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### Factors Influencing COVID-19 Testing among American Indians and Latinos in Two Rural Agricultural Communities: A Qualitative Study

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**OBJECTIVES/GOALS:** Despite efforts to improve COVID-19 health outcomes through testing and vaccination, SARS-CoV-2 has exacerbated health disparities in underserved populations. Through this study we examined socio-contextual factors impacting decisions to test for COVID-19 among Native Americans in the Flathead Reservation and Hispanics in the Yakima Valley. **METHODS/STUDY POPULATION:** A series of 28 key informant interviews and 6 focus groups (N=39 focus group participants) were completed with community and tribal leaders using an interview guide informed by the Theory of Planned Behavior, Social Cognitive Theory, and the Social Contextual Factor Frameworks. The interview guide was designed to examine the socio-contextual factors impacting decisions to test for COVID-19 among Native Americans and Hispanics in the Northwest. A codebook was developed to apply deductive coding to informant responses, followed by an inductive, constant comparison approach. Three analysts met to refine the codebook and conduct inter-rater agreement. **RESULTS/ANTICIPATED RESULTS:** Five themes (social, cultural, health, religious and political factors) were identified that impacted testing for COVID-19. For social factors, participants discussed the influence of families and friends and unfair employment practices influencing decisions to test. Cultural factors included deep rooted distrust for the government and historical trauma. Health factors participants reported included the importance of testing to save lives, distrust for medical system, and health communications around COVID-19 affecting decisions to test. There was some interaction between religious and political factors. While participants mentioned beliefs in putting things in God's hands, some decisions to test seemed to be affected by their political views. **DISCUSSION/SIGNIFICANCE:** Several socio-cultural factors influence decisions to test for COVID-19. Understanding the community's perception of COVID-19 testing is critical for successful implementation of preventive strategies.

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### Stress and Coping Efforts Among Caregivers of Children with Down Syndrome: Application of The Transactional Model of Stress and Coping

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**OBJECTIVES/GOALS:** Stress is amplified in parents of children with Down syndrome (DS). However, little is known about caregivers' use of coping strategies in relation to stress-related eating and their child

with DS. The purpose of this study is to explore stressors and coping resources that increase or decrease stress-related eating among caregivers of children with DS. **METHODS/STUDY POPULATION:** This descriptive qualitative study sought to understand and describe the lived experiences of caregivers of children with DS. Fifteen caregivers of children, ages 2-6-years with DS, completed an online survey and individual interview. The Transactional Model of Stress and Coping was used to develop the interview guide and to assess related constructs using the Mindful Eating Questionnaire (MEQ), Perceived Stress Scale (PSS), Salzburg Stress Eating Scale (SSES), and a subscale of the Eating and Appraisal Due to Emotions and Stress Questionnaire (EADES). Interviews were audio-recorded, transcribed verbatim, coded using NVivo 12, and analyzed using deductive thematic analysis based on theoretical constructs and content analysis approaches. **RESULTS/ANTICIPATED RESULTS:** Thirteen of the 15 participants reported moderate to high perceived stress on the PSS. Stressors identified by caregivers included caring for a child with DS, feeding difficulties, physical and mental health, family and social interactions, and finances. Caregivers utilized various interpersonal resources to cope, including family, friends, and social media groups. In the interviews, stress-related eating was revealed as a coping mechanism for 9 caregivers. Also, 13 caregivers reported eating more or eating less when stressed on the SSES and 7 caregivers reported increased emotional eating as measured on the sub-scale of the MEQ. Only two caregivers described using mindfulness strategies throughout the interview. **DISCUSSION/SIGNIFICANCE:** Overall, caregivers of children with DS report increased perceived stress related to their role as a caregiver of a child with DS, which may be related to changes in caregivers' dietary intake. Dietary interventions developed for these families should include mindful eating and stress management strategies.

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### Surgical Management of Degenerative Cervical Myelopathy: Comparing Outcomes Between Patients Admitted Through Clinic Versus Emergency Department

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**OBJECTIVES/GOALS:** Degenerative cervical myelopathy (DCM) can lead to pain, disability, and permanent spinal cord impairment. Timely diagnosis and surgical intervention is essential to optimize functional outcomes for patients with CSM. Here, we compared patients who were admitted through clinic versus the emergency department (ED) for surgical management of DCM. **METHODS/STUDY POPULATION:** Patients aged ≥18 years admitted for surgery for DCM through clinic (elective cohort) were compared to a surgical cohort who were evaluated through the ED (call cohort). Basic demographics included age, gender, race, ethnicity, and insurance payor. Sociodemographic characteristics were estimated using the Social Deprivation Index (SDI) and the Area Deprivation Index (ADI) for the state of California, which were obtained through aggregated Zip Code Tabulation Area (ZCTA). Cervical MRI was reviewed to assess severity of spinal cord compression. Other outcomes included number of motion segments operated on, functional outcome using the Nurick classification, length of stay (LOS), disposition, and

30-day reoperation and readmission rates. RESULTS/ANTICIPATED RESULTS: From 2015 to 2021, 327 DCM patients received surgery (227 Elective Cohort, 100 Call Cohort). Elective cohort was mainly female (48.0 vs 30.0%,  $p=0.002$ ) and white (72.7 vs 51.0%,  $p=0.0001$ ). Call cohort was mainly uninsured/covered by Medicare/Medicaid (78.0 vs 67.0%,  $p=0.04$ ), had higher SDI (68.0 vs 56.2,  $p=0.0003$ ), ADI (7.9 vs 7.2,  $p=0.009$ ), and cervical cord compression on MRI (78.0 vs 42.3% Grade III,  $p=0.0003$ ). DISCUSSION/SIGNIFICANCE: Compared to DCM patients undergoing elective surgery, those admitted through the ED were more likely to be male, non-White, and socioeconomically disadvantaged, as measured by SDI and ADI. Postoperative outcomes were less favorable for these patients, including longer hospital stay, discharge disposition, and less Nurick grading improvement.

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### **The effect of housing status (homelessness vs. housed) on naloxone administration among patients with opioid overdose assessed by emergency medical services: A prehospital cross-sectional review**

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OBJECTIVES/GOALS: People experiencing homelessness vs. housed peers have higher rates of substance use disorders as well as increased emergency medical services (EMS) use. However, it is unknown if EMS administers naloxone at different rates to people experiencing homelessness. We address if patient housing status impacts naloxone administration by EMS providers. METHODS/STUDY POPULATION: We conducted a retrospective, cross-sectional analysis of electronic patient care reports (ePCRs) for all 911-incidents attended by the Los Angeles Fire Department (LAFD) during the study period, January to December 2018. Individuals who were medically assessed by the LAFD and who were administered naloxone by LAFD EMS were included. Exclusion criteria was incomplete ePCRs. The primary outcome was prevalence of EMS naloxone administration by housing status in the city of Los Angeles. We used descriptive statistics and a logistic regression model to examine differences in care. RESULTS/ANTICIPATED RESULTS: Naloxone was administered in 2,438 of the 345,190 incidents that occurred during the study period. 608 (25%) incidents involved people experiencing homelessness. Top indications for naloxone administration were similar in both groups: overdose, altered consciousness and cardiac arrest. Of those who received naloxone, people experiencing homelessness were more likely to be male (82% v 67%) and younger (41 v 46 years). People experiencing homelessness were more likely to receive naloxone (OR 2.6, 95% CI 2.4-2.9). People experiencing homelessness received naloxone at a rate of 44 times that of housed peers. A logistic regression model adjusting for gender, age, respiratory depression and transport status showed people experiencing homelessness remained more likely to receive naloxone (OR 2.3, 95% CI 2.0-2.5). DISCUSSION/SIGNIFICANCE: Emergency medical services are more likely to administer naloxone to people experiencing homelessness than housed peers. There is a need to identify bias and factors that impact prehospital care and patient outcomes of people experiencing homelessness.

New care pathways for people confronting homelessness and opioid use disorders are needed.

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### **The Feasibility and Acceptability of a Remote Glucose Monitoring Program for Pregnant Marshallese Women with Pre-Gestational and Gestational Diabetes\***

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OBJECTIVES/GOALS: The objective of the study is to test the feasibility and acceptability of a remote glucose monitoring program for pregnant Marshallese women with pre-gestational (PGDM) or gestational diabetes (GDM) without excluding women with limited English proficiency. The study will explore changes in patient-physician communication and self-efficacy. METHODS/STUDY POPULATION: Twenty Marshallese pregnant women with PGDM or GDM will be identified for recruitment. The patient will meet with a bilingual staff member to explain the study and provide consent. At enrollment, patients will complete an enrollment survey and be provided with the iGlucose monitor and receive training its use. Their provider(s) will receive access to their patient's online portal for monitoring. At 14 days postpartum patients will receive a post-intervention survey and invitation to participate in interview, and their provider(s) will receive a satisfaction survey for the remote monitoring program. RESULTS/ANTICIPATED RESULTS: We hypothesize that the use of a remote glucose monitoring intervention is feasible and acceptable for Marshallese women with PGDM or GDM. Further, we hypothesize that the remote glucose monitoring program will increase satisfaction with physician-patient communication and will increase self-efficacy with glucose management. We anticipate that providers will find the program feasible and acceptable for use with the Marshallese population. DISCUSSION/SIGNIFICANCE: RPM technology can transform the way PGDM and GDM are managed. RPM may have greater benefits when there is a lack of language concordance by providing more time for patient-provider communication, thereby improving patient satisfaction and decreasing the risk of negative outcomes for Marshallese women.

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### **The Feasibility and Acceptability of Perturbation-Based Balance to Older Adults in Rural Communities\***

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OBJECTIVES/GOALS: Older adults in rural communities are at an elevated risk of falling. Perturbation-Based Balance Training (PBT) is a highly effective fall prevention paradigm but its feasibility in the community is unknown. The purpose of this study was to determine the feasibility and acceptability of PBT to older adults and local clinicians in rural communities. METHODS/STUDY POPULATION: 19 older adults (60+ years) were recruited from communities in rural Montana to take part in a PBT program. The PBT program was implemented using a bespoke portable PBT treadmill developed by our research team and validated against commercial PBT treadmills. To increase ecological validity, the program was implemented by local clinicians. The PBT