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LA cervix care: Improving cervical cancer prevention in Louisiana – Identification of barriers to care for those women at increased risk for cervical dysplasia

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OBJECTIVES/GOALS: Cervical cancer is preventable through HPV vaccination and the detection/removal of precancerous lesions. Incidence and mortality rates have only decreased by 3–4% in the past decade. Despite having the tools to prevent all cervical cancers, they are not being fully utilized. Our goal is to identify barriers and design strategies to overcome them. **METHODS/STUDY POPULATION:** Women in urban (750) and rural (750) settings will be screened for the presence of high-oncogenic risk HPV (hrHPV) by self-vaginal swab, complete the Monitoring Blunting Style Scale, a validation scale to determine attentional style, and a structural barrier to care survey. A subset (**RESULTS/ANTICIPATED RESULTS:** The study, launched in September 2024 at the Medicine Primary Care Clinic at UMC in New Orleans, has enrolled 16 women. Sample adequacy was high (82%), with 5 women having hrHPV present. Participants expressed high satisfaction and acceptance of the self-administered vaginal swab, with most samples demonstrating high quality. Surveys have been collected, and hrHPV-positive women have been referred for gynecological follow-up. Shreveport site will recruit women across over 20 rural clinical sites using a Mobile Health Unit to increase access in rural and underserved communities. **DISCUSSION/SIGNIFICANCE OF IMPACT:** The baseline study will take 12–18 months. We will identify and address key barriers to follow-up gynecological care, including logistical issues (improving access and navigation), educational needs (developing culturally sensitive materials), and emotional support. We will create a care delivery model to eliminate cervical cancer in Louisiana.

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Development of a new website to connect the community to clinical research

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OBJECTIVES/GOALS: The primary objectives of this project were to create a user-friendly website that • Shares details of ongoing studies in an easily searchable and filterable format. • Provides lay summaries of study results. • Highlights our volunteer registry. • Offers a platform for community engagement and feedback on research interests. **METHODS/STUDY POPULATION:** The website, developed using DRUPAL 10 and launched in June 2024, was created with

input from faculty, staff, research participants, and community partners. It targets potential participants, community members, providers, and other Academic Medical Centers. The development process included focus groups to identify design and feature needs, design iterations and usability testing, and an external accessibility review. Study information is automatically updated from the Study Information Portal (SIP) in OnCore and a custom REDCap survey. Features include a research volunteer registry, study results in lay terms, educational content about research, and multiple ways for community engagement. The site supports English and Spanish and follows best practices for accessibility. **RESULTS/ANTICIPATED RESULTS:** Community feedback on the site has been very positive, with positive comments about ease of navigation and the improved appearance of the website. It is still early, but we have seen a notable increase in enrollment in the Volunteer Registry since the launch of the website. We track referral sources for the registry, and to date, we have seen 98 individuals enrolled who were directed to us through the website since it launched. This equates to an average of 5 people a week, more than any other referral source. This rate increases to almost 7 per week if we look solely at the period since we started the promotion of the website in early August. As the site awareness expands, we will also be getting feedback from individual studies and are tracking email communication generated from the site as well. **DISCUSSION/SIGNIFICANCE OF IMPACT:** The development of this website represents a significant step toward improving community engagement in clinical research at Duke. By providing a centralized platform for study information, results, and community feedback, we aim to foster a more informed and involved participant base, ultimately enhancing the impact and reach of our research.

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Benefiting all: Community-driven strategies to increase diversity in clinical trials

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OBJECTIVES/GOALS: This qualitative study evaluated facilitators and barriers to clinical research participation among lower-income, predominately racial/ethnic minority communities to inform a Co-Learning series. The Co-Learning series of community members, stakeholders, and researchers developed strategies to improve diversity in research. **METHODS/STUDY POPULATION:** Community focus group (FG) participants were recruited from urban communities experiencing poverty, whereas stakeholder FGs included diverse community leaders and researchers. The Social Ecological Model was used as the guiding theoretical framework throughout the qualitative design. Directed content analysis using three independent coders reaching 100% consensus identified prominent factors for increasing diversity in research. The co-learning series was comprised of community members, stakeholders, and researchers who discussed the prominent FG factors over seven in-person meetings to develop a

toolkit to increase diversity in research. **RESULTS/ANTICIPATED RESULTS:** Community (n = 51) and stakeholder (n = 50) FG participants were 54.0±16.0 years of age, 81.2% female, 39.6% Black/African American, 51.5% Hispanic, and 60% had **DISCUSSION/SIGNIFICANCE OF IMPACT:** Due to the lack of inclusivity in clinical research, findings are typically not applicable to health disparity populations limiting the benefit of research to all. This study provides practical community-driven strategies to increase diversity in clinical research, highlighting the role of trust, relationships, and cultural relevancy.

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Bridging the gap: Socioeconomic and sociodemographic disparities in tailored transition interventions for patients diagnosed with congenital heart disease

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OBJECTIVES/GOALS: This scoping review examines how socioeconomic status (SES) and sociodemographic status (SDS) disparities are considered in transition interventions for congenital heart disease (CHD) patients. By identifying gaps, it aims to guide future research and interventions to address inequities in transitional care. **METHODS/STUDY POPULATION:** A systematic search of the literature was performed using PubMed, Scopus, and Web of Science. Literature was searched from January 1990 to October 2024 and revealed 823 articles. Upon initial screening, 71 duplicates, 76 non-SES focused articles, and an additional 128 irrelevant articles were excluded. A total of 548 full-text articles were reviewed. Articles that did not focus on transition interventions for CHD patients were excluded. Studies were analyzed for factors affecting care transitions with special attention to SDS and SES factors. SDS factors were defined as age, gender, race/ethnicity, and geographic location, while SES factors were defined as income level, education, employment status, and access to care. **RESULTS/ANTICIPATED RESULTS:** Out of 548 articles reviewed, only 18 addressed SES factors, and 10 examined SDS factors in the transition from pediatric to adult care. The most common interventions were patient education (33%), care coordination (29%), and family support (21%), but they lacked tailoring to SES/SDS factors. Patients from low-income households were 50% more likely to experience care discontinuities and 40% less likely to participate in transition programs. Health literacy interventions were generic, overlooking socioeconomic differences. Tailored transition programs are needed to address low health literacy and financial barriers, potentially improving outcomes for disadvantaged patients in rural and underserved areas. **DISCUSSION/SIGNIFICANCE OF IMPACT:** This review exposes the limited focus on SES and SDS disparities in CHD transition interventions. Disadvantaged patients face barriers

like limited access to care and low health literacy. Developing tailored programs to address these gaps is crucial for enhancing transitions and improving long-term outcomes for vulnerable CHD patients.

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Evaluating ChatGPT's role in enhancing mental health care for Hispanic LBTTQI+ young adults: A comparative study

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OBJECTIVES/GOALS: Evaluate the effectiveness of ChatGPT as a complementary tool for addressing the mental health needs of Hispanic LBTTQI+ young adult patients. We will also explore the experience of clinical healthcare providers with the integration of ChatGPT as a complementary tool in psychotherapy with Hispanic LBTTQI+ young adults. **METHODS/STUDY POPULATION:** In this mixed-method study, we will create hypothetical clinical cases that reflect common mental health challenges experienced by LBTTQI+ Hispanic population. These cases will be presented to three groups: 1) ChatGPT app, 2) clinical mental health care providers, and 3) clinical mental health care providers collaborating with ChatGPT. Each group will provide a diagnosis and a treatment plan based on the case information. A panel of experts will evaluate each plan using a standardized rubric to provide a score on clinical accuracy and on the ability to address specific needs of Hispanic LBTTQI+ patients. Statistical analysis will be used to evaluate the differences in the scores of each domain and qualitative content analysis to evaluate the experience of clinical mental health care providers using ChatGPT. **RESULTS/ANTICIPATED RESULTS:** The results will provide evidence of the effectiveness of ChatGPT as a supportive tool in mental health care. We anticipated that the combination of a clinical mental health care provider and ChatGPT to develop a diagnosis and treatment plan would produce better outcomes than either ChatGPT or the clinical mental health care provider working independently. We will also expect to find a positive attitude toward the integration of ChatGPT applications, viewing them as useful tools that complement traditional psychological interventions for Hispanic LBTTQI+ young adults. The study will provide evidence of the effectiveness of ChatGPT to complementing clinical practice involving Hispanic LBTTQI+ young adults. Those results in a preclinical phase are preconditions to a more applied intervention. **DISCUSSION/SIGNIFICANCE OF IMPACT:** We aim to improve the quality of life for LBTTQI+ Hispanics by developing innovative psychological treatments enhanced by AI apps. By developing innovative treatments, we are addressing and mitigating health disparities within the LBTTQI + Hispanic community in Puerto Rico and contributing to a broader effort of inclusivity and health equity.