

Based Measure-SBM) and Malmquist index with Clearances. The sum of these two items is corresponding to the total expenditure in the sector analysed. Output: the output is defined as the number of renal transplants performed by every Brazilian State. **RESULTS:** Examining the decomposition of the Malmquist index, has that 18 States increased the index of pure change of efficiency (Pairing) with values greater than 1. According to the results, 21 States have submitted an index less than 1, indicating an offset of the boundary of production to a lower level. The analysis of efficiency of Brazilian States proposed in this study indicates a need for a better allocation and/or application of the resources spent by the SUS in the area of kidney transplants. **CONCLUSIONS:** The results of this survey suggest that the process of kidney transplants has presented an activity with great variability between States. The offer of the kidney organ becomes insufficient in these places to meet the demand, creating queues of waiting for a kidney transplant. The system of kidney transplants in Brazil, in the current period, presents a number of surgeries that are below the population's needs, due mainly to the lack of effective donations of this organ.

PHS69

ECONOMIC IMPACT OF PATIENTS WITH TUBEROUS SCLEROSIS COMPLEX (TSC) IN THE UK: A RETROSPECTIVE DATABASE ANALYSIS IN THE CLINICAL PRACTICE RESEARCH DATALINK (CPRD)

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OBJECTIVES: TSC is a multi-system genetic disorder that affects up to 8,000 patients in the UK. It is associated with non-malignant lesions throughout the body, neurological manifestations, and impaired cognition. Consequently, the burden on patients, their families, and the health care system is thought to be substantial. This study assesses the real-world economic impact of TSC in the UK. **METHODS:** TSC patients were retrospectively identified between April, 1997 to March, 2012 in CPRD (Read: PK5.00, PK5.12) and linked Hospital Episodes Statistics (HES; ICD-10: Q85.1) databases. Health care encounters in the following settings were analysed: general practitioner (GP), inpatient, emergency room (ER) admissions and outpatient. Analyses were stratified by age at time of occurrence for paediatrics (<18 years) and adults (≥18 years). **RESULTS:** A total of 341 TSC patients were identified (52% female; median age 14.4 years at first event). The annual rate (mean[SD]) of health care encounters (by person-year) was 13.7(14.3) for paediatrics and 15.6(15.3) for adults. Annual rates (mean[SD]) of paediatric vs. adult encounters by care setting was as follows: GP, 10.1(3.1) vs. 12.9(14.2); inpatient, 1.0(1.6) vs. 0.6(1.0); ER admission, 0.4(0.8) vs. 0.3(0.7); outpatient, 3.9(3.3) vs. 2.8(3.0). Neurological manifestations (primarily epilepsy, including infantile spasms and status epilepticus) were most common in paediatrics resulting in inpatient and ER admission use in 53% and 62% of patients, respectively. Musculoskeletal manifestations were most common in adults resulting in inpatient and ER use in 31% and 33% of patients, respectively. Mean(SD) number of surgical procedures and tests/patient-year was 0.2(0.4) and 0.3(0.4), respectively. MRI or CT scans were observed in 34% of paediatrics and 26% of adults. **CONCLUSIONS:** Health care resource utilization rates suggest significant economic burden of TSC throughout life. Absence of MRI or CT procedures may signify deviation from recommended monitoring guidelines. Further analyses will quantify the cost impact of TSC on the UK health care system.

PHS71

HIGH COST PATIENTS AND COST PATTERNS FROM PEDIATRIC TO ADULT CARE IN A MEDICAID POPULATION WITH SICKLE CELL DISEASE

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OBJECTIVES: The aim of this study was to identify high cost sickle cell disease (SCD) patients (HCSPs) and analyze their cost patterns throughout lifetime and as they transition from pediatric to adult care. **METHODS:** State Medicaid data from 1997 to 2010 were analyzed. Patients with ≥2 SCD diagnoses and ≥1 blood transfusion were included. HCSPs were defined as the fraction of most expensive patients accounting for 50% of the total yearly costs. Periodic events associated with high costs are likely to be responsible for high total costs. High cost events (HCEs), defined as quarters with costs ≥\$33,095, corresponding to the amount separating the top 5% most expensive quarters observed in the sample, were analyzed. A longitudinal logistic regression model was used to identify factors associated with HCEs. **RESULTS:** From a cohort of 3,208 eligible SCD patients, 449 (14%) were identified as HCSPs. The average yearly total cost of HCSPs was significantly higher at \$108,524/year compared to \$17,683/year for other patients. The share of the total yearly costs of HCSPs increased from 34.4% to 46.3% between age groups 11-15 and 16-20, reaching its maximum at 65.2% in the 26-30 age group. The frequency of HCEs increased by 122.6% in the transitioning group from 0.110 HCE/year among patients aged 11-15 to 0.244 HCE/year among patients aged 16-20. Patients were more likely to have a HCE during the post-transition period (adjusted odds ratio [OR]: 1.41, p=.0046) and when experiencing an SCD complication (OR: 3.79, p<.0001). Blood transfusions received during the previous quarter were associated with a lower likelihood of HCEs (OR: 0.87, p=.0080). **CONCLUSIONS:** In this population of Medicaid SCD patients, 14% were responsible for over 50% of total yearly health care costs. Directing appropriate and targeted interventions can help assist providers improve outcomes and lower health care costs in this patient population.

PHS72

THE COST OF MULTIPLE LYMPH NODE BIOPSY PROCEDURES TO THE UNITED STATES HEALTH CARE SYSTEM AMONG PATIENTS DIAGNOSED WITH LYMPHOMA: A COMMERCIAL HEALTH CARE DATABASE ANALYSIS

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OBJECTIVES: Diagnosis and monitoring of lymphoma includes lymph node assessment. This study examined the association of multiple lymph node biopsies and health care resource use among lymphoma patients. **METHODS:** Patients with ≥2 claims for Hodgkin lymphoma (HL) or non-Hodgkin's (NHL) lymphoma from 1/1/06-12/31/12 were identified from a large US claims database; the index date was the first lymphoma claim date. Patients were retained if continuously enrolled in the health plan for ≥12 months before and after the index date, were not diagnosed with lymphoma during the pre-index period or diagnosed with cancer other than lymphoma. Health care cost and utilization were examined during the 2-year study period. Indication of receipt of biopsy included ≥1 claim for a lymph node biopsy (core needle, fine needle, surgical, other), pathology, or tumor excision (bone marrow biopsy not included). Health care cost and utilization was examined among patients with 0 to ≥3 biopsies. The cost of claims indicating biopsy was identified for each biopsy type. **RESULTS:** 20,813 newly diagnosed lymphoma patients met all inclusion criteria. 16,557 (80%) had ≥1 claim indicating biopsy, 12,920 (62%) had ≥2 and 8,783 (42%) had ≥3. The percentage with an inpatient stay and ER visit was greatest among patients with ≥3 biopsies (52%, 53%) compared to patients with 2 (33%, 41%), 1 (25%, 34%), or 0 biopsies (26%, 42%). Total health care cost was greatest among patients with ≥3 biopsies (\$102,465) compared to 2 (\$51,565), 1 (\$25,614), or 0 biopsies (\$15,671). The cost of biopsies ranged from \$307 for a fine needle biopsy to \$3,296 for a complex surgical biopsy and \$12,353 for other biopsies. Biopsies involving the mediastinum cost \$10,554 on average. **CONCLUSIONS:** Lymphoma patients incur significant health care cost and utilization. Increasing the efficiency of lymph node diagnosis could avoid the need for repeat biopsies and reduce health care costs.

PHS73

COSTS OF PILOT PROGRAMS IN CHICAGO-BASED CENTERS FOR POPULATION HEALTH AND HEALTH DISPARITIES: A CASE FOR TEAM-CARE?

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OBJECTIVES: To measure the costs of two team-care based pilot interventions. These interventions are part of the Chicago-based National Institutes of Health-funded Centers for Population Health and Health Disparities (CPHHD) designed to improve health outcomes in medically underserved communities. **METHODS:** The data come from two Chicago-based CPHHD randomized controlled trials. Use of a virtual team aimed at reducing depressive symptoms in older adults with depression (BRIGHTEN Heart) and cardio-metabolic syndrome and use of a patient navigator to improve diagnostic follow-up of mammography screening for breast cancer. The programs collected detailed data regarding service delivery and resource use. Costs were measured from a provider perspective. Actual time spent with patients was estimated in the navigator program using details on activities performed and previous time study data for those activities in similar programs. Time was converted to costs based on average wages reported by the Bureau of Labor Statistics (BLS) by occupational title. BRIGHTEN Heart involved multiple services along with time and travel cost estimates for each occupation and service. **RESULTS:** There were 493 patients that received patient navigator services and 16 patients in the virtual team-based BRIGHTEN Heart intervention. The patients were almost all minorities and were below average in terms of income and education. The operating cost of the Navigator program was \$14.29 following diagnostic screening. The operating cost for the year of virtual team care in BRIGHTEN Heart was \$753.18. **CONCLUSIONS:** Costs are an important consideration for evaluating team-care based interventions to improve patient health in the underserved. The two programs evaluated here offer insight into the relatively low cost of interventions with team-care strategies employing allied health workers. Given the low cost of care, the programs offer promise of being cost effective. Future work will examine these costs in comparison to the effectiveness of the program.

PHS74

TREATMENT PATTERNS AND HEALTH CARE RESOURCE UTILIZATION OF PATIENTS WITH NEUROENDOCRINE TUMORS IN THE UNITED STATES

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OBJECTIVES: To examine patient characteristics, treatment patterns, and health care resource utilization of patients with neuroendocrine tumors (NETs) in the US. **METHODS:** Using a US administrative claims database, commercially-insured adults newly diagnosed with carcinoid tumors (ICD-9-CM: 209.xx) or pancreatic islet cell tumors (ICD-9-CM: 157.4 and 211.7) between 07/01/2007 and 12/31/2010 were identified (the date of the first observed diagnosis as the index date). Patients were required to have 6-month pre-index and 12-month post-index continuous enrollment. Descriptive analysis was performed to describe demographic and clinical characteristics, treatment patterns for NETs, and health care resource utilization during the 12-month post-index period. Similar analysis was conducted for Medicare-eligible individuals with the supplemental private insurance. **RESULTS:** This study included 3,940 commercially-insured individuals (mean age: 52.3 years; 55.4% female) and 1,658 Medicare-eligible individuals (mean age: 74.9 years; 49.0% female) with NETs. In the commercial population, carcinoid syndrome (33.2%), liver metastasis (22.4%), and nausea/vomiting (18.2%) were most common among the comorbidities evaluated. While 19.5% of individuals received surgical therapy and 17.5% received medical therapy (somatostatin analogue treatment) as the first-line treatment, nearly two-thirds received neither of those treatments. During the 12-month post-index period, about half of individuals had inpatient hospitalization and 35.4% had emergency room visits; the mean physician office visit was 19.9. In the Medicare population, carcinoid syndrome (27.4%), liver metastasis (20.7%), and diarrhea (16.1%) were the most prevalent comorbidities. While 13.2% received surgical therapy and 19.8% received medical therapy, over two-thirds received neither. Approximately half of individuals had inpatient hospitalization and 37.3% had emergency room visit during the 12-month post-index period; the mean physician office visit was 26.1. **CONCLUSIONS:** This exploratory study described real world