$242,303,186), Medicaid costs increasing 74% ($75,486,525-$131,185,098), and private insurance costs decreasing 7% ($134,325,086-$125,069,130). Hospitalized spine-infection patients with a DM diagnosis increased 6%, while discharges with other associated comorbidities decreased. In the group of patients with spine infection and those with DM, the ratio of male/female patients, patient-age distribution, and payer mixes were similar. This was not present for the other comorbidity groups. ***Conclusions:*** The frequency of U.S. hospitalizations for spine infection increased between 2006 and 2014. The associated volume of Medicare and Medicaid patients increased and fewer patients were commercially insured, with consistent corresponding changes in aggregate HCUPnet calculated payer costs. The increase in spine infections appeared to parallel the increase in hospitalization for diabetes mellitus, a recognized comorbidity associated with infection. Assessing correlations between spine infection and comorbidities requires further study, along with estimating the economic burden of these patients.

PMU28
CLINICAL AND ECONOMIC OUTCOMES OF CARBAPENEM-RESISTANT GRAM-NEGATIVE ORGANISMS: A MULTICENTER STUDY IN CHINA

Zhen X,[1] Gu S,[2] Sun X,[3] Hu X,[3] Gu Y,[3] Dong H[3]
[1]*Shandong University, Jinan, China,* [2]*Nanjing University, Nanjing, China,* [3]*Zhejiang University, Hangzhou, China*

Objectives: Carbapenem-resistant gram-negative organisms, which were classified as critical organisms in WHO priority ranking list of antibiotic resistant organisms are difficult to treat. In China, the proportion of A. baumannii, P. aeruginosa, K. pneumonia isolates that were carbapenem-resistant A. baumannii (CRAB), carbapenem-resistant P. aeruginosa (CRPA), carbapenem-resistant K. pneumonia (CRKP) were 59.0%, 22.4%, and 7.6%, respectively. The clinical and economic outcomes of CRAB, CRPA, and CRKP are largely uninvestigated. This study aimed to compare the differences in hospital cost, length of stay, and hospital mortality among inpatients with CRAB and carbapenem-susceptible A. baumannii (CSAB), CRPA and carbapenem-susceptible P. aeruginosa (CSPA), and CRKP and carbapenem-susceptible K. pneumonia (CSKP). ***Methods:*** A retrospective and multicenter study of inpatients with antibiotic positive clinical samples was conducted in four tertiary hospitals in China during 2013 and 2015. Propensity score matching was conducted to balance the potential confounding variables, and to explore the main indicators including hospital cost, length of stay, and hospital mortality. Monte Carlo simulations with 1,000 iterations were run to calculate 95% uncertainty intervals. ***Results:*** A total of 1,665 inpatients with CRAB and 1,280 with CSAB, 1,244 with CRPA and 2,674 with CSPA, 831 with CRKP and 4,328 with CSKP were included. PSM generated 682, 1,155, 822 pairs between CRAB and CSAB group, CRPA and CSPA group, and CRKP and CSKP group, respectively. After PSM, increased total hospital cost of $7,277, $4,605, $14,252 were observed in inpatients caused by CRAB. CRPA, and CRKP colonization and infection. Excess length of stay of 15.8 days, 5.4 days, and 13.2 days were found among inpatients with CRAB, CRPA, and CRKP, which were also associated with attributable hospital mortality of 4.03%, 2.03%, and 2.94%. ***Conclusions:*** Our study highlights the heavy clinical and economic outcomes imposed by A. baumannii, P. aeruginosa, K. pneumonia and carbapenem resistance on the Chinese healthcare system.

PMU29
REAL-WORLD IMPACT OF DISEASE ON FUNCTIONING AND ACTIVITY: A CROSS-SECTIONAL STUDY OF THE NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY

Yan T,[1] **Ortendahl JD,**[1] Chang E,[1] Wessler Z,[2] Lemay J,[2] Harmon AL,[1] Broder MS[1]
[1]*Partnership for Health Analytic Research, LLC, Beverly Hills, CA, USA,* [2]*Amgen, Thousand Oaks, CA, USA*

Objectives: Economic evaluations conducted to inform healthcare resource allocation often rely on quality-adjusted life years (QALYs) to measure therapeutic benefit. However, QALYs, with underlying health utilities estimated using the EQ5D or SF36, may fail to capture the full impact of disease as they do not robustly quantify physical and cognitive limitations. We explored how well-being and heath utility can differ across diseases. ***Methods:*** This study examined 8 conditions: arthritis, asthma, cancer, depression, diabetes, heart disease, lung disease, and stroke. Health utilities for each condition were obtained from published literature. Other measures of disease burden were estimated from the National Health and Nutrition Examination Survey (NHANES). The 2015-2016 physical functioning (PF) and physical activity (PA) questionnaires were used to measure PF and PA while the 2013-2014 Digit Symbol Substitution Test was used to measure cognitive functioning. Group rankings by these measures were compared to rankings by health utility. ***Results:*** Health utilities were lowest for depression (0.44) and stroke (0.76), and highest for those with cancer (0.81) and diabetes (0.79). Physical functioning was worst (higher score) among those with stroke (28.2), lung disease (27.3), and depression (27.1) and best for cancer (24.4) and diabetes (24.6). Physical activity was most impacted by heart disease (27.3) and lung disease (29.0), and least impacted by depression (40.7). Cognitive functioning was worst (41.6) in stroke and best (52.0) in asthma. ***Conclusions:*** Differences in rankings of disease severity by utilities and by well-being metrics demonstrate that utilities, and results of cost-utility analyses that use them, might be biased against treatments for certain conditions. As patient preferences for clinical outcomes vary, the full burden of disease should be considered in evaluations. Restricting access to treatments based on an incomplete estimate of burden could lead to misallocation of resources and a withholding of therapies that patients find valuable.

PMU30
COST-EFFECTIVENESS ANALYSIS OF NEWBORN SCREENING FOR SPINAL MUSCULAR ATROPHY (SMA) IN THE UNITED STATES

Arjunji R,[1] Zhou J,[2] Patel A,[1] Edwards ML,[3] Harvey M,[2] Soverino M,[4] Dabbous O[1]
[1]*AveXis, Inc., Bannockburn, IL, USA,* [2]*Analysis Group, London, UK,* [3]*Analysis Group, New York, NY, USA,* [4]*Analysis Group, Boston, MA, USA*

Objectives: Spinal muscular atrophy (SMA) is a neurodegenerative disease caused by *SMN1* gene deletion/mutation. Disease severity (SMA type) correlates with *SMN2* gene copy number. Gene therapy (onasemnogene abeparvovec-xioi) provides sustained, continuous production of SMN protein, and is FDA-approved, with ongoing trials for SMA types 2/3, and presymptomatic treatment for all SMA types. With effective treatments available, many US states are implementing newborn screening (NBS) to detect *SMN1* deletions and *SMN2* copies, providing early diagnosis and the option of presymptomatic treatment. It is important to understand the economic impact of NBS and presymptomatic gene therapy. ***Methods:*** A decision-analytic model was built to assess the cost effectiveness of NBS in 10,000 hypothetical newborns from a US third-party payer perspective. In the base case, NBS with presymptomatic gene therapy for any positive SMA test was compared to no NBS with gene therapy for symptomatic SMA type 1. Inputs and assumptions on lifetime costs and utilities for SMA types were obtained from the 2018 Institute for Clinical and Economic Review SMA report; other values were sourced from published literature. Model outputs included costs, quality-adjusted life years (QALYs), and incremental cost-effectiveness ratios (ICERs). Scenario and sensitivity analyses tested model robustness. ***Results:*** In the base case, NBS for 10,000 newborns with presymptomatic gene therapy for any positive test and treatment cost $3,150,087 and produced 269,996 QALYs. The ICER was $15,181/QALY compared to no NBS with gene therapy for symptomatic SMA type 1. In the scenario analysis, if only presymptomatic patients with ≤3 *SMN2* copies are treated, NBS was dominant. ***Conclusions:*** Compared to no screening, NBS with presymptomatic gene therapy for SMA is a cost-effective option from the US payer perspective. Results were most sensitive to treatment strategies (i.e. treatment depending on *SMN2* copy number) and the distribution of SMA types; screening costs had a minimal impact.

PMU31
ABSENTEEISM AND WORK DISABILITY ASSOCIATED WITH PSORIASIS AND PSORIATIC ARTHRITIS IN THE US

Orbai AM,[1] Reddy S,[2] Villacorta R,[3] Dennis N,[4] **Peterson S,**[3] Mesana L,[5] Chakravarty SD,[6] Pacou M,[4] Lin I,[3] Walsh J[7]
[1]*Johns Hopkins Arthritis Center, Baltimore, MD, USA,* [2]*NYU School of Medicine, New York, NY, USA,* [3]*Janssen Immunology Global Commercial Strategy Organization, Horsham, PA, USA,* [4]*Amaris, Paris, France,* [5]*Amaris, New York, NY, USA,* [6]*Janssen Scientific Affairs, LLC, Horsham, PA, USA,* [7]*University of Utah School of Medicine, George E. Wahlen Veteran Affairs Medical Center, Salt Lake City, UT, USA*

Objectives: Absenteeism and work disability substantially contribute to the economic burden of psoriasis (PsO) and psoriatic arthritis (PsA). This study compared short-term disability and absenteeism among patients with PsO, PsA, and a control group of patients without PsO and PsA. ***Methods:*** The IBM MarketScan Commercial Database and Health and Productivity Management Database screened three adult patient groups for work absenteeism and/or short-term disability between 01/01/2009 and 04/30/2019: 1) PsO: ≥1 inpatient or 2 outpatient diagnoses for PsO (none for PsA); 2) PsA: ≥1 inpatient or 2 outpatient diagnoses for PsA; 3) Control: no PsO or PsA diagnoses. The control group was matched 3:1 to PsO and PsA patients based on age, gender, and number of non-rheumatological comorbidities. Absenteeism, short-term disability loss and costs (in 2018 USD) were evaluated descriptively and through mixed models. ***Results:*** 5,427 PsO and 914 PsA absentee-eligible and 32,624 PsO and 5,326 PsA short-term disability-eligible patients were matched to the control group. Mean age at baseline for absentee-eligible patients (47.2 years ± 9.9) and short-term disability-eligible patients (45.6 years ± 9.9) were comparable among the groups. Average costs from non-recreational work absences were $1,901, $1,649, and $1,427 per patient per year (PPPY) for the PsA, PsO, and control group, respectively. Compared to the control group at one year, these costs were significantly greater in the PsA ($p<0.001$) and PsO ($p<0.001$) groups. The one-year odds of short-term disability were significantly greater among patients with PsA compared to PsO (OR:1.47, 95%CI:1.33-1.61) and controls (OR:1.89, 95%CI:1.72-2.07). The average costs from short-term disability were $654, $444, and $349 PPPY for the PsA,