OBJECTIVES: Provider continuity is defined as seeing the same health care provider over time. Previous studies indicated that high provider continuity improves health care outcomes and the efficiency of health care delivery. The impact of provider continuity in sickle cell disease (SCD) care, however, is unknown. This study examined the association between provider continuity and the risk of SCD-related hospitalization and re-hospitalization within 30 days of discharge. **METHODS:** A retrospective cohort study was conducted using Florida Medicaid claims data from 2001-2005. Patients with claims containing SCD-related ICD-9 codes (282.41-282.42, 282.6- 282.64, 282.68-282.69) were selected. To be eligible, individuals had to be aged <65 years, continuously enrolled in Medicaid, and have made ≥2 ambulatory visits. Modified modified continuity index (MMCI) scores were calculated to quantify provider continuity. Cox proportional hazard modeling was used to examine the relationship between MMCI and hospitalization and 30-day re-hospitalization controlling for basic demographics, prior utilization, SCD treatments and complications. **RESULTS:** A total of 2422 patients with mean age of 10.2 (SD=11.9) and 47.2% male were included. Average MMCI score was 0.60 (SD=0.28), 53.47% had ≥1 SCD-related hospitalization; of those, 18.8% were re-hospitalized within 30 days. After controlling for patient-level factors, patients with higher provider continuity were less likely to be hospitalized (HR=0.53, 95% CI: 0.44-0.65), but MMCI was not significantly associated with 30-day risk of re-hospitalization (HR=0.89, 95% CI=0.55-1.43). **CONCLUSIONS:** Higher provider continuity was associated with a lower risk of SCD-related hospitalization in the Florida Medicaid SCD population, but did not affect the rate of 30-day re-hospitalization. Policies that improve and maintain continuity between SCD patients and a single provider may lead to lower hospitalization rates and possibly lower health care costs.

PSY71

HEALTH AND FUNCTIONAL STATUS FOR INDIVIDUALS WITH THROMBOCYTOPENIA IN THE UNITED STATES: EVIDENCE FROM NHANES

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OBJECTIVES: Thrombocytopenia, or low blood platelet count, is associated with disease progression and treatment for several chronic conditions, including liver disease, cancer, and HIV. Yet, little information describing the impact of thrombocytopenia on patients is available. This study compared indicators of health and functional status among individuals with and without thrombocytopenia. **METHODS:** 1999-2008 National Health and Nutrition Examination Survey (NHANES) data were used to identify individuals aged ≥20 years with normal and low platelets, using a threshold of $150x10^9$/L. Indicators of health and/or functional status included self-reported general health [1-5 scale, 1=excellent], number of health care visits and overnight hospital stays, days physical health was not good, inactive days due to physical health, and work limitations. Weighted means and frequencies were summarized and compared using paired t-tests and chi-squared tests, respectively. **RESULTS:** 22,959/25,772 participants aged ≥20 years had information on platelets. Of these, 526 (1.9%) had low platelets at the time of examination. Individuals with thrombocytopenia were older (51.7 vs 37.2 years) and more likely to be male (67.7% vs 48.6%), infected with hepatitis C (7.4% vs 1.4%), and ever diagnosed with cancer (14.2% vs 8.0%) or a liver condition (12.3% vs 3.1%), p<.05 for all. Fewer participants with thrombocytopenia reported excellent health compared to those with normal platelets (12.5% vs 16.5%, p<.0001). Participants with thrombocytopenia reported more health care provider visits (2.35 vs 2.02, p<.0001) and were more likely to report an overnight hospital stay (0.19% vs 0.11%, p<.001). Participants with thrombocytopenia had more inactive days due to physical health and were more likely to face work limitations (p<.01 for all). **CONCLUSIONS:** Thrombocytopenia is associated with limitations on functional status and increased health care utilization, some of which may be related to patients' underlying health conditions. Further study is needed to determine the incremental impact of thrombocytopenia.

PSY72

VARIATION BY AGE IN HEALTH-RELATED QUALITY OF LIFE OF PATIENTS INITIATING TREATMENT FOR MYELODYSPLASTIC SYNDROMES

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OBJECTIVES: Minimal health-related quality of life (HRQOL) data have been published on myelodysplastic syndromes (MDS) patients in the United States. This analysis characterized HRQOL by age group of MDS pts treated with Vidaza® in the AVIDA® registry. **METHODS:** Data were collected from AVIDA, a Vidaza treatment registry, initiated in US community clinics. Clinicians provided patient demographic, treatment pattern, and clinical outcome data. Patients reported HRQOL (EORTC-QLQ-C30) within 2 months of treatment initiation. Mean (Standard Deviation [SD]) scores on global health status (GHS), 5 functional scales and 9 symptom/other scales were analyzed by age: <65, 65-74, ≥75 years. Statistical significance was ascertained by ANOVA using SAS 9.1. **RESULTS:** Data were reported from 99 clinics on 427 pts: <65 (n=68), 65-74 (n=127), and ≥75 (n=232) years. Mean (SD) GHS was 54.8 (1.2) overall, and similar among age groups: 53.9 (2.9), 54.7 (2.1), and 55.2 (1.6), p=0.9263. Similarly, physical, role, and social functioning were comparable. Emotional and cognitive functioning, however, were worse among those <65 versus the older groups: 66.2 (3.5), 78.6 (1.8), 79.5 (1.5), p<0.0001 for emotional, and 72.4 (3.5), 82.7 (1.7), 80.3 (1.4), p=0.0067 for cognitive. The <65 cohort reported significantly worse scores on 4 of 9 symptom/other scores: financial difficulties (34.8 (4.5), 15.3 (2.4), 13.0 (1.7), p<0.0001); insomnia (39.7 (4.0), 27.5 (2.7), 27.3 (2.2), p=0.0141); appetite loss (29.9 (3.8), 18.4 (2.5), 25.3 (2.1), p=0263); and fatigue 53.9 (3.1), 44.3 (2.3), 48.5 (1.8), p=0.0452). **CONCLUSIONS:** AVIDA registry findings indicate baseline HRQOL among MDS patients in real world settings differs by age in certain domains. Findings suggest HRQOL is similar or better in elderly MDS patients than younger patients. These differences in emotional and cognitive functioning, fatigue, insomnia, appetite loss, and financial difficulties require consideration by clinicians in managing MDS patients.

PSY73

PAIN MEDICATION USE AND DETERMINANTS OF OPIOIDS PRESCRIBING IN THE UNITED STATES OUTPATIENT SETTINGS

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OBJECTIVES: Chronic pain is a major public health concern in the US. Established guidelines are available for management of non-malignant chronic pain, including opioid use. However, discrepancies in opioid prescribing patterns due to physician misconceptions remain concerning. Therefore, this study evaluated pain medication use and investigated determinants of opioid analgesic prescribing in the US outpatient settings for common non-malignant chronic pain indications. **METHODS:** This cross-sectional study analyzed the National Ambulatory Medical Care Survey(NAMCS) data from 2002-2007 on patients 18 years and older with non-malignant chronic pain diagnosis based on ICD-9-CM codes identified as reason for visits. Pain medications prescribed were retrieved using NAMCS drug codes. Multivariate logistic models examined determinants of opioid prescribing among chronic pain patients. **RESULTS:** Approximately 69 million weighted outpatient visits were reported for non-malignant chronic pain between 2000-2007 in the US. The mean age for patients was 53 (range 18-100) and the majority were women(63%). Neuropathic pain was reported for 2.39% visits while 16.24% had an inflammatory pain diagnosis. Non-medication treatment was prescribed during 26% of these visits. While most(95%) visits reported prescribing NSAIDs, 29% reported receiving prescriptions for more than five medications. Primary care physicians (PCPs) were 1.74 times more likely to prescribe opioids [OR(odds ratio):1.74, CI:1.42-2.14] than other specialty physicians. Patients receiving more than five medications were 2.80 times more likely to receive opioids (OR:2.80,CI:2.28-3.44) than those with less than five medications. Patients from the southern region of the US were 1.43 times more likely to receive opioids (OR:1.43,CI:1.06-1.94) than patients from the northeast region. **CONCLUSIONS:** According to our study, visits with PCPs, more than five prescriptions, established patients, and physician visits in the southern region of the US were some of the determinants of opioid prescribing. Increased awareness of opioid prescription guidelines for pain management may eliminate prescription discrepancies and improve patient care.

PSY74

TREATMENT CHOICE FOR PAIN MANAGEMENT IN NURSING HOME HOSPICE/PALLIATIVE CARE RESIDENTS IN THE UNITED STATES

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OBJECTIVES: This study determined factors associated with treatment choice for pain management in US nursing home hospice/palliative care residents. **METHODS:** This is a cross sectional study of data from the resident file of the 2004 National Nursing Home Survey (NNHS). Residents assigned to a bed in a hospice specialty unit or receiving services from a special program for hospice/palliative care in 1174 systematically selected nursing homes and having pain in 7 days before the survey were included. Treatment choices included standing order (SO) of analgesics, as-needed orders (PRN) of analgesics and non-pharmacological treatment (NPT). Factors evaluated were gender, marital status, age, ethnicity, eating limitation, toilet limitation, urinary incontinence and bowel incontinence. Weighted descriptive analysis, bivariate analysis using chi-square tests and multivariate analysis using logistic regression were conducted using SAS version 9.2 to determine factors associated with pain management. **RESULTS:** Overall 22.6% (338,029/1,492,207,weighted) patients met the study inclusion criteria. Mean[SD] age was 79.1[13.3] years, 74.7% were females and 89.8% were white. 78.6%, 49.8%, and 29.3% received PRN, SO, and NPT, respectively. Logistic regression showed higher likeliness to receive SO for patients of age at or above 65 years (OR=1.51 95% CI=1.184-1.948 P=0.001), patients with bowel incontinence (OR=1.21 95% CI=1.020-1.437 P=0.028) and Medicaid patients (OR=1.5 95% CI=1.258-1.799 P<0.0001). Likeliness to receive PRN was lower for patients of age at or above 65 years (OR=0.60 95% CI=0.428-0.841 P=0.0031), patients with bowel incontinence (OR=0.67 95% CI=0.533-0.859 P=0.0014), Medicaid patients (OR=0.65 95% CI=0.525-0.806 P<0.0001) and Hispanics (OR=0.327 95% CI=0.204-0.527 P<0.001). Likeliness to receive NPT was higher for patients with toileting limitation (OR=2.905 95% CI=1.135-7.434 P=0.026) and lower for patients with urinary incontinence(OR=0.022 95% CI=0.003-0.172 P=0.0003). **CONCLUSIONS:** Factors affecting treatment choice were age, bowel and urinary incontinence, toileting limitations, ethnicity and insurance type and can be targeted in future studies aiming at management of pain in nursing homes.

Systemic Disorders/Conditions – Research on Methods

PSY75

PREVALENCE RATIOS AGAINST ODDS RATIOS AS EFFECT MEASURES IN A CROSS-SECTIONAL STUDY OF OBESITY AND ITS CHRONIC COMORBID CONDITIONS

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OBJECTIVES: To compare the estimates of Prevalence Ratio (PR) and Odds Ratios (OR) as effect measures in the analysis of cross sectional data for obese individuals suffering with chronic comorbid conditions. **METHODS:** Medical Expenditure Panel Survey data files from 2005-2007 was utilized for the analysis. Obese adults were defined as individuals with age ≥ 20 years and having a BMI ≥ 30. Prevalence ratios were estimated from logistic regressions by dividing predicted prevalence estimates of comorbidities among obese individuals to the predicted prevalence of comorbidities in non-obese individuals after adjusting for socio-demographic factors. Ninety-five percent boot-strapped confidence intervals were generated around the prevalence ratios. Odds ratios were generated by using the 'Survey Logistic' syntax in SAS after adjusting for the same socio-demographic factors. **RESULTS:** Both odds ratios and prevalence ratios indicate that obese individuals have a greater burden of chronic conditions in the United States. Obese individuals had the greatest odds of having hypertension and osteoarthritis followed by coronary heart disease, diabetes and dyslipidemia. Prevalence ratios were highest for diabetes, followed by hypertension, osteoarthritis and dyslipidemia. Odds ratios were almost always greater than the prevalence ratios for all chronic conditions. The confidence intervals derived around odds ratios were also wider than the confidence intervals around the prevalence ratios. **CONCLUSIONS:** The relative importance of obesity upon different disease conditions differed depending on whether PR or OR were estimated. This study along with previous literature shows that odds ratios may be overestimating the true effect of a disease condition on the prevalence of a comorbid disease. Although it is easier to derive odds ratios, prevalence ratios may be more realistic estimates of the true public health burden. Thus prevalence ratios should ideally be used as effect measures instead of odds ratios especially for commonly occurring disease conditions.

PSY76

TREATMENT OF CRYOPYRIN-ASSOCIATED PERIODIC SYNDROMES (CAPS) KNOWLEDGE STUDY (TOCKS): NOVEL DATA COLLECTION, VIEWING AND DYNAMIC REPORTING MECHANISM

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OBJECTIVES: The objective of knowledge study (TOCKS) was to quantify the patient burden and to characterize patient symptomatology and acceptance of treatment with anakinra in Cryopyrin-associated Periodic Syndrome (CAPS), an orphan disease. Additionally, chart review and patient recall of symptoms, adverse events, and resource use were compared. The aforementioned objectives were completed through the use of a unique online approach to gathering data and rapidly displaying the results. **METHODS:** This retrospective medical chart review and concurrent online patient survey, conducted in Centers of Excellence for CAPS in Europe, was accomplished by analyzing data entered via internet-based case report forms (CRFs). Data were entered into the CRFs by both study groups for two distinct collection periods—prior to and during the most recent 12 months of anakinra treatment. **RESULTS:** Four sites (50 patients total) participated in TOCKS. Prior to entering data, users viewed an online tutorial to help in completing the survey. No patients were lost to follow up and the data were successfully collected, analyzed, and reviewed via the online CRF and dynamically-generated data tables. This innovative online approach allowed users to enter de-identified data, in multiple sessions, even in the most remote destinations. One patient successfully completed their survey in the Amazon. In addition, a unique identifier was randomly generated that linked chart review with patient recall data online. Site investigators were also able to view the dynamic tables and reports online and benchmark themselves against the other, encrypted, sites. **CONCLUSIONS:** This novel internet technology allowed for efficient data collection from multiple sites and multiple sources within a short time frame. The unique identifier made it effortless to collect and compare the entries from the chart and from the patients for the same patient.

PSY77

COMPARISON OF OBESITY-ASSOCIATED COMORBIDITIES BETWEEN EMR AND CLAIMS DATABASES

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OBJECTIVES: To compare rates of obesity-associated comorbidities between the General Electric (GE) Centricity EMR and Thomson Reuters MedStat MarketScan commercial claims databases in patients with either a recorded BMI ≥25 (GE EMR) or ICD-9 code for overweight/obesity (MarketScan). **METHODS:** From the GE EMR, subjects aged 20-64 with at least one BMI value ≥25 and ≥2 y of EMR activity prior to BMI index date were included. From MarketScan, subjects ≥20 y (mostly <65 y), with a claim (ICD-9 code) for overweight, obesity, or morbid obesity, and ≥365 days of claims activity after selected comorbidity was first recorded, were included. Selected comorbidities were identified by ICD-9 codes in both databases and stratified by BMI or overweight/obesity claims. **RESULTS:** In the GE EMR, 109,885 subjects (36.7%) were overweight or obese (BMI ≥25). Of these, 51% had BMI 25-29.9, 28% had BMI 30-34.9, and 22% had BMI ≥35. In the MarketScan database, 246,261 subjects (0.7%) had overweight, obesity, or morbid obesity claims. Of these, 4% were overweight, 66% were obese, and 30% were morbidly obese. The three most prevalent comorbidities in both databases, across all weight categories, were hypertension, hyperlipidemia, and chronic back pain, except diabetes replaced back pain in the morbid obesity group in MarketScan. For all comorbidities, prevalence was higher in MarketScan, except polycystic ovary syndrome prevalence was higher in GE EMR BMI ≥35 group compared to morbid obesity group in MarketScan. **CONCLUSIONS:** Despite different methods (BMI vs. ICD-9 codes) for capturing obesity between two databases, prevalence rankings of comorbidities were similar. Obesity is therapeutically classified by BMI; however, most large claims databases capture obesity by ICD-9 codes. This may result in variation in weight group distributions and significant under-reporting of obesity claims in MarketScan. Our findings highlight the need for further research in optimal sources for data in obese patients.

PSY78

ESTIMATING THE BMI-MORTALITY RELATION USING FRACTIONAL POLYNOMIALS

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OBJECTIVES: This study tests a flexible modeling approach, which endogenously estimates the non-linear and asymmetric functional form for body mass index (BMI), to examine the relationship between mortality and obesity measured as BMI >30. **METHODS:** This study used the National Health Interview Survey (NHIS), between 1997 and 2000. Respondents were linked to the National Death Index with mortality follow-up through 2005. We estimated the 5-year probability of death using the logistic regression model adjusting for BMI, age and sex. The multivariable fractional polynomials (MFP) procedure was employed to determine the best fitting functional form for BMI and compared to alternative functional forms using a chi-squared test. Expected years of life lost due to obesity were based on adjusted death probabilites and computed using standard life table functions. **RESULTS:** The best fitting adjustment model contains the powers −1 and −2 for BMI. A chi-squared test shows a statistically significant improvement in model fit compared to other BMI polynomial functions. The estimated relationship between 5-year probability of death and BMI exhibits a J-shaped pattern for women and a U-shaped pattern for men. The BMI associated with minimum mortality is 27.53 for males and 25.19 for females. A 40-year-old female with a BMI of 40 has an estimated 5.82 fewer years of expected life compared to an analogous female with a BMI of 25. For a comparable change in BMI in a 40-year-old male, the expected years of life lost is 5.20. **CONCLUSIONS:** The BMI-mortality relation is flat around the minimum, but especially high mortality is associated with the morbidly obese. The MFP approach provides a robust alternative to estimating mortality by allowing the data to determine the best fitting model. The approach is also useful in estimating the relationship between the full spectrum of BMI values and other health outcomes.

PSY79

CONTENT VALIDITY OF THE MULTIPLE SCLEROSIS INTERNATIONAL QOL (MUSIQOL) QUESTIONNAIRE IN IRAN, EGYPT, MOROCCO, SAUDI ARABIA AND TUNISIA

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OBJECTIVES: The MusiQOL questionnaire was co-developed in 15 countries to assess the quality of life of patients with Multiple Sclerosis. The objective of this study was to test the cultural relevance of the instrument in 4 Arabic countries (Egypt, Morocco, Saudi Arabia and Tunisia) and Iran, not involved in the initial development, and to assess the conceptual equivalence of the translations with the UK original used as a basis for translation. **METHODS:** In each country, the translation process was conducted by a linguistic expert, using either the standard forward/backward methodology or the adjusted process (adaptation from the Saudi Arabia version), including cognitive interviews with 6 patients. The basis for discussion was the concept list developed in collaboration with the author. **RESULTS:** Linguistic and cultural issues emerged during the translation process. First, the acronym "MS" used throughout the original version for "Multiple Sclerosis" was replaced by the full name in Arabic countries for clarity, but not in Iran where the patients preferred the abbreviation. Second, using euphemistic expressions for taboo concepts such as sex life proved necessary to ensure homogenous response across all languages without any negative connotation. Finally, leisure activities (e.g. shopping, going out to a movie, gardening) described in the original had to be adapted to the religious and social context in the target countries. **CONCLUSIONS:** The 5 language versions of the MusiQol were established following a proven standardized methodology, on the basis of a concept list worked out with the author, to allow international data pooling and mining whilst addressing the specific challenges of regional adaptation. The process as a whole supports the advantage of integrating continuous and diverse international feedback on wording during the linguistic validation process.

PSY80

PRIORITIZATION AND WEIGHTING OF PATIENT-RELEVANT ENDPOINTS (PRES) AS PART OF THE IQWIGS EFFICIENCY FRONTIER METHOD IN GERMANY

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OBJECTIVES: The IQWiG's method provides a concept for the drawing of an efficiency limit and its extrapolation to the assessment of the cost-benefit relation. Here benefits are to be assessed in terms of a set of clinical endpoints. PREs might include different issues of mortality, morbidity and health-related quality of life as well as other important factors identified as being patient-relevant. Efficiency frontiers cannot be drawn for all possible outcomes, it is important to determine which factors are most relevant to patients. IQWiG allows different efficiency frontiers. How can contradictory results be interpreted? The problem within the utility mea-