

Abstracts

Oral Presentation

Abstract Title: **The Relationship Between Opioid Related Experiences, Perceptions, and Post-graduate Plans in Ohio's Future Prescribers**

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Abstract: Background: Opioid misuse is a growing problem in the United States, particularly in the Midwest. Current research does not address future prescribers' knowledge, beliefs and post-graduate plans related to opioids. Aims: This study aimed to (1) describe medical professional students' perceived impact of the opioid crisis, personal experiences, and post-graduate plans and (2) determine if personal experiences with opioids influence students' future plans regarding medical practice and opioids. Methods: A cross-sectional survey of 491 nurse practitioner (NP), physician assistant (PA) and osteopathic medical (DO) students at Ohio University was conducted. Results: Most participants were female DO students (female=62.7%, age=27.2±5.4 years, 80.4% Caucasian, 68.2% DO students). More NP students had clinical encounters with drug seeking behavior ($\chi^2=15.0$, $p=0.001$) and had more experience treating acute overdose ($\chi^2=63.2$, $p<0.001$). NPs reported their families were impacted by opioids ($\chi^2=13.4$, $p=0.001$) and perceived the opioid crisis as more severe ($F_{2,488}=7.13$, $p=0.001$). Students with previous clinical experience in drug seeking or acute overdose were more confident in their ability to treat addiction ($\chi^2=19.3$, $p<0.001$; $\chi^2=24.6$, $p<0.001$). Students whose families or communities were impacted by opioids were more likely to say their work upon graduation would involve managing addiction ($\chi^2=6.4$, $p=0.011$; $\chi^2=9.3$, $p=0.002$). Conclusion: All students reported a high level of clinical experience with opioids. Clinical and personal experiences related to the opioid crisis influenced post-graduate plans to work with patients with opioid-use disorder. The opioid crisis affects medical professional students, and this should be considered when developing opioid-related material and providing wellness resources on campus.

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Abstracts

Oral Presentation

Abstract Title: **Appalachian Status is a Negative Predictor of Post-Mastectomy Breast Reconstruction**

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Abstract: Background: The benefits of breast reconstruction (BR) are well documented and include increased quality of life as well as improved self-esteem, body image, sexuality, and reduced concerns of cancer recurrence. Significant disparities in BR utilization in women from rural areas have been reported; however, no studies have examined BR utilization specifically in Appalachia. The primary goal of this study was to determine if there were differences in BR utilization between Appalachian and non-Appalachian women in Kentucky. Methods: A retrospective (January 2006 – December 2015) cohort study was conducted using population-level data accessed from Kentucky Cancer Registry for female patients diagnosed with breast cancer and treated with mastectomy. Patients were divided into mastectomy-only and mastectomy plus BR groups and stratified according to Appalachian status. A multivariate logistic regression model controlling for various factors was used to predict BR. The likelihood of receiving BR was reported in odds ratios (OR) using a 95% confidence interval (CI). Results: Overall, 12,036 patients underwent mastectomy. Of those, 2,822 (23.4%) underwent BR. The rate of BR among Appalachian and non-Appalachian women was 15.0% and 26.3%, respectively ($p < 0.001$). Multivariate analysis showed women from Appalachia (OR 0.54, CI 0.48-0.61; $p < 0.001$) were less likely to undergo BR than non-Appalachian women. Conclusion: Women from Appalachia are 46% less likely to undergo BR than their non-Appalachian counterparts. While multiple factors are likely contributory, access to care still remains a challenge for these patients. Future efforts aimed at alleviating this disparity should focus on improving access to reconstructive surgeons.

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Abstracts

Oral Presentation

Abstract Title: **Impact of Early Life Lead and Manganese Exposure on Postural Balance in Adolescents**

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Abstract: PURPOSE: Lead (Pb) and manganese (Mn) are potentially neurotoxic metals of increasing concern to communities located near industrial point sources. Marietta, Ohio is home to America's largest ferromanganese refinery, a significant source of ambient Mn. In this Appalachian community-based longitudinal cohort study, we investigate the relationship between early childhood exposure to metals and adolescent postural balance. Given the dual role of Mn as essential and neurotoxic, we hypothesize biomarkers of Mn exposure will exhibit a negative association with motor function. METHODS: Children ages 7-9 were enrolled into the ongoing study from 2008-2013 (n=510). Biomarkers collected in childhood include blood and hair Mn, blood Pb, and serum cotinine. To date, 74 participants have returned in adolescence for evaluation of neuromotor function, measured by postural balance. Multivariable linear regression models were employed to assess the relationship between early life metals exposure and postural balance in adolescence adjusting for age, sex, height weight ratio, parent IQ, parent education, and number of smokers. RESULTS: Geometric mean and standard deviation for blood (n=65) and hair Mn (n=72) were $9.8\mu\text{g/L} \pm 1.3$ and $447.4\text{ng/g} \pm 2.7$ respectively. Blood Pb (n=65) and serum cotinine (n=67) measured $0.8\mu\text{g/dL} \pm 1.5$ and $0.04\mu\text{g/L} \pm 8.6$ respectively. Adjusted multivariable models show a significant relationship ($p=0.02$) between low level Pb exposure in childhood and teen postural balance, and a marginally significant relationship ($p=0.09$) between hair Mn and decreased postural balance. CONCLUSIONS: Exposure to low level Pb and elevated ambient Mn in early childhood negatively influences postural balance in later teenage years.

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Abstracts

Oral Presentation

Abstract Title: **Reshaping Appalachian Health One Community at a Time: The Accountable Health Communities Model**

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Abstract: Background: Residents in eastern Kentucky's Appalachian region experience significant health disparities tied to elevated poverty and unmet social needs. The Kentucky Consortium for Accountable Health Communities (KC-AHC) project is an academic-community partnership that uses multi-level interventions to improve health and quality of care for vulnerable Medicare and Medicaid beneficiaries across 27 counties in eastern Kentucky. Methods: Nineteen clinical care sites in eastern Kentucky are participating in the KC-AHC project. During medical visits, community-dwelling adult Medicaid and Medicare beneficiaries are offered systematic screening for health-related social needs, including food insecurity, transportation, housing, utilities, and safety. High risk patients (2+ ED visits in past 12 months) also receive navigation intervention conducted by clinic staff for appropriate community services connection. Results: Screening and navigation intervention roll-out is slated for August 1, 2018. Initial piloting of the screening tool in 5 participating clinics revealed the following: 52% reported ≥ 1 health-related social need with food insecurity most prevalent, and nearly 30% of the 52 respondents were high-risk. This is in contrast to the 13% high-risk population projected by CMS. Overall, patients were receptive to participating in the screening process and receiving community services. Community advisory board members provided critical input on priorities to increase service accessibility. Conclusions: Implementing interventions to address social determinants of health in underserved rural settings requires attention to community engaged, culturally congruent, inclusive approaches. KC-AHC offers a unique opportunity to examine AHC model implementation and partner alignment in a rural context, with the ultimate goal of improving health outcomes for rural populations.

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Abstracts

Oral Presentation

Abstract Title: **Contextualizing the Stress Experience of Grandparents Rearing Grandchildren in Rural Central Appalachia**

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Abstract: With escalating rates of parental substance abuse, addiction, and incarceration in the rural U.S. and elsewhere, grandparents increasingly have stepped into fulfill childrearing responsibilities. The increasing rate of custodial grandparenting has been especially widespread in rural Appalachia, a region with sparse resources. The shift in kinship care reflects the resiliency and utility of extended family structures in Appalachia, but presents new challenges for grandparent well-being, including increased social stressor exposure. To better understand the stress experience of rural Appalachian grandparents with primary childrearing responsibilities, we conducted twenty-six in-depth interviews. Interviews were transcribed, minutely coded and analyzed using qualitative standards of rigor. Stress was described as arising from interactions with the parent generation, the transition to the parental role and forfeiture of the grandparent role. Additional sources of stress including worry about their capacity to physically and financially provide for grandchildren. Despite these stressors, grandparents suggested that caregiving was a protective factor against depression and beneficial for their health and activity levels. Moreover, many grandparents indicated a cultural and historical continuity of grandparenting in a culture that traditionally has emphasized extended family ties and extensive social support.

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Abstracts

Oral Presentation

Abstract Title: **Implementation of NCI's Screen to Save: Colorectal Cancer Outreach and Screening Initiative at UK Markey Cancer Center**

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Abstract: Introduction: The goal of the National Cancer Institute's (NCI) Colorectal Cancer Outreach and Screening Initiative – Screen to Save (S2S) – is to increase colorectal cancer (CRC) knowledge leading to improved rates of CRC screening among adults age 50 and older, particularly in medically underserved populations with a high burden of CRC such as the communities of Appalachian Kentucky. In 2017, the University of Kentucky Markey Cancer Center implemented S2S educational activities in four counties in eastern Kentucky. The purpose of this project was to determine if face-to-face, small group education can increase knowledge of basic CRC terms, and CRC screening guidelines. Methods: The S2S research initiative recruited participants from community events (e.g., health fairs), and offered a \$10 gift card to complete the intervention. The CRC educational activities and intervention consisted of a pre-test, followed by a walk-through colon tour and small group CRC educational presentation, and completing with a post-test. Results: Markey's S2S events reached 1,138 individuals with CRC information, and 102 individuals participated in pre- and post-testing CRC educational intervention. Results suggest that face-to-face, small group education improves CRC knowledge, including comprehension of screening guidelines, among adults in rural and Appalachian communities. For example, respondents improved knowledge of screening age recommendations for FIT/FOBT by 60%, and 83% of participants demonstrated increased knowledge of age recommendations for colonoscopy screening. Conclusion: The use of culturally-tailored, personally-communicated CRC education in a community setting shows potential to improve at-risk population's knowledge of CRC risk factors and screening guidelines.

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