

in Ontario. **METHODS/STUDY POPULATION:** The study employed a participatory design approach, utilizing co-design and community-consulted design practices. The co-design process involved three design sessions with 7 adult participants (3 with SCD, 3 with SCD working in healthcare, and 1 without SCD but working in healthcare) to actively involve them in designing an intervention that addressed their unmet needs. A thematic analysis of the first design session was conducted to gain insight into their experiences. The community-consulted design included three internal research team sessions to synthesize the participants' insights. Zoom was used for all sessions, and Miro as the online collaboration tool for participatory design activities, resulting in a prototype that reflected the collective input of the target users and the broader community. **RESULTS/ANTICIPATED RESULTS:** With the thematic analysis, one prominent theme emerged, labeled as 'Barriers to Successful Transition,' which consisted of four subthemes: 1) Lack of Education and Awareness; 2) Constraints in Healthcare Delivery; 3) Managing Multiple Transitions; and 4) Racial Bias in Healthcare. The word 'hospital' emerged as the most frequently mentioned word, following closely were the terms 'school,' 'person,' 'sickle cell disease,' and 'education.' This analysis underscores the crucial involvement of hospitals and healthcare providers in facilitating the transition of youth with SCD. Following the design sessions, the most desirable/feasible intervention was to create an accredited digital educational module for adult healthcare providers specifically focusing on youth transitioning with SCD. **DISCUSSION/SIGNIFICANCE:** 3,500 people in Ontario have SCD, with an average age of 24 years, where one-third are aged 14 or younger. Youth with SCD face unique challenges, so effective communication and comprehensive care coordination are needed from healthcare providers. The digital module will increase awareness and ultimately improve transition readiness.

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Assessing the Role of Youth Sports in Diabetes Prevention and Perceived Discrimination

Leesi George-Komi and Dr. Leah Robinson
University of Michigan

OBJECTIVES/GOALS: Our study aims to 1) examine the link between engagement in CLR Academy and youth diabetes risk factors—physical activity, nutrition, mental health, and weight status; 2) examine CLR's role in moderating the relationship between perceived discrimination and these risk factors. Includes a program evaluation of CLR & interviews of members. **METHODS/STUDY POPULATION:** Youth-onset diabetes is rising in American minority communities. Youth sports programs like the Community Leadership Revolution (CLR) Academy in Washtenaw County, MI are emerging responses to this issue. CLR targets diabetes risk factors through team sports by promoting mindfulness and healthy habits. Employing a mixed-methods, pre-test-posttest approach, our study focuses on how the frequency of engagement in CLR impacts CLR's effect on youth's diabetes risk factors. Considering the discrimination minority youth experience, we also aim to see if CLR potentially buffers the impact of perceived discrimination on diabetes risk factors. A posttest program evaluation of CLR will also include semi-structured interviews with CLR staff and participants. **RESULTS/ANTICIPATED RESULTS:** There is potential that youth with high engagement in CLR Academy may

see enhanced benefits in managing diabetes risk factors compared to less active participants. This may be particularly true for youth experiencing high perceived discrimination, with potential marked improvements in mental health, like reduced anxiety and depression. Additionally, through a program evaluation and semi-structured interviews, our study aims to uncover the factors contributing to CLR's success as a community-led intervention while also identifying areas for enhancement. Post-study, CLR will receive financial support to integrate these insights into their program, furthering their effectiveness in youth diabetes prevention and overall well-being. **DISCUSSION/SIGNIFICANCE:** This study may provide significant insights into the relationship between sports participation, diabetes risk factors, and perceived discrimination. The findings could help CLR improve its program and guide more effective diabetes prevention strategies in minority youth through other youth sports programs.

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The CoBo Study: Combined Contingency Management for Both Stimulant Use and HIV

Gabriela Steiner¹, Elise Riley¹, Gabriel Chamie¹, Stefan Baral², Kelly Knight¹, Phillip Coffin¹, Monica Gandhi¹ and Ayesha Appa¹
¹University of California, San Francisco and ²Johns Hopkins University

OBJECTIVES/GOALS: Contingency management (CM), wherein patients earn prizes for behavior change, is the gold-standard for reducing stimulant misuse and has been shown to improve medication adherence. We aim to describe the feasibility, acceptability, and effectiveness of CM to reduce stimulant use and optimize ART adherence in Women's HIV primary care. **METHODS/STUDY POPULATION:** Using the ADAPT-ITT model for adapting evidence-based HIV interventions, we implemented the CoBoStudy at the Ward 86 Women's Clinic at San Francisco General Hospital. Inclusion criteria are (1) adult age women with HIV, (2) suboptimal ART adherence, (3) stimulant use disorder with goal of reduced-use. Participants receive weekly CM for 12 weeks with escalating incentives for point-of-care urine testing negative for stimulants and positive for tenofovir ART. We use mixed methods to evaluate feasibility and acceptability of CoBo with quantitative process measures, sequential explanatory in-depth interviews with participants and staff, and effectiveness by proportion of point-of-care urine tests without stimulants and with tenofovir. **RESULTS/ANTICIPATED RESULTS:** CoBoStudy enrollment began in September 2023; n=10 participants have enrolled with an additional n=20 planned. We will report feasibility and acceptability using: 1) the number of women with HIV, stimulant use disorder, and suboptimal ART adherence enrolled vs. recruited, 2) the number and proportion of CM sessions attended/missed, 3) cost per participant, and 4) participant-reported facilitators and barriers to CM engagement. We will report preliminary effectiveness based on: 1) proportion of POC tests negative for stimulants, positive for ART, and 2) trend in self-reported stimulant use assessed weekly during CM. **DISCUSSION/SIGNIFICANCE:** Women with comorbid HIV and stimulant use disorder have demonstrated poor outcomes including reduced ART adherence and faster progression to AIDS. This work aims to expand access to evidence-based treatment for stimulant use disorder for women with HIV and share key opportunities and challenges for doing so in the women's health HIV primary setting.