57 postmenopausal women (65% NHB; age: 62±8 years; BMI: 28±4 kg/m^2; blood pressure: 136±17/80±9 mmHg). VO2max was measured using maximal treadmill testing (Modified Bruce Protocol) and arterial stiffness (pulse wave velocity, PWV) via SphygmoCor XCEL. We used bias-corrected bootstrapped mediation models (5,000 resamples) to estimate the indirect effect of ancestry on PWV via VO2max, adjusting for age, body mass index, lived experience, adverse childhood exposures, and neighborhood deprivation. Given the small sample size, these analyses are exploratory. RESULTS/ANTICIPATED RESULTS: NHB women had significantly lower VO2max than NHW women (18.0±3.7 vs. 23.8±4.5 mL•kg^{-1}•min^{-1}). VO2max was inversely associated with PWV (B = -0.10, SE = 0.04, p = 0.02, 95% CI = −0.19 to −0.01). After adjustment, ancestry was not directly associated with PWV. Neighborhood deprivation (B = 0.16, SE = 0.07, p = 0.02, 95% CI = 0.03 to 0.29) and lived experience (B = 0.10, SE = 0.04, p = 0.03, 95% CI = 0.01 to 0.19) were associated with higher PWV, even after adjusting for VO2max and risk factors. In bootstrapped mediation models, the indirect effect of ancestry on PWV through VO2max was significant (B = 0.35, SE = 0.19, 95% BCa CI = 0.03 to 0.78), consistent with partial mediation. DISCUSSION/SIGNIFICANCE OF IMPACT: Cardiorespiratory fitness appears to partly account for population differences in arterial stiffness, but this cross-sectional analysis with a modest sample is exploratory. Targeting both fitness and upstream socioeconomic factors may be needed to reduce differences in women's vascular health.

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Establishing a community-focused clinical research site in a low-resourced HBCU: Lessons learnt through collaboration, capacity building, workforce training, community engagement, and infrastructure development

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OBJECTIVES/GOALS: Texas Southern University (TSU), a low-resourced HBCU and one of the largest in the USA, without an affiliated hospital, clinic network, or patient population, established a community-focused clinical research site to educate, recruit, and expand research participation, especially among those with unmet health needs. METHODS/STUDY POPULATION: The implementation process involved strategic planning in five key areas as below: * Collaboration: Partnered with mentor site to align site capabilities with industry standards * Capacity Building: EstablishCTMS, eReg, eSource, and REDCap workflow * Workforce Training: Hired and strengthened research personnel expertise through training, certification, and mentorship * Community Engagement: Enhanced trusted relationships with community members, key stakeholders, and advisory board members * Infrastructure Development: Defined site capabilities: regulatory processes, data management, IRB optimization, budgeting, contract management, and prospective study feasibility assessments. Developed standard operating procedures and clinical research registry for site readiness RESULTS/ANTICIPATED RESULTS: A first of its kind Community-Focused Clinical Research Site in a low-resourced HBCU without an affiliated hospital, clinic network, or patient population was successfully established at TSU with mentorship by the University of Texas Medical Branch Galveston, PhRMA Foundation EQBMED, and RCMI Coordinating Center. A registry for potential research participants was successfully implemented in May 2025. Since its inception, 160 community members have indicated interest in clinical research registry participation. 56 community members are fully enrolled in the registry. Key challenges included bridging feasibility gaps at TSU, navigating the development of new clinical research infrastructure, and managing regulatory and contracting approval timeline. DISCUSSION/SIGNIFICANCE OF IMPACT: Establishing a clinical research site in a low-resourced HBCU without an affiliated hospital requires cross-disciplinary collaboration and intentional community engagement. TSU's approach offers a replicable model for integrating clinical research to expand access to community member especially among those with unmet health needs.

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Expanding rural access to colorectal cancer screening: Implementation of an FDA-approved blood-based test through a mobile health unit in Louisiana

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OBJECTIVES/GOALS: To describe the early implementation of the FDA-approved Shield blood-based colorectal cancer screening test using a mobile health unit serving rural Louisiana, assessing population reach and acceptability of the test. METHODS/STUDY POPULATION: This is a secondary analysis of implementation data collected by the Partners in Wellness (PIW) Mobile Health Unit between February and August 2025. The mobile unit includes a designated blood-draw space where specimens were collected by a trained phlebotomist or a registered nurse following standardized procedures. Adults aged ≥45 years were eligible. De-identified demographic information and Shield test results were analyzed descriptively. All individuals with positive results were referred for colonoscopy, and those with inconclusive results were offered Cologuard stool-based testing. One participant declined the stool-based testing. RESULTS/ANTICIPATED RESULTS: A total of 77

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