

Implementation of a Telehealth Lifestyle Intervention to Prevent Diabetes in Black Parent-Child Dyads

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Background: Obesity and family history increase the risk for youth-onset type 2 diabetes mellitus (T2DM) disproportionately in Black youth. Critical questions about the feasibility and acceptability of family-based lifestyle interventions to prevent T2DM in youth remain unanswered.

Methods: This single-arm pilot trial evaluated the implementation of a parent-focused lifestyle intervention in a telehealth setting for Black families with children at risk for T2DM. Parent-child dyads (n=19) were recruited from a pediatric weight management clinic to participate in a 30-week intervention (15 sessions). Child (8- to 11-years) eligibility criteria included having a body mass index (BMI) \geq 95th percentile and for parents (\geq 18-years), a BMI \geq 25 and \geq 5 on the American Diabetes Association risk test. The RE-AIM (Reach, Effectiveness, Adoption, Implementation, and Maintenance) framework guided the evaluation. Feasibility, acceptability, and satisfaction were assessed.

Results: Barriers and facilitators to RE-AIM were identified. The strongest facilitators to Reach included clinician buy-in and point-of-care referral. Complexity and time made screening arduous for clinicians, but with the help of study staff, 95% of the recruitment goal was met. Group-based sessions (n=3 groups; 5-8 parents per group) were delivered as planned. Group cohesion and lifestyle coach support encouraged attendance (82%), and Wi-Fi-enabled iPads made participation feasible. Parents reported high satisfaction (89%), requested a longer intervention (1- vs 0.5-year), and urged for a child-focused component. Estimated program costs were \$1,232 per dyad. Implementation was not maintained after the study period and 47% of families complied with follow-up clinical care.

Discussion: Strategies for care team coordination and family retention in clinical care are needed. Future studies should explore reimbursement models for sustainability. These

findings contribute to addressing barriers to implementing lifestyle interventions to prevent T2DM in Black youth.

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