

## PROJECT SUMMARY/ABSTRACT

Most adults with obesity continue to gain weight. While primary care clinical guidelines recommend provision of, or referral to, intensive weight management treatment for patients with obesity, there are significant barriers to delivery. Even if offered, many patients do not have the time or resources to participate. Given this, along with the challenges of losing weight and keeping it off, a *harm reduction framework* focused on disrupting continued age-related weight gain among primary care patients with obesity may be a strategy to mitigate obesity's adverse health effects. Self-regulation theory suggests that daily self-weighing (DSW; i.e., instruction to weigh daily and monitor weight) offers a simple way to promote weight management among patients with obesity. We, and others, have shown that DSW associates with better weight management and may be ideal for primary care because of its low-burden and consistency with clinical guidelines recommending self-monitoring of health parameters such as blood pressure and glucose. However, DSW's effect when implemented in primary care among adults with obesity is unknown. Therefore, we propose conducting **SWOP (Daily Self-Weighing for Obesity Management in Primary Care)**, a 24-month randomized controlled trial (RCT) in 400 adults with obesity (i.e., body mass index [BMI]:  $\text{kg/m}^2 \geq 30$ ) receiving primary care through a clinical network affiliated with the University of Alabama at Birmingham (UAB). Enrolled participants will receive weight management educational materials and then randomized to DSW or standard care (SC). DSW will involve provision of a web-enabled digital scale with graphical weight feedback, while SC will involve routine care. We will test the causal effect of *assignment* to DSW on weight (primary outcome) and self-initiated adoption of weight management practices (secondary outcomes) over 24 months (Aim 1). We will also test the causal effect of DSW *adherence* on weight and weight control practices (Aim 2). Finally, we will evaluate the cost effectiveness of DSW compared to SC (Aim 3). Results will allow us to estimate whether DSW mitigates continued age-related weight gain among adults with obesity. If so, DSW could have substantial public health and economic effects by offering a weight management strategy that is feasible to implement in primary care.