

Appendix B. Intervention Fidelity and Sustainability

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Treatment or intervention fidelity was achieved first by relying on an experienced team of clinicians and clinical investigators to develop the intervention and supervise its delivery. The Intervention Team was led by Dr. Corby Martin, a Clinical Psychologist, and Dr. John Apolzan, who has a doctorate in Foods and Nutrition. Drs. Martin and Apolzan directly supervised a coordinator with a Master's of Science degree in psychology and extensive experience delivering interventions similar to the PROPEL intervention. The intervention coordinator managed the day-to-day delivery of the intervention and was the main liaison with the health coaches who delivered the intervention in their respective clinics throughout Louisiana. Further, the PROPEL intervention materials were designed based on the Diabetes Prevention Program (DPP),¹ Look AHEAD,² and CALERIE^{3,4} and were adapted for appropriate levels of health literacy via the guidance of Terry Davis, PhD and Connie Arnold, PhD. Drs. Davis and Arnold are health literacy and patient education experts and have extensive experience designing and delivering interventions that are health-literacy appropriate. Drs. Davis and Arnold provided guidance on the intervention materials and led integration of patient feedback about the intervention and its materials that was garnered from focus groups and Patient Advisory Board meetings. Finally, Drs. Davis and Arnold approved the intervention materials prior to study start.

The health coaches were also hired based on their training and clinical experience. Although it is difficult to identify and hire people with the desired credentials and level of clinical experience in rural locations, the health coaches who delivered the intervention throughout the study included Registered Dietitian Nutritionists and coaches with Master's degrees in counseling, health, exercise, or health promotion. To foster treatment fidelity, the coaches received two in-person multi-day training programs that were held at Pennington Biomedical. During this training, coaches learned the theoretical rationale for the intervention, observed experienced clinicians deliver mock sessions, and then conducted mock sessions under supervision and subsequently they practiced mock sessions with each other prior to seeing patients. In addition to the two initial training programs, coaches attend a re-training session at Pennington Biomedical once per year. The intervention coordinator also conducted

training sessions virtually, and these sessions were initiated by the Intervention Team when it was detected that a coach required additional training. Additionally, all coaches collected two audio recordings of patient sessions per month, and these sessions are reviewed by members of the Intervention Team and coaches were provided with feedback based on this review. The Intervention Team also attempted to conduct both announced and unannounced site visits to each clinic once per quarter, with each coach being directly observed delivering the intervention to enrolled patients. All coaches and the entire Intervention Team also participated in a weekly 1.5 hour virtual Intervention meeting that relied on the Computer Tracking System (CTS, described below). During this weekly meeting, each coach presented self-selected patient cases to the group to obtain help and suggestions on how to work with the patient, and the Intervention Team also selected cases to review based on the Team's review of the coach's patient data. Finally, for approximately the first year of the intervention, the Intervention Team conducted an additional weekly Regional Call with the coaches in each region to help the coaches address regional nuances that were affecting delivery of the intervention.

Intervention fidelity was further facilitated with the use of a Computer Tracking System (CTS) and toolbox that standardized intervention delivery over time, among patients, and among coaches. The CTS and toolbox were based on previous work and interventions,^{2,3,4} and the CTS provided different levels of data and access to the patients, coaches, and Intervention Team at Pennington Biomedical. It is password protected and Internet-based; hence, it is accessible via any Internet-enabled device. The patient materials (Lesson Materials, meal plans, etc.) were accessible in the CTS, and the coaches used the CTS as their sole source of patient management. Each patient's session materials were printed from the CTS, their meal plan was selected and printed from the CTS, and the coach kept their notes and attendance data in the CTS; thus, obviating the need for paper patient records. The CTS also houses a toolbox that helps standardize delivery of intervention components (e.g., the use of portion-controlled foods, increased contact with the coach, etc.) across patients. Specifically, the CTS tracks objectively if the patient is achieving their expected rate of weight loss and other goals (e.g., session attendance), and these data are used to prompt the coach and patient to utilize specific

intervention strategies based on the problem that the patient is experiencing. Hence, patients in different parts of Louisiana with different coaches were likely to receive the same treatment suggestions when they encountered the same problem, such as failing to lose weight at the expected rate. This method was used successfully in the Diabetes Prevention Program (DPP),¹ Look AHEAD,² and CALERIE.^{3,4} Dr. Martin led the intervention team, which included the same intervention coordinator, during CALERIE, and CALERIE relied on a very similar CTS. Finally, the CTS facilitated intervention fidelity by providing patient data at the patient level, coach level, clinic level, and study level. These data were summarized to identify if certain clinics or coaches were experiencing high or low levels of patient attendance or patient weight loss, for example, compared to other coaches or the overall study.

Intervention Sustainability

The PROPEL intervention provides a platform for a sustainable program. First, the intervention materials were created to have appropriate levels of health literacy and the materials were well-received by participants. Second, the intervention outlines strategies or tools to help people lose weight when they experience set-backs or challenges, and those tools can be deployed in programs that do or do not utilize a CTS. Third, the CTS can be used as a standalone program and integrated into Electronic Medical Records or other platforms that manage delivery of care. Further, the intervention and CTS can be adapted to meet the needs of other patient populations or to achieve different weight management goals.

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