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### Identifying Racial Disparities in the Pain Management of Hidradenitis Suppurativa

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**OBJECTIVES/GOALS:** The purpose of this study is to evaluate average pain scores in patients with Hidradenitis Suppurativa (HS) and determine if racial disparities influence HS-related pain management. **METHODS/STUDY POPULATION:** We surveyed 3,140 adult patients about demographics, HS, pain levels, medical history, and health-related quality of life. Among respondents (N=162), pain scores (0-10) were grouped as high (8+, N=54) and low (<7, N=108). We used logistic regression to calculate adjusted odds ratios (aOR) and 95% confidence intervals (95% CI). **RESULTS/ANTICIPATED RESULTS:** Respondents were female (88.9%), Black race (59.4%), with a median age of 36 (IQR 25-42) and a mean pain score of 7 (IQR 5-8). Half (48.2%) of respondents disagreed or strongly disagreed with, "I am satisfied with how my pain related to HS is being managed by my doctors." Independent risk factors for high pain included Black race (aOR=7.95, 95% CI 3.11-20.26), history of prescribed pain medications (aOR=2.37, 95% CI 1.06-5.30), and former/current tobacco use (aOR=4.12, 95% CI 1.76-9.64). **DISCUSSION/SIGNIFICANCE:** The preliminary data support the hypothesis that race influences HS-related pain. In addition, less education, a history of prescription pain medication use, and tobacco use are all independent risk factors contributing to higher pain scores in patients with HS. Further analysis will be conducted to evaluate racial influences on pain management.

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### Addressing Health Disparities through an Innovative University-Community Vaccination and Food Access Model

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**OBJECTIVES/GOALS:** To describe and evaluate an innovative university-community vaccination and food access model for minority, immigrant, and underserved individuals experiencing food insecurity during a global pandemic. **METHODS/STUDY POPULATION:** The Purdue University Center for Health Equity and Innovation (CHEQI) partnered with the two largest food banks in the Midwest and Walgreens to offer free COVID-19 and Flu vaccinations alongside food distribution. Goals included addressing food insecurity, increasing vaccine access, and decreasing vaccine hesitancy. CHEQI acquired funding, recruited volunteers and interpreters, assessed interest and addressed vaccine hesitancy. Food

bank/pantry partners distributed food and provided access to clientele and marketing assistance. Walgreens procured, administered, and documented vaccinations. The Model accommodated drive-through and indoor processes. Unidentifiable observational and self-report data were collected. Descriptive statistics were computed to characterize program outcomes. **RESULTS/ANTICIPATED RESULTS:** A total of 11 vaccination events occurred between June and October 2021 at three food bank/pantry locations. Of these 11 events, nine (82%) were drive-through and two (18%) took place indoors, eight (72%) offered COVID-19 vaccinations only, and three (27%) offered both COVID-19 and Flu vaccinations. Food was distributed to a total of 5,108 families and 416 vaccines (314 COVID, 102 Flu) were administered. Of the 396 individuals who received at least one vaccine, 20 (5%) received both a COVID and Flu vaccine. Of the 386 individuals who received at least one vaccine and reported their sex, 194 (50%) identified as female and the average age of those who received at least one vaccine was 45 years old. Of those who reported race (N = 228) or ethnicity (N = 253), 43% identified as Black or African American and 53% identified as LatinX. **DISCUSSION/SIGNIFICANCE:** Findings offer an innovative vaccination and food access model for diverse individuals experiencing food insecurity during a global pandemic. By drawing on cost effective, accessible, and culturally contextualized practices to optimize the reach and quality of vaccination services we can improve access barriers and mitigate health disparities.

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### Advancing Structural and Systematic Equity in Epidemiological Analyses of Large Datasets

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**OBJECTIVES/GOALS:** Health inequities represent complex structural and systematic processes that lead to disparate outcomes for populations or subgroups within populations. This project aims to improve the available structural and systematic approaches to the study of such inequities at the population level. **METHODS/STUDY POPULATION:** Using examples from diabetes research, two critical factors that may impact the validity or utility of health equity models will be examined; and proposed methodological approaches to offsetting potentially resulting biases will be offered. The factors include: (1) inequitably missing and misclassified data in large datasets and (2) the presumed positioning of socially constructed variables such as race, ethnicity, and gender within modeled structural and systematic mechanisms. This examination intersects theories and praxis in epidemiological modeling and health equity promotion with the goal of advancing rigorous, equity-focused epidemiological methods. **RESULTS/ANTICIPATED RESULTS:** Inequitably missing and misclassified data are generally expected to obscure inequities. Treatment of missing or misclassified data as informative measures of inequity is expected to partially offset this bias. The implicitly modeled components of socially constructed variables are expected to be non-uniform across structural and systematic mechanisms of inequity. Models that apply these variables as informatively heterogeneous constructs, using multi-phase analyses to test modeling assumptions and to assess intersectionality, may provide better context about the mechanisms by which inequity has been distributed and, perhaps, by which equity may be achieved. **DISCUSSION/SIGNIFICANCE:** Equitable epidemiological methods are essential to the advancement of evidence-based health equity on

the population level. Potential structural or systematic inequities in large-scale datasets and traditional data analyses should be thoughtfully reviewed through a health equity lens.

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### Cross-institutional collaborations for health equity research at a CTSA

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**OBJECTIVES/GOALS:** We were interested in health equity research for each CTSA-affiliated institution, specifically focusing on cross department and cross-campus co-authorship. We conducted a bibliometric analysis of our CTSA-funded papers relating to diversity and inclusion to identify cross department and cross-campus collaborations. **METHODS/STUDY POPULATION:** We worked with our CTSA's Racial Justice, Diversity, Equity and Inclusion Task Force to conduct an environmental scan of diversity and inclusion research across our CTSA partner institutions. Using the Scopus database, searches were constructed to identify and retrieve the variety of affiliations for each of the CTSA authors, a health equity/health disparities search hedge, and all of our CTSA grant numbers. We limited the dates from the beginning of our CTSA in 2008–November 2021. We used PubMed to retrieve all MeSH terms for the articles. We used Excel to analyze the data, Python and NCBI's Entrez Programming Utilities to analyze MeSH terms, and VOSviewer to produce the visualizations. **RESULTS/ANTICIPATED RESULTS:** The results of this search yielded 94 articles overall. We broke these up into subsets (not mutually exclusive) to represent five of the researcher groups across our CTSA. We analyzed the overall dataset for citation count, normalized citation count, CTSA average authors, gender trends, and co-term analysis. We also developed cross department co-authorship maps and cross-institutional/group co-authorship maps. **DISCUSSION/SIGNIFICANCE:** This poster will demonstrate both the current areas where cross-departmental and cross-institutional collaboration exists among our CTSA authors, as well as identify potential existing areas for collaboration to occur. These findings may determine areas our CTSA can support to improve institutional performance in addressing health equity.

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### Stroke and COVID Population: A Health Equity Analysis

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**OBJECTIVES/GOALS:** Observational studies suggest unequal effects of COVID-19 on the population of the U.S. distinguished by race and ethnicity. Our primary research question: what are the demographic differences among patients identified with concurrent ischemic stroke and COVID-19 positivity? **METHODS/STUDY POPULATION:** The National Covid Cohort Collaboration (N3C) data was used to identify patients with concurrent COVID-19 and stroke, operationally defined as those with a COVID diagnosis and inpatient admission for ischemic stroke 1 week before or 6 weeks

after their COVID diagnosis. The data was further age restricted (18–65 years) and a categorical variable was created representing payer plans (Medicaid, Medicare, Other insurance). Data on patients race/ethnicity, comorbidities, treatments administered (Remdesivir and ECMO) and insurance information was analyzed using various exploratory data methods and visualizations. Logistic regression was implemented to model the relationship between variables (dependent/independent) in the cohorts. Model complexity was analyzed using the F test of significance. **RESULTS/ANTICIPATED RESULTS:** Taken as a whole, the data contained over 7 billion rows and around 6.4 million persons (~ 2.15 million of whom were COVID+). The main cohort of individuals with concurrent COVID positivity and ischemic stroke made up around 0.29% of the original COVID+ group, and the payer plan sub-cohort consists of around 29.26% of our main cohort. Black/African American (AA) and the Hispanic/Latino any Race have younger distributions (median ~ 65 years), while the White Non-Hispanic group has the oldest distribution (median ~ 70 years). Black/AA had the highest average number of comorbidities per patient (4.49), compared to white non-Hispanic (3.39) and Asian non-Hispanic (2.59). In our analysis, Medicaid patients had lower odds of obtaining ECMO ( $p < .01$ ), there was no significant difference in Remdesivir treatment. **DISCUSSION/SIGNIFICANCE:** We found the N3C data to be useful in studying a distinct group of patients, and exploring COVID-19 and ischemic stroke treatment across patients' race/ethnicity identities and insurance status. Our exploratory analysis provides a foundation for further insight into demographic trends and discrepancies in apportionment of treatment.

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### Community Research Academy: Lifting Community Voices for Equity in Health Research and Innovation

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**OBJECTIVES/GOALS:** To engage community partners in full spectrum of translational sciences participants will: 1. Develop community-based research projects. 2. Evaluate pilot awards submitted to the Community Advisory Board for funding. 3. Actively participate in the research cores at the CTSC **METHODS/STUDY POPULATION:** The Academy workshop curriculum supports an in-depth examination of the translational research process, introduction to the CTSC Community Advisory Board; as well as to community based participatory research; grant evaluation process, and the need for active community involvement in various cores, and clinical trials. Workshops presented by tenured professionals and community leaders with multi-media out of class assignments. Scheduled