

PNID patient population, will encourage peripheral nerve surgeons to use these parameters in conjunction with pain intensity to measure outcomes. A follow-up study expanding on these results and including measures of anger and frustration in a larger sample is underway.

3201

### **Patient Perceptions of Healthcare Provider Interactions among Higher-Weight Women with Eating Disorders: Opportunities for Earlier Screening, Improved Referral, and Increased Clinician Rapport**

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**OBJECTIVES/SPECIFIC AIMS:** Objective: Identify barriers and facilitators of positive patient-provider interactions for AAN patients. **METHODS/STUDY POPULATION:** Methods: Using a mixed-methods, longitudinal, patient-interview design, N = 29 (to date) women with a history of AAN have been enrolled. Each patient completed a diagnostic interview and standardized surveys to establish ED diagnosis, severity, and associated psychopathology. Transcribed, semi-structured qualitative interviews are assessed for common themes using content analysis methods. **RESULTS/ANTICIPATED RESULTS:** Anticipated Results: Patients aged 18 to 74 (M = 36.3, SD = 12.0), with mean BMI = 39.8 (22.7-61.1; SD = 11.3), and mean weight suppression (lbs) during their illness = 119.41 (SD = 69.3). Women reported a mean = 12.75 years (0-37 years, SD = 10.5) treatment delay. Qualitative analysis revealed the following barriers in healthcare provider interactions: 1) experiences of provider weight-bias, 2) low specificity in ED screening questions, 3) lack of indicated screening procedures/diagnostic tests (orthostatic screening, EKG, food log, labs), and 4) provider praise of ED behaviors. Facilitators: 1) lower BMI at presentation, 2) provider education in EDs, 3) community-provider collaboration, and 4) patient self- and family- advocacy. **DISCUSSION/SIGNIFICANCE OF IMPACT:** Discussion: Unfortunately, while early intervention best predicts positive outcomes, higher-weight patients in this study experienced significant treatment delay. Translationally, it is taking too long for AAN patients to receive the right treatment at the right time. However, findings indicate that interventions at the provider level (increasing ED education, building community partnerships, increased adherence to screening protocols) could improve screening, diagnostic, and referral practices—and ultimately long-term outcomes for this unique patient population.

3047

### **Patient-Reported Outcomes Measurement Information System (PROMIS<sup>®</sup>) Global Health Short Form is Responsive to Patient Reported Changes in Systemic Lupus Erythematosus**

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**OBJECTIVES/SPECIFIC AIMS:** The accurate and efficient serial measurement of patient centered outcomes is a priority in the clinical care of systemic lupus erythematosus (SLE). Patient-Reported Outcomes Measurement Information Systems (PROMIS<sup>®</sup>) Global Health Short Form (PROMIS10) is a 10-item universal patient reported outcome measure of global physical and mental health with

construct validity in SLE. The longitudinal responsiveness (sensitivity to change) of PROMIS10 in SLE patients is unknown. We aimed to evaluate the responsiveness of PROMIS10 in SLE outpatients using patient and physician-derived anchors. **METHODS/STUDY POPULATION:** Adults meeting SLE classification criteria were recruited from an SLE Center of Excellence. Subjects completed PROMIS10 at two visits a minimum of one month apart. SLE disease activity was measured with a patient global assessment of change, a physician global assessment and the physician-derived SELENA-SLEDAI. Responsiveness over time of PROMIS10 scores was evaluated using known-groups validity. Effect sizes of changes in PROMIS global physical health and global mental health scores from baseline to follow up were compared across groups of patients who differed in their patient global assessment of change, physician global assessment, and SELENA-SLEDAI using Kruskal-Wallis tests. **RESULTS/ANTICIPATED RESULTS:** A diverse cohort of 228 SLE patients completed baseline surveys (Table 1), with 190 (83%) completing a follow up survey. Using the patient-based anchor, PROMIS10 demonstrated mild to moderate responsiveness to improvement (effect size 0.29) and worsening (effect sizes -0.27 and -0.54) of health status for both global physical health and global mental health (Table 2). Using the physician global assessment and SELENA-SLEDAI as anchors, there were no statistically significant differences in effect sizes across groups. **DISCUSSION/SIGNIFICANCE OF IMPACT:** PROMIS10 showed responsiveness over time to patient-reported, but not physician-derived changes in lupus health status. These data suggest that PROMIS10 can be used to efficiently measure and monitor important aspects of the patient experience of lupus not captured by physician-derived metrics. Further studies are needed to evaluate the role of PROMIS in optimizing longitudinal disease management in SLE.

3085

### **Pediatric provider and staff perceptions of HPV vaccine completion compared to other healthcare providers: Effects on perceived need for change**

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**OBJECTIVES/SPECIFIC AIMS:** According to Diffusion of Innovations Theory, an important predictor of successful implementation of a new intervention within an organization is perceived need for change (i.e. tension for change [TFC]). No research has examined factors influencing TFC in relation to human papillomavirus (HPV) vaccination. Providers who assume their clinic already performs well in HPV vaccination coverage may perceive a lower need for assistance for improvement. We assessed the association between perceived HPV vaccine completion compared to peer clinics and perceived support needed to increase HPV vaccination coverage. **METHODS/STUDY POPULATION:** All providers (physicians/nurse practitioners/physician assistants) and staff (clinical/non-clinical) from 21 pediatric clinics participating in an HPV vaccine quality improvement (QI) intervention study in Tennessee were invited to complete a baseline survey. Perceived comparative performance (i.e. perceived HPV vaccine completion compared to peer clinics) and TFC (i.e. perceived support needed to increase HPV vaccination coverage) were measured on continuous scales of 0-100. We used logistic regression to estimate odds of perceiving higher TFC (upper tertile, score of 51-100) for every unit increase in perceived comparative performance. Analyses controlled for age of respondent, perceived strength of evidence for HPV vaccine guidelines, and clinic

factors, including culture/climate and available resources. RESULTS/ANTICIPATED RESULTS: Of 325 respondents, most were staff (61%), female (87%), and non-Hispanic White (83%). Respondents who perceived higher HPV vaccination coverage compared to peer clinics perceived lower clinic-level TFC (adjusted OR [aOR] = 0.98; 95% CI, 0.97-0.99). When stratifying by job role, this negative association was observed among providers (aOR = 0.95; 95% CI, 0.92-0.98), but not among staff (aOR = 1.00; 95% CI, 0.98-1.03). DISCUSSION/SIGNIFICANCE OF IMPACT: Providers who perceived higher HPV vaccination coverage compared to peer clinics perceived lower need for support to improve vaccination outcomes. Our results suggest that QI efforts targeting pediatric clinics may find it useful to assess providers' perceptions of their clinic's performance, which could affect motivation to engage in QI efforts and successfully improve outcomes.

### 3211

#### Place, Poverty, and Prevention: A Mixed Methods Study

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OBJECTIVES/SPECIFIC AIMS: Understand the association between ADI and completion of preventative cancer screening and high risk behaviors -Identify how to operationalize ADI in clinical settings to assist care teams and improve overall care delivery. METHODS/STUDY POPULATION: Aim 1: Panned Mayo Clinic patients living in MN, IA, or WI Aim 2: BRFSS survey respondents from MN, IA, or WI Aim. 3: Community health officials and Mayo Clinic care teams. RESULTS/ANTICIPATED RESULTS: We anticipate that areas with greater composite deprivation will have lower completion rates of cancer screening and higher risk behaviors. DISCUSSION/SIGNIFICANCE OF IMPACT: No single body of work has illustrated how ADI relates to completion of preventative cancer screening and high-risk behaviors. Due to the limited research focused on area deprivation and behavioral health, our work will identify some of the first national hot spots with high deprivation and high-risk behaviors. Additionally, this is one of the first studies describing spatial variation in health outcomes for Mayo Clinic patients. Understanding the association between ADI and patient adherence to preventative screening will allow us to support care teams in providing personalized and sustainable care for patients living in areas of high deprivation. The strength and novelty of this project is in the utility of the mixed methods design, which provides a more complete understanding of geographic disparities and a unique perspective to patient care, a perspective that is not portrayed in existing literature.

### 3274

#### Postoperative Opioid Use and Prescription Utilization in Adolescents

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OBJECTIVES/SPECIFIC AIMS: This is a prospective, longitudinal cohort study correlating postoperative opioid use, prescription availability at discharge and patient use at home using survey methodology and longitudinal cohort data. The primary objectives of this project are

twofold. First, we will determine whether the number of opioid pills prescribed after surgery increases the risk of abuse, diversion and conversion to chronic use. Next, we will determine whether patient and parent characteristics, behavioral factors and medical comorbidities increase the risk of opioid abuse, diversion and conversion to chronic use after surgery. METHODS/STUDY POPULATION: A mixed-methods approach will be employed utilizing retrospective and prospective medical record review, survey methodology, and longitudinal cohort matching with California's Controlled Substance Utilization Review and Evaluation System (CURES) reports of opioid usage. Surveys will be administered before and after surgery and will capture both parent and patient level factors that may influence longitudinal opioid use. Adolescents and young adults 13-20 years old discharged from Children's Hospital Los Angeles undergoing one of seven procedures most commonly associated with an opioid prescription at time of discharge (spinal fusion, arthroscopy, bowel resection for inflammatory bowel disease, pectus excavatum repair, tonsillectomy, pilonidal excision and hip reconstruction) will be enrolled. RESULTS/ANTICIPATED RESULTS: Inpatient and outpatient opioid usage will predict incidence of diversion, abuse and conversion to chronic usage. Furthermore, socioeconomic factors and behavioral comorbidities such as anxiety and depression will be identified as predictors of diversion, abuse and conversion to chronic opioid use. DISCUSSION/SIGNIFICANCE OF IMPACT: This study will be one of the first to identify opioid prescribing variation in children who require surgery and will identify multiple provider, patient and family level factors influencing use. Furthermore, it will identify factors predictive of possible diversion, abuse and conversion to chronic use. The results of this exploratory analysis will lay the foundation for future studies utilizing physician decision support tools, aid in crafting "best practice" patterns and clinical benchmarks for opioid prescribing, and serve to inform policy makers on the most impactful ways to optimize opioid prescribing practices for adolescents who require surgery.

### 3288

#### Prenatal maternal exposure to disaster-related stress and effortful control in early childhood

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OBJECTIVES/SPECIFIC AIMS: Our overall objectives are to determine (i) whether natural disaster-related prenatal maternal stress (PNMS) alters infants' effortful control (EC) at two years of age, and (ii) if the timing of exposure moderates its effects on toddlers EC. METHODS/STUDY POPULATION: We propose a longitudinal study with 50 mother-toddler dyads. Natural disaster-related PNMS would be measured at 12-15 and 18-24 months of age and will include: objective exposure and maternal distress. EC will be measured with a questionnaire and a Laboratory Temperament Assessment Battery at two years of age. RESULTS/ANTICIPATED RESULTS: We anticipate that children exposed to Hurricane-related PNMS would present low EC levels compared to those with low prenatal exposure. DISCUSSION/SIGNIFICANCE OF IMPACT: These results are expected to provide evidence for further promoting early intervention and ameliorating negative effects of PNMS on child outcomes.