and professional). More information on utilization, costs, and cost-effectiveness of ESI in treating lumbar spinal stenosis are needed.

PMS74

DEVELOPING AND IMPLEMENTING PATIENT-RESOURCE USE DIARIES FOR A CLINICAL TRIAL ASSESSING SPINAL STENOSIS INTERVENTIONS IN THE ELDERLY

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OBJECTIVES: To develop and implement patient-reported resource use questionnaires for assessing utilization and costs in elderly patients with lumbar spinal stenosis (SS), as part of an epidural steroid injection randomized clinical trial (RCT) in multiple integrated health systems. **METHODS:** We developed patient-completed diaries for a RCT in an elderly population with SS to capture medication use, time, and costs incurred by patients. Diary sections included: prescription opioid medications, non-opioid analgesics and over-the-counter (OTC) products, therapeutic services, time spent for SS care, and products purchased for back pain. We summarized demographics and commonly-reported opioid medications for currently-enrolled subjects. **RESULTS:** We implemented resource use diaries in a RCT during baseline to week 3, weeks 4-6, weeks 24-26, and weeks 50-52. Overall, the diaries capture 12 weeks of data, distributed at key time points, during 12 months.

The prescription opioid section and OTC section collect dose and daily medication use intensity. Later sections capture weekly visits, time, and purchases for back pain. We integrated the patient questionnaires into our overall electronic data management system, including prompts for sites to send participants diaries, collect diaries and enter the data on our RedCap™ electronic data capture system. To date, 100 RCT participants completed baseline diaries. The mean age was 69.6 years, 59% were females, and approximately 29% were from minority groups. The most commonly reported opioid medications were hydrocodone-acetaminophen and acetaminophen-codeine. **CONCLUSIONS:** It is important to capture the patient perspective in RCTs, particularly those with complex interactions among pain, functioning, medication use and economic endpoints. Electronic medical records are powerful tools to assess clinical and economic resource use, but still have limitations on collecting what patients spend and do to manage their pain condition. Logistical challenges and patient burden of completing questionnaires must be weighed against a more comprehensive economic evaluation and management of a high-priority condition.

PMS75

ANNUAL GOLIMUMAB UTILIZATION AND COSTS FOR PSORIATIC ARTHRITIS PATIENTS ENROLLED IN MANAGED CARE PLANS

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OBJECTIVES: To calculate expected mean annual golimumab costs based on observed one-year dosing patterns within a managed care population of psoriatic arthritis (PsA) patients. **METHODS:** IMS LifeLink™ Health Plan Claims database was utilized to identify patients with: index golimumab claim (4/24/2009-01/06/2010); age ≥ 18 years at index; ≥ 1 PsA diagnosis code (696.0); and 12/24 months pre-/post-index continuous enrollment. Biologic experience was defined as ≥ 1 medical/pharmacy claims for another biologic 12 months prior to the first golimumab prescription. Golimumab utilization was reported as the proportion of patients and prescriptions at the recommended 50 mg dose, and prescription intervals, for the 12 month post-index period. Annual costs were modeled using the golimumab United States wholesale acquisition cost (effective 7/5/2011) of \$1,941.65 per 50 mg. **RESULTS:** 127 PsA patients receiving golimumab (n=914 prescriptions) were identified; 59.8% were female; mean \pm SD age was 49 \pm 10 years. The majority (78.7%) of patients had pre-index biologic experience; 73.0% experienced 1 unique biologic, 24.0% experienced 2 unique biologics, and 3.0% experienced 3+ unique biologics at some time point before golimumab. A 50 mg golimumab dose was dispensed in 95.3% of all PsA patients upon initiation and 96.6% of all prescriptions. The dose at each of the first 12 prescription fills was 50 mg for 95.2%-97.9% of patients. A 50 mg dose was dispensed upon initiation in 94.0% and 100.0% of biologic-experienced and non-biologic-experienced PsA patients, respectively. Overall mean \pm SD interval between prescriptions was 32 \pm 14 days; median was 30 days. Based upon observed prescription intervals, a mean annual acquisition cost of \$22,135 would be realized. **CONCLUSIONS:** The majority of PsA patients receiving golimumab was biologic-experienced and received a 50 mg dose on a monthly basis with no apparent increased dose requirement. Estimated average annual per patient golimumab cost in a managed care PsA population would be \$22,135.

PMS76

TWO-YEAR DIRECT HEALTH CARE COST BURDEN OF PSORIATIC ARTHRITIS TO MANAGED CARE: A RETROSPECTIVE CASE STUDY OF GOLIMUMAB PATIENTS

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OBJECTIVES: To describe the 2-year disease-related direct healthcare costs of psoriatic arthritis (PsA) patients, in managed care, prior to initiating golimumab (baseline). **METHODS:** The IMS LifeLink™ Health Plan Claims database was utilized to identify patients who had/were: index golimumab pharmacy claim started April 24, 2009-June 30, 2010; aged ≥ 18 years at index; ≥ 1 PsA ICD-9 diagnosis code (696.0); and 24 months pre- and ≥ 6 months post-index continuous enrollment. Total disease-related direct healthcare costs included medical (inpatient, outpatient) and pharmacy (biologic and non-biologic treatment) costs. Disease-related allowable healthcare costs were calculated from outpatient and inpatient claims with an ICD-9 diagnosis code for PsA (696.0) or rheumatoid arthritis (RA-714.xx). Pharmacy costs were calculated from allowed costs for biologic and non-biologic treatments used in PsA, RA, or psoriasis. **RESULTS:** A total of 211 golimumab patients with PsA (n=180 with pre-index biologic experience) were analyzed; mean \pm SD age was 50 \pm 10; 61.1% female. Concomitant diagnosis codes for RA or psoriasis were found in 39.8% and 51.2% of all PsA patients, respectively. Total mean \pm SD pre-index PsA-related costs were \$3,569 \pm \$9,231. Mean PsA-related outpatient medical costs represented 92.0% of total PsA-related costs. Among the 114 patients with a comorbid RA diagnosis code, overall mean pre-index total RA-related costs were \$2186. Mean disease-related pharmacy costs for the 2-year period prior to golimumab totaled \$28,041. Based on the disease-related outpatient, inpatient, and pharmacy costs, the 2-year direct mean per patient disease-related health care costs in PsA was \$32,791. **CONCLUSIONS:** In this study, annual managed care per patient direct PsA healthcare costs were \$16,369. This new economic burden of illness estimate may further aid decision makers in assessing the cost-effectiveness and budgetary impact of PsA therapies, including biologics. This estimate, however, should be considered in the context of incremental improvements in clinical outcomes associated with biologic treatments compared with older PsA therapies.