

# Update on the Effectiveness of Lifestyle Coaching SMART Goal Sessions with Patients at a Student-Led Clinic Pre- and Post-COVID



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## Abstract

At the KNIGHTS student-run free clinic, patients receive lifestyle coaching using a SMART goal-setting approach to improve medical outcomes. These visits were traditionally completed face-to-face with follow-ups conducted via text-messaging; however, due to COVID-19 pandemic they were transitioned to phone call visits. The purpose of this study is to compare patient goal adherence and response rates between face-to-face and phone call consultations with SMART goal setting followed by text message follow-ups. Given the ongoing nature of this project, the following is an update from previous work to include new patients. Although this study has a low number of participants during the COVID-19 pandemic, our results thus far show goal adherence and response rates improved with lifestyle coaching calls compared to in-person consultations at two weeks and four weeks after the encounter. Many factors may have contributed to these results, such as intrinsic motivation of the patients, amount of time spent with each patient, and patient awareness of the necessity for lifestyle changes in light of COVID-19. Despite the low number of patients involved (N=12) limitations of this study, the results affirm the feasibility of replicating in-person SMART goal-setting sessions through remote lifestyle coaching calls while maintaining the safety and health of KNIGHTS Clinic patients, medical students and attendings.

## Introduction

### Background:

Six out of ten Americans live with one or more chronic conditions, including heart disease and diabetes<sup>1</sup>. Several chronic diseases can be prevented or controlled through lifestyle changes such as adjusting diet, increasing physical activity, and optimizing hydration<sup>1,2,3</sup>. Lifestyle coaching, whether in-person or remotely conducted, has been shown to improve patient health and outcomes in those suffering from chronic conditions such as cardiovascular disease, diabetes, metabolic syndrome, and pre-diabetes<sup>2,3</sup>.

The University of Central Florida College of Medicine's KNIGHTS Clinic is an entirely student-run clinic located at Grace Medical Home in downtown Orlando, Florida. In-person clinics were held twice a month in the evening to offer primary care and specialty services for uninsured patients. Patients seen at the clinic include both English and Spanish-speaking patients. Patients are provided lifestyle coaching and goal-setting consultations to improve health and wellness by the patient education team at the end of every visit.

Due to the COVID-19 pandemic, in-person clinic services were moved to telehealth and in-person patient education transitioned to remote lifestyle coaching phone calls. Each goal-setting consultation was arranged through CareMessage (a HIPAA-protected text messaging platform for patients and clinics) and conducted over a telephone call. Lifestyle goals were set using the SMART goal method (specific, measurable, attainable, realistic/relevant, and time-related)<sup>4</sup>. Messages and calls were available in English and Spanish. Offering lifestyle coaching through telemedicine could improve accessibility and health outcomes for our patients with chronic conditions.

### Purpose:

With a significant portion of the KNIGHTS Clinic patient population impacted by chronic conditions (e.g. hyperlipidemia, diabetes, hypertension), our team aimed to track how implementing specific patient discussions about lifestyle changes might be accepted and whether patients were able to maintain their established SMART goal(s). We present our remote patient education program with initial lifestyle discussions, goal implementation, and follow-up patient responses at 2 weeks and 4 weeks. The primary objectives of our project, listed below, were not impacted by the transition to remote lifestyle coaching calls:

- Assess the feasibility of replicating our patient education program in a remote setting with phone coaching calls
- Observing variability in patient responsiveness to CareMessage follow-up texts following the transition to remote coaching calls
- Measuring goal adherence rates for patients successfully meeting their goals at 2 weeks and at 4 weeks
- Compare preliminary results of lifestyle coaching call outcomes to pre-COVID goal adherence and response rates

## Data Analysis

Using CareMessage, patients were texted 2 weeks and 4 weeks after their lifestyle goal-setting sessions by a KNIGHTS Clinic patient education team member. In these follow-up texts, patients were asked whether or not they had been meeting their goals. Patient responses were tracked for whether or not they responded to these follow-up texts and whether they responded "Yes" or "No" in regard to goal achievement. Response and goal achievement rates were calculated as percentages and compared between the two groups: patients that received in-person consultations at KNIGHTS Clinic prior to COVID-19 versus patients that received consultations via phone calls after COVID-19. Additionally, the number of goals set for each patient and number of lifestyle topics discussed was tracked per patient consultation. Lastly, the average number of lifestyle topics discussed per patient consultation was calculated for the two groups and compared.

**Pre-COVID:** Goals set: n=42. Response rate at 2 weeks: 59% (n=25). Goals met at 2 weeks: 50% (n=21). Response rate at 4 weeks: 50% (n=21). Goals met at 4 weeks: 50% (n=21). Average number of topics discussed per patient consultation: 2.2.

**Post-COVID:** Goals set: n=12. Response rate at 2 weeks: 83% (n=10). Goals met at 2 weeks: 67% (n=8). Response rate at 4 weeks: 67% (n=8). Goals met at 4 weeks: 59% (n=7). Average number of topics discussed per patient consultation: 2.8.

## Results

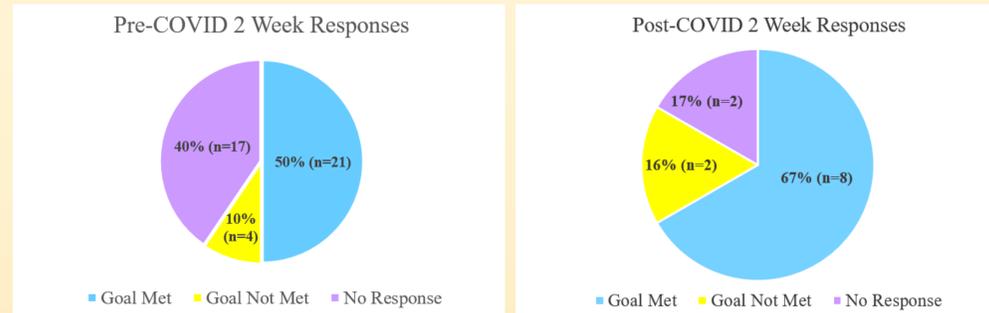


Figure 1a

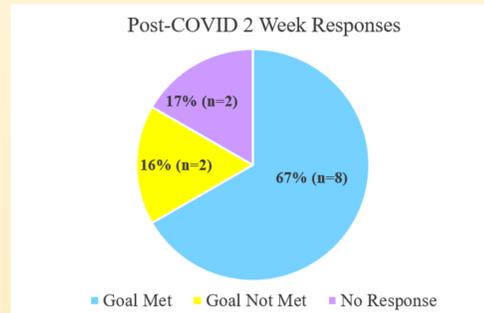


Figure 1b

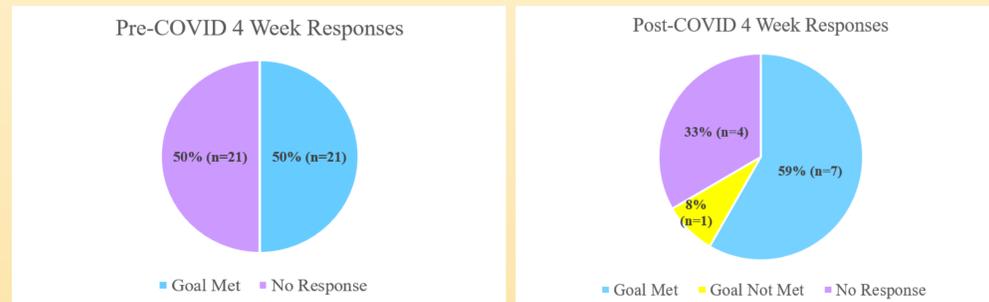


Figure 1c

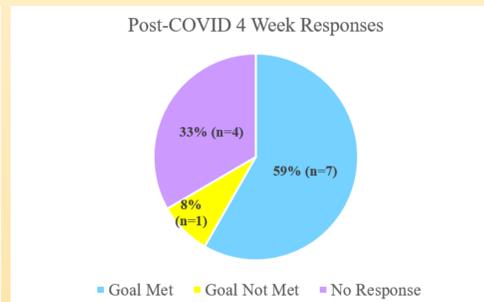


Figure 1d

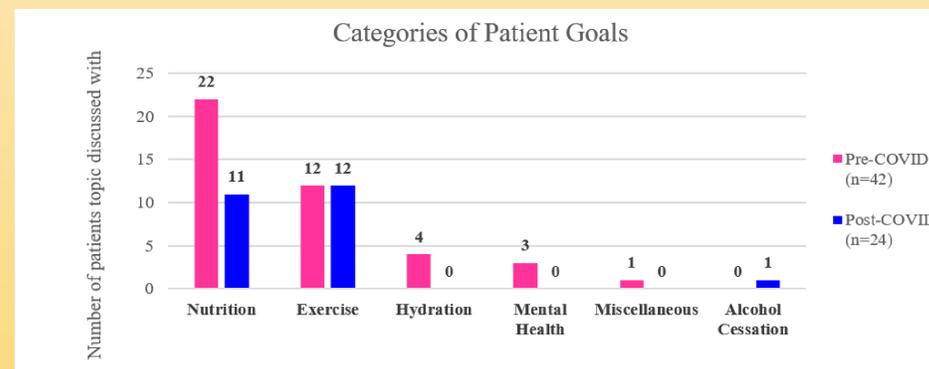


Figure 2a

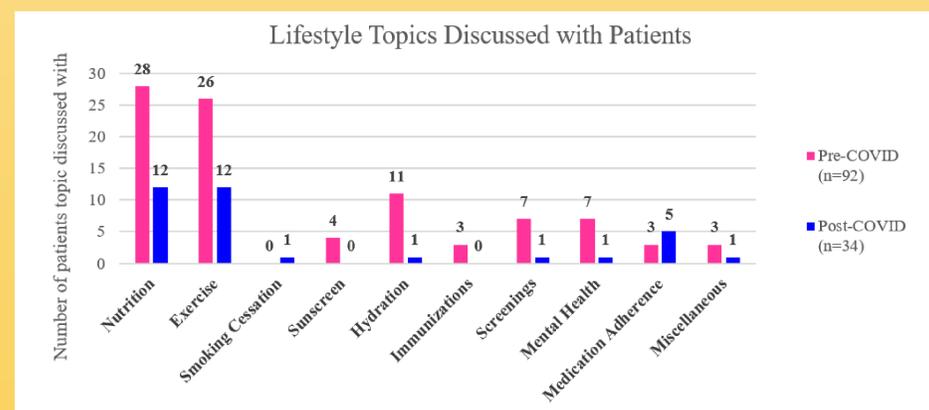


Figure 2b

## Methods

**Pre-COVID (August 2019 – March 2020):** Patients scheduled for in-person primary care visits at KNIGHTS Clinic were seen by the patient education team at the end of their visit. The patient education team offered to discuss lifestyle interventions based on either the patient's personal interests or chronic conditions.

For each patient who accepted, patient education team members used motivational interviewing techniques to help the patient create SMART goal(s). Team members tracked the topics discussed on a password-protected spreadsheet, along with the day of the week that the patient preferred for follow-up contact on goal reminders and goal adherence.

At the end of the lifestyle coaching consultation, patients were provided with follow-up instructions indicating that a member of the lifestyle coaching team would message them on the day of the week of their choosing. Patients were messaged 3 times: 1 week, 2 weeks, and 4 weeks after goal establishment. The 1-week contact was a simple reminder of a patient's goal(s). The 2- and 4-week communications specifically asked if patients had completed their SMART goal(s). In these messages, patients were asked to reply "Yes" or "No." This data was recorded for each patient.

**Post-COVID (June 2020 – November 2020):** Patients were recruited on the basis of chronic illness status on EMR documentation. Reports were generated to establish a list of patients with dyslipidemia, diabetes, and hypertension. Each patient listed on these reports was contacted via a CareMessage text to gauge interest in receiving a lifestyle coaching call. Patients that responded "Yes" were subsequently scheduled for a lifestyle coaching phone call.

Using the same methods utilized prior to COVID-19, patient education team members helped patients create SMART goal(s), tracked topics discussed, and followed-up with patients via text messages 1 week, 2 weeks, and 4 weeks after goal establishment. In addition, patients also received resource links pertaining to their goal.

**Sample Text Message:** Did you know that fruit juice is bad for those living with diabetes and that beans really are good for your heart? Grace Medical Home and UCF (KNIGHTS Clinic) are conducting lifestyle coaching calls to discuss this, and many other dietary and activity changes, to help with managing diabetes. If you are interested in scheduling a call, please reply "Yes". If you are not interested, please reply "No". Thank you and have a wonderful day!

## Conclusions

As a new remote program, data from our lifestyle coaching calls is limited to 12 patients. Although comparison between outcomes of our pre-COVID and post-COVID patient groups receiving patient education goal-setting is limited due to the small sample size, our current data affirms the feasibility and promising success of a remote lifestyle coaching program. The program's current results suggest that the implementation of lifestyle coaching phone calls during COVID-19 has demonstrated better outcomes when compared to in-person patient counseling. Upward trends in the number of topics discussed during each coaching session, 2 and 4-week patient response rates, and 2 and 4-week goal adherence rates also suggest that coaching calls may be a more efficacious method of delivering goal-setting interventions when compared to in-person interventions. Since the onset of the COVID-19 pandemic, changes in at-home behaviors and levels of intrinsic motivation in KNIGHTS Clinic patients may be contributing to the improved outcomes observed. We speculate that increases in sedentary activities and time spent at home, for example, might encourage patients to more closely evaluate their lifestyle and wellness and consider making changes. For example, patients showed greater interest in setting exercise goals with an increase from 29% to 50% of total goals set. However, we recognize it is also possible that the patients who elected to receive a phone call may demonstrate overall higher levels of intrinsic motivation when compared to the general population counseled during in-person visits. Moreover, providing separately scheduled coaching calls rather than delivering coaching at the end of an in-person visit allows the encounter to remain focused on lifestyle interventions. Similarly, scheduled patients are provided with more time to reflect on their expectations for the remote encounter and prepare questions for the patient education provider. These factors may also contribute to the increased success in goal adherence following coaching calls. Given these results, future quality improvement projects can be aimed to analyze the differences in goal adherence and response rates in male versus female, English-speaking versus Spanish-speaking, and younger versus older patient populations. Determining the effects of these specific patient factors can direct future changes in lifestyle coaching sessions and follow-ups in order to produce higher response and goal success rates.

## References

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